Atlassian

Documentation for Confluence 4.3

Contents

Confluence Administrator's Guide . . . 15
Managing Confluence Users . . . 18
Adding and Inviting Users . . . 20
Removing or Deactivating Users . . . 24
Searching For and Administering Users . . . 26
Editing User Details . . . 27
Resetting the Login Count for a User . . . 29
Changing Usernames . . . 29
Restoring Passwords To Recover Admin User Rights . . . 38
Managing Site-Wide Permissions and Groups . . . 42
Global Groups Overview . . . 42
Adding or Removing Users in Groups . . . 43
Global Permissions Overview . . . 47
Setting Up Public Access . . . 51
Configuring User Directories . . . 53
Configuring the Internal Directory . . . 55
Connecting to an LDAP Directory . . . 56
Configuring the LDAP Connection Pool . . . 66
Configuring an SSL Connection to Active Directory . . . 68
Connecting to an Internal Directory with LDAP Authentication . . . 77
Connecting to Crowd or JIRA for User Management . . . 85
Reverting from Crowd or JIRA to Internal User Management . . . 93
Connecting to JIRA 4.2 or Earlier for User Management . . . 97
Managing Multiple Directories . . . 99
Managing Nested Groups . . . 101
Synchronising Data from External Directories . . . 106
Diagrams of Possible Configurations for User Management . . . 108
User Management Limitations and Recommendations . . . 114
Requesting Support for External User Management . . . 118
Disabling the Built-In User Management . . . 120
Installing Plugins and Macros . . . 121
Installing and Configuring Plugins using the Universal Plugin Manager . . . 122
Checking Plugin Compatibility for Confluence Upgrades . . . 123
Configuring a Plugin . . . 124
Disabling or Enabling a Plugin . . . 125
Installing a Plugin . . . 128
Uninstalling a Plugin . . . 130
Upgrading your Existing Plugins . . . 131
Viewing the Plugin Audit Log . . . 132
Viewing your Installed Plugins . . . 133
Plugin loading strategies in Confluence . . . 136
Removing Malfunctioning Plugins . . . 139
Enabling and Configuring Macros . . . 141
Configuring a URL Whitelist for Macros . . . 141
Configuring the User List Macro . . . 143
Enabling HTML macros . . . 144
Enabling the html-include Macro . . . 145
Troubleshooting the Gallery Macro . . . 146
Adding, Editing and Removing User Macros . . . 146
Writing User Macros . . . 147
Best Practices for Writing User Macros . . . 152
Examples of User Macros . . . 153
Guide to User Macro Templates . . . 164
Configuring the Office Connector . . . 171
Administration . . . 178
Viewing and Editing License Details . . . 179

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Reducing the User Count for your Confluence License . . . 181
Cache Statistics . . . 182
Confluence Data Directory Configuration . . . 184
Content Index Administration . . . 185
Finding Unused Spaces . . . 188
Important Directories and Files . . . 189
Confluence Home Directory . . . 191
Confluence Installation Directory . . . 193
Installing a Language Pack . . . 193
Site Backup and Restore . . . 195
Production Backup Strategy . . . 196
Configuring Backups . . . 197
User Submitted Backup & Restore Scripts . . . 199
Manually Backing Up the Site . . . 201
Restoring a Site . . . 202
Restoring a Space . . . 204
Changing the version of a space backup . . . 206
Restoring a Test Instance from Production . . . 206
Restoring Data from other Backups . . . 207
Retrieve file attachments from a backup . . . 208
Troubleshooting failed XML site backups . . . 210
Troubleshooting XML backups that fail on restore . . . 214
Migrating from HSQLDB to MySQL . . . 217
Rebuilding the Ancestor Table . . . 222
Viewing System Information . . . 223
Live Monitoring Using the JMX Interface . . . 223
Tracking Customisations Made to your Confluence Installation . . . 226
Viewing Site Statistics . . . 227
Viewing System Properties . . . 228
Installing Patched Class Files . . . 229
Finding Your Confluence Support Entitlement Number (SEN) . . . 230
Configuring Confluence . . . 230
Site Configuration . . . 232
Configuring the Site Home Page . . . 233
Configuring the Administrator Contact Page . . . 233
Editing the Site Title . . . 235
Editing the Global Logo . . . 235
Configuring the Server Base URL . . . 235
Customising Default Space Content . . . 236
Configuring the Destination of View Space Links . . . 238
Editing the Site Welcome Message . . . 238
Configuring the What's New Dialog . . . 243
Configuring Encoding . . . 245
Character encodings in Confluence . . . 245
Troubleshooting Character Encodings . . . 247
"€" Euro character not displaying properly . . . 249
MySQL 3.x Character Encoding Problems . . . 250
Configuring Mail . . . 251
Configuring a Server for Outgoing Mail . . . 251
Setting Up a Mail Session for the Confluence Distribution . . . 253
Configuring the Recommended Updates Email Notification . . . 254
The Mail Queue . . . 255
Optional Settings . . . 255
Attachment Storage Configuration . . . 256
Hierarchical File System Attachment Storage . . . 258
Configuring a WebDAV client for Confluence . . . 263
Configuring Quick Navigation . . . 268
Enabling OpenSearch . . . 269
Enabling the Did You Mean Feature . . . 270
Enabling the Remote API . . . 270
Enabling Threaded Comments . . . 271
Enabling Trackback . . . 271

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Other Settings . . . 271
Configuring Attachment Size . . . 272
Configuring Character Encoding . . . 272
Configuring HTTP Timeout Settings . . . 273
Configuring Indexing Language . . . 273
Configuring Number Formats . . . 274
Configuring Shortcut Links . . . 274
Configuring Time and Date Formats . . . 275
Known Issues with Enterprise or Webhosting environments . . . 276
Configuring System Properties . . . 276
Recognised System Properties . . . 289
Application Server Configuration . . . 299
Application Server URL encoding . . . 299
Configuring Tomcat's URI encoding . . . 299
Managing Application Server Memory Settings . . . 300
Switching to Apache Tomcat . . . 301
Database Configuration . . . 304
Known Issues For Supported Databases . . . 305
Configuring Database Character Encoding . . . 305
Database Setup Guides . . . 309
Database JDBC drivers . . . 309
Database Setup for Oracle . . . 310
Database Setup for SQL Server . . . 316
Database Setup For Any External Database . . . 320
Database Setup for PostgreSQL . . . 322
Database Setup For MySQL . . . 329
Creating Database Schema Manually . . . 336
Migrate to Another Database . . . 336
The Embedded HSQLDB Database . . . 339
Troubleshooting the Embedded Database (HSQL DB) . . . 340
Connecting to HSQLDB using DBVisualizer . . . 340
Troubleshooting External Database Connections . . . 343
Configuring database query timeout . . . 344
Improving Database Performance . . . 345
Creating a Lowercase Page Title Index . . . 346
Surviving Database Connection Closures . . . 348
Webserver Configuration . . . 350
Configuring Web Proxy Support for Confluence . . . 350
Running Confluence behind Apache . . . 352
General Apache Configuration Notes . . . 353
Using Apache with mod_proxy . . . 354
Using Apache with virtual hosts and mod_proxy . . . 358
Using Apache with mod_jk . . . 360
Using mod_rewrite to Modify Confluence URLs . . . 363
Configuring Apache to Cache Static Content via mod_disk_cache . . . 363
Starting Confluence Automatically on System Startup . . . 364
Start Confluence Automatically on Linux . . . 364
Start Confluence Automatically on Windows as a Service . . . 369
Configuring a Large Confluence Installation . . . 372
Configuring Logging . . . 374
Troubleshooting SQL Exceptions . . . 377
Registering External Gadgets . . . 378
Configuring a URL Whitelist for Gadgets . . . 381
Confluence Data Model . . . 383
Confluence Clustering Overview . . . 398
Technical Overview of Clustering in Confluence . . . 400
Cluster safety mechanism . . . 404
Changing Datasources Manually in a Cluster . . . 405
Cluster Troubleshooting . . . 406
Multicast Test . . . 420
Clustering for Scalability vs Clustering for High Availability (HA) . . . 420
Recommended network topology . . . 422

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Cluster Administration page . . . 423
Cluster Checklist . . . 425
Confluence Security . . . 429
Confluence Community Security Advisory 2006-01-19 . . . 432
Confluence Security Advisory 2005-02-09 . . . 433
Confluence Security Advisory 2005-12-05 . . . 434
Confluence Security Advisory 2006-01-20 . . . 435
Confluence Security Advisory 2006-01-23 . . . 436
Confluence Security Advisory 2006-06-14 . . . 436
Confluence Security Advisory 2007-07-26 . . . 437
Confluence Security Advisory 2007-08-08 . . . 437
Confluence Security Advisory 2007-11-19 . . . 439
Confluence Security Advisory 2007-11-27 . . . 441
Confluence Security Advisory 2007-12-14 . . . 442
Confluence Security Advisory 2008-01-24 . . . 443
Confluence Security Advisory 2008-03-06 . . . 444
Confluence Security Advisory 2008-03-19 . . . 445
Confluence Security Advisory 2008-05-21 . . . 447
Confluence Security Advisory 2008-07-03 . . . 449
Confluence Security Advisory 2008-09-08 . . . 450
Confluence Security Advisory 2008-10-14 . . . 454
Confluence Security Advisory 2008-12-03 . . . 458
Confluence Security Advisory 2009-01-07 . . . 460
Confluence Security Advisory 2009-02-18 . . . 461
Confluence Security Advisory 2009-04-15 . . . 463
Confluence Security Advisory 2009-06-01 . . . 465
Confluence Security Advisory 2009-06-16 . . . 466
Confluence Security Advisory 2009-08-20 . . . 467
Confluence Security Advisory 2009-10-06 . . . 470
Confluence Security Advisory 2009-12-08 . . . 472
Confluence Security Advisory 2010-05-04 . . . 473
Confluence Security Advisory 2010-06-02 . . . 483
Confluence Security Advisory 2010-07-06 . . . 484
Confluence Security Advisory 2010-08-17 . . . 487
Confluence Security Advisory 2010-09-21 . . . 488
Confluence Security Advisory 2010-10-12 . . . 492
Confluence Security Advisory 2010-11-15 . . . 494
Confluence Security Advisory 2011-01-18 . . . 496
Confluence Security Advisory 2011-03-24 . . . 501
Confluence Security Advisory 2011-05-31 . . . 504
Confluence Security Advisory 2012-05-17 . . . 507
Configuring Confluence Security . . . 509
Confluence Cookies . . . 510
Configuring Secure Administrator Sessions . . . 512
Using Fail2Ban to limit login attempts . . . 514
Securing Confluence with Apache . . . 516
Using Apache to limit access to the Confluence administration interface . . . 516
Managing External Referrers . . . 519
Excluding external referrers . . . 520
Hiding external referrers . . . 521
Ignoring External Referrers . . . 521
Best Practices for Configuring Confluence Security . . . 522
Hiding the People Directory . . . 523
Configuring Captcha for Spam Prevention . . . 524
Hiding External Links From Search Engines . . . 525
Configuring Captcha for Failed Logins . . . 526
Configuring XSRF Protection . . . 527
User Email Visibility . . . 528
Anonymous Access to Remote API . . . 529
Running Confluence Over SSL or HTTPS . . . 529
Connecting to LDAP or JIRA or Other Services via SSL . . . 535
Configuring RSS Feeds . . . 536

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Preventing and Cleaning Up Spam . . . 537
Design and Layout . . . 539
Choosing a Default Language . . . 540
Custom Decorator Templates . . . 541
Customising Look and Feel Overview . . . 544
Customising Colour Schemes . . . 545
Customising Site and Space Layouts . . . 546
Adding a Navigation Sidebar . . . 548
Upgrading Customised Site and Space Layouts . . . 553
Global Templates . . . 555
Importing Templates . . . 555
Modify Confluence Interface Text . . . 558
Working With Decorator Macros . . . 559
Customising a Specific Page . . . 561
Customising PDF or HTML Content . . . 561
Customising the Dashboard . . . 562
Customising the eMail Templates . . . 563
Customising the Login Page . . . 564
Themes Overview . . . 565
Applying a Theme to a Site . . . 565
Customising the Left Navigation Theme . . . 566
Modifying Look and Feel (for themes) . . . 566
Configuring the Theme Plugin . . . 571
Including Cascading Stylesheets in Themes . . . 575
Creating a Theme . . . 576
Importing Data . . . 576
Importing Content from Another Wiki . . . 577
Performance Tuning . . . 578
Cache Performance Tuning . . . 582
Cache Performance Tuning for Specific Problems . . . 588
Confluence Cache Schemes . . . 589
Memory usage and requirements . . . 591
Requesting Performance Support . . . 593
Access Log Scripts . . . 597
Troubleshooting Slow Performance Using Page Request Profiling . . . 597
Compressing an HTTP Response within Confluence . . . 601
Performance Testing Scripts . . . 602
Garbage Collector Performance Issues . . . 609
Operating Large or Mission-Critical Confluence Installations . . . 617
Scheduled Jobs . . . 625
Search . . . 632
Setup Confluence To Index External Sites . . . 632
Setup External Search Tool To Index Confluence . . . 633
Working with Confluence Logs . . . 633
log4j Logging Levels . . . 635
Integrating Confluence with Other Applications . . . 636
Configuring Application Links . . . 636
Adding an Application Link . . . 637
Configuring Authentication for an Application Link . . . 639
Configuring Basic HTTP Authentication for an Application Link . . . 643
Configuring OAuth Authentication for an Application Link . . . 644
Configuring Trusted Applications Authentication for an Application Link . . . 646
Incoming and Outgoing Authentication . . . 648
Editing an Application Link . . . 649
Making an Application Link the Primary Link . . . 650
Relocating an Application Link . . . 651
Upgrading an Application Link . . . 652
Deleting an Application Link . . . 655
Configuring Project Links across Applications . . . 655
Adding Project Links between Applications . . . 656
Making a Project Link the Primary Link . . . 657
Deleting a Project Link . . . 658

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Confluence and JIRA . . . 659
Installing Confluence and JIRA Together . . . 659
Integrating JIRA and Confluence . . . 660
Setting Up Trusted Communication between JIRA and Confluence . . . 662
Confluence Installation and Upgrade Guide . . . 670
System Requirements . . . 670
Server Hardware Requirements Guide . . . 673
Example Size and Hardware Specifications From Customer Survey . . . 677
Confluence Installation Guide . . . 679
Installing Confluence . . . 680
Installing Confluence on Windows . . . 680
Installing Confluence on Windows from Zip File . . . 684
Uninstalling Confluence from Windows . . . 687
Installing Confluence on Linux . . . 687
Installing Confluence on Linux from Archive File . . . 690
Uninstalling Confluence from Linux . . . 694
Change listen port for Confluence . . . 695
Installing the Confluence EAR-WAR Edition . . . 696
Known Issues for Apache Tomcat . . . 699
Installing Java for Confluence . . . 699
Setting the JAVA_HOME Variable in Windows . . . 700
Confluence Cluster Installation . . . 701
Confluence Cluster Installation with Existing Data . . . 704
Upgrading a Confluence Cluster . . . 707
Apache and Tomcat load balancing . . . 708
Creating a Dedicated User Account on the Operating System to Run Confluence . . . 711
Getting a Confluence License . . . 712
Running Confluence in a Virtualised Environment . . . 712
Confluence Setup Guide . . . 717
External Database . . . 726
Load Content for the Site . . . 727
Restoring from Backup During Setup . . . 728
Configuring JIRA Integration in the Setup Wizard . . . 729
Upgrading Confluence . . . 737
Upgrading Beyond Current Licensed Period . . . 743
Confluence Post-Upgrade Checks . . . 744
Upgrading Confluence EAR-WAR Distribution . . . 745
Migration from Wiki Markup to XHTML-Based Storage Format . . . 750
Migration of Templates from Wiki Markup to XHTML-Based Storage Format . . . 754
Upgrading Confluence Manually . . . 756
Supported Platforms . . . 762
End of Support Announcements for Confluence . . . 763
Supported Platforms FAQ . . . 774
Migrating Confluence Between Servers . . . 774
Migrating from Confluence OnDemand to a Confluence Installed Site . . . 778
Confluence Release Notes . . . 780
Confluence Release Summary . . . 784
Confluence Release Cycle . . . 789
Upgrade Notes Overview . . . 790
Confluence 4.3 Release Notes . . . 791
Confluence 4.3 Upgrade Notes . . . 804
Issues Resolved in Confluence 4.3 . . . 806
Confluence 4.2.13 Release Notes . . . 810
Confluence 4.2.13 Upgrade Notes . . . 811
Confluence 4.2.12 Release Notes . . . 812
Confluence 4.2.12 Upgrade Notes . . . 813
Confluence 4.2.11 Release Notes . . . 813
Confluence 4.2.11 Upgrade Notes . . . 815
Confluence 4.2.8 Release Notes . . . 815
Confluence 4.2.8 Upgrade Notes . . . 816
Confluence 4.2.7 Release Notes . . . 817
Confluence 4.2.7 Upgrade Notes . . . 818

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Confluence 4.2.6 Release Notes . . . 819
Confluence 4.2.6 Upgrade Notes . . . 821
Confluence 4.2.5 Release Notes . . . 821
Confluence 4.2.5 Upgrade Notes . . . 824
Confluence 4.2.4 Release Notes . . . 825
Confluence 4.2.4 Upgrade Notes . . . 826
Confluence 4.2.3 Release Notes . . . 827
Confluence 4.2.3 Upgrade Notes . . . 829
Confluence 4.2.2 Release Notes . . . 830
Confluence 4.2.2 Upgrade Notes . . . 832
Confluence 4.2.1 Release Notes . . . 833
Confluence 4.2.1 Upgrade Notes . . . 834
Confluence 4.2 Release Notes . . . 835
Confluence 4.2 Upgrade Notes . . . 846
Issues Resolved in Confluence 4.2 . . . 848
Confluence 4.1.10 Release Notes . . . 854
Confluence 4.1.10 Upgrade Notes . . . 855
Confluence 4.1.9 Release Notes . . . 855
Confluence 4.1.9 Upgrade Notes . . . 858
Confluence 4.1.7 Release Notes . . . 859
Confluence 4.1.7 Upgrade Notes . . . 860
Confluence 4.1.6 Release Notes . . . 860
Confluence 4.1.6 Upgrade Notes . . . 861
Confluence 4.1.5 Release Notes . . . 862
Confluence 4.1.5 Upgrade Notes . . . 864
Confluence 4.1.4 Release Notes . . . 864
Confluence 4.1.4 Upgrade Notes . . . 865
Confluence 4.1.3 Release Notes . . . 866
Confluence 4.1.3 Upgrade Notes . . . 868
Confluence 4.1.2 Release Notes . . . 868
Confluence 4.1.2 Upgrade Notes . . . 872
Confluence 4.1 Release Notes . . . 872
Confluence 4.1 Upgrade Notes . . . 886
Issues Resolved in Confluence 4.1 . . . 888
Confluence 4.0.7 Release Notes . . . 893
Confluence 4.0.7 Upgrade Notes . . . 894
Confluence 4.0.5 Release Notes . . . 894
Confluence 4.0.5 Upgrade Notes . . . 898
Confluence 4.0.4 Release Notes . . . 898
Confluence 4.0.4 Upgrade Notes . . . 900
Confluence 4.0.3 Release Notes . . . 901
Confluence 4.0.3 Upgrade Notes . . . 901
Confluence 4.0 Release Notes . . . 902
Issues Resolved in Confluence 4.0 . . . 917
Confluence 4.0 Upgrade Notes . . . 942
Older Releases . . . 945
Confluence 3.x.x Releases . . . 945
Confluence 3.0.1 Release Notes . . . 946
Coherence license changes SEPT 2009 - new Standard and Clustered Confluence Editions 9 952
Confluence 3.0.1 Upgrade Notes . . . 954
Confluence 3.0.2 Release Notes . . . 958
Confluence 3.0.2 Upgrade Notes . . . 961
Confluence 3.0 Release Notes . . . 963
Confluence 3.0 Known Issues . . . 976
Confluence 3.0 Upgrade Notes . . . 976
Confluence 3 Performance improvements . . . 978
Issues Resolved in Confluence 3.0 . . . 101
Confluence 3.1.1 Release Notes . . . 102
Confluence 3.1.1 Upgrade Notes . . . 103
Confluence 3.1.2 Release Notes . . . 103
Confluence 3.1.2 Upgrade Notes . . . 103

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Confluence 3.1 Release Notes . . . 103
Confluence 3.1 Known Issues . . . 105
Confluence 3.1 Upgrade Notes . . . 105
Issues Resolved in Confluence 3.1 . . . 105
Confluence 3.2.1 Release Notes . . . 105
Confluence 3.2.1 Upgrade Notes . . . 106
Confluence 3.2 Release Notes . . . 106
Confluence 3.2 Upgrade Notes . . . 107
Issues Resolved in Confluence 3.2 . . . 107
Confluence 3.3.1 Release Notes . . . 108
Confluence 3.3.1 Upgrade Notes . . . 108
Confluence 3.3.3 Release Notes . . . 108
Confluence 3.3.3 Upgrade Notes . . . 109
Confluence 3.3 Release Notes . . . 109
Confluence 3.3 Upgrade Notes . . . 110
Issues Resolved in Confluence 3.3 . . . 110
Confluence 3.4.1 Release Notes . . . 111
Confluence 3.4.1 Upgrade Notes . . . 111
Confluence 3.4.2 Release Notes . . . 111
Confluence 3.4.2 Upgrade Notes . . . 111
Confluence 3.4.3 Release Notes . . . 111
Confluence 3.4.3 Upgrade Notes . . . 111
Confluence 3.4.5 Release Notes . . . 111
Confluence 3.4.5 Upgrade Notes . . . 111
Confluence 3.4.6 Release Notes . . . 112
Confluence 3.4.6 Upgrade Notes . . . 112
Confluence 3.4.7 Release Notes . . . 112
Confluence 3.4.7 Upgrade Notes . . . 112
Confluence 3.4.8 Release Notes . . . 112
Confluence 3.4.8 Upgrade Notes . . . 112
Confluence 3.4.9 Release Notes . . . 112
Confluence 3.4.9 Upgrade Notes . . . 112
Confluence 3.4 Release Notes . . . 112
Confluence 3.4 Upgrade Notes . . . 113
Issues Resolved in Confluence 3.4 . . . 113
Confluence 3.5 Release Notes . . . 114
Confluence 3.5 Upgrade Notes . . . 116
Issues Resolved in Confluence 3.5 . . . 116
Confluence 3.5.1 Release Notes . . . 118
Confluence 3.5.1 Upgrade Notes . . . 118
Confluence 3.5.2 Release Notes . . . 118
Confluence 3.5.2 Upgrade Notes . . . 119
Confluence 3.5.3 Release Notes . . . 119
Confluence 3.5.3 Upgrade Notes . . . 119
Confluence 3.5.4 Release Notes . . . 119
Confluence 3.5.4 Upgrade Notes . . . 119
Confluence 3.5.5 Release Notes . . . 119
Confluence 3.5.5 Upgrade Notes . . . 119
Confluence 3.5.6 Release Notes . . . 119
Confluence 3.5.6 Upgrade Notes . . . 119
Confluence 3.5.7 Release Notes . . . 119
Confluence 3.5.7 Upgrade Notes . . . 120
Confluence 3.5.9 Release Notes . . . 120
Confluence 3.5.9 Upgrade Notes . . . 120
Confluence 3.5.11 Release Notes . . . 120
Confluence 3.5.11 Upgrade Notes . . . 120
Confluence 3.5.13 Release Notes . . . 120
Confluence 3.5.13 Upgrade Notes . . . 120
Confluence 3.5.16 Release Notes . . . 120
Confluence 3.5.16 Upgrade Notes . . . 120
Confluence 3.5.17 Release Notes . . . 120
Confluence 3.5.17 Upgrade Notes . . . 120

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Confluence 2.x.x Releases . . . 121
Confluence 2.6.1 Release Notes . . . 121
Confluence 2.6.1 Upgrade Guide . . . 121
Confluence 2.6.2 Release Notes . . . 121
Confluence 2.6.2 Upgrade Guide . . . 121
Confluence 2.6.3 Release Notes . . . 121
Confluence 2.6 Release Notes . . . 121
Confluence 2.6 Upgrade Guide . . . 122
Issues resolved in Confluence 2.6 . . . 122
Confluence 2.7.1 Release Notes . . . 122
Confluence 2.7.1 Upgrade Guide . . . 122
Confluence 2.7.2 Release Notes . . . 122
Confluence 2.7.2 Upgrade Guide . . . 122
Confluence 2.7.3 Release Notes . . . 122
Confluence 2.7.3 Upgrade Guide . . . 122
Confluence 2.7.4 Release Notes . . . 122
Confluence 2.7 Release Notes . . . 122
Issues Resolved in Confluence 2.7 . . . 123
Confluence 2.7 Upgrade Guide . . . 123
Confluence 2.8.1 Release Notes . . . 123
Confluence 2.8.1 Upgrade Notes . . . 123
Confluence 2.8.2 Release Notes . . . 123
Confluence 2.8.2 Upgrade Notes . . . 123
Confluence 2.8.3 Release Notes . . . 123
Confluence 2.8 Beta Release Notes . . . 123
Confluence 2.8 Release Notes . . . 123
Issues resolved in Confluence 2.8 . . . 124
Confluence 2.8 Screen and Menu Changes . . . 124
Confluence 2.8 Upgrade Notes . . . 124
Confluence 2.9.1 Release Notes . . . 125
Confluence 2.9.1 Upgrade Notes . . . 125
Confluence 2.9.2 Release Notes . . . 125
Confluence 2.9.2 Upgrade Notes . . . 125
Confluence 2.9.3 Release Notes . . . 125
Confluence 2.9 Release Notes . . . 125
Confluence 2.9 Upgrade Notes . . . 126
Issues resolved in Confluence 2.9 . . . 126
Confluence 2.10.1 Release Notes . . . 126
Confluence 2.10.1 Upgrade Notes . . . 127
Confluence 2.10.2 Release Notes . . . 127
Confluence 2.10.2 Upgrade Notes . . . 127
Confluence 2.10.3 Release Notes . . . 127
Confluence 2.10.3 Upgrade Notes . . . 128
Confluence 2.10.4 Release Notes . . . 128
Confluence 2.10 Release Notes . . . 128
Confluence 2.10 Upgrade Notes . . . 129
Issues resolved in Confluence 2.10 . . . 129
Workaround For Enabling MySQL 4.1.x with Confluence 2.10 . . . 129
Release Notes 2.0 . . . 129
Issues Resolved for 2.0 . . . 130
Release Notes 2.0.1 . . . 130
Issues resolved for 2.0.1 . . . 130
Release Notes 2.0.2 . . . 130
Issues resolved for 2.0.2 . . . 130
Release Notes 2.0.3 . . . 130
Issues resolved for 2.0.3 . . . 131
Release Notes 2.1 . . . 131
Issues Resolved for 2.1 . . . 131
Release Notes 2.1.1 . . . 131
Issues resolved for 2.1.1 . . . 131
Release Notes 2.1.2 . . . 131
Issues resolved for 2.1.2 . . . 131

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Release Notes 2.1.3 . . . 131
Issues resolved for 2.1.3 . . . 131
Release Notes 2.1.4 . . . 131
Issues resolved for 2.1.4 . . . 131
Release Notes 2.1.5 . . . 131
Issues resolved for 2.1.5 . . . 131
Release Notes 2.2 . . . 131
Issues Resolved for 2.2 . . . 132
Release Notes 2.2.1 . . . 132
Issues resolved for 2.2.1 . . . 132
Release Notes 2.2.2 . . . 132
Issues resolved for 2.2.2 . . . 132
Release Notes 2.2.3 . . . 132
Issues resolved for 2.2.3 . . . 132
Release Notes 2.2.4 . . . 132
Issues Resolved for 2.2.4 . . . 133
Release Notes 2.2.5 . . . 133
2.2.5 Security Patch . . . 133
Release Notes 2.2.6a . . . 133
Issues Resolved for 2.2.6a . . . 133
Release Notes 2.2.7 . . . 133
Issues Resolved for 2.2.7 . . . 133
Release Notes 2.2.8 . . . 133
Issues Resolved for 2.2.8 . . . 133
Release Notes 2.2.9 . . . 133
Issues Resolved for 2.2.9 . . . 133
Release Notes 2.2.10 . . . 133
Release Notes 2.3 . . . 133
FileAppender log4j.properties . . . 134
Issues Resolved for 2.3 . . . 134
Release Notes 2.3.1 . . . 134
Release Notes 2.3.2 . . . 134
Release Notes 2.3.3 . . . 134
Release Notes 2.4 . . . 134
Changes to the Page Permission API in Confluence 2.4 . . . 134
Release Notes 2.4.1 . . . 134
Release Notes 2.4.2 . . . 135
Issues Resolved for 2.4.2 . . . 135
Release Notes 2.4.3 . . . 135
Release Notes 2.4.4 . . . 135
Release Notes 2.4.5 . . . 135
Release Notes 2.5 . . . 135
Issues Resolved for 2.5 . . . 135
Release Notes 2.5.1 . . . 135
Release Notes 2.5.2 . . . 135
Release Notes 2.5.3 . . . 135
Release Notes 2.5.4 . . . 136
Release Notes 2.5.5 . . . 136
Upgrade Guide 2.5.5 . . . 136
Release Notes 2.5.6 . . . 136
Upgrade Guide 2.5.6 . . . 136
Release Notes 2.5.7 . . . 136
Upgrade Guide 2.5.7 . . . 136
Release Notes 2.5.8 . . . 136
Upgrade Guide 2.5.8 . . . 136
Confluence 1.x.x Releases . . . 136
Release Notes 1.0 . . . 136
Release Notes 1.0rc5 . . . 137
Release Notes 1.0b1 . . . 137
Issues Resolved for 1.0b4 . . . 137
Issues Resolved for 1.0 . . . 137
Release Notes 1.0rc2 . . . 137

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Release Notes 1.0rc6 . . . 137
Release Notes 1.0a3 . . . 138
Release Notes 1.0b2 . . . 138
Release Notes 1.0rc1 . . . 138
Release Notes 1.0b3 . . . 138
Release Notes 1.0a2 . . . 138
Release Notes 1.0.1 . . . 138
Issues Resolved for 1.0.1 . . . 139
Release Notes_1.0.1 . . . 139
Release Notes 1.0.3 . . . 139
Issues Resolved for 1.0.3 . . . 139
Release Notes 1.1 . . . 139
Issues Resolved for 1.1 . . . 139
Release Notes 1.1.1 . . . 139
Issues Resolved for 1.1.1 . . . 140
Release Notes 1.1.2 . . . 140
Release Notes 1.2 . . . 140
Issues Resolved for 1.2 . . . 140
Permissions Changes in 1.2 . . . 140
Release Notes 1.2.1 . . . 140
Issues Resolved for 1.2.1 . . . 140
Release Notes 1.2.2 . . . 140
Issues Resolved for 1.2.2 . . . 140
Release Notes 1.2.3 . . . 140
Issues Resolved for 1.2.3 . . . 140
Release Notes 1.3 . . . 140
Confluence Presentation . . . 141
Issues Resolved for 1.3 . . . 141
What's New in 1.3 . . . 141
Release Notes 1.3.1 . . . 141
Issues Resolved for 1.3.1 . . . 141
Release Notes 1.3.2 . . . 141
Issues Resolved for 1.3.2 . . . 141
Release Notes 1.3.4 . . . 141
Issues Resolved for 1.3.4 . . . 141
Release Notes 1.3.5 . . . 141
Issues Resolved for 1.3.5 . . . 142
Release Notes 1.3.6 . . . 142
Release Notes 1.4 . . . 142
Issues Resolved for 1.4 . . . 142
Release Notes 1.4.1 . . . 142
Issues Resolved for 1.4.1 . . . 142
Release Notes 1.4.2 . . . 142
Issues Resolved for 1.4.2 . . . 142
Release Notes 1.4.3 . . . 142
Confluence SOAP Provider Migration . . . 142
Issues Resolved for 1.4.3 . . . 142
Release Notes 1.4.4 . . . 142
Issues Resolved for 1.4.4 . . . 142
Confluence Development Releases . . . 142
Confluence 4.3-RC1 Release Notes . . . 143
Confluence 4.3-Beta1 Release Notes . . . 143
Confluence 4.3-m11 EAP Release Notes . . . 144
Confluence 4.3 EAP only - JIRA Integration with Confluence Notifications . . . 145
Confluence 4.2-Beta3 Release Notes . . . 145
Confluence 4.2-Beta2 Release Notes . . . 145
Confluence 4.2-Beta1 Release Notes . . . 145
Confluence 4.1-rc1 Release Notes . . . 146
Confluence 4.1-rc1 Upgrade Notes . . . 146
Confluence 4.1-m5 EAP Release Notes . . . 146
Confluence 4.0-beta2 ("Beta 2") Release Notes . . . 147
Confluence 4.0-m36 EAP Release Notes . . . 148

Created in 2012 by Atlassian. Licensed under a Creative Commons Attribution 2.5 Australia License.

Confluence 4.0-m29 EAP Release Notes . . . 149
Confluence 4.0-m27 EAP Release Notes . . . 149
Confluence 3.5-rc1 ("Release Candidate 1") Release Notes . . . 150
Confluence 3.5-beta3 ("Beta 3") Release Notes . . . 150
Confluence 3.5-beta2 ("Beta 2") Release Notes . . . 151
Confluence 3.5-beta1 ("Beta 1") Release Notes . . . 151
Confluence 3.5-m4 ("Milestone 4") Release Notes . . . 152
Confluence 3.5-m3 ("Milestone 3") Release Notes . . . 152
Confluence 3.5-m2 ("Milestone 2") Release Notes . . . 153
Confluence 3.5-m1 ("Milestone 1") Release Notes . . . 153
Release Notes 3.4-beta1 ("Beta 1") . . . 153
Release Notes 3.4-m4 ("Milestone 4") . . . 154
Release Notes 3.4-m2 ("Milestone 2") . . . 154
Release Notes 3.4-m1 ("Milestone 1") . . . 155
Release Notes 3.3-beta3 ("Beta3") . . . 156
Release Notes 3.3-m3 ("Milestone 3") . . . 157
Release Notes 3.3-m1 ("Milestone 1") . . . 157
Confluence 3.2 Beta Release Notes . . . 157
Release Notes 3.2-m3 ("Milestone 3") . . . 158
Release Notes 3.2-m4 ("Milestone 4") . . . 159
Confluence 3.1 Release Candidate 1 Release Notes . . . 160
Confluence 3.1 Beta 2 Release Notes . . . 160
Confluence 3.1 Beta 1 Release Notes . . . 161
Confluence 3.1 Newly Deprecated Code . . . 162
Release Notes 3.1-m7 ("Milestone 7") . . . 162
Release Notes 3.1-m6 ("Milestone 6") . . . 163
Release Notes 3.1-m5 ("Milestone 5") . . . 163
Prototype REST API . . . 163
Release Notes 3.1-m4 ("Milestone 4") . . . 163
Release Notes 3.1-m3 ("Milestone 3") . . . 164
Confluence 3.1 Deprecated Code Cleanup . . . 164
Release Notes 3.1-m1 ("Milestone 1") . . . 165
Release Notes 3.0-rc1 ("Release Candidate 1") . . . 166
Release Notes 3.0-beta2 ("Beta 2") . . . 166
Release Notes 3.0-m9 ("Milestone 9") . . . 166
Release Notes 3.0-m8 ("Milestone 8") . . . 166
Release Notes 3.0-m7 ("Milestone 7") . . . 167
Release Notes 3.0-m6 ("Milestone 6") . . . 167
Release Notes 3.0-m5 ("Milestone 5") . . . 168
Release Notes 3.0-m4 ("Milestone 4") . . . 168
Release Notes 3.0-m3 ("Milestone 3") . . . 168
Release Notes 2.10-rc1 ("Release Candidate 1") . . . 169
Release Notes 2.10-m8 ("Milestone 8") . . . 169
Release Notes 2.10-m7 ("Milestone 7") . . . 169
Release Notes 2.10-m5 ("Milestone 5") . . . 169
Release Notes 2.10-m4 ("Milestone 4") . . . 169
Release Notes 2.10-m3 ("Milestone 3") . . . 170
Release Notes 2.10-m2 ("Milestone 2") . . . 170
Release Notes 2.10-m1 ("Milestone 1") . . . 170
Release Notes 2.9-rc1 ("Release Candidate 1") . . . 171
Release Notes 2.9-m5 ("Milestone 5") . . . 171
Release Notes 2.9-m3 ("Milestone 3") . . . 171
Release Notes 2.9-m2 ("Milestone 2") . . . 171
Release Notes 2.8-m9 ("Milestone 9") . . . 171
Release Notes 2.8-m7 ("Milestone 7") . . . 171
Release Notes 2.8-m6 ("Milestone 6") . . . 172
Release Notes 2.8-m4 ("Milestone 4") . . . 172
Release Notes 2.8-m3 ("Milestone 3") . . . 172
Release Notes 2.8-m2 ("Milestone 2") . . . 172
Release Notes 2.7-rc1 ("Release Candidate 1") . . . 172
Release Notes 2.7-m5 ("Milestone 5") . . . 172
Release Notes 2.7-m4 ("Milestone 4") . . . 172

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Release Notes 2.7-m2 ("Milestone 2") . . . 172
Release Notes 2.6-dr1 . . . 173
Including Cascading Stylesheets in Themes for Confluence 2.6 . . . 173
Release Notes 2.3-DR2 . . . 173
Release Notes 2.3-DR1 . . . 173
Release Notes 2.0-RC2 . . . 173
Release Notes 2.0-RC1 . . . 173
Release Notes 1.5-DR2 . . . 173
Release Notes 1.5-DR1 . . . 174
Release Notes 1.4-RC2 . . . 174
Release Notes 1.4-DR7 . . . 174
Release Notes 1.4-DR6 . . . 174
Issues Resolved for 1.4-DR6 . . . 175
Release Notes 1.4-DR4 . . . 175
Release Notes 1.4-DR3 . . . 175
1.4 Interface - Where Did Everything Go? . . . 175
Release Notes 1.4-DR2 . . . 175
Release Notes 1.4-DR1 . . . 177
Release Notes 1.3-final . . . 178
Release Notes 1.3-DR4 . . . 178
Release Notes 1.3-DR3 . . . 178
Release Notes 1.3-DR2 . . . 178
Release Notes 1.3-DR1 . . . 178
Troubleshooting Problems and Requesting Technical Support . . . 179
Content Anonymiser for Data Backups . . . 179
Enabling Detailed SQL Logging . . . 179
Generating a Heap Dump . . . 179
Generating a Thread Dump . . . 179
Generating a Thread Dump Externally . . . 180
Getting Java Crash Log File . . . 180
Profiling using the YourKit Plugin . . . 180
Confluence Resources . . . 180
Trying Confluence in a Demonstration Site or Demo Space . . . 180
Confluence Tutorial Videos . . . 180
Local Confluence Documentation . . . 180
Confluence SharePoint Connector . . . 181
Support Policies . . . 181
Bug Fixing Policy . . . 181
How to Report a Security Issue . . . 181
New Features Policy . . . 181
Patch Policy . . . 181
Security Advisory Publishing Policy . . . 181
Security Patch Policy . . . 181
Severity Levels for Security Issues . . . 181

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Confluence Administrator's Guide

Confluence Administrator's Guide
Configuring Confluence Data and Backups System Administration Importing Data Mail Configuration Security User Management Design and Layout Integrating Confluence and JIRA Plugins and Macros Performance Tuning Character Encoding Support

Additional Resources
Visit the Configuration Guide for documentation on configuring databases and application servers. The Confluence User's Guide has information on how to use Confluence as a collaborative tool. Go to Documentation Home for links to more resources.

Download
You can download the Confluence Admin Guide in PDF, HTML or XML formats.

Site Administrator?
The **Confluence Administrator's Guide** provides information to site administrators on how to manage their Confluence instances. If you still have a question that hasn't been answered, write and tell us about it.

Configuring Confluence

Site Configuration

Configuring the Site Home Page
Editing the Site Title
Editing the Site Welcome Message
Configuring the Destination of View Space Links
Editing the Global Logo
Configuring the Server Base URL
Configuring HTTP Timeout Settings
Configuring System Properties
Customising Default Space Content

Optional Settings

Enabling the Remote API
Enabling Trackback

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Enabling Threaded Comments
Attachment Storage Configuration
Configuring Attachment Size

Display Settings
Configuring Indexing Language
Configuring Character Encoding
Configuring Time and Date Formats
Configuring Number Formats
Configuring Shortcut Links

Data and Backups

Site Backup and Restore
Production Backup Strategy

Backups Configuration
Configuring Backups
Scheduled Jobs
Manually Backing Up the Site

Restoring Data
Restoring a Site
Restoring a Space
Restoring Data During Setup
Retrieve file attachments from a backup
Restoring a Test Instance from Production

Scheduled Jobs
Scheduled Jobs

Data Model
Confluence Data Model

System Administration

System Configuration
Viewing System Information
Viewing and Editing License Details
Cache Statistics
Viewing Site Statistics

System Administration
Content Index Administration
Upgrading Confluence
Migrating Confluence Between Servers
Migrate to Another Database
Important Directories and Files
Rebuilding the Ancestor Table
Finding Unused Spaces

Large Confluence Installations
Operating Large or Mission-Critical Confluence Installations
Configuring a Large Confluence Installation
Overview of Confluence Clusters
Cluster Administration page

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Importing Data

Universal Wiki Converter
Importing Pages from Disk

Mail Configuration

Configuring a Server for Outgoing Mail
The Mail Queue

Security

Overview and Advisories

Security Overview and Advisories

Security Options

Configuring Captcha for Spam Prevention
Managing External Referrers
Hiding external referrers
Hiding External Links From Search Engines
Excluding external referrers
User Email Visibility
Anonymous Access to Remote API
Running Confluence Over SSL or HTTPS

User Management

Confluence User Management

Global Groups Overview
Global Permissions Overview
Setting Up Public Access
Adding and Inviting Users
Editing User Details
Removing or Deactivating Users
Adding or Removing Users in Groups
Restoring Passwords To Recover Admin User Rights

External User Management

Configuring User Directories
Connecting to an LDAP Directory
Requesting Support for External User Management

Crowd User Management

Connecting to Crowd or JIRA for User Management

JIRA User Management

Connecting to Crowd or JIRA for User Management

Design and Layout

Configuring Site and Space Layouts

Customising Look and Feel Overview
Customising Colour Schemes
Customising Site and Space Layouts

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Working With Decorator Macros
Global Templates
Customising the eMail Templates

Configuring Themes
Themes Overview
Creating a Theme
Applying a Theme to a Site
Including Cascading Stylesheets in Themes

Integrating Confluence and JIRA

Integrating JIRA and Confluence
Installing Confluence and JIRA Together
Setting Up Trusted Communication between JIRA and Confluence

Plugin Management

Confluence Plugin Guide
Installing a Plugin
Installing and Configuring Plugins using the Universal Plugin Manager
Configuring the Office Connector
Setting Up Trusted Communication between JIRA and Confluence
Configuring a URL Whitelist for Macros

Macros
Adding, Editing and Removing User Macros
Enabling HTML macros
Enabling the html-include Macro
Troubleshooting the Gallery Macro
Configuring the User List Macro
Working With Decorator Macros
Writing Macros

Performance Tuning

Memory usage and requirements
Configuring a Large Confluence Installation
Performance tuning
Enabling HTTP Compression
Working with Confluence Logs
Page Request Profiling
Profiling using the YourKit Plugin

Character Encoding

Configuring Encoding
Troubleshooting Character Encodings

Support

How to Get Support

Managing Confluence Users

A Confluence user is a person who can read or update a Confluence site. You can choose whether your Confluence site is accessible to anonymous users (people who have not logged in) or only to logged-in users.

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See Setting up Public Access.

Confluence user management

You can add users to Confluence, and then assign them permissions that determine their access to the content and administrative functions in your Confluence site. You can also collect users into groups, and assign the permissions to groups for easier management. See the following topics:

- Adding and Inviting Users
- Removing or Deactivating Users
- Searching For and Administering Users
- Managing Site-Wide Permissions and Groups

By default, Confluence stores its users and groups in the Confluence database. This is called the internal directory. You can choose to connect Confluence to an external userbase instead, such as Microsoft Active Directory or another LDAP server. You can also use Atlassian Crowd and JIRA as directory managers. When you add a user or group to Confluence, it will be added to the external directory too, based on your configuration options. See Configuring User Directories.

On this page:

- Confluence user management
- Authentication
  - Seraph
  - XML-RPC and SOAP authentication
  - Password authentication
- Earlier user management frameworks

Related pages:

- Configuring Confluence Security
- Confluence Administrator's Guide

⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Authentication

Seraph

Almost all authentication in Confluence (and JIRA) is performed through Seraph, Atlassian's open source web authentication framework. The goal of Seraph is to provide a simple, extensible authentication system that we can use on any application server.

Seraph is implemented as a servlet filter. Its sole job is, given a web request, to associate that request with a particular user (or no user if the request is anonymous). It supports several methods of authentication, including HTTP Basic Authentication, form-based authentication, and looking up credentials already stored in the user's session.

Seraph itself performs no user management functions. It merely checks the credentials of the incoming request and delegates any user management functions (looking up a user, checking a user's password) to Confluence's user management system.

If you want to integrate Confluence with your own single sign-on (SSO) infrastructure, you would do so by installing Atlassian Crowd or by writing a custom Seraph authenticator. See our developer documentation on HTTP authentication with Seraph.

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XML-RPC and SOAP authentication

Normally, requests for Confluence's remote API will include an authentication token as the first argument. With this method of authentication, XML-RPC and SOAP authentication requests are checked directly against the user management framework, and tokens are assigned directly by the remote API subsystem. These requests do not pass through Seraph authenticators.

However, if the token argument is blank, Seraph will be used as a fallback authentication method for remote API requests. So, to use a custom Seraph authenticator with XML-RPC or SOAP requests, ensure that you pass an empty string as the authentication token to remote API methods.

Password authentication

By default, password authentication is delegated from Seraph to the user management system. This is not necessary, however. Single sign-on systems may have no password authentication at all, and get all the necessary credentials from the SSO provider.

Earlier user management frameworks

- **Atlassian-User – now behind the scenes.** Atlassian-User is a user and group management framework developed by Atlassian. It provides user, group and profile management services to Confluence. In earlier versions of Confluence, you needed to configure your user directories by editing the `atlassian-user.xml` file directly. In Confluence 3.5 and later this is no longer necessary, nor is it possible. Please refer to the documentation for Confluence 3.4 or earlier, if you need details of this framework. Refer to the Confluence 3.5 Upgrade Notes for details of the automatic migration that will occur during the upgrade process.
- **OSUser – obsolete.** OpenSymphony User was Confluence's core user management framework before Atlassian-User. Please refer to the documentation for Confluence 3.4 or earlier, if you need details of this framework.

Adding and Inviting Users

There are a number of ways to add users to Confluence:

- **By user signup**: If user signup is enabled on your Confluence site, people can add themselves as users of the site. See below.
- **Via an invitation link:** You can invite people to sign up, by sending them an invitation link. You can copy and paste the link, or prompt Confluence to send the link in an email message. See below.
- **By adding users manually**: Administrators with Confluence Administrator or System Administrator permissions can add new users. See below.
- **Via an external user directory**: See Configuring User Directories.

Allowing user signup

If you enable user signup, a 'Sign Up' option will appear on the Confluence screens. The option will be on the login screen, and also in the header on public sites. People can choose the option to create their own usernames on Confluence.

You can restrict the signup to people whose email addresses are within a given domain or domains. This is useful if you want to ensure that only people within your organisation can add their own usernames.

You will still be able to add or invite users manually, whether user signup is enabled or not.

You need Confluence Administrator or System Administrator permissions to change the signup options.

To set the user signup options:

1. Choose **Invite Users** on the dashboard, then choose **User Signup Options**.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Then choose **Users** > **User Signup**

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Options.
2. Choose **Allow people to sign up to create their account**.
3. Choose one of the following options:
   - **Restricted by domain(s)** – Note: You need to set up a mail server for Confluence before you can configure domain restricted signup. When you choose this option, a text box will appear. Enter one or more domains, separated by commas. People will only be able to sign up if their email address belongs to one of the domains specified here. Confluence will send the person an email message, asking them to click a link to confirm their email address.
     For example: `mydomain.com, mydomain.net`
   - **No restrictions** – Anyone will be able to sign up to Confluence. Confluence will not send any email message requesting confirmation.
4. Choose **Notify administrators by email when an account is created** if you want Confluence to send an email message to all administrators (people with Confluence Administrator or System Administrator permissions) every time someone signs up to Confluence.

On this page:

- Allowing user signup
- Enabling and disabling notifications about user signup
- Inviting people to sign up
- Resetting the invitation link
- Adding users manually
- Notes

Related pages:

- Managing Confluence Users
- Configuring a Server for Outgoing Mail
- Confluence Administrator's Guide

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Enabling and disabling notifications about user signup

By default, Confluence will send an email notification to all Confluence administrators whenever someone signs up to the Confluence site. The administrators (people with Confluence Administrator or System Administrator permissions) will receive this message when someone signs up either by clicking the 'Sign Up' link or by clicking the invitation URL sent by an administrator.

To disable this notification:

1. Choose **Invite Users** on the dashboard, then choose **User Signup Options**.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Then choose **Users** > **User Signup Options**.
2. Remove the tick from **Notify administrators by email when an account is created**.
3. Choose **Save**.

Screenshot: User signup options

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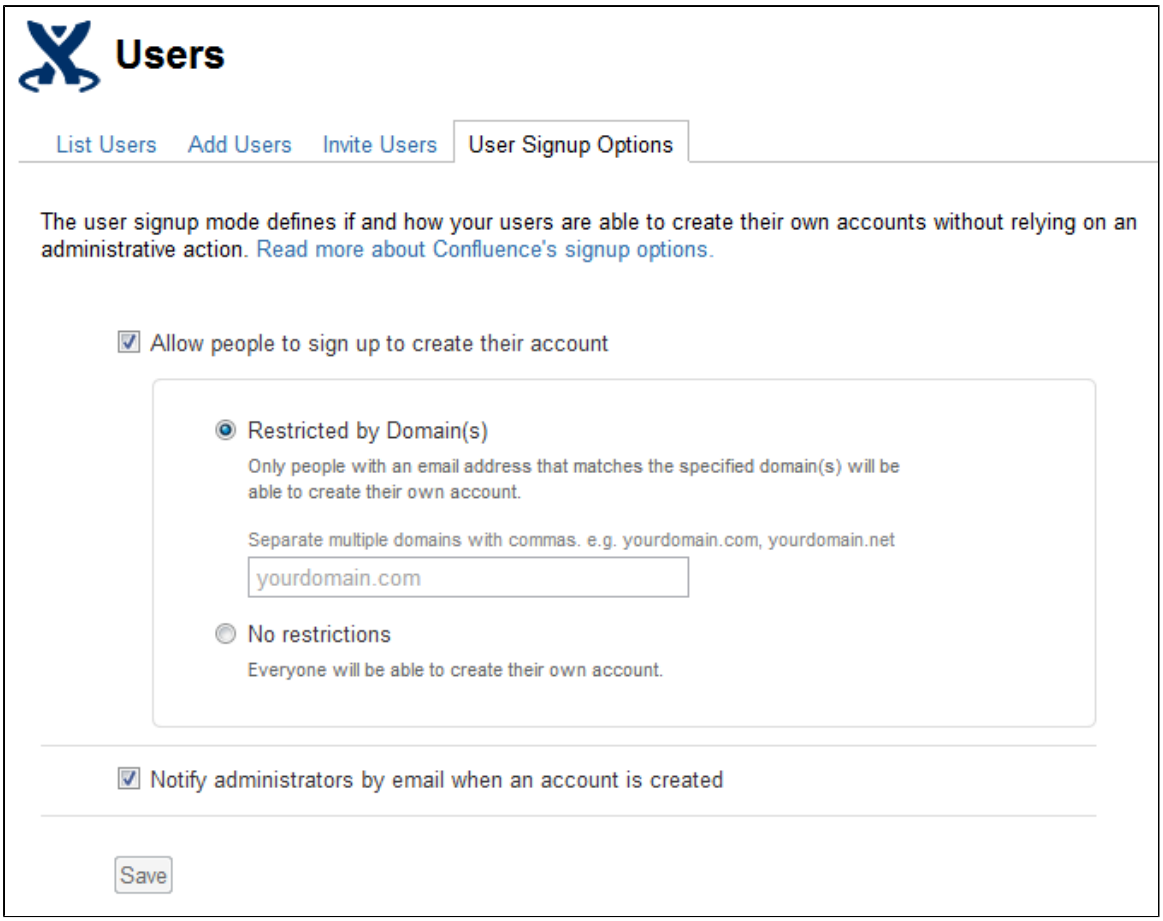

Inviting people to sign up

You can invite new users to the site by sending them a signup URL, called an 'invitation link'. You can copy the invitation link and paste it onto a page or into an email message, or you can prompt Confluence to send an email message containing the same link.

The option to send invitations is independent of the signup options. You can send invitations if signup is open to all, restricted by domain, or disabled entirely. Even if signup is disabled, a person who has received an invitation will be able to sign up.

When someone visits the invitation link in a browser, a Confluence signup screen will appear.

To invite people to sign up:

1. Choose **Invite Users** on the dashboard.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Then choose **Users** > **Invite Users**.
2. Copy the **Invitation Link** and paste it into an email message, or onto a page on your intranet, for example.
3. Alternatively, prompt Confluence to send an email message for you:
   - Enter one or more email addresses in the field labelled **Email To**. Separate the addresses with commas. For example: `john@example.com, sarah@example.com`
   - Optional: Change the **Message** if you want to.
   - Choose **Send**.

Resetting the invitation link

The invitation link includes a security token, like this:

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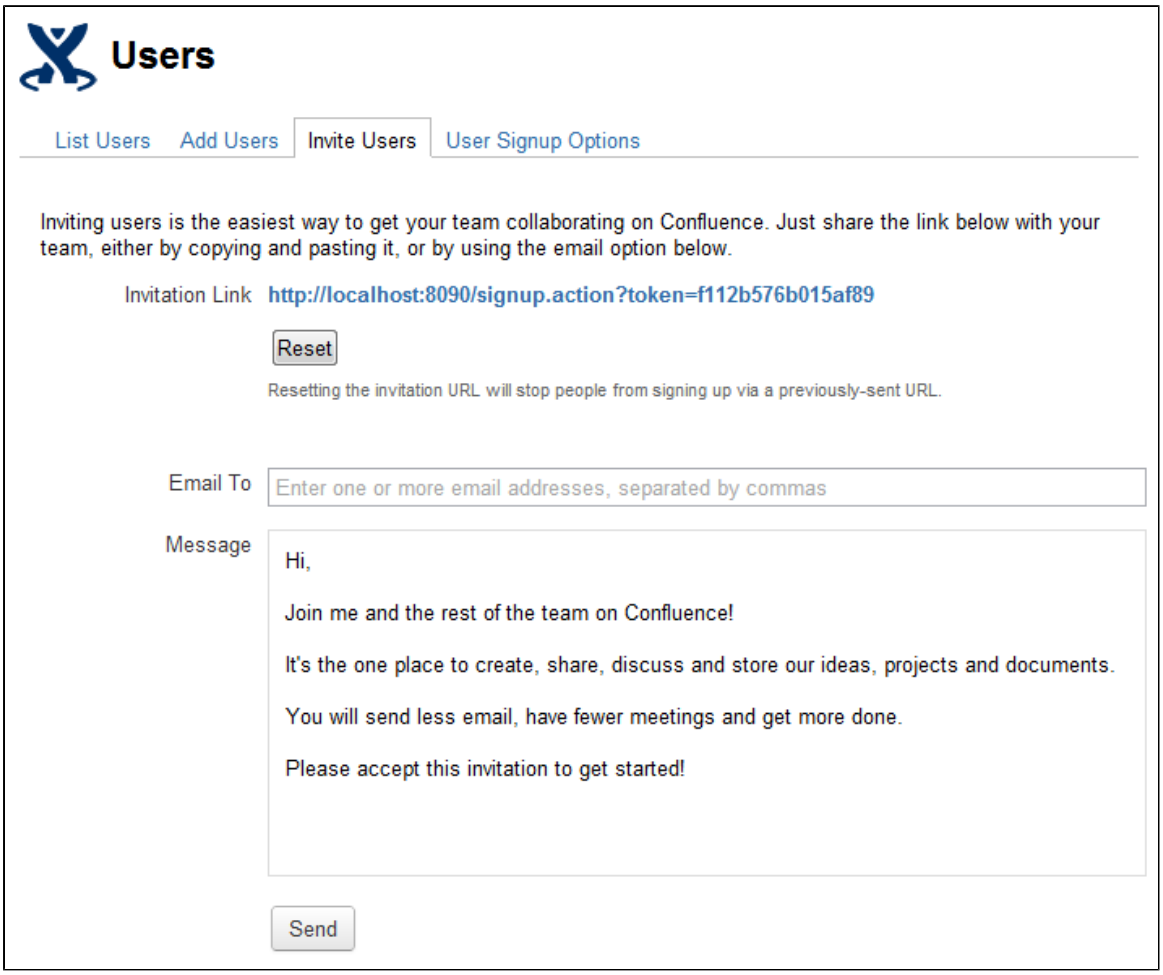
```
http://confluence.example.com/signup.action?token=d513a04456312c47
```

This security token is a shared token – individual invitations do not have unique tokens. Anyone who obtains this token will be able to sign up to Confluence.

You can change the token at any time, by choosing **Reset**. The previous invitation link will become unusable. People will no longer be able to use the previous link to sign up. If they try, they will see an error message that the signup token has expired.

Screenshot: Inviting users



Adding users manually

To add a new user:

1. Choose **Invite Users** on the dashboard, then choose **Add Users**.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Then choose **Users** > **Add Users**.
2. Enter the user's details: username, name, password, and email address.
3. Choose whether Confluence should send an **email** message informing the person of their new username. The email message will contain a link that the person can use to reset their password.
4. Choose **Create**.

Screenshot: Adding users

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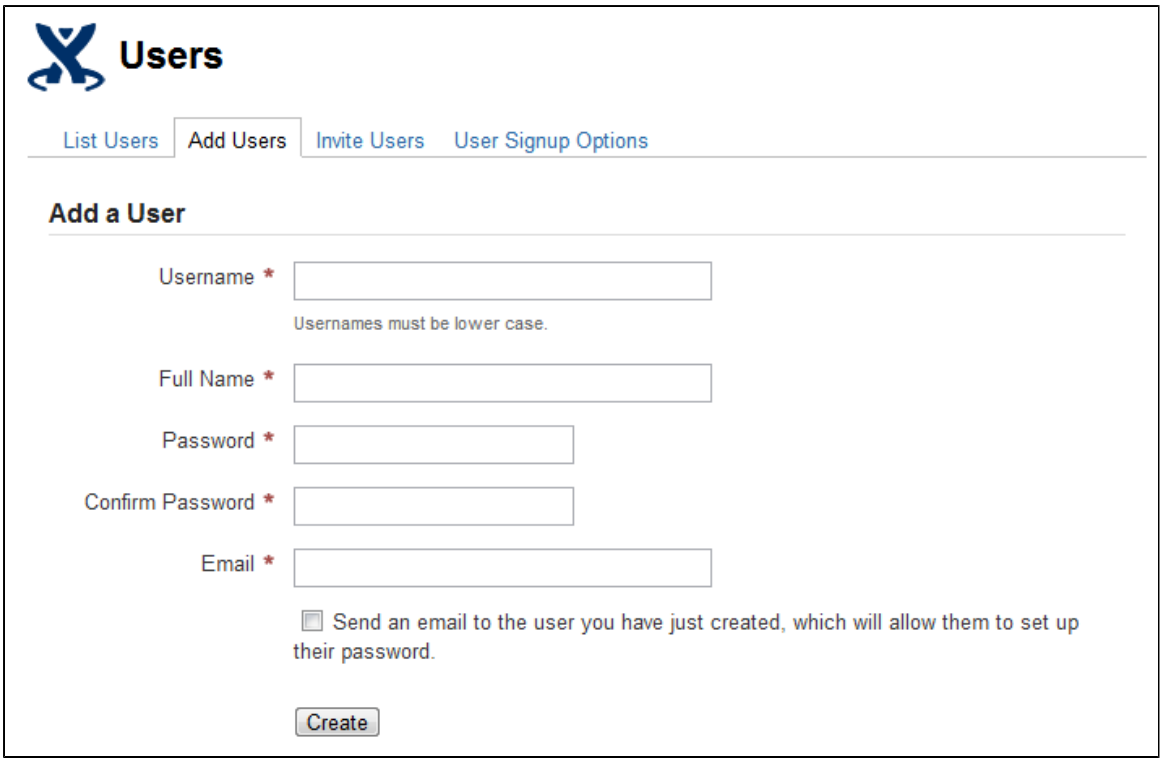

Notes

- **Multiple directories.**You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:
  - The order of the directories is the order in which they will be searched for users and groups.
  - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

  See Managing Multiple Directories.

- **Email server required for domain restricted signup and for invitations.** You need to set up a mail server for Confluence, before you can configure domain restricted signup or send email invitations to users.
- **Are the user management options not visible?** If you have external user management turned on, internal user management is disabled. To configure external user management, go to **Browse** > **Confluence Admin** > **Security Configuration**. See Disabling the Built-In User Management.

Removing or Deactivating Users

If you are a Confluence Administrator, you can remove and deactivate users.

You can **remove** a user from Confluence if they have not yet added or edited any content on the site. Such content includes pages and blog posts, and edits and comments on existing pages.

You can **deactivate**, or disable, a user, including one who has contributed content.

- Deactivated users can no longer log in to Confluence.
- Deactivating a user will not remove the content created by them.
- Deactivated users do not count towards your license count. (See the notes below.)

Related pages:

- Managing Confluence Users
- Configuring User Directories

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> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

To remove a user:

1. Go to the user's profile and choose **Administer User**.
2. Choose **Remove**.

To deactivate a user:

1. Go to the user's profile and choose **Administer User**.
2. Choose **Disable**.

Screenshot: Administering a user

User:	alui
Full Name:	Andrew Lui [Atlassian Technical Writer]
Email:	alui@atlassian.com
Directory:	Confluence Internal Directory
Created:	Feb 24, 2011 18:47
Last Updated:	Feb 24, 2011 18:47
Login:	**Last Login:** Mar 13, 2011 22:34 **Last Failed Login:** Jan 26, 2011 19:25 **Total Failed Login Count:** 3 **Current Failed Login Count:** 0
Groups:	atlassian-developers atlassian-staff confluence-administrators confluence-managers confluence-users documentation licensed-contributors
View Profile | Edit Groups | Edit Details | Set Password | Remove | Disable	

Notes

- The **Administer User** link is only visible if you are logged in as an administrator.
- You can also remove or disable users using the Administration Console.
- You can edit the groups that a user belongs to, to change their permissions without completely preventing their access to Confluence.
- **Multiple user directories:** You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:
  - The order of the directories is the order in which they will be searched for users and groups.
  - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

  See Managing Multiple Directories.

- **Number of users and your license:** The Confluence 'License Details' screen tells you how many users

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your Confluence instance is licensed to support, and how many are currently registered. See Viewing and Editing License Details. The number of registered users includes only users who have the 'Can Use' global permission. Deactivated users, as described above, are not included.

Searching For and Administering Users

If you have Confluence Administrator permissions, you can view users, edit their user details, reset their passwords, and assign them to groups.

Accessing the user management screen

There are two ways to do this.

Option 1: Administer a known user:

- Go to a user's profile
- Choose **Administer User**.

Option 2: Find the user first:

- Choose **Browse** > **Confluence Admin**.
- Choose **Users** in the left-hand panel.
- The 'Users' screen appears. You can now list all users or search for a specific user.

Listing all users

To list all users:

1. Choose **Show all users**. All members of the `confluence-users` group are listed in alphabetical order, by username. If there are more users than can fit on one page, the results will be divided into multiple pages.
2. To move to another page of results, choose the numbered links, **Next** or **Previous** near the top or bottom of the page.
3. To specify how many results should be shown per page, choose a number **10**, **20**, **50** or **100** near the top of the page.

On this page:

- Accessing the user management screen
- Listing all users
- Using the simple user search
- Using the advanced user search
- Notes

Related pages:

- Adding and Inviting Users
- Giving People Access to Content
- Confluence Administrator's Guide

⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Using the simple user search

To search for a user via the simple user search:

1. If the **Simple** link is showing, choose it. (If you see the 'Advanced' link and no 'Simple' link, then the

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simple search is already active.)
2. Type some information about the user into the 'Find User' text box. You can type all or part of their username, full name or email address.
3. Choose **Search**.
4. Confluence will display a list of matching users. Click the link on a username to see and edit the details for that user.

Using the advanced user search

The advanced user search allows you to specify the field in which your search term appears: username, full name or email address. This is useful if you need to limit the number of users appearing in the search results.

To search via the advanced user search:

1. If the **Advanced** link is showing, choose it. (If you see the 'Simple' link and no 'Advanced' link, then the advanced search is already active.)
2. Complete one or more of the following fields:
   - **Username** — Enter all or part of the person's username. This is their login ID, such as 'joe', or 'bloggs'.
   - **Full Name** — Enter all or part of the person's name. For example, 'joe bloggs', or 'bloggs', or 'joe'.
   - **Email** — Enter all or part of the person's email address. For example, 'acme'.
3. Choose **Search**.
4. Confluence will display a list of matching users. Click the link on a username to see and edit the details for that user.

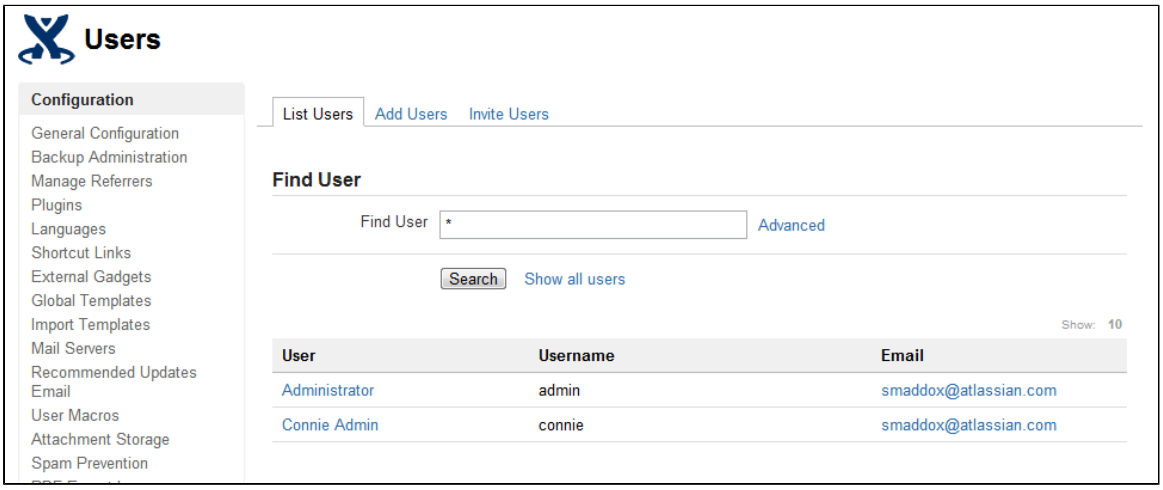
Notes

- **Multiple user directories:** You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:
  - The order of the directories is the order in which they will be searched for users and groups.
  - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

  See Managing Multiple Directories.

- **Crowd and the user search:** If you are using Atlassian's Crowd for user management, you will need Crowd 1.5.1 or later to use the 'Simple' option in the user search. If your version of Crowd does not support the simple user search, you will see only the 'Advanced' search form.

Screenshot: The user management screen



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Editing User Details

To update a user's details:

1. First, go to the user management screen for the user concerned. There are two ways to do this:
   - Either,
     - Go to the user's Profile and click the '**Administer User**' link on the user's profile screen.
   - Or, Choose **Browse** > **Confluence Admin**.
     - Select the link '**Manage Users**' in the left-hand panel.
     - Locate the user by doing a search on the username or the groups to which they belong.
     - Click the user link.
2. Now you should be able to see the user's current details and links allowing you to edit them.
   - **View Profile** — View the user's profile.
   - **Edit Groups** — Add or remove this user from a group.
   - **Edit Details** — Change details such as the user's name, email address, contact details and team or department information.
     Changing a user's username is not supported. See Changing Usernames for information.
   - **Set Password** — Edit the user's password details.
   - **Remove** — You can remove a user permanently if the user has not added or edited any content on the site.
   - **Disable** — You can disable (i.e. deactivate) access for a user who has already added or edited any content on the site.

User:	alui
Full Name:	Andrew Lui [Atlassian Technical Writer]
Email:	alui@atlassian.com
Directory:	Confluence Internal Directory
Created:	Feb 24, 2011 18:47
Last Updated:	Feb 24, 2011 18:47
Login:	**Last Login:** Mar 13, 2011 22:34 **Last Failed Login:** Jan 26, 2011 19:25 **Total Failed Login Count:** 3 **Current Failed Login Count:** 0
Groups:	atlassian-developers atlassian-staff confluence-administrators confluence-managers confluence-users documentation licensed-contributors
View Profile | Edit Groups | Edit Details | Set Password | Remove | Disable	

Screenshot above: User details

> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Notes

- **Multiple user directories:** You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:

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- The order of the directories is the order in which they will be searched for users and groups.
- Changes to users and groups will be made only in the first directory where the application has permission to make changes.

See Managing Multiple Directories.

RELATED TOPICS

No content found for label(s) managing-users.

Administrators Guide Home Confluence Documentation Home

Resetting the Login Count for a User

Confluence records the number of failed logins attempts made against each user account. When the login attempts exceed a preset number (see Configuring Captcha for Failed Logins), the user will prompted to authenticate using CAPTCHA until they successfully log in.

If you are a Confluence Administrator, you can manually reset the failed login count for a user.

> *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

To reset the failed login count for a user,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Manage Users**' in the left-hand panel. The '**Manage Users**' screen appears, as shown below.
3. Search for the desired user and click the user in the search results. The 'View User' screen will be displayed.
4. Click the '**Reset Failed Login Count**' for the user. The 'Current Failed Login Count' will be reset to 0.

Screenshot: Resetting failed login count for a user

Changing Usernames

A **username** is the name used to log into Confluence, eg. `jsmith`.

> Currently, there is no straightforward method for changing a username and its associated content, to that of another user. The only practicable method currently available is to execute direct SQL queries on your database. There is a feature request to facilitate this process via a web interface and you can vote for it to improve its chances of being implemented. Be aware, however, that no matter what method you use to change usernames in Confluence, there is **no support** provided for this process. The instructions below provide suggested guidelines on how to change a username via SQL queries, although this may vary depending on your database.

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The information on this page does not apply to Confluence OnDemand.

Instructions For Changing Usernames

This document is for use with 3.5 or later. If using an earlier version, please see the 3.4 version of the page.

The following SQL commands are only tested for MySQL and PostgreSQL Databases. If you have any other database please contact your DBA to determine the equivalent queries.

Usernames can only be changed through direct update to the Confluence database.

1. If you have a database administrator, request that they approve the database-related steps described below
2. If you are using JIRA user management, Revert from JIRA To Internal User Management
3. Backup Confluence
4. If you are using MySQL, make sure you are not running in safe updates mode:

```
set sql_safe_updates=0;
```

5. Create a `usermigration`table:

```
create table usermigration
(
oldusername varchar(255),
newusername varchar(255)
)
```

6. Usernames that will be changed must be placed in the `usermigration`table with their current and planned usernames:

```
insert into usermigration (oldusername, newusername)
values ('oldusername', 'newusername');
```

7. Run the following SQL commands:
   a. If you have command line access to your database, download the scripts for PostgreSQL or MySQL then run them against your database:

      PostgreSQL

```
$ psql -f PostgreSQLChangeUsernames.sql your_database_name
```

      MySQL

```
$ mysql your_database_name < MySQLChangeUsernames.sql
```

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b. Otherwise, run the following:
   i. If your DB administration tool does not support multiple SQL queries, these must be entered individually:

PostgreSQL

```
update attachments
set creator = newusername from usermigration u
where creator = u.oldusername;

update attachments
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update content
set creator = newusername from usermigration u
where creator = u.oldusername;

update content
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update content
set username = newusername from usermigration u
where username = u.oldusername;

update content_label
set owner = newusername from usermigration u
where owner = u.oldusername;

update content_perm
set creator = newusername from usermigration u
where creator = u.oldusername;

update content_perm
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update content_perm
set username = newusername from usermigration u
where username = u.oldusername;

update cwd_user
set lower_user_name = lower(newusername) from usermigration u
where lower_user_name = lower(u.oldusername);

update cwd_user
set user_name = newusername from usermigration u
where user_name = u.oldusername;

update extrnlnks
set creator = newusername from usermigration u
where creator = u.oldusername;

update extrnlnks
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update follow_connections
set followee = newusername from usermigration u
where followee = u.oldusername;
```

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```
update follow_connections
set follower = newusername from usermigration u
where follower = u.oldusername;

update label
set owner = newusername from usermigration u
where owner = u.oldusername;

update links
set creator = newusername from usermigration u
where creator = u.oldusername;

update links
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update notifications
set creator = newusername from usermigration u
where creator = u.oldusername;

update notifications
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update notifications
set username = newusername from usermigration u
where username = u.oldusername;

update pagetemplates
set creator = newusername from usermigration u
where creator = u.oldusername;

update pagetemplates
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update rememberme token
set username = newusername from usermigration u
where username = u.oldusername;

update spacegroups
set creator = newusername from usermigration u
where creator = u.oldusername;

update spacegroups
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update spacepermissions
set creator = newusername from usermigration u
where creator = u.oldusername;

update spacepermissions
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update spacepermissions
set permusername = newusername from usermigration u
where permusername = u.oldusername;

update spaces
set creator = newusername from usermigration u
where creator = u.oldusername;
```

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```
update spaces
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;

update trackbacklinks
set creator = newusername from usermigration u
where creator = u.oldusername;
```

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```
update trackbacklinks
set lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;
```

MySQL

```
update ATTACHMENTS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update ATTACHMENTS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update CONTENT a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update CONTENT a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update CONTENT a, usermigration u
set a.username = u.newusername
where a.username = u.oldusername;

update CONTENT_LABEL a, usermigration u
set a.owner = u.newusername
where a.owner = u.oldusername;

update CONTENT_PERM a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update CONTENT_PERM a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update CONTENT_PERM a, usermigration u
set a.username = u.newusername
where a.username = u.oldusername;

update CWD_USER a, usermigration u
set a.lower_user_name = LOWER(u.newusername)
where a.lower_user_name = LOWER(u.oldusername);

update CWD_USER a, usermigration u
set a.user_name = u.newusername
where a.user_name = u.oldusername;

update EXTRNLNKS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update EXTRNLNKS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update FOLLOW_CONNECTIONS a, usermigration u
set a.followee = u.newusername
```

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```
where a.followee = u.oldusername;

update FOLLOW_CONNECTIONS a, usermigration u
set a.follower = u.newusername
where a.follower = u.oldusername;

update LABEL a, usermigration u
set a.owner = u.newusername
where a.owner = u.oldusername;

update LINKS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update LINKS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update NOTIFICATIONS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update NOTIFICATIONS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update NOTIFICATIONS a, usermigration u
set a.username = u.newusername
where a.username = u.oldusername;

update PAGETEMPLATES a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update PAGETEMPLATES a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update REMEMBERMETOKEN a, usermigration u
set a.username = u.newusername
where a.username = u.oldusername;

update SPACEGROUPS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update SPACEGROUPS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update SPACEPERMISSIONS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;

update SPACEPERMISSIONS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update SPACEPERMISSIONS a, usermigration u
set a.permusername = u.newusername
where a.permusername = u.oldusername;

update SPACES a, usermigration u
```

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```
set a.creator = u.newusername
where a.creator = u.oldusername;

update SPACES a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;

update TRACKBACKLINKS a, usermigration u
set a.creator = u.newusername
where a.creator = u.oldusername;
```

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```
update TRACKBACKLINKS a, usermigration u
set a.lastmodifier = u.newusername
where a.lastmodifier = u.oldusername;
```

ii. Reassign user preferences in the OS_PROPERTYENTRY table. Usernames in the OS_PROPERTYENTRY table need to be prefixed with 'CWD_'.

PostgreSQL

```
update os_propertyentry
set entity_name = 'CWD_' || newusername from usermigration u
where entity_name = 'CWD_' || u.oldusername;
```

MySQL

```
update OS_PROPERTYENTRY a, usermigration u
set a.entity_name = concat('CWD_', u.newusername)
where a.entity_name = concat('CWD_', u.oldusername);
```

iii. Reassign personal spaces and settings associated with the old username to the new username. The tilda (~) is required as it is prepended to the space key of all personal spaces:

PostgreSQL

```
update spaces
set spacekey = '~' || newusername from usermigration u
where spacekey = '~' || u.oldusername;

update bandana
set bandanacontext = '~' || newusername from usermigration u
where bandanacontext = '~' || u.oldusername;
```

MySQL

```
update SPACES a, usermigration u
set a.spacekey = concat('~', u.newusername)
where a.spacekey = concat('~', u.oldusername);

update BANDANA a, usermigration u
set a.bandanacontext = concat('~', u.newusername)
where a.bandanacontext = concat('~', u.oldusername);
```

8. Each username is associated with a full name. For example, username 'jsmith' may have a full name of 'John M Smith'. If this fullname needs to be changed, modify the `first_name`, `lower_first_name`, `last_name` and `lower_last_name` in the `cwd_user` table. Ensure the `lower_` columns are merely copies of their normal counterparts but with all letters in lower case. Then modify the `display_name` and `lower_display_name` columns so that they are the `first_name` and `last_name` columns or the `lower_first_name` and `lower_last_name` columns put together but separated by a space.

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Rebuild the Indexes

After all the updates, it's necessary to Rebuild the Indexes from Scratch

All old usernames in Confluence should now be replaced with the new usernames from the `usermigration` table.

RELATED TOPICS

No content found for label(s) confluence-usermanagement.

Administrators Guide Home Confluence Documentation Home

Restoring Passwords To Recover Admin User Rights

Use this document if you are unable to log in to Confluence as administrator. The most common reason for using these instructions is if you have lost the administration password for your Confluence site.

Before you Start

Please note the following before you start:

- The following instructions include example SQL that should work on MySQL and PostgreSQL. You may need to customise the queries for other databases or for your installation.
- We strongly recommend testing the queries on a test database before modifying your production database.

New user management in Confluence 3.5 and later

- Confluence now uses the `CWD_USER` table in the database to store and refer to its users.
- When you imported your backup on upgrade from Confluence 3.4.9 or earlier, the upgrade process copied the users from the `OS_USER` table (for upgrades from versions older than 2.7) or the `USERS` table (for versions 2.7 to 3.4) into the `CWD_USER` table.
- The new user management framework also introduced user directories. Making modifications to users in the database will only fully work for users in Confluence's Internal Directory. The instructions below include extra steps for instances in which the user management has been delegated to external sources (via LDAP, Crowd or JIRA).

Please refer to the older documentation if you are still using OSUser or AtlassianUser.

Using Crowd for SSO

- If Confluence is configured for SSO through Crowd, you will only be able to authenticate as users from the Crowd server.
- This document covers how to recover administration rights from the local 'Confluence Internal Directory' only. However, you will not be able to authenticate as a local Confluence administrator while Crowd SSO is enabled. Please refer to Integrating Crowd with Atlassian Confluence for details on how to configure or disable Crowd SSO.

On this page:

- Before you Start
- Step 0. Get access to the database
- Step 1. Identify Administrator
- Step 2. Replace Administrator Password
- Step 3. Put the Internal Directory in First Position
- Step 4. Clean Up
- Notes

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> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Step 0. Get access to the database

If you are using the embedded HSQL database, you can find the files containing your database in `<confluence-home-directory>/database`. When you shut down Confluence, the SQL will be written to a '.script' or '.log' file in that directory to which you can append the SQL described below.

If you are using a proper production database, connect to the database with your normal tools. You will need to have permission to run queries and update data in the database.

Step 1. Identify Administrator

To find out which usernames have admin privileges, connect to your database using a database admin tool such as DBVisualiser. Please download a database admin tool now if you do not have one installed already. Then connect to your database and retrieve the list of administrator usernames and IDs with:

```
select u.id, u.user_name from cwd_user u
join cwd_membership m on u.id=m.child_user_id join cwd_group g on
m.parent_id=g.id join cwd_directory d on d.id=g.directory_id
where g.group_name = 'confluence-administrators' and d.directory_name='Confluence
Internal Directory';
```

If there are multiple results, choose one ID/username combination to use for the following steps.
If there are no results, skip down to 'If No Local Users Exist' in Step 2.

Step 2. Replace Administrator Password

Confluence does not store passwords in plain text in the database, but uses hashes computed from the original password. You will need to insert a hash, rather than the plain password, over the existing password in the database. Below is the hash for the password `admin`

```
x61Ey612Kl2gpFL56FT9weDnpSo4AV8j8+qx2AuTHdRyY036xxzTTrw10Wq3+4qQyB+XURPWx1ONxp3Y3
pB37A==
```

For an External Database

To change the password to `admin` for a given username:

1. Shut down Confluence.
2. Connect to your database.
3. Run the following SQL:

```
update cwd_user set credential =
'x61Ey612Kl2gpFL56FT9weDnpSo4AV8j8+qx2AuTHdRyY036xxzTTrw10Wq3+4qQyB+XURPWx1
ONxp3Y3pB37A=='
where id=<id from Stage 1>;
```

For the Evaluation Embedded HSQL Database

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To change the password to `admin` for a given username:

1. Shut down Confluence.
2. Open `<confluence-home>/database/confluencedb.script`, or `confluencedb.log` if the .script file looks empty.
3. Search for:

```
INSERT INTO CWD_USER VALUES(
```

4. Keep searching until you find the appropriate user, then replace their password with the hash value above.
5. Save the file.
6. Restart Confluence.

If No Local Users Exist

There may be no administrators in your Internal Directory. If this is the case, you need to add one:

1. Add a new admin user by running:

```
insert into cwd_user(id, user_name, lower_user_name, active, created_date,
updated_date, first_name, lower_first_name, last_name, lower_last_name,
display_name, lower_display_name, email_address, lower_email_address,
directory_id, credential) values (1212121, 'admin', 'admin', 'T',
'2009-11-26 17:42:08', '2009-11-26 17:42:08', 'A. D.', 'a. d.',
'Ministrator', 'ministrator', 'A. D. Ministrator', 'a. d. ministrator',
'admin@example.com', 'admin@example.com', (select id from cwd_directory
where directory_name='Confluence Internal Directory'),
'x61Ey612Kl2gpFL56FT9weDnpSo4AV8j8+qx2AuTHdRyY036xxzTTrw10Wq3+4qQyB+XURPWx1
ONxp3Y3pB37A==');
```

2. Add new groups by running:

```
insert into cwd_group(id, group_name, lower_group_name, active, local,
created_date, updated_date, description, group_type, directory_id)
values (
'888888','confluence-administrators','confluence-administrators','T','F','2
011-03-21 12:20:29','2011-03-21 12:20:29',NULL,'GROUP',(select id from
cwd_directory where directory_name='Confluence Internal Directory'));
insert into cwd_group(id, group_name, lower_group_name, active, local,
created_date, updated_date, description, group_type, directory_id)
values ( '999999','confluence-users','confluence-users','T','F','2011-03-21
12:20:29','2011-03-21 12:20:29',NULL,'GROUP',(select id from cwd_directory
where directory_name='Confluence Internal Directory'));
```

3. Add group memberships into cwd_membership:

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```
insert into cwd_membership (id, parent_id, child_user_id) values (888888,
(select id from cwd_group where group_name='confluence-users' and
directory_id=(select id from cwd_directory where directory_name='Confluence
Internal Directory')), 1212121);
insert into cwd_membership (id, parent_id, child_user_id) values (999999,
(select id from cwd_group where group_name='confluence-administrators' and
directory_id=(select id from cwd_directory where directory_name='Confluence
Internal Directory')), 1212121);
```

⚠️ If using an Oracle database, use **sysdate** instead of a string for the **`created_date`** column.

Step 3. Put the Internal Directory in First Position

Start Confluence, and try logging in with the username of the user you updated/created and the password 'admin'. If this works, skip to Step 4. Otherwise, your Internal Directory does not have high enough priority.

To put your Internal Directory in first position:

1. Find the directory names and their order:

```
select d.id, d.directory_name, m.list_index from cwd_directory d join
cwd_app_dir_mapping m on d.id=m.directory_id;
```

2. Take note of the ID with list_index 0, and the list_index and ID of the Confluence Internal Directory.
3. Switch the order of the directories:

```
update cwd_app_dir_mapping set list_index = 0 where directory_id =
<Internal Directory id>;
update cwd_app_dir_mapping set list_index = <Noted Internal Directory
list_index> where directory_id = <Directory id that had list_index 0>;
```

4. Check to see if the directory is active (the 'active' column should be set to 'T'):

```
select id, directory_name, active from cwd_directory where id = <Internal
Directory id>;
```

5. If necessary, activate the directory:

```
update cwd_directory set active = 'T' where id = <Internal Directory id>;
```

Step 4. Clean Up

To tidy up:

1. Start Confluence.
2. Log in with your modified/created username and use password `admin`
3. Change your password. **Do not leave your password as admin, or your instance will not be secure**.

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4. If you created a new user in Stage 2, create a new admin via the UI and delete the admin you created in Stage 2.
5. If you followed Stage Three, go to Confluence Administration > User Directories and rearrange your directories so they are correctly configured again.

Notes

- Learn more about the password hash algorithm Confluence is using.

Managing Site-Wide Permissions and Groups

Permissions determine what people can do on your Confluence site. Confluence recognises permissions at site level and at space level, as well as page-level restrictions.

You can create groups and allocate people to them, so that you can assign permissions to a number of people at once. For example, it is quicker to give group 'X' access to Confluence, rather than giving every team member access individually. You can also set the access levels for anonymous users.

Related pages:

- Confluence Security
- Confluence Administrator's Guide

Global Groups Overview

A group is a collection of users. Administrators create groups so that the administrator can assign permissions to a number of people at once. For example, it is quicker to give group 'X' access to Confluence, rather than giving every team member access individually. You need Confluence Administrator permissions to view and update groups.

Groups are available at the space and page levels to allow for flexible access control. A user in a group will automatically be granted all permissions granted to the group.

Special groups

There are two special default groups in Confluence:

1. **confluence-administrators**: This is a group of 'super-users' who can access the Confluence administration screens ('administration console') and perform site-wide administration. Members of this group can also see all spaces in the Confluence site. Any user who is a member of this group has site-wide administration powers, regardless of any other setting. The settings on the global permissions screen do **not** affect the powers allowed to members of this group.
2. **confluence-users**: This is the default group for all new users. Permissions you assign to this group will be assigned to all newly signed-up users of Confluence.

The Confluence Administrator permission and the 'confluence-administrators' group are not related. Going by the names, you would think the 'confluence-administrators' group and the 'Confluence Administrator' permission are related – but they are not. Granting a user or a group 'Confluence Administrator' permission is *not* the same as granting them membership of the 'confluence-administrators' group. Granting the 'Confluence Administrator' permission enables access to only a subset of the administrative functions. Granting membership to the 'confluence-administrators' group gives complete access.

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On this page:

- Special groups
- Anonymous users
- Updating groups
- Notes

Related pages:

- Managing Confluence Users
- Global Permissions Overview
- Confluence Administrator's Guide

⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Anonymous users

Confluence treats all users who do not log in when they access Confluence as being 'anonymous'. You can grant anonymous 'Use Confluence' permission via the Global Permissions screen. See Setting up Public Access . This will allow non-registered users to access pages and spaces in Confluence. A space administrator can further control anonymous access per space via the space permissions.

Updating groups

To add a new group:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Manage Groups** in the left-hand panel.
3. Choose **Add Group**.
4. Enter a name for your group and choose **Save**.

You are now ready to start adding users to the group.

To remove a group:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Manage Groups** in the left-hand panel. You will see a list of all existing groups along with links to remove them.
3. Choose **Remove** beside the group you want to remove.

Notes

- **Multiple user directories:** You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:
  - The order of the directories is the order in which they will be searched for users and groups.
  - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

  See Managing Multiple Directories.

Adding or Removing Users in Groups

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If you are a Confluence Administrator, you can add users and groups, and assign users to groups in order to determine their permissions.

This page tells you how to add a user to a group or remove a user from a group. For an overview of users and groups, please refer to Users and Groups and Managing Confluence Users.

You can edit group membership in two places:

- From the group management screen.
- From the user management screen for a particular user.

Both methods are described below.

On this page:

- Adding and Removing Members via the Group Management Screen
- Editing Group Membership from the User Management Screen
- Notes

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Adding and Removing Members via the Group Management Screen

This is the recommended method, available in **Confluence 2.10** and later. It allows you to manage the group membership for a number of users at the same time.

To add members to a group:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Manage Groups**' in the left-hand panel.
3. The '**Manage Groups**' screen appears, showing a list of groups. Select the group to which you want to add users.
4. The '**Group Members**' screen appears, showing the users who belong to the selected group. (See screenshot below.) Click the '**Add Members**' link.
5. The '**Add Members**' screen appears, as shown below. Type in the usernames of the people you want to add to the group. You can also search for and select users by clicking the icon, as described in Searching for Users.
6. When you have added the required username(s), click the '**Add**' button to add the member(s) to the group.

To remove members from a group:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Manage Groups**' in the left-hand panel.
3. The '**Manage Groups**' screen appears, showing a list of groups. Select the group from which you want to remove the user.
4. The '**Group Members**' screen appears, showing the users who belong to the selected group. (See screenshot below.) Click the 'Remove user from group' icon next to the user whose group membership you want to remove.

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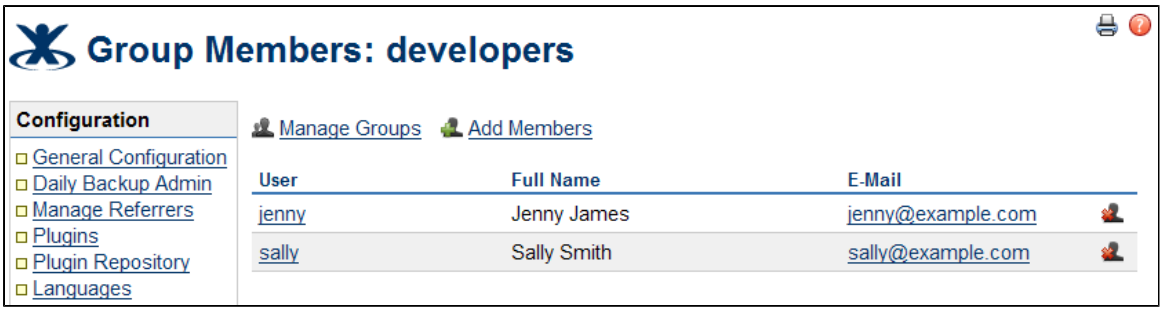
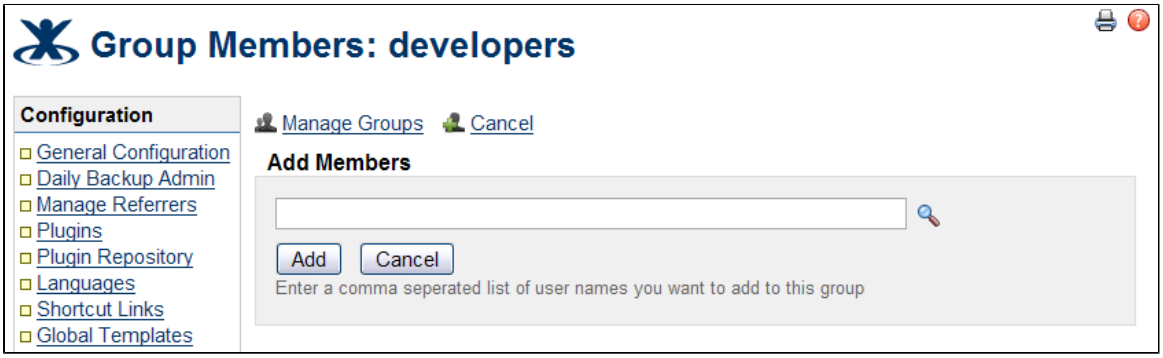


Screenshot above: Group members



Screenshot above: Adding members

Editing Group Membership from the User Management Screen

You can update a user's group membership from the user management screen. This functionality allows you to update one user at a time.

To add a user to a group or remove a user from a group:

1. Go to the user management screen for the user concerned. There are two ways to do this:
   - Either,
     - Go to the user's Profile and click the '**Administer User**' link on the user's profile screen. (This link is available in Confluence 2.8.2 and later.)
   - Or, Choose **Browse** > **Confluence Admin**.
     - Select '**Manage Users**' in the left-hand panel.
     - The '**Manage Users**' screen appears, as shown below. You can now choose to '**Show all users**' or you can search for a specific user by entering all or part of the person's username, full name or email address. (For more details about the user search, see Searching For and Administering Users.)
     - Click the link on the username you want to edit.
2. Now you should be able to see the user's current details, with links allowing you to edit the user's details and groups. See the screenshot showing a user's details below.
3. Click '**Edit Groups**'. This will display two lists of groups, as shown in the screenshot below. Update the user's group membership as follows:
   - '**Not a member of groups**' — This box shows all groups to which the user does not belong. To add the user to a group, select a group and click '**Join**'. Hold the Ctrl key down and click to select more than one group.
   - '**Member of groups**' — This box shows all groups to which the user belongs. Select a group and click '**Leave**' to remove the user from the group.

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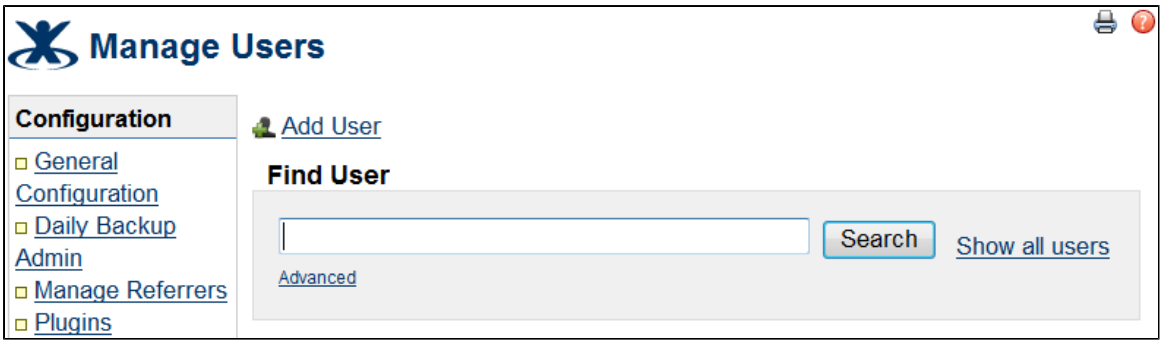
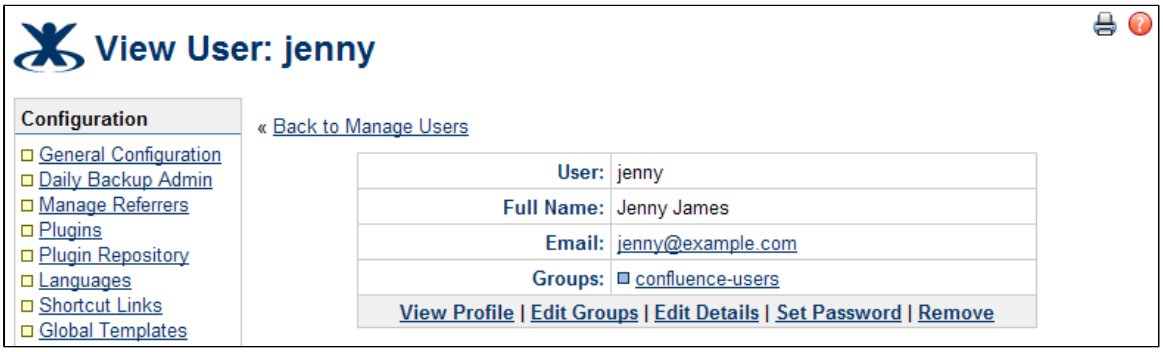


Screenshot above: Managing users



Screenshot above: User details

Screenshot above: Editing a user's groups

Notes

- **Multiple user directories:** You may define multiple user directories in Confluence, so that Confluence looks in more than one place for its users and groups. For example, you may use the default Confluence **internal directory** and also connect to an **LDAP** directory server. In such cases, you can define the **directory order** to determine where Confluence looks first when processing users and groups. Here is a summary of how the directory order affects the processing:
  - The order of the directories is the order in which they will be searched for users and groups.
  - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

  See Managing Multiple Directories.

RELATED TOPICS

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No content found for label(s) confluence-usermanagement.

Administrators Guide Home Confluence Documentation Home

Global Permissions Overview

Permissions determine the actions which a user is allowed to perform within Confluence. Global permissions are one of the levels of permission provided by Confluence.

In order to assign these permissions, you must already have the global 'Confluence Administrator' or 'System Administrator' permission (described below). You can then assign global permissions to groups, individual users and anonymous users. Further permissions are granted from the space administration screens.

The Confluence permission scheme allows the following levels of site administrator permissions, with the most powerful at the top of the list:

- **Super user** – A 'super user' belongs to the `confluence-administrators` group, has full administrative access to Confluence, and can see all the content.
- **System Administrator** – A person with 'System Administrator' permission has full administrative access to Confluence.
- **Confluence Administrator** – A person with 'Confluence Administrator' permission has access to most of the Confluence administrative functions.

Note: The first system administrator and super-user is defined during initial setup. During the initial configuration of Confluence, the Setup Wizard asks for the username of the System Administrator. This user will have the 'System Administrator' permission and will be a member of the 'confluence-administrators' group.

On this page:

- Overview of the global permissions
- Comparing the System Administrator permission with the Confluence Administrator permission
- Comparing the confluence-administrators group with the administrator permissions
- Updating global permissions
- Error messages you may see

Related pages:

- Searching For and Administering Users
- Global Groups Overview
- Confluence Administrator's Guide

Some functionality described on this page is restricted in Confluence OnDemand.

Overview of the global permissions

Global permissions control access across the whole Confluence site. Here is a list:

Global Permission	Description
Can Use	This is the most basic permission that allows users to access the site. Users with this permission count towards the number of users allowed by your license. See the information on removing/deactivating users.

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Attach Files to User Profile	This allows the user to upload files to be stored in their user profile. This feature was made obsolete by the introduction of personal spaces in Confluence 2.2. Hence, this permission is no longer relevant. Attachments can be accessed from a user profile view (for example, an image within the 'About Me' field of a profile view) by attaching these files to a page within that user's personal space and referencing them using appropriate wiki markup code.
Update User Status	This allows the user to update their user status message, which can be seen on the user's profile, pages in their personal space and on various activity streams accessible to other Confluence users.
Personal Space	This permission allows the user to create a personal space.
Create Space(s)	This permission allows users to create new spaces within your Confluence site. When a space is created, the creator automatically has the 'Admin' permission for that space and can perform space-wide administrative functions.
Confluence Administrator	This permission allows users to access the 'Administration Console' that controls site-wide administrative functions. Users with this permission can perform most, but not all, of the Confluence administrative functions. See the comparison of 'System Administrator' and 'Confluence Administrator' below.
System Administrator	This permission allows users to access the 'Administration Console' that controls site-wide administrative functions. Users with this permission can perform all the Confluence administrative functions, including the ones which the 'Confluence Administrator' permission does not allow. See the comparison of 'System Administrator' and 'Confluence Administrator' below. Refer also to the note about the 'confluence-administrators' group below.

Comparing the System Administrator permission with the Confluence Administrator permission

Confluence recognises two levels of administrator:

- **System Administrator** – Users with this permission can perform all the Confluence administrative functions, including the ones which the 'Confluence Administrator' permission does not allow.
- **Confluence Administrator** – Users with this permission can perform most, but not all, of the Confluence

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administrative functions.

The two-tier administration is useful when you want to delegate some administrator privileges to project managers or team leaders. You can give 'Confluence Administrator' permission to users who should be able to perform most administrative functions, but should not be able to perform functions that can compromise the security of the Confluence system.

The following functions are granted to the 'System Administrator' permission but excluded from the 'Confluence Administrator' permission:

Administration Screen	Excluded from Confluence Administrator permission
General Configuration	The following functionality is disallowed: • Server Base URL • Remote API plugin • Public Signup • Connection Timeouts
Security Configuration	The following functionality is disallowed: • External user management • Append wildcards to user and group searches • Anti XSS Mode • Enable Custom Stylesheets for Spaces • Show system information on the 500 page • Maximum RSS Items • XSRF Protection
Plugins	The following functionality is disallowed: • Upgrade • Install • Confluence Upgrade Check
Daily Backup Admin	This function is disallowed entirely.
Mail Servers	This function is disallowed entirely.
User Macros	This function is disallowed entirely.
Attachment Storage	This function is disallowed entirely.
Layouts	This function is disallowed entirely.
Custom HTML	This function is disallowed entirely.
Backup & Restore	This function is disallowed entirely.
Logging and Profiling	This function is disallowed entirely.
Cluster Configuration	This function is disallowed entirely.
Scheduled Jobs	This function is disallowed entirely.

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Application Links	This function is disallowed entirely.

Comparing the confluence-administrators group with the administrator permissions

The 'confluence-administrators' group defines a set of 'super-users' who can access the Confluence administration console and perform site-wide administration. Members of this group can also see the content of all pages and spaces in the Confluence instance, regardless of space permissions. They cannot immediately see the pages that exclude them via page restrictions without knowing the direct URL to the page. They can remove the page restrictions via the Space Administration screen if need be. For example, they will not see restricted pages displayed by the children macro. But they are able to access restricted pages directly using the page URL.

The settings on the 'Global Permissions' screen do not affect the powers allowed to members of the 'confluence-administrators' group .

Granting the 'System Administrator' or 'Confluence Administrator' permission to a user will *not* automatically grant the user access to all spaces in the site. These permissions will only give access to the administration console.

Be aware, however, that users with 'System Administrator' can add themselves to the 'confluence-administrators' group and become a super-user.

The Confluence Administrator permission and the 'confluence-administrators' group are not related. Going by the names, you would think the 'confluence-administrators' group and the 'Confluence Administrator' permission are related – but they are not. Granting a user or a group 'Confluence Administrator' permission is *not* the same as granting them membership of the 'confluence-administrators' group. Granting the 'Confluence Administrator' permission enables access to only a subset of the administrative functions. Granting membership to the 'confluence-administrators' group gives complete access.

Updating global permissions

To view the global permissions for a group or user:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Global Permissions** in the left-hand panel. The 'View Global Permissions' screen appears.

Add or edit group and user permissions as follows:

To add permissions for a group:

1. First add the group to Confluence, if you have not already done so.
2. Choose **Edit Permissions**. The 'Edit Global Permissions' screen appears.
3. Enter the group name in the **Grant browse permission to** box in the 'Groups' section. You can search for the group name.
4. Choose **Add**.
5. The group will appear in the list and you can now edit its permissions.

To add permissions for a specific user:
(Consider adding the user to a group and then assigning the permissions to the group, as described above, instead of assigning permissions to the specific user.)

1. First add the user to Confluence, if you have not already done so.
2. Choose **Edit Permissions**. The 'Edit Global Permissions' screen appears.
3. Enter the username in the **Grant browse permission to** box in the 'Individual Users' section. You can search for the username.
4. Choose **Add**.
5. The username will appear in the list and you can now edit its permissions.

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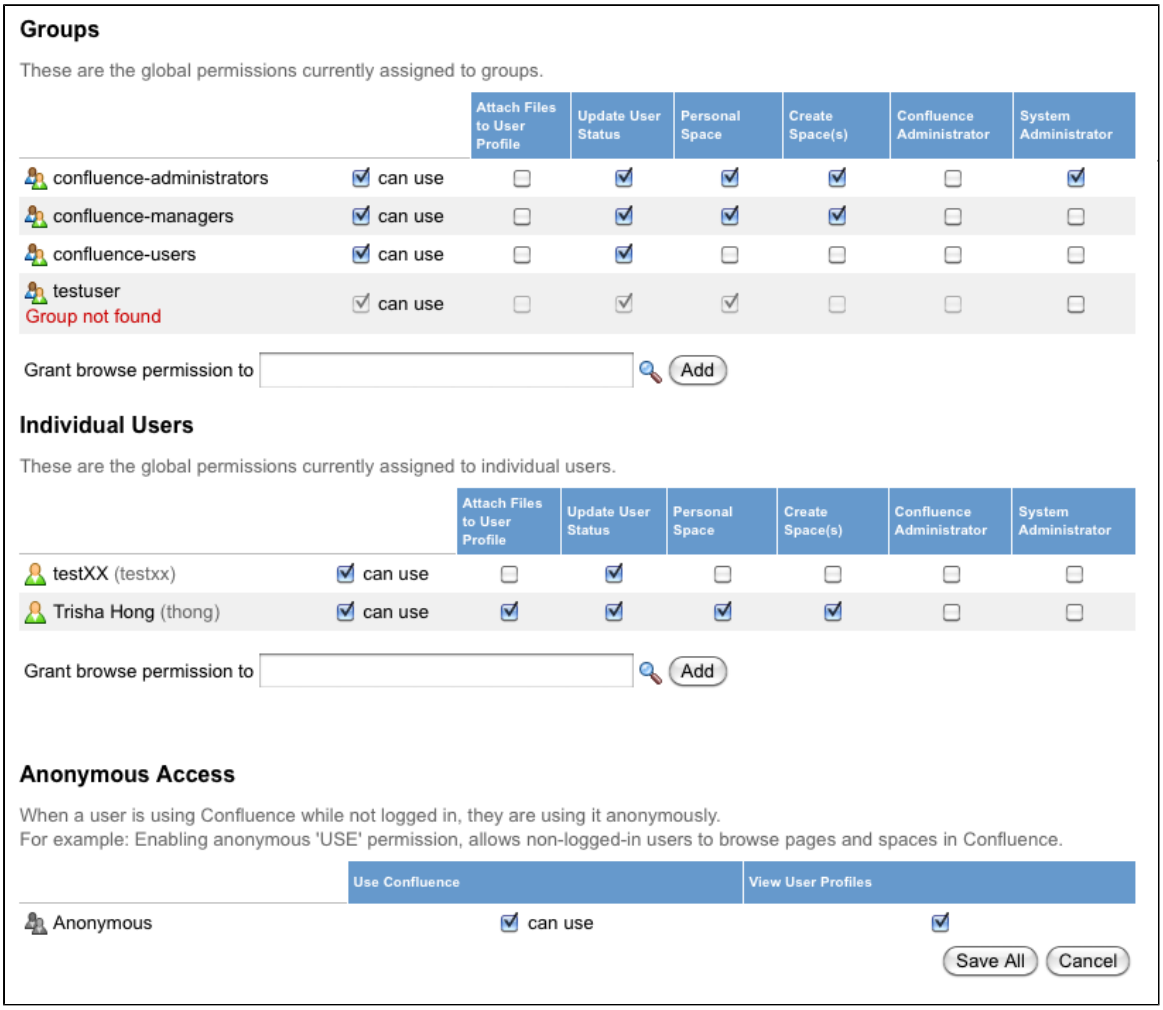
To add or edit the permissions for a user or group:

1. Select, or clear, the check box under the relevant permission in the row for the relevant user/group. A selected check box indicates that the permission is granted.
2. To allow anonymous access to your Confluence site, select the 'Use Confluence' and 'View User Profile' options in the 'Anonymous Access' section.
   For more information about these permissions, refer to Setting up Public Access.
3. Choose **Save All** to save your changes.

Screenshot: Editing global permissions



Error messages you may see

Confluence will let you know if there is a problem with some permissions. In rare situations, you may see the following error messages below a permission:

- 'User/Group not found' — This message may appear if your LDAP repository is unavailable, or if the user/group has been deleted after the permission was created.
- 'Case incorrect. Correct case is: xxxxxx' — This message may appear if the upper/lower case in the permission does not match the case of the username or group name. If you see a number of occurrences of this message, you should consider running the routine supplied to fix the problem.

Setting Up Public Access

You can enable anonymous access (also known as public access) to your Confluence site by granting the 'Use Confluence' permission to 'anonymous' users. An 'anonymous' user is someone who has not logged in to the Confluence site. The 'Use Confluence' permission is also called 'can use'.

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This user category gives you an easy way to administer users who have not logged into the site. Permissions assigned to this category apply to all anonymous users of the site.

Enabling anonymous access to the site

If you want to make your site visible to everyone, including people who have not logged in, you must enable anonymous access at site level.

To enable anonymous access to your site:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Global Permissions** in the left-hand panel.
3. Choose **Edit Permissions**.
4. In the 'Anonymous Access' section, select the **can use** check box to enable anonymous access to the content on your site.
5. If you want to allow anonymous users to see user profiles, select the check box in the **View User Profiles** section.
   Note: You must grant the 'can use' permission as well, if you want to grant the 'View User Profiles' permission.
6. Choose **Save All**.

On this page:

- Enabling anonymous access to the site
- Disabling anonymous access to the site
- Granting public access to a space
- Notes

Related pages:

- Configuring Captcha for Spam Prevention
- Adding and Inviting Users
- Global Permissions Overview
- Confluence Administrator's Guide

⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Disabling anonymous access to the site

To disable anonymous access to your site, deselect the **can use** check box, then choose **Save All**. People will not be able to see the content on the site until they have logged in.

Granting public access to a space

To enable public access to a Confluence space, you must grant the following permissions to anonymous users:

- The site-wide 'can use' permission, as described above.
- The relevant space permissions. If you want a space to be publicly accessible, the anonymous user must have at least the 'View Space' permission. To set space permissions, choose **Browse** > **Space Admin** > **Permissions**.

Notes

- We **severely warn against** giving anonymous users any administrative privileges, either within a space, or especially over the Confluence site. Giving administrative privileges to untrusted users may lead to a serious security compromise of your site.

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- You can allow people to sign up for usernames themselves, and choose other options for user signup and invitations. See Adding and Inviting Users.

Configuring User Directories

A user directory is a place where you store information about users and groups. User information includes the person's full name, username, password, email address and other personal information. Group information includes the name of the group, the users that belong to the group, and possibly groups that belong to other groups.

The **internal** directory stores user and group information in the Confluence database. You can also connect to **external** user directories, and to Atlassian **Crowd** and **JIRA** as directory managers.

On this page:

- Configuring User Directories in Confluence
- Connecting to a Directory
- Updating Directories

The information on this page does not apply to Confluence OnDemand.

Configuring User Directories in Confluence

To configure your Confluence user directories:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**User Directories**' in the left-hand panel.

Connecting to a Directory

You can add the following types of directory servers and directory managers:

- Confluence's internal directory. See Configuring the Internal Directory.
- Microsoft Active Directory. See Connecting to an LDAP Directory.
- Various other LDAP directory servers. See Connecting to an LDAP Directory.
- An LDAP directory for delegated authentication. See Connecting to an Internal Directory with LDAP Authentication.
- Atlassian Crowd. See Connecting to Crowd or JIRA for User Management.
- Atlassian JIRA 4.3 or later. See Connecting Confluence to JIRA for User Management.
- Atlassian JIRA 4.2 or earlier, using the legacy database connection. See Connecting to JIRA 4.2 or Earlier for User Management.

You can add as many external user directories as you need. Note that you can define the **order** of the directories. This determines which directory Confluence will search first, when looking for user and group information. See Managing Multiple Directories.

Updating Directories

Limitations when Editing Directories

You cannot edit, disable or remove the directory your user belongs to. This precaution is designed to prevent administrators from locking themselves out of the application by changing the directory configuration in a way that prevents them logging in or removes their administration permissions.

This limitation applies to all directory types. For example:

- You cannot disable the internal directory if your user is an internal user.

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- You cannot disable or remove an LDAP or a Crowd directory if your user comes from that directory.

In some situations, reordering the directories will change the directory that the current user comes from, if a user with the same username happens to exist in both. This behaviour can be used in some cases to create a copy of the existing configuration, move it to the top, then remove the old one. Note, however, that duplicate usernames are not a supported configuration.

You cannot remove the internal directory. This precaution aligns with the recommendation below that you always keep an administrator account active in the internal directory.

Recommendations

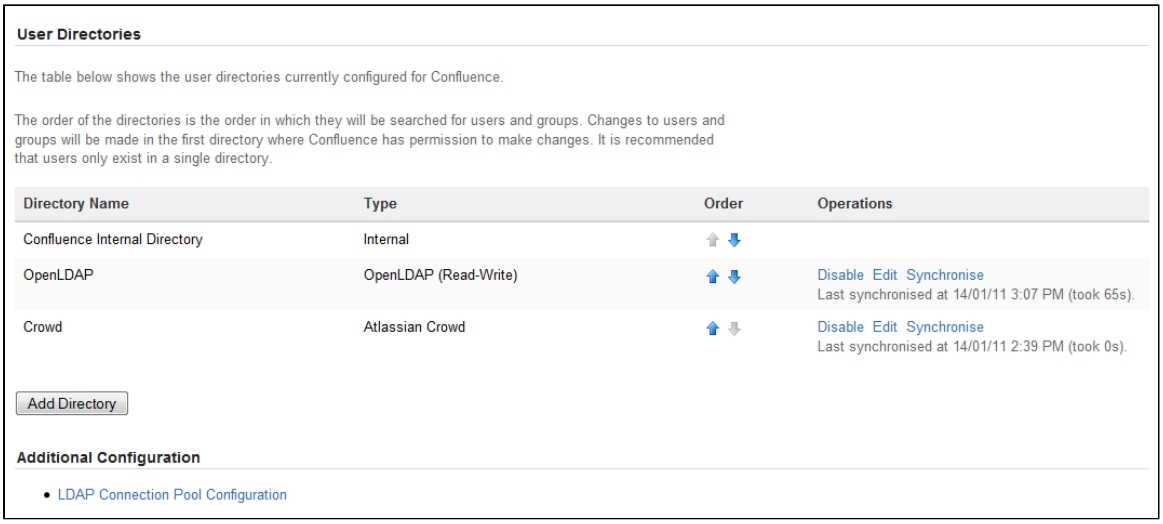
The recommended way to edit directory configurations is to log in as an internal user when making changes to external directory configuration.

⚠ We recommend that you keep either an administrator or system administrator user active in your internal directory for troubleshooting problems with your user directories.

Enabling, Disabling and Removing Directories

You can enable or disable a directory at any time. If you disable a directory, your configuration details will remain but the application will not recognise the users and groups in that directory.

You have to disable a directory before you can remove it. Removing a directory will remove the details from the database.



Screenshot above: Configuring user directories

RELATED TOPICS

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

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- Adding and Inviting Users
- Managing Site-Wide Permissions and Groups

Administrators Guide Home Confluence Documentation Home

Configuring the Internal Directory

The internal directory stores user and group information in the Confluence database.

Overview

The internal directory is enabled by default at installation. When you create the first administrator during the setup procedure, that administrator's username and other details are stored in the internal directory.

If needed, you can configure one or more additional user directories. This is useful if you want to grant access to users and groups that are stored in a corporate directory or other directory server.

On this page:

- Overview
- Diagram of Possible Configuration

The information on this page does not apply to Confluence OnDemand.

Diagram of Possible Configuration

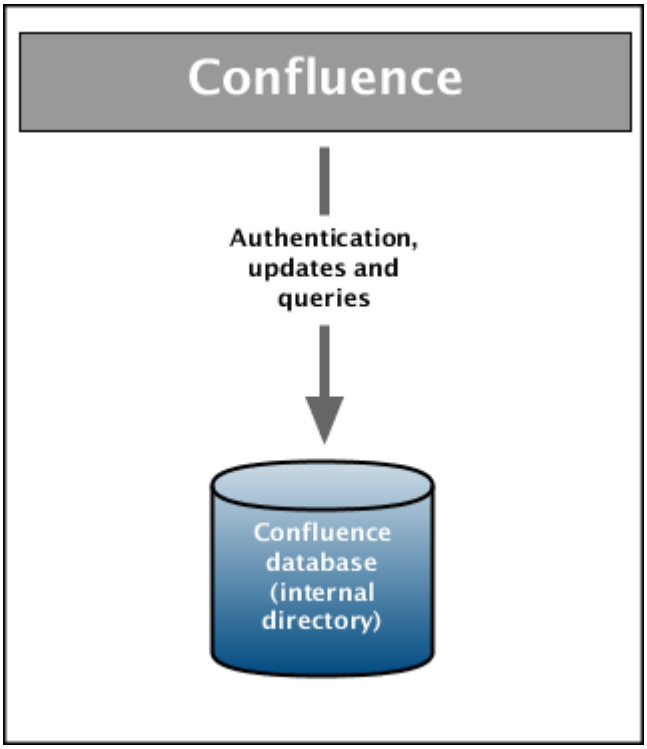

Diagram above: Confluence using its internal directory for user management.

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication

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- Connecting to Crowd or JIRA for User Management
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How to Reenable the Internal Directory (Knowledge base article)

Connecting to an LDAP Directory

You can connect your Confluence application to an LDAP directory for authentication, user and group management.

Overview

An LDAP directory is a collection of data about users and groups. LDAP (Lightweight Directory Access Protocol) is an Internet protocol that web applications can use to look up information about those users and groups from the LDAP server.

We provide built-in connectors for the most popular LDAP directory servers:

- Microsoft Active Directory
- Apache Directory Server (ApacheDS)
- Apple Open Directory
- Fedora Directory Server
- Novell eDirectory
- OpenDS
- OpenLDAP
- OpenLDAP Using Posix Schema
- Posix Schema for LDAP
- Sun Directory Server Enterprise Edition (DSEE)
- A generic LDAP directory server

When to use this option: Connecting to an LDAP directory server is useful if your users and groups are stored in a corporate directory. When configuring the directory, you can choose to make it read only, read only with local groups, or read/write. If you choose read/write, any changes made to user and group information in the application will also update the LDAP directory.

Connecting to an LDAP Directory in Confluence

To connect Confluence to an LDAP directory:

1. Choose **Browse** > **Confluence Admin**.
2. Click **User Directories** in the left-hand panel.
3. **Add** a directory and select one of these types:
    - **Microsoft Active Directory** – This option provides a quick way to select AD, because it is the most popular LDAP directory type.
    - **LDAP** – You will be able to choose a specific LDAP directory type on the next screen.
4. Enter the values for the settings, as described below.
5. Save the directory settings.
6. Define the **directory order** by clicking the blue up- and down-arrows next to each directory on the 'User Directories' screen. Here is a summary of how the directory order affects the processing:
    - The order of the directories is the order in which they will be searched for users and groups.
    - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

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For details see Managing Multiple Directories.

On this page:

- Overview
- Connecting to an LDAP Directory in Confluence
- Server Settings
- Schema Settings
- Permission Settings
  - Adding Users to Groups Automatically
- Advanced Settings
- User Schema Settings
- Group Schema Settings
- Membership Schema Settings
- Diagrams of Some Possible Configurations
- Notes

Related pages:

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
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The information on this page does not apply to Confluence OnDemand.

Server Settings

Setting	Description
Name	Enter a meaningful name to help you identify the LDAP directory server. Examples: • `Example Company Staff Directory` • `Example Company Corporate LDAP`

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Directory Type	Select the type of LDAP directory that you will connect to. If you are adding a new LDAP connection, the value you select here will determine the default values for many of the options on the rest of screen. Examples: • `Microsoft Active Directory` • `OpenDS` • And more.
Hostname	The host name of your directory server. Examples: • `ad.example.com` • `ldap.example.com` • `opends.example.com`
Port	The port on which your directory server is listening. Examples: • `389` • `10389` • `636` (for example, for SSL)
Use SSL	Tick this check box if the connection to the directory server is an SSL (Secure Sockets Layer) connection. Note that you will need to configure an SSL certificate in order to use this setting.
Username	The distinguished name of the user that the application will use when connecting to the directory server. Examples: • `cn=administrator,cn=users,dc=ad,dc=example,dc=com` • `cn=user,dc=domain,dc=name` • `user@domain.name`
Password	The password of the user specified above.

Schema Settings

Setting	Description

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Base DN	The root distinguished name (DN) to use when running queries against the directory server. Examples: • `o=example,c=com` • `cn=users,dc=ad,dc=example,dc=com` • For Microsoft Active Directory, specify the base DN in the following format: `dc=domain1,dc=local`. You will need to replace the `domain1` and `local` f or your specific configuration. Microsoft Server provides a tool called `ldp.exe` which is useful for finding out and configuring the the LDAP structure of your server.
Additional User DN	This value is used in addition to the base DN when searching and loading users. If no value is supplied, the subtree search will start from the base DN. Example: • `ou=Users`
Additional Group DN	This value is used in addition to the base DN when searching and loading groups. If no value is supplied, the subtree search will start from the base DN. Example: • `ou=Groups`

Permission Settings

Note: You can only assign LDAP users to local groups when 'External Management User Management' is not selected.

Setting	Description
Read Only	LDAP users, groups and memberships are retrieved from your directory server and can only be modified via your directory server. You cannot modify LDAP users, groups or memberships via the application administration screens.
Read Only, with Local Groups	LDAP users, groups and memberships are retrieved from your directory server and can only be modified via your directory server. You cannot modify LDAP users, groups or memberships via the application administration screens. However, you can add groups to the internal directory and add LDAP users to those groups.

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Read/Write	LDAP users, groups and memberships are retrieved from your directory server. When you modify a user, group or membership via the application administration screens, the changes will be applied directly to your LDAP directory server. Please ensure that the LDAP user specified for the application has modification permissions on your LDAP directory server.

Adding Users to Groups Automatically

Setting	Description
Default Group Memberships	*Option available in Confluence 3.5 and later, and JIRA 4.3.3 and later.* This field appears if you select the 'Read Only, with Local Groups' permission. If you would like users to be automatically added to a group or groups, enter the group name(s) here. To specify more than one group, separate the group names with commas. *In Confluence 3.5 to Confluence 3.5.1:* Each time a user logs in, their group memberships will be checked. If the user does not belong to the specified group(s), their username will be added to the group(s). If a group does not yet exist, it will be added locally. *In Confluence 3.5.2 and later, and JIRA 4.3.3 and later:* The first time a user logs in, their group memberships will be checked. If the user does not belong to the specified group(s), their username will be added to the group(s). If a group does not yet exist, it will be added locally. On subsequent logins, the username will *not* be added automatically to any groups. This change in behaviour allows users to be removed from automatically-added groups. In Confluence 3.5 and 3.5.1, they would be re-added upon next login. Please note that there is no validation of the group names. If you mis-type the group name, authorisation failures will result – users will not be able to access the applications or functionality based on the intended group name. Examples: • `confluence-users` • `confluence-users,jira-users,jira-developers`

Advanced Settings

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Setting	Description
Enable Nested Groups	Enable or disable support for nested groups. Some directory servers allow you to define a group as a member of another group. Groups in such a structure are called 'nested groups'. If you are using groups to manage permissions, you can create nested groups to allow inheritance of permissions from one group to its sub-groups.
Use Paged Results	Enable or disable the use of the LDAP control extension for simple paging of search results. If paging is enabled, the search will retrieve sets of data rather than all of the search results at once. Enter the desired page size – that is, the maximum number of search results to be returned per page when paged results are enabled. The default is 1000 results.
Follow Referrals	Choose whether to allow the directory server to redirect requests to other servers. This option uses the node referral (JNDI lookup `java.naming.referral`) configuration setting. It is generally needed for Active Directory servers configured without proper DNS, to prevent a 'javax.naming.PartialResultException: Unprocessed Continuation Reference(s)' error.
Naive DN Matching	If your directory server will always return a consistent string representation of a DN, you can enable naive DN matching. Using naive DN matching will result in a significant performance improvement, so we recommend enabling it where possible. This setting determines how your application will compare DNs to determine if they are equal. • If this check box is ticked, the application will do a direct, case-insensitive, string comparison. This is the default and recommended setting for Active Directory, because Active Directory guarantees the format of DNs. • If this check box is not ticked, the application will parse the DN and then check the parsed version.

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Enable Incremental Synchronisation	Enable incremental synchronisation if you only want changes since the last synchronisation to be queried when synchronising a directory. ⚠️ Please be aware that when using this option, the user account configured for synchronisation must have read access to: • The `uSNChanged` attribute of all users and groups in the directory that need to be synchronised. • The objects and attributes in the Active Directory deleted objects container (see Microsoft's Knowledge Base Article No. 892806 for details). If at least one of these conditions is not met, you may end up with users who are added to (or deleted from) the Active Directory not being respectively added (or deleted) in JIRA.
Synchronisation Interval (minutes)	Synchronisation is the process by which the application updates its internal store of user data to agree with the data on the directory server. The application will send a request to your directory server every x minutes, where 'x' is the number specified here. The default value is 60 minutes.
Read Timeout (seconds)	The time, in seconds, to wait for a response to be received. If there is no response within the specified time period, the read attempt will be aborted. A value of 0 (zero) means there is no limit. The default value is 120 seconds.
Search Timeout (seconds)	The time, in seconds, to wait for a response from a search operation. A value of 0 (zero) means there is no limit. The default value is 60 seconds.
Connection Timeout (seconds)	This setting affects two actions. The default value is 0. • The time to wait when getting a connection from the connection pool. A value of 0 (zero) means there is no limit, so wait indefinitely. • The time, in seconds, to wait when opening new server connections. A value of 0 (zero) means that the TCP network timeout will be used, which may be several minutes.

User Schema Settings

Setting	Description

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User Object Class	This is the name of the class used for the LDAP user object. Example: • `user`
User Object Filter	The filter to use when searching user objects. Example: • `(&(objectCategory=Person)(sAMAccountName=*))`
User Name Attribute	The attribute field to use when loading the username. Examples: • `cn` • `sAMAccountName` NB: In Active Directory, the 'sAMAccountName' is the 'User Logon Name (pre-Windows 2000)' field. The User Logon Name field is referenced by 'cn'.
User Name RDN Attribute	The RDN (relative distinguished name) to use when loading the username. The DN for each LDAP entry is composed of two parts: the RDN and the location within the LDAP directory where the record resides. The RDN is the portion of your DN that is not related to the directory tree structure. Example: • `cn`
User First Name Attribute	The attribute field to use when loading the user's first name. Example: • `givenName`
User Last Name Attribute	The attribute field to use when loading the user's last name. Example: • `sn`
User Display Name Attribute	The attribute field to use when loading the user's full name. Example: • `displayName`
User Email Attribute	The attribute field to use when loading the user's email address. Example: • `mail`
User Password Attribute	The attribute field to use when loading a user's password. Example: • `unicodePwd`

Group Schema Settings

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Setting	Description
Group Object Class	This is the name of the class used for the LDAP group object. Examples: • `groupOfUniqueNames` • `group`
Group Object Filter	The filter to use when searching group objects. Example: • `(objectCategory=Group)`
Group Name Attribute	The attribute field to use when loading the group's name. Example: • `cn`
Group Description Attribute	The attribute field to use when loading the group's description. Example: • `description`

Membership Schema Settings

Setting	Description
Group Members Attribute	The attribute field to use when loading the group's members. Example: • `member`
User Membership Attribute	The attribute field to use when loading the user's groups. Example: • `memberOf`
Use the User Membership Attribute, when finding the user's group membership	Put a tick in the checkbox if your directory server supports the group membership attribute on the user. (By default, this is the '`memberOf`' attribute.) • If this checkbox is ticked, your application will use the group membership attribute on the user when **r etrieving the list of groups to which a given user belongs**. This will result in a more efficient retrieval. • If this checkbox is not ticked, your application will use the members attribute on the group ('`member`' by default) for the search. • If the 'Enable Nested Groups' checkbox is ticked, your application will ignore the 'Use the User Membership Attribute' option and will use the members attribute on the group for the search.

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Use the User Membership Attribute, when finding the members of a group	Put a tick in the checkbox if your directory server supports the group membership attribute on the user. (By default, this is the '`memberOf`' attribute.) • If this checkbox is ticked, your application will use the group membership attribute on the user when **r etrieving the members of a given group**. This will result in a more efficient search. • If this checkbox is not ticked, your application will use the members attribute on the group ('`member`' by default) for the search.

Diagrams of Some Possible Configurations

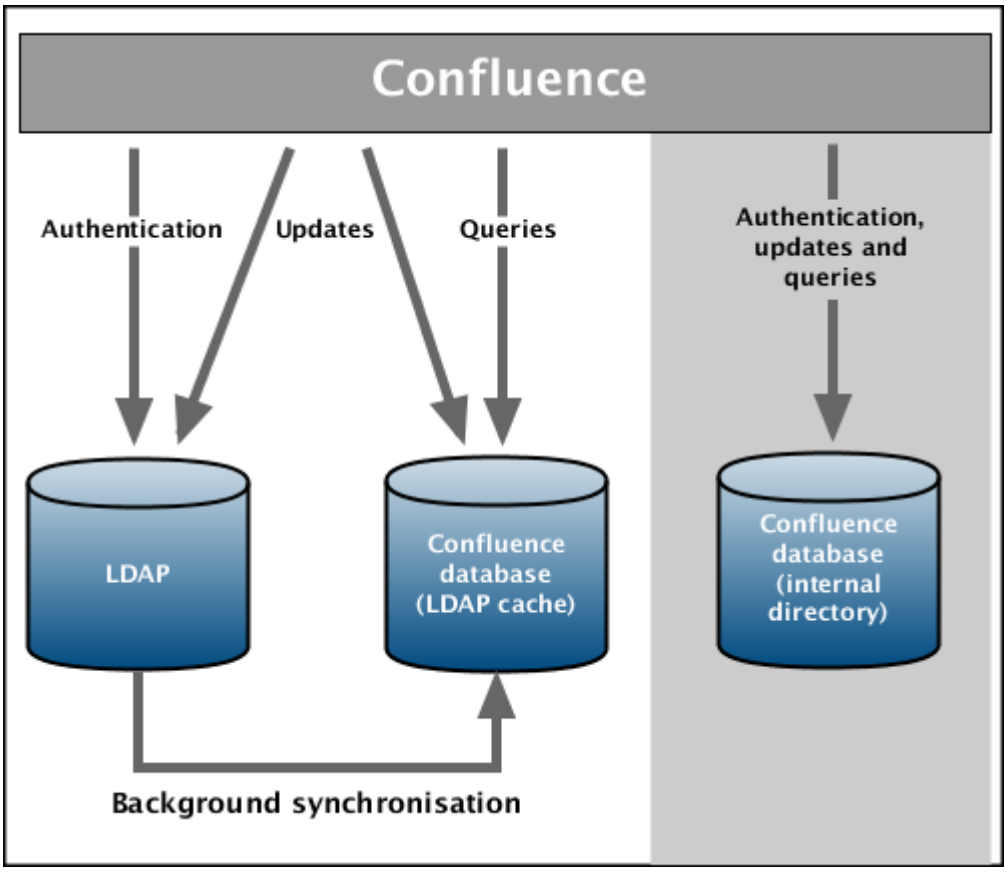

Diagram above: Confluence connecting to an LDAP directory.

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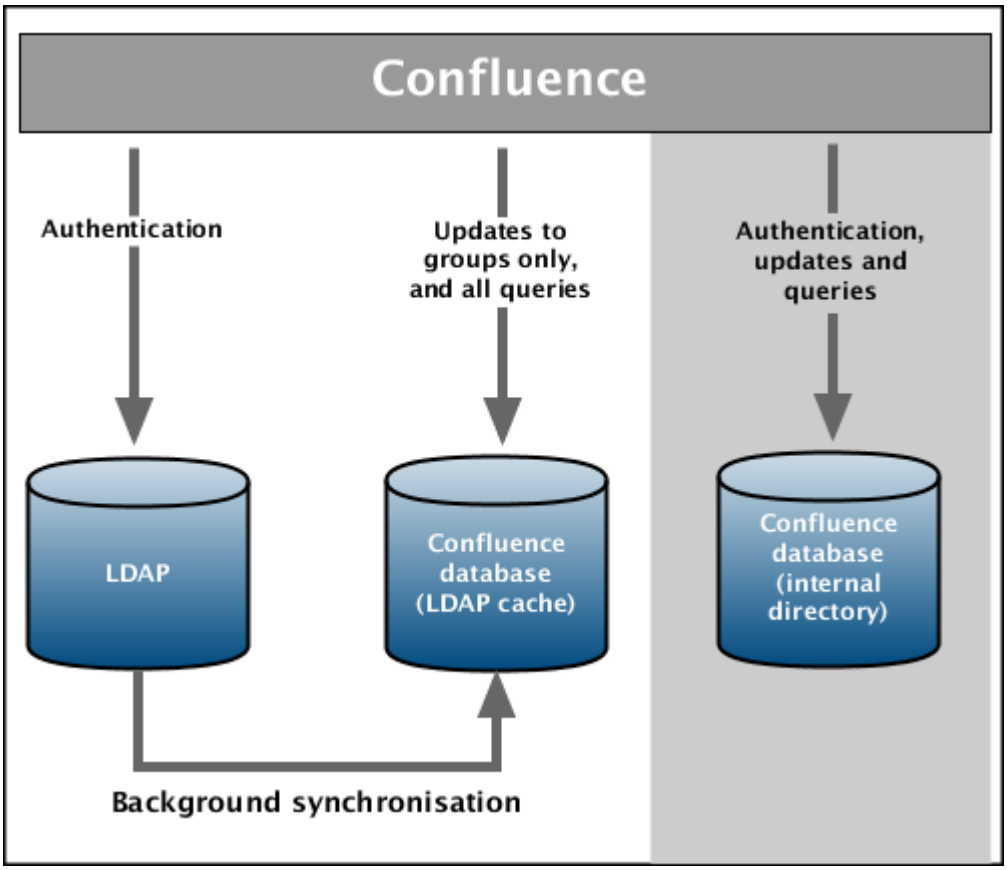

Diagram above: Confluence connecting to an LDAP directory with permissions set to read only and local groups.

Notes

Currently there is a bug which causes a system error if the username and password are not correct. This also happens if you are accessing anonymously, but the directory server does not support anonymous access. If you get a system error message, try checking the username and password credentials. You can watch this issue to see updates on this bug: **CONF-25961** - Authenticate to see issue details

Configuring the LDAP Connection Pool

When connection pooling is enabled, the LDAP directory server maintains a pool of connections and assigns them as needed. When a connection is closed, the directory server returns the connection to the pool for future use. This can improve performance significantly.

To configure your LDAP connection pool:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**User Directories**' in the left-hand panel.
3. Click '**LDAP Connection Pool Configuration**' in the 'Additional Configuration' section.

> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Setting	Description	Default Value

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Initial Pool Size	The number of LDAP connections created when initially connecting to the pool.	`1`
Preferred Pool Size	The optimal pool size. LDAP will remove idle connections when the number of connections grows larger than this value. A value of `0` (zero) means that there is no preferred size, so the number of idle connections is unlimited.	`10`
Maximum Pool Size	The maximum number of connections. When the number of connections reaches this value, LDAP will refuse further connections. As a result, requests made by an application to the LDAP directory server will be blocked. A value of `0` (zero) means that the number of connections is unlimited.	`0`
Pool Timeout (seconds)	The length of time, in seconds, that a connection may remain idle before being removed from the pool. When the application is finished with a pooled connection, the connection is marked as idle, waiting to be reused. A value of `0` (zero) means that the idle time is unlimited, so connections will never be timed out.	`30`
Pool Protocol	Only these protocol types will be allowed to connect to the LDAP directory server. If you want to allow multiple protocols, enter the values separated by a space. Valid values are: • `plain` • `ssl`	`plain ssl` (Both plain and ssl)

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Pool Authentication	Only these authentication types will be allowed to connect to the LDAP directory server. If you want to allow multiple authentication types, enter the values separated by a space. See RFC 2829 for details of LDAP authentication methods. Valid values are: • `none` • `simple` • `DIGEST-MD5`	`simple`

Notes:

- The connection pool settings are system wide and will be used to create a new connection pool for every configured LDAP directory server.
- You must restart your application server for these settings to take effect.

RELATED TOPICS

Connecting to an LDAP Directory
Configuring User Directories

Administrators Guide Home Confluence Documentation Home

Configuring an SSL Connection to Active Directory

If you want to configure a read/write connection with Microsoft Active Directory, you will need to install an SSL certificate, generated by your Active Directory server, onto your Confluence server and then install the certificate into your JVM keystore.

On this page:

- Prerequisites
- Step 1. Install the Active Directory Certificate Services
- Step 2. Obtain the Server Certificate
- Step 3. Import the Server Certificate

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Updating user, group, and membership details in Active Directory requires that your Atlassian application be running in a JVM that trusts the AD server. To do this, we generate a certificate on the Active Directory server, then import it into Java's `keystore`.

Prerequisites

To generate a certificate, you need the following components installed on the Windows Domain Controller to which you're connecting.

Required Component	Description
Internet Information Services (IIS)	This is required before you can install Windows Certificate Services.

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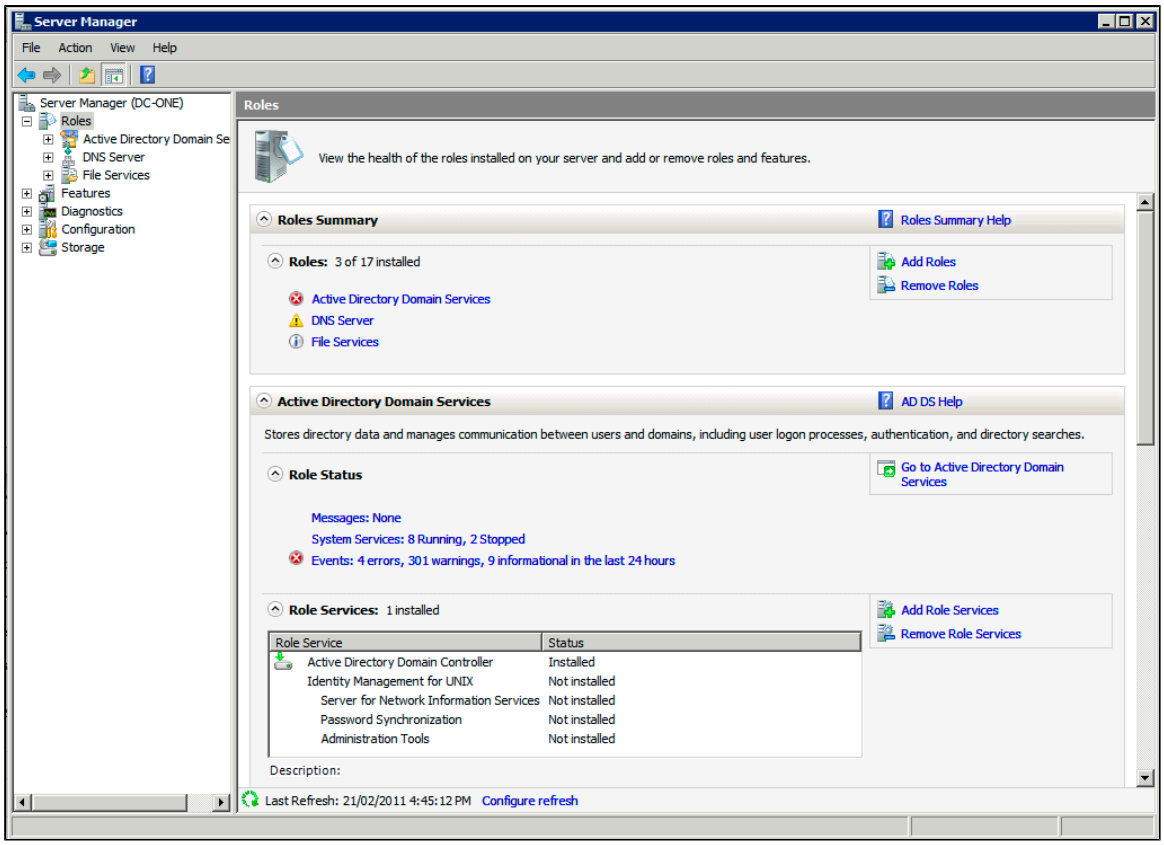
Windows Certificate Services	This installs a certification authority (CA) which is used to issue certificates. Step 1, below, explains this process.
Windows 2000 Service Pack 2	Required if you are using Windows 2000
Windows 2000 High Encryption Pack (128-bit)	Required if you are using Windows 2000. Provides the highest available encryption level (128-bit).

Step 1. Install the Active Directory Certificate Services

If Certificate Services are already installed, skip to step 2, below. The screenshots below are from Server 2008, but the process is similar for Server 2000 and 2003.

1. Log in to your Active Directory server as an administrator.
2. Click **Start**, point to **Administrative Tools**, and then click **Server Manager**.
3. In the **Roles Summary** section, click **Add Roles**.



4. On the **Select Server Roles** page, select the **Active Directory Certificate Services** check box. Click **Next** twice.

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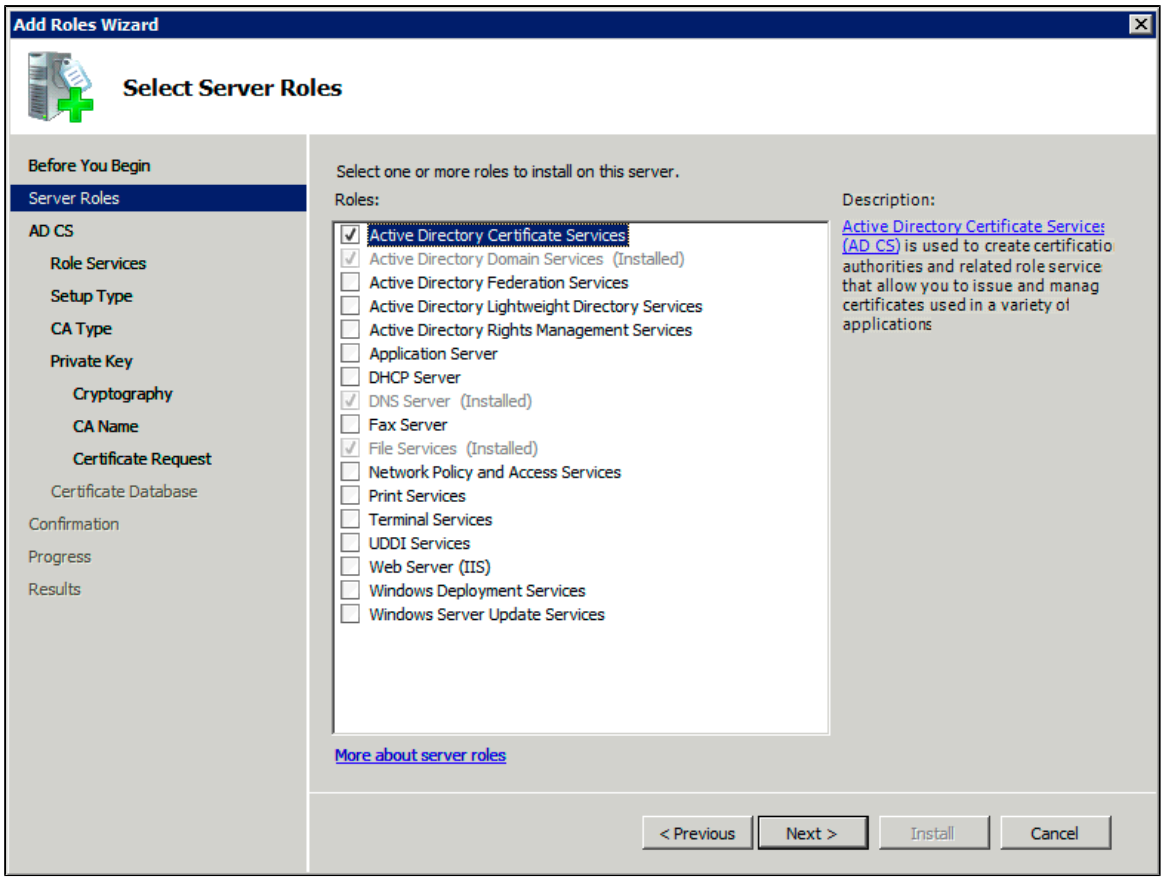
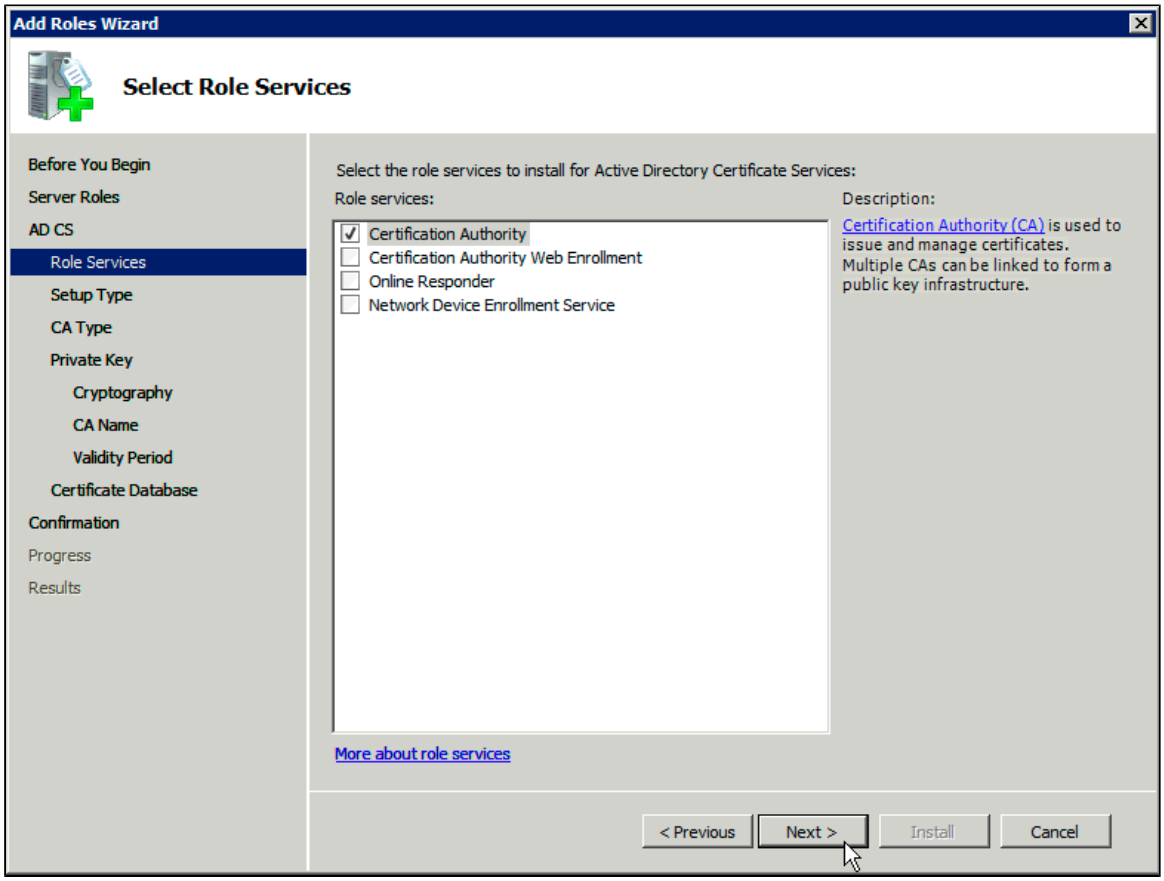


5. On the **Select Role Services** page, select the **Certification Authority** check box, and then click **Next**.



6. On the **Specify Setup Type** page, click **Enterprise**, and then click **Next**.

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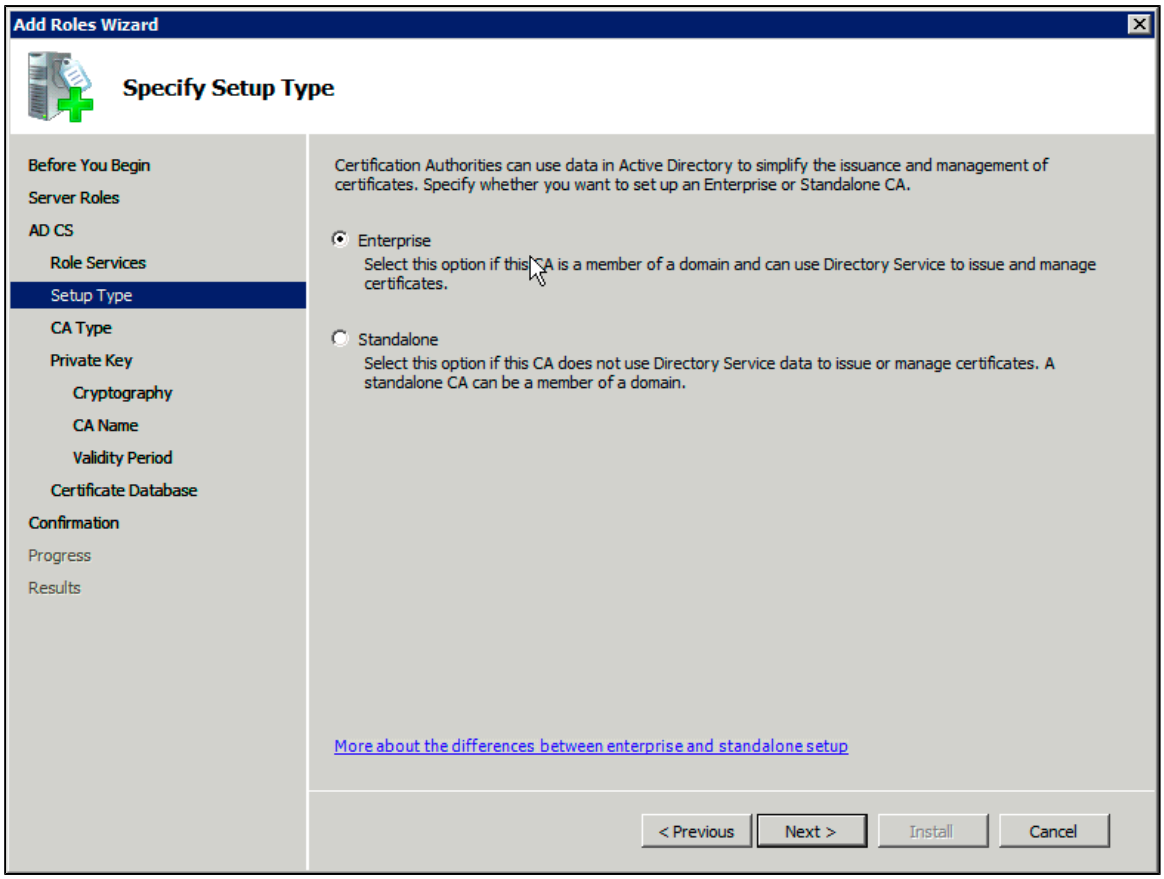
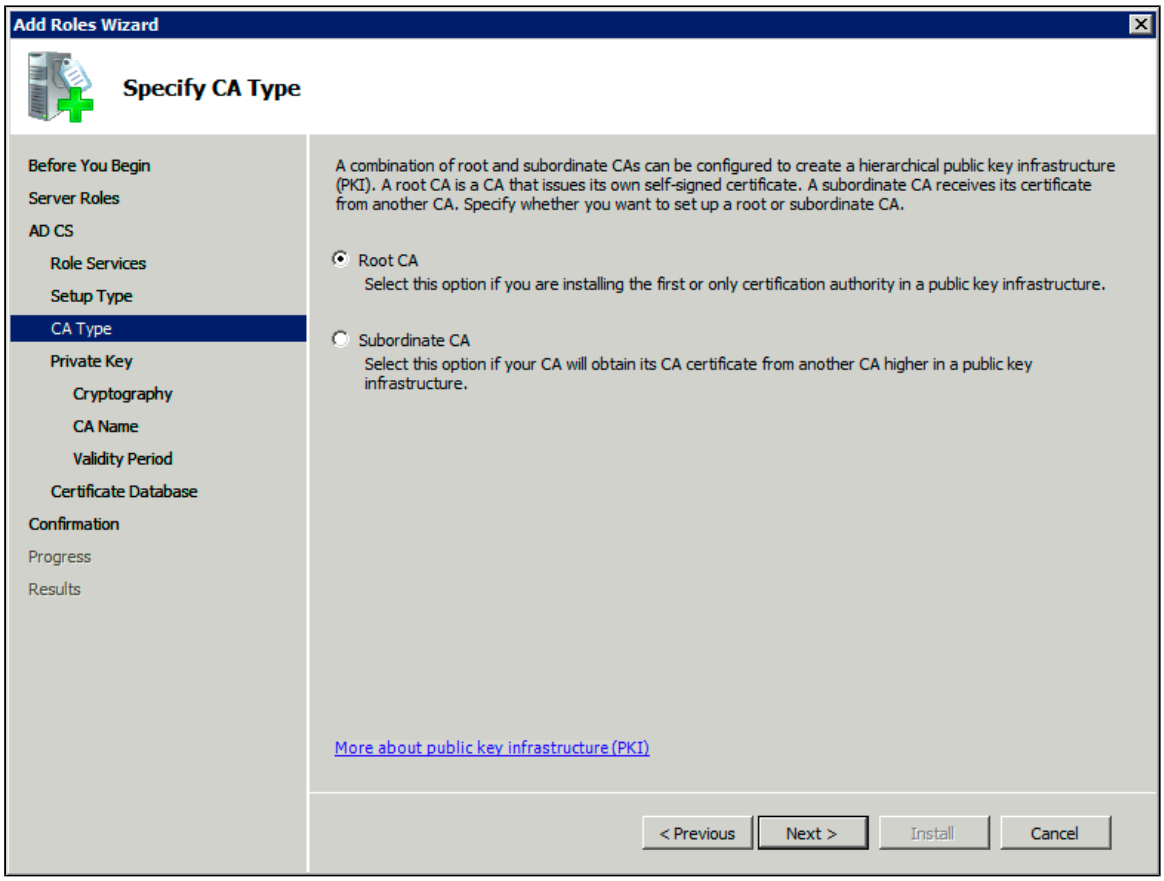


7. On the **Specify CA Type** page, click **Root CA**, and then click **Next**.



8. On the **Set Up Private Key** and **Configure Cryptography for CA** pages, you can configure optional configuration settings, including cryptographic service providers. However, the default values should be fine. Click **Next** twice.

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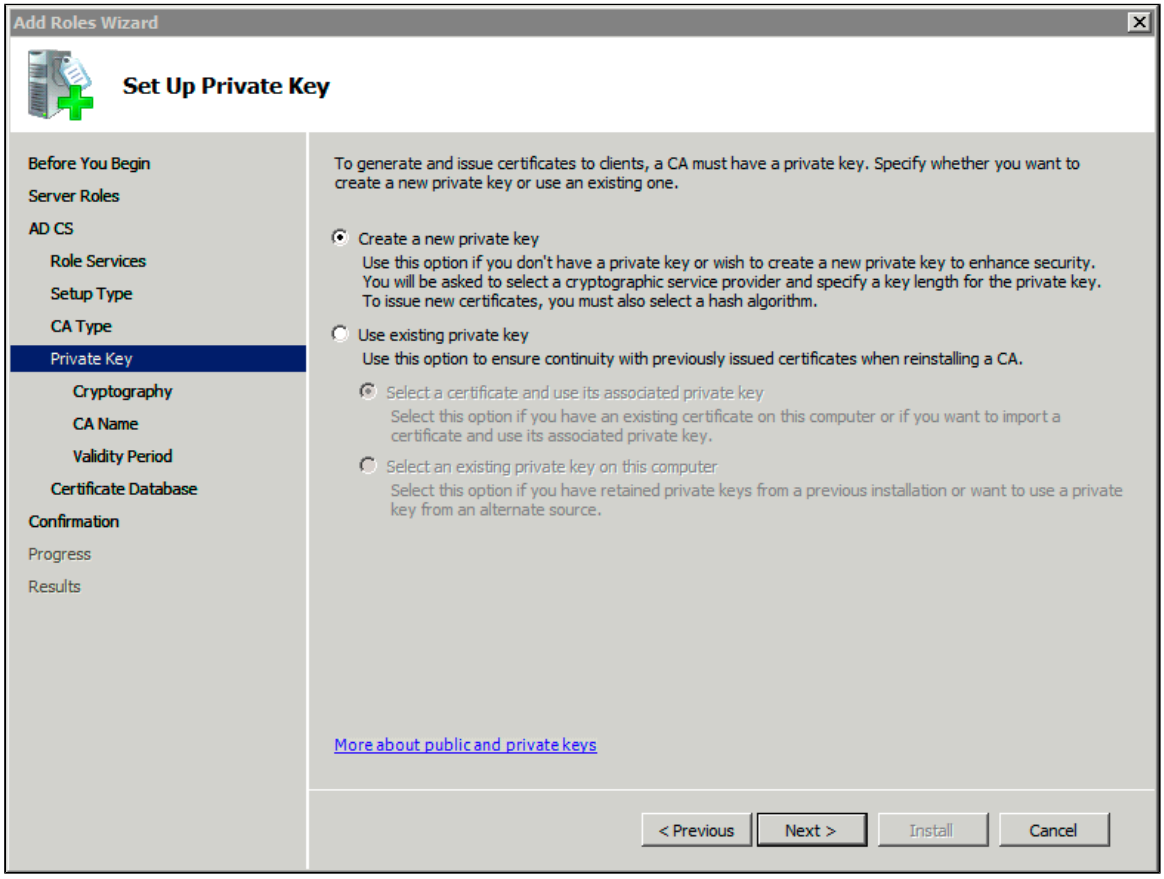
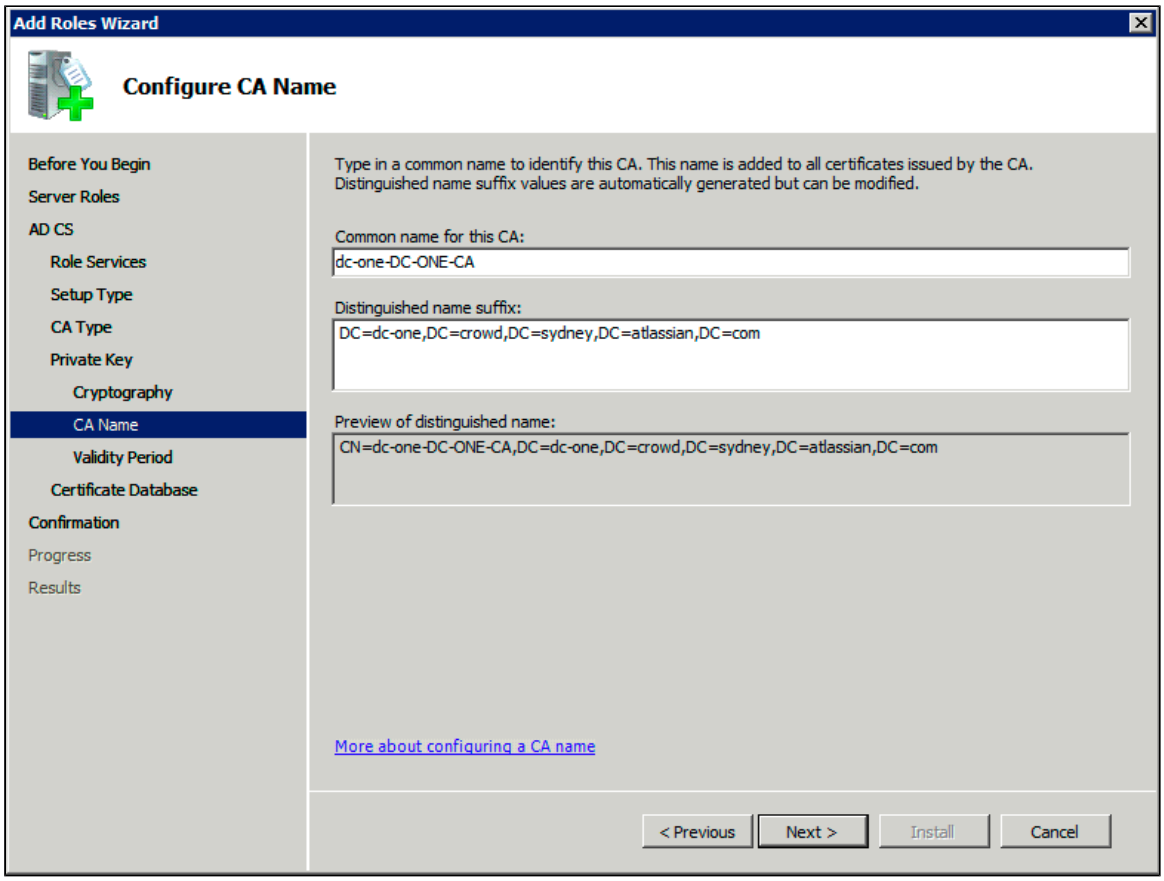


9. In the **Common name for this CA** box, type the common name of the CA, and then click **Next**.



10. On the **Set Validity Period** page, accept the default values or specify other storage locations for the certificate database and the certificate database log, and then click **Next**.

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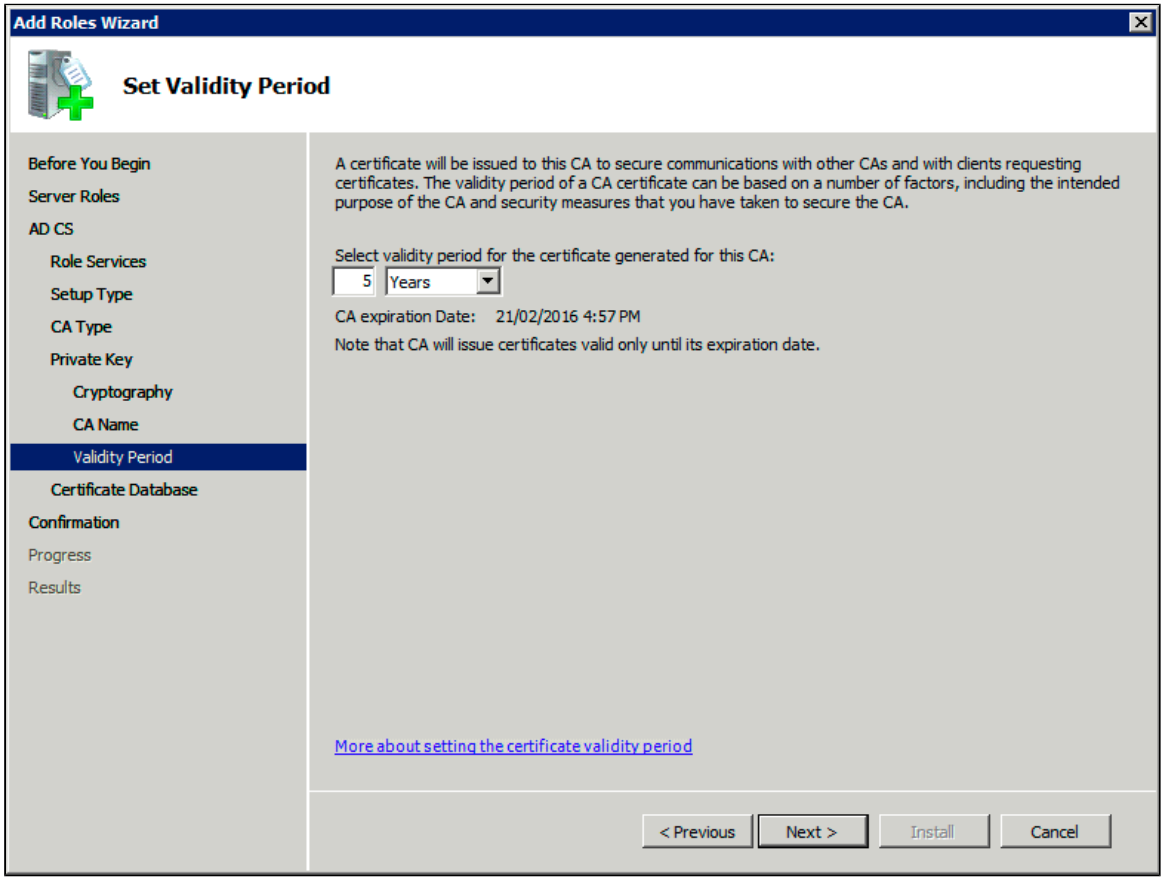

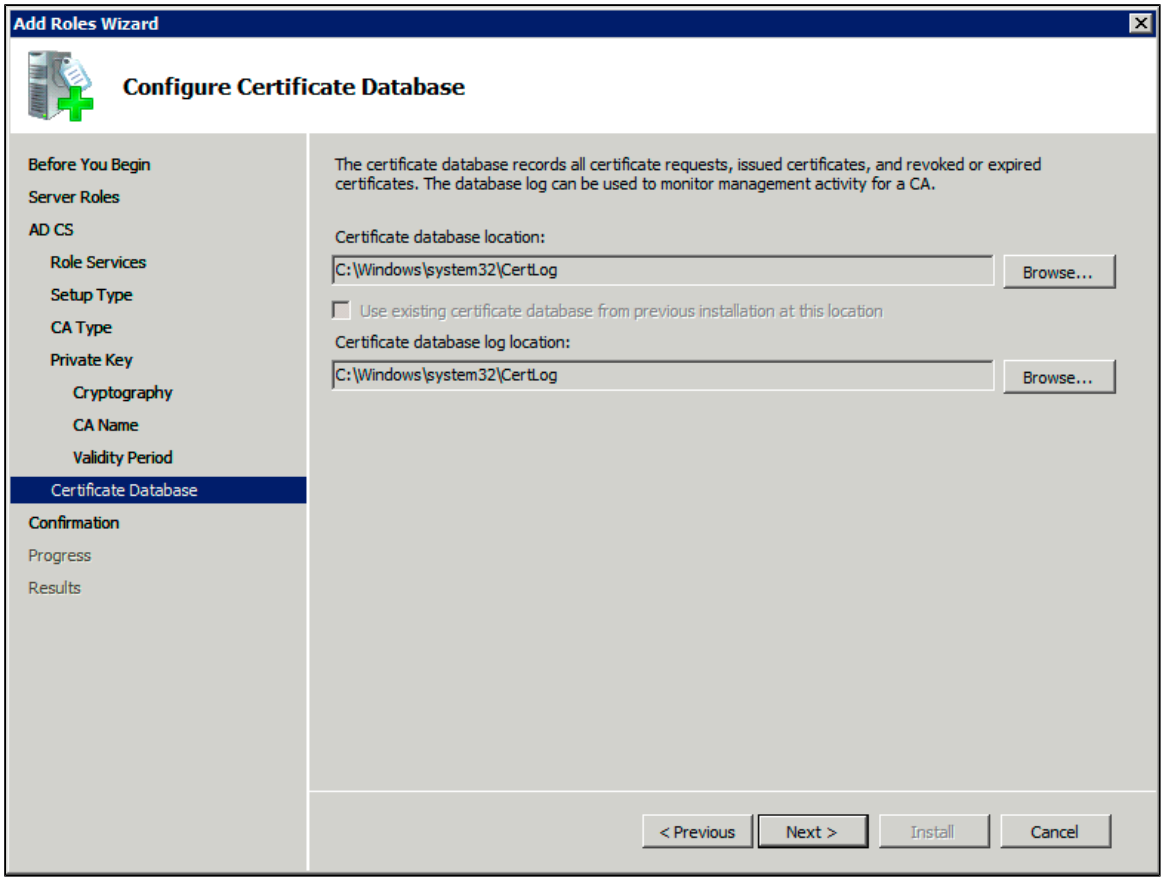

11. After verifying the information on the **Confirm Installation Selections** page, click **Install**.

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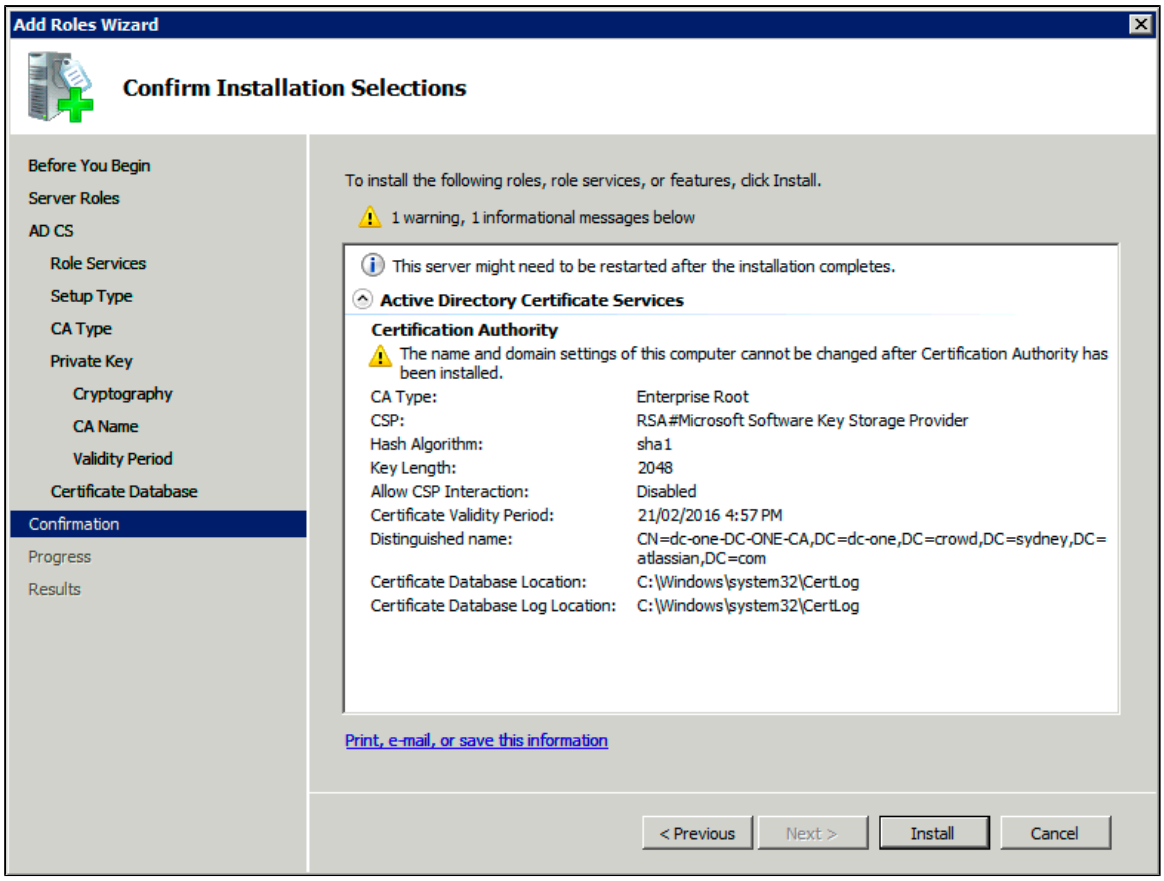
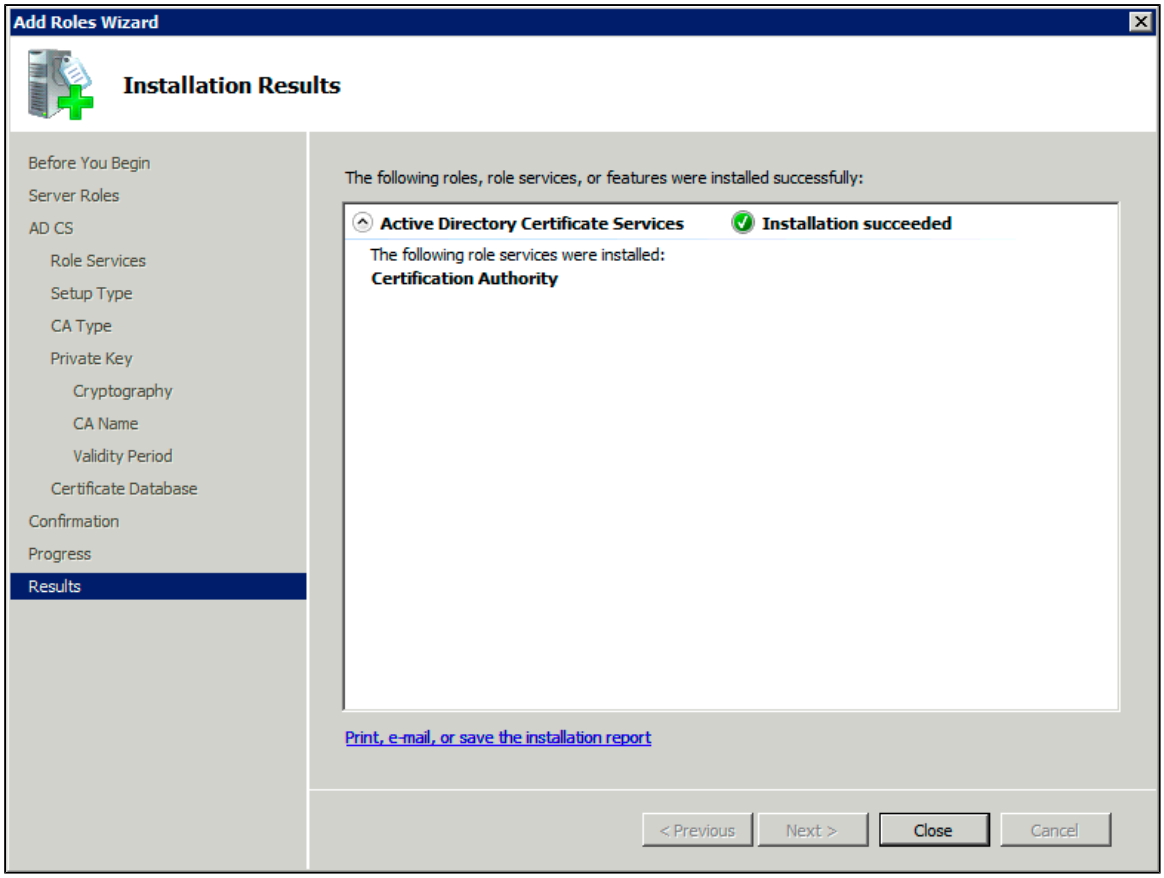


12. Review the information on the results screen to verify that the installation was successful.



Step 2. Obtain the Server Certificate

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The steps above describe how to install the certification authority (CA) on your Microsoft Active Directory server. Next, you will need to add the Microsoft Active Directory server's SSL certificate to the list of accepted certificates used by the JDK that runs your application server.

The Active Directory certificate is automatically generated and placed in root of the C:\ drive, matching a file format similar to the tree structure of your Active Directory server. For example: `c:\ad2008.ad01.atlassian.com_ad01.crt`.

You can also export the certificate by executing this command on the Active Directory server:

```
certutil -ca.cert client.crt
```

Step 3. Import the Server Certificate

For an application server to trust your directory's certificate, the certificate must be imported into your Java runtime environment. The JDK stores trusted certificates in a file called a keystore. The default keystore file is called `cacerts` and it lives in the `jre\lib\security` sub-directory of your Java installation.

In the following examples, we use `server-certificate.crt` to represent the certificate file exported by your directory server. You will need to alter the instructions below to match the name actually generated.

Windows

1. Navigate to the directory in which Java is installed. It's probably called something like `C:\Program Files\Java\jdk1.5.0_12`.
2. Run the command below, where `server-certificate.crt` is the name of the file from your directory server:

```
keytool -import -keystore .\jre\lib\security\cacerts -file
server-certificate.crt
```

3. `keytool` will prompt you for a password. The default keystore password is `changeit`.
4. When prompted `Trust this certificate? [no]:` enter `yes` to confirm the key import:

```
Enter keystore password:  changeit
Owner: CN=ad01, C=US
Issuer: CN=ad01, C=US
Serial number: 15563d6677a4e9e4582d8a84be683f9
Valid from: Tue Aug 21 01:10:46 ACT 2007 until: Tue Aug 21 01:13:59
ACT 2012
Certificate fingerprints:
         MD5:  D6:56:F0:23:16:E3:62:2C:6F:8A:0A:37:30:A1:84:BE
         SHA1:
73:73:4E:A6:A0:D1:4E:F4:F3:CD:CE:BE:96:80:35:D2:B4:7C:79:C1
Trust this certificate? [no]:  yes
Certificate was added to keystore
```

You may now use the '**Secure SSL**' option when connecting your application to your directory server.

UNIX

1. Navigate to the directory in which Java is installed. `cd $JAVA_HOME` will usually get you there.

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2. Run the command below, where `server-certificate.crt` is the name of the file from your directory server:

```
sudo keytool -import -keystore ./jre/lib/security/cacerts -file
server-certificate.crt
```

3. `keytool` will prompt you for a password. The default keystore password is `changeit`.
4. When prompted `Trust this certificate? [no]:` enter `yes` to confirm the key import:

```
Password:
Enter keystore password:  changeit
Owner: CN=ad01, C=US
Issuer: CN=ad01, C=US
Serial number: 15563d6677a4e9e4582d8a84be683f9
Valid from: Tue Aug 21 01:10:46 ACT 2007 until: Tue Aug 21 01:13:59
ACT 2012
Certificate fingerprints:
         MD5:  D6:56:F0:23:16:E3:62:2C:6F:8A:0A:37:30:A1:84:BE
         SHA1:
73:73:4E:A6:A0:D1:4E:F4:F3:CD:CE:BE:96:80:35:D2:B4:7C:79:C1
Trust this certificate? [no]:  yes
Certificate was added to keystore
```

You may now use the '**Secure SSL**' option when connecting your application to your directory server.

Mac OS X

1. Navigate to the directory in which Java is installed. This is usually `/Library/Java/Home`.
2. Run the command below, where `server-certificate.crt` is the name of the file from your directory server:

```
sudo keytool -import -keystore ./jre/lib/security/cacerts -file
server-certificate.crt
```

3. `keytool` will prompt you for a password. The default keystore password is `changeit`.
4. When prompted `Trust this certificate? [no]:` enter `yes` to confirm the key import:

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```
Password:
Enter keystore password:  changeit
Owner: CN=ad01, C=US
Issuer: CN=ad01, C=US
Serial number: 15563d6677a4e9e4582d8a84be683f9
Valid from: Tue Aug 21 01:10:46 ACT 2007 until: Tue Aug 21 01:13:59
ACT 2012
Certificate fingerprints:
         MD5:  D6:56:F0:23:16:E3:62:2C:6F:8A:0A:37:30:A1:84:BE
         SHA1:
73:73:4E:A6:A0:D1:4E:F4:F3:CD:CE:BE:96:80:35:D2:B4:7C:79:C1
Trust this certificate? [no]:  yes
Certificate was added to keystore
```

You may now use the '**Secure SSL**' option when connecting your application to your directory server.

RELATED TOPICS

Connecting to an LDAP Directory
Configuring User Directories

Administrators Guide Home Confluence Documentation Home

Connecting to an Internal Directory with LDAP Authentication

You can connect your Confluence application to an LDAP directory for delegated authentication. This means that Confluence will have an internal directory that uses LDAP for authentication only. There is an option to create users in the internal directory automatically when they attempt to log in, as described in the settings section.

Overview

An internal directory with LDAP authentication offers the features of an internal directory while allowing you to store and check users' passwords in LDAP only. Note that the 'internal directory with LDAP authentication' is separate from the default 'internal directory'. On LDAP, all that the application does is to check the password. The LDAP connection is read only. Every user in the internal directory with LDAP authentication must map to a user on LDAP, otherwise they cannot log in.

When to use this option: Choose this option if you want to set up a user and group configuration within your application that suits your needs, while checking your users' passwords against the corporate LDAP directory. This option also helps to avoid the performance issues that may result from downloading large numbers of groups from LDAP.

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On this page:

- Overview
- Connecting Confluence to an Internal Directory with LDAP Authentication
- Server Settings
  - Copying Users on Login
- Schema Settings
- Advanced Settings
- User Schema Settings
- Group Schema Settings
- Membership Schema Settings
- Diagrams of Possible Configurations

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Connecting Confluence to an Internal Directory with LDAP Authentication

To connect to an internal directory but check logins via LDAP:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**User Directories**' in the left-hand panel.
3. **Add** a directory and select type '**Internal with LDAP Authentication**'.
4. Enter the values for the settings, as described below.
5. Save the directory settings.
6. If you want LDAP users to be used in place of existing internal users, move the 'Internal with LDAP Authentication' directory to the top of the list. You can define the **directory order** by clicking the blue up- and down-arrows next to each directory on the '**User Directories**' screen. Here is a summary of how the directory order affects the processing:
   - The order of the directories is the order in which they will be searched for users and groups.
   - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

   For details see Managing Multiple Directories.
7. Add your users and groups in Confluence. See Adding and Inviting Users and Managing Site-Wide Permissions and Groups .

Server Settings

Setting	Description
Name	A descriptive name that will help you to identify the directory. Examples: • `Internal directory with LDAP Authentication` • `Corporate LDAP for Authentication Only`

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Directory Type	Select the type of LDAP directory that you will connect to. If you are adding a new LDAP connection, the value you select here will determine the default values for some of the options on the rest of screen. Examples: • `Microsoft Active Directory` • `OpenDS` • And more.
Hostname	The host name of your directory server. Examples: • `ad.example.com` • `ldap.example.com` • `opends.example.com`
Port	The port on which your directory server is listening. Examples: • `389` • `10389` • `636` (for example, for SSL)
Use SSL	Select this check box if the connection to the directory server is an SSL (Secure Sockets Layer) connection. Note that you will need to configure an SSL certificate in order to use this setting.
Username	The distinguished name of the user that the application will use when connecting to the directory server. Examples: • `cn=administrator,cn=users,dc=ad,dc=example,dc=com` • `cn=user,dc=domain,dc=name` • `user@domain.name`
Password	The password of the user specified above.

Copying Users on Login

Setting	Description

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Copy User on Login	This option affects what will happen when a user attempts to log in. If this check box is selected, the user will be created automatically in the internal directory that is using LDAP for authentication when the user first logs in and their details will be synchronised on each subsequent log in. If this check box is not selected, the user's login will fail. If you select this check box the following additional fields will appear on the screen, which are described in more detail below: • Default Group Memberships • Synchronise Group Memberships • User Schema Settings (described in a separate section below)
Default Group Memberships	This field appears if you select the **Copy User on Login** check box. If you would like users to be automatically added to a group or groups, enter the group name(s) here. To specify more than one group, separate the group names with commas. Each time a user logs in, their group memberships will be checked. If the user does not belong to the specified group(s), their username will be added to the group(s). If a group does not yet exist, it will be added to the internal directory that is using LDAP for authentication. Please note that there is no validation of the group names. If you mis-type the group name, authorisation failures will result – users will not be able to access the applications or functionality based on the intended group name. Examples: • `confluence-users` • `confluence-users,jira-users,jira-developers`
Synchronise Group Memberships	This field appears if you select the **Copy User on Login** check box. If this check box is selected, group memberships specified on your LDAP server will be synchronised with Confluence each time the user logs in. If you select this check box the following additional fields will appear on the screen, both described in more detail below: • Group Schema Settings (described in a separate section below) • Membership Schema Settings (described in a separate section below)

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Schema Settings

Setting	Description
Base DN	The root distinguished name (DN) to use when running queries against the directory server. Examples: • `o=example,c=com` • `cn=users,dc=ad,dc=example,dc=com` • For Microsoft Active Directory, specify the base DN in the following format: `dc=domain1,dc=local`. You will need to replace the `domain1` and `local` f or your specific configuration. Microsoft Server provides a tool called `ldp.exe` which is useful for finding out and configuring the the LDAP structure of your server.
User Name Attribute	The attribute field to use when loading the username. Examples: • `cn` • `sAMAccountName`

Advanced Settings

Setting	Description
Use Paged Results	Enable or disable the use of the LDAP control extension for simple paging of search results. If paging is enabled, the search will retrieve sets of data rather than all of the search results at once. Enter the desired page size – that is, the maximum number of search results to be returned per page when paged results are enabled. The default is 1000 results.
Follow Referrals	Choose whether to allow the directory server to redirect requests to other servers. This option uses the node referral (JNDI lookup `java.naming.refe rral`) configuration setting. It is generally needed for Active Directory servers configured without proper DNS, to prevent a 'javax.naming.PartialResultException: Unprocessed Continuation Reference(s)' error.

User Schema Settings

Note: this section is only visible when **Copy User on Login** is enabled.

Setting	Description

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Additional User DN	This value is used in addition to the base DN when searching and loading users. If no value is supplied, the subtree search will start from the base DN. Example: • `ou=Users`
User Object Class	This is the name of the class used for the LDAP user object. Example: • `user`
User Object Filter	The filter to use when searching user objects. Example: • `(&(objectCategory=Person)(sAMAccountName=*))`
User Name RDN Attribute	The RDN (relative distinguished name) to use when loading the username. The DN for each LDAP entry is composed of two parts: the RDN and the location within the LDAP directory where the record resides. The RDN is the portion of your DN that is not related to the directory tree structure. Example: • `cn`
User First Name Attribute	The attribute field to use when loading the user's first name. Example: • `givenName`
User Last Name Attribute	The attribute field to use when loading the user's last name. Example: • `sn`
User Display Name Attribute	The attribute field to use when loading the user's full name. Example: • `displayName`
User Email Attribute	The attribute field to use when loading the user's email address. Example: • `mail`

Group Schema Settings

Note: this section is only visible when both **Copy User on Login** and **Synchronise Group Memberships** are enabled.

Setting	Description

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Additional Group DN	This value is used in addition to the base DN when searching and loading groups. If no value is supplied, the subtree search will start from the base DN. Example: • `ou=Groups`
Group Object Class	This is the name of the class used for the LDAP group object. Examples: • `groupOfUniqueNames` • `group`
Group Object Filter	The filter to use when searching group objects. Example: • `(objectCategory=Group)`
Group Name Attribute	The attribute field to use when loading the group's name. Example: • `cn`
Group Description Attribute	The attribute field to use when loading the group's description. Example: • `description`

Membership Schema Settings

Note: this section is only visible when both **Copy User on Login** and **Synchronise Group Memberships** are enabled.

Setting	Description
Group Members Attribute	The attribute field to use when loading the group's members. Example: • `member`
User Membership Attribute	The attribute field to use when loading the user's groups. Example: • `memberOf`
Use the User Membership Attribute, when finding the user's group membership	Select the check box if your directory server supports the group membership attribute on the user. (By default, this is the 'memberOf' attribute.) • If this check box is selected, your application will use the group membership attribute on the user when **retrieving the members of a given group**. This will result in a more efficient retrieval. • If this check box is not selected, your application will use the members attribute on the group ('member' by default) for the search.

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Diagrams of Possible Configurations

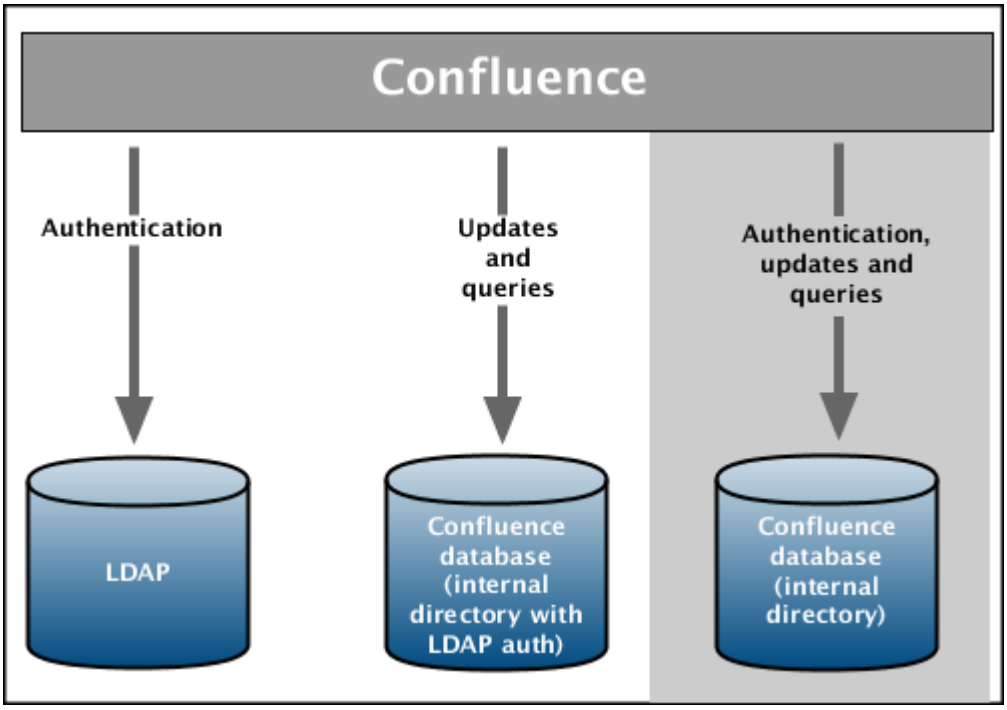

Diagram above: Confluence connecting to an LDAP directory for authentication only.

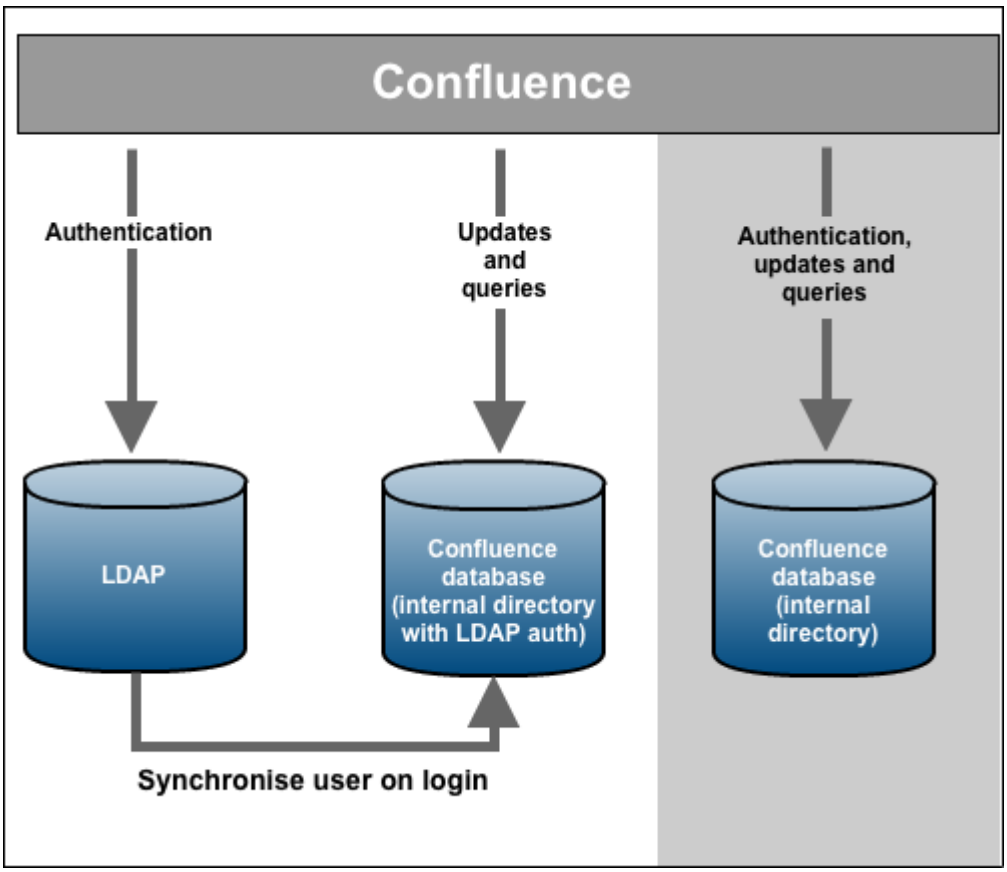

Diagram above: Confluence connecting to an LDAP directory for authentication only, with each user synchronised with the internal directory that is using LDAP authentication when they log in to Confluence.

RELATED TOPICS

Configuring User Directories

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- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

Connecting to Crowd or JIRA for User Management

You can connect your Confluence application to Atlassian Crowd or to JIRA (version 4.3 or later) for management of users and groups, and for authentication (verification of a user's login).

On this page:

- Connecting Confluence to Crowd for User Management
- Connecting Confluence to JIRA for User Management
- Diagrams of Some Possible Configurations

The information on this page does not apply to Confluence OnDemand.

Connecting Confluence to Crowd for User Management

Atlassian Crowd is an application security framework that handles authentication and authorisation for your web-based applications. With Crowd you can integrate multiple web applications and user directories, with support for single sign-on (SSO) and centralised identity management. The Crowd Administration Console provides a web interface for managing directories, users and their permissions. See the Crowd Administration Guide.

When to use this option: Connect to Crowd if you want to use the full Crowd functionality to manage your directories, users and groups. You can connect your Crowd server to a number of directories of all types that Crowd supports, including custom directory connectors.

To connect Confluence to Crowd:

1. Go to your **Crowd Administration Console** and define the Confluence application to Crowd. See the Crowd documentation: Adding an Application.
2. Choose **Browse** > **Confluence Admin**.
3. Click '**User Directories**' in the left-hand panel.
4. **Add** a directory and select type '**Atlassian Crowd**'. Enter the settings as described below.
5. Save the directory settings.
6. Define the **directory order** by clicking the blue up- and down-arrows next to each directory on the '**User Directories**' screen. Here is a summary of how the directory order affects the processing:
   - The order of the directories is the order in which they will be searched for users and groups.
   - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

   For details see Managing Multiple Directories.
7. If required, configure Confluence to use Crowd for single sign-on (SSO) too. See the Crowd documentation: Integrating Crowd with Atlassian Confluence.

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Crowd Settings in Confluence

Setting	Description
Name	A meaningful name that will help you to identify this Crowd server amongst your list of directory servers. Examples: • `Crowd Server` • `Example Company Crowd`
Server URL	The web address of your Crowd console server. Examples: • `http://www.example.com:8095/crowd/` • `http://crowd.example.com`
Application Name	The name of your application, as recognised by your Crowd server. Note that you will need to define the application in Crowd too, using the Crowd administration Console. See the Crowd documentation on adding an application.
Application Password	The password which the application will use when it authenticates against the Crowd framework as a client. This must be the same as the password you have registered in Crowd for this application. See the Crowd documentation on adding an application.

Crowd Permissions

Setting	Description
Read Only	The users, groups and memberships in this directory are retrieved from Crowd and can only be modified via Crowd. You cannot modify Crowd users, groups or memberships via the application administration screens.
Read/Write	The users, groups and memberships in this directory are retrieved from Crowd. When you modify a user, group or membership via the application administration screens, the changes will be applied directly to Crowd. Please ensure that the application has modification permissions for the relevant directories in Crowd. See the Crowd documentation: Specifying an Application's Directory Permissions.

Advanced Crowd Settings

Setting	Description

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Enable Nested Groups	Enable or disable support for nested groups. Before enabling nested groups, please check to see if the user directory or directories in Crowd support nested groups. When nested groups are enabled, you can define a group as a member of another group. If you are using groups to manage permissions, you can create nested groups to allow inheritance of permissions from one group to its sub-groups.
Synchronisation Interval (minutes)	Synchronisation is the process by which the application updates its internal store of user data to agree with the data on the directory server. The application will send a request to your directory server every x minutes, where 'x' is the number specified here. The default value is 60 minutes.

Connecting Confluence to JIRA for User Management

> Note that the license tiers for JIRA and Confluence do not need to match to use this feature. For example, you can manage a Confluence 50 user license with JIRA, even if JIRA only has a 25 user license.

Subject to certain limitations, you can connect a number of Atlassian web applications to a single JIRA server for centralised user management.

When to use this option: You can only connect to a server running **JIRA 4.3 or later**. Choose this option as an alternative to Atlassian Crowd, for simple configurations with a limited number of users.

If you are running JIRA 4.2 or earlier, please see Connecting to JIRA 4.2 or Earlier for User Management.

To connect Confluence to JIRA 4.3 or later:

1. Go to your **JIRA administration screen** and define the Confluence application to JIRA:
    - For JIRA 4.3.x, select **'Other Applications'** from the **'Users, Groups & Roles'** section of the 'Administration' menu.
    - For JIRA 4.4 or later, select **'Users' > 'JIRA User Server'** in Administration mode.
    - Click **'Add Application'**.
    - Enter the **application name** and **password** that Confluence will use when accessing JIRA.
    - Enter the **IP address** or addresses of your Confluence server. Valid values are:
        - A full IP address, e.g. `192.168.10.12`.
        - A wildcard IP range, using CIDR notation, e.g. `192.168.10.1/16`. For more information, see the introduction to CIDR notation on Wikipedia and RFC 4632.
    - **Save** the new application.
2. Set up the JIRA user directory in Confluence:
    - Choose **Browse** > **Confluence Admin**.
    - Click '**User Directories**' in the left-hand panel.
    - **Add** a directory and select type '**Atlassian JIRA**'.
    - Enter the settings as described below. When asked for the **application name** and **password**, enter the values that you defined for your Confluence application in the settings on JIRA.
    - Save the directory settings.
    - Define the **directory order** by clicking the blue up- and down-arrows next to each directory on the '**User Directories**' screen. Here is a summary of how the directory order affects the processing:
        - The order of the directories is the order in which they will be searched for users and groups.

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- Changes to users and groups will be made only in the first directory where the application has permission to make changes.

For details see Managing Multiple Directories.

3. In order to use Confluence, users must be a member of the `confluence-users` group or have Confluence 'can use' permission. Follow these steps to configure your Confluence groups in JIRA:
   a. Add the `confluence-users` and `confluence-administrators` groups in JIRA.
   b. Add your own username as a member of both of the above groups.
   c. Choose one of the following methods to give your existing JIRA users access to Confluence:
      - Option 1: In JIRA, find the groups that the relevant users belong to. Add the groups as members of one or both of the above Confluence groups.
      - Option 2: Log in to Confluence using your JIRA account and go to the Confluence **Administration Console**. Click '**Global Permissions**' and assign the '**can use**' permission to the relevant JIRA groups.

JIRA Settings in Confluence

Setting	Description
Name	A meaningful name that will help you to identify this JIRA server amongst your list of directory servers. Examples: • `JIRA Server` • `My Company JIRA`
Server URL	The web address of your JIRA server. Examples: • `http://www.example.com:8080` • `http://jira.example.com`
Application Name	The name used by your application when accessing the JIRA server that acts as user manager. Note that you will also need to define your application to that JIRA server, via the '**Other Applications**' option in the 'Users, Groups & Roles' section of the 'Administration' menu.
Application Password	The password used by your application when accessing the JIRA server that acts as user manager.

JIRA Permissions

Setting	Description
Read Only	The users, groups and memberships in this directory are retrieved from the JIRA server that is acting as user manager. They can only be modified via that JIRA server.

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Read/Write	The users, groups and memberships in this directory are retrieved from the JIRA server that is acting as user manager. When you modify a user, group or membership, the changes will be applied directly to your application and to the JIRA server that is acting as user manager.

Advanced JIRA Settings

Setting	Description
Enable Nested Groups	Enable or disable support for nested groups. Before enabling nested groups, please check to see if nested groups are enabled on the JIRA server that is acting as user manager. When nested groups are enabled, you can define a group as a member of another group. If you are using groups to manage permissions, you can create nested groups to allow inheritance of permissions from one group to its sub-groups.
Synchronisation Interval (minutes)	Synchronisation is the process by which the application updates its internal store of user data to agree with the data on the directory server. The application will send a request to your directory server every x minutes, where 'x' is the number specified here. The default value is 60 minutes.

Diagrams of Some Possible Configurations

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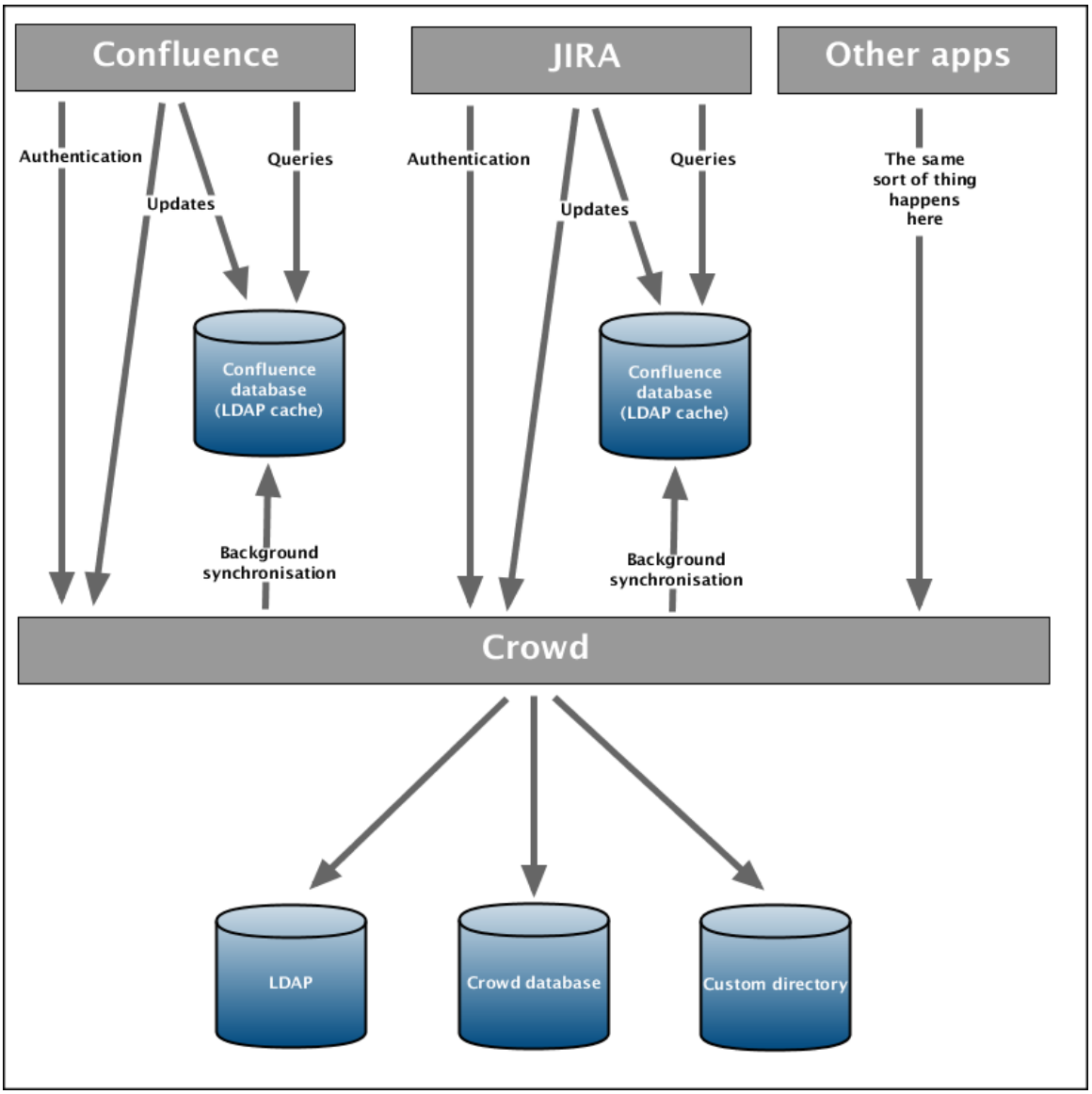

Diagram above: Confluence, JIRA and other applications connecting to Crowd for user management.

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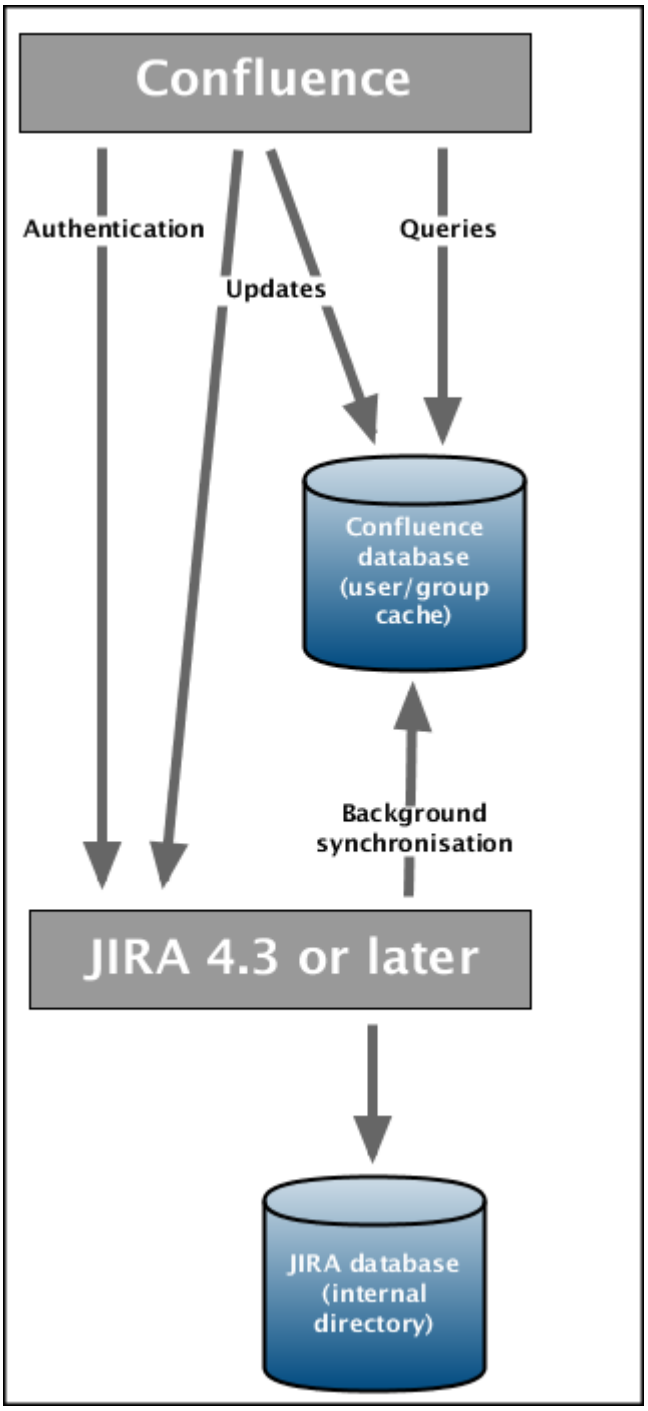

Diagram above: Confluence connecting to JIRA for user management.

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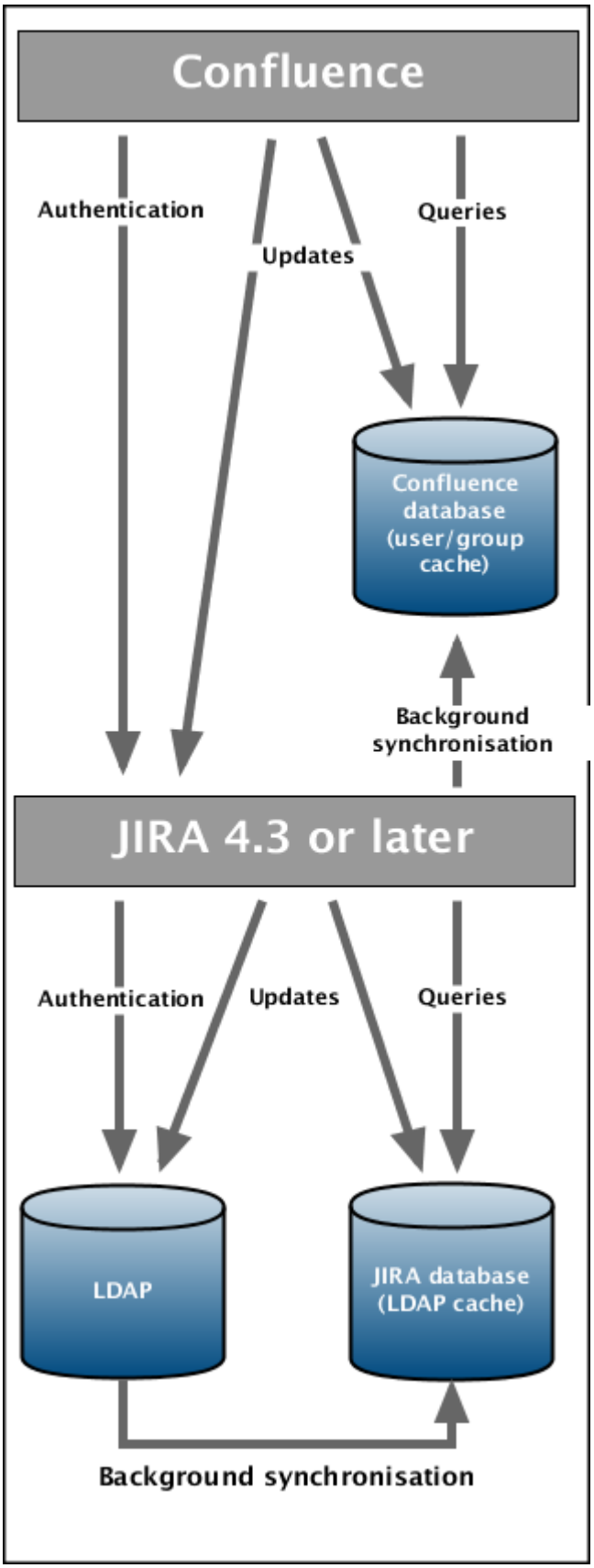

Diagram above: Confluence connecting to JIRA for user management, with JIRA in turn connecting to LDAP.

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory

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- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

Reverting from Crowd or JIRA to Internal User Management

If your Confluence site currently uses JIRA or Crowd for user management, you can revert to internal user management as described below. If your Confluence instance has only a few users, it is easier to recreate the users and groups in Confluence manually. If you have a large number of users and groups, it is more efficient to migrate the relevant users and groups into the Confluence Internal directory.

> Both options provided below will reset the affected users' passwords. When done, be sure to notify them to use the 'Reset My Password' link on the Confluence log in page before they attempt to log in.

On this page:

- Option 1 – Manually Recreate Users and Groups in Confluence
- Option 2 – Transfer Crowd/JIRA Users and Groups to the Confluence Database

> *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Option 1 – Manually Recreate Users and Groups in Confluence

Use this option if you have only a few users and groups.

1. Log in to Confluence as a Confluence system administrator.
2. Go to the user directories administration screen and move the **internal** directory to the top of the list of directories, by clicking the arrows in the '**Order**' column.
3. Make sure that you have at least one user from the **internal** directory in each of the `confluence-users` and `confluence-administrators` groups.
4. Make sure that you have a username in the **internal**directory with Confluence system administrator permissions.
   - If you do not have such a user, add a new one now, and log out of Confluence.
   - Log back in as the user you just added, and go back to the user directories administration screen.
5. Disable the '**Atlassian Crowd**' directory.
6. Manually add the required users and groups in Confluence. They will be added to the internal directory, because you have moved it to the top of the list of directories.
   - If you have assigned Confluence permissions to a group which exists in JIRA, you must create a group in Confluence with the same name.
   - If a user who exists in JIRA has created content or has had permissions assigned to them in Confluence, you must also create that user in Confluence.
7. Add the users to the required groups.

Option 2 – Transfer Crowd/JIRA Users and Groups to the Confluence Database

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Use this option to migrate External Application (Crowd or JIRA) users into the Confluence database. You need a knowledge of SQL to perform this task.

The SQL commands given below are tailored for **MySQL**. If you are using a database other than MySQL, you will need to modify the SQL to work in your database.

Step 1. Create Backups

Creating backups is the only way to restore your data if something goes wrong.

1. From Confluence, create a full XML site backup including attachments.
2. Stop Confluence.
3. Make a backup copy of the Confluence home and installation directories.
4. Repeat the above steps for your External Application.
5. From your MySQL administration tool, create a database backup for the Crowd/JIRA and Confluence databases.

Step 2. Replace Confluence User Management

Use the SQL below to move groups and users from your External Application to Confluence by transferring table content. The SQL provided is specific to MySQL and must be modifed for other databases.

Find the IDs for your Directories

1. Run the following command and take note of the resulting number. It will be referenced throughout the following instructions as <Confluence Internal ID>.

```
select id from cwd_directory where directory_name='Confluence Internal
Directory';
```

2. From the User Directories administration page, find the name of the directory who's users/groups you want to move. Run the following command and take note of the resulting number. It will be referenced throughout the following instructions as <External Application ID>.

```
select id from cwd_directory where directory_name='<External Directory
Name>';
```

Move Groups to Confluence

1. It is possible that you have several groups in your Internal Directory that have the same name as groups in your External Application. To find these, run:

```
select distinct a.id, a.directory_id, a.group_name, d.directory_name from
cwd_group a join cwd_group b on a.group_name=b.group_name join
cwd_directory d on d.id=a.directory_id where a.directory_id !=
b.directory_id;
```

   a. If you have results from the previous query, for each of the group names that have duplicates, find the id for the group in the Confluence Internal Directory (<internal group id>) and the External Application (<external group id>). Run the following:

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```
update cwd_group_attribute set group_id=<internal group id>,
directory_id=<Confluence Internal Id> where group_id=<external group
id>;
update cwd_membership set child_group_id=<internal group id> where
child_group_id=<external group id>;
update cwd_membership set parent_id=<internal group id> where
parent_id=<external group id>;
delete from cwd_group where id=<external group id>;
```

2. Move all the groups in the External Application to the Confluence Internal Directory.

```
update cwd_group set directory_id=<Confluence Internal ID> where
directory_id=<External Application ID>;
```

Move Users to Confluence

1. It is possible that you have several users in your Internal Directory that have the same name as users in your External Application. To find these, run:

```
select distinct a.id, a.directory_id, a.user_name, d.directory_name from
cwd_user a join cwd_user b on a.user_name=b.user_name join cwd_directory d
on d.id=a.directory_id where a.directory_id != b.directory_id;
```

   a. If you have results from the previous query, for each of the user names that have duplicates, find the id for the user in the Confluence Internal Directory (<internal user id>) and the External Application (<external user id>). Run the following:

```
update cwd_membership set child_user_id=<internal user id> where
child_user_id=<external user id>;
update cwd_user_credential_record set user_id=<internal user id>
where user_id=<external user id>;
update cwd_user_attribute set user_id=<internal user id>,
directory_id=<Confluence Internal ID> where user_id=<external user
id>;
delete from cwd_user where id=<external user id>;
```

2. Move all the users in the External Application to the Confluence Internal Directory.

```
update cwd_user set directory_id=<Confluence Internal ID> where
directory_id=<External Application ID>;
```

Delete the External Application directory

1. You need to change the order of your directories so that the Internal directory is at the top, and active.
   a. If you have only two directories - the Internal and the External Application directory you are deleting, then do the following:

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```
update cwd_app_dir_mapping set list_index = 0 where directory_id =
<Confluence Internal ID>;
```

b. If you have more than two directories, you need to rearrange them so the Internal Directory is at the top (list_index 0) and the External Application directory you are deleting is at the bottom.
   - List the directories and their order using

```
select d.id, d.directory_name, m.list_index from cwd_directory d
join cwd_app_dir_mapping m on d.id=m.directory_id order by
m.list_index;
```

   - Change the list indexes so that they are in the order you want. Directory order can be rearranged using

```
update cwd_app_dir_mapping set list_index = <position> where
directory_id = <directory id>;
```

c. Check that the internal directory is enabled.
   - List the internal directory. An enabled directory will have its 'active' column set to 'T'

```
select id, directory_name, active from cwd_directory where id =
<Internal Directory id>;
```

   - If the internal directory is not active, activate it by

```
update cwd_directory set active = 'T' where id = <Internal
Directory id>;
```

2. When the directories are ordered correctly, delete the External Application directory from the directory order:

```
delete from cwd_app_dir_operation where app_dir_mapping_id = (select id
from cwd_app_dir_mapping where directory_id = <External Application ID>);
delete from cwd_app_dir_mapping where directory_id = <External Application
ID>;
```

3. The External Application directory is referenced in several other tables in the database. You need to remove the remaining references to it:

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```
delete from cwd_directory_attribute where directory_id=<External
Application ID>;
delete from cwd_directory_operation where directory_id=<External
Application ID>;
```

4. All references to the External Directory should now have been removed. Delete the directory using:

```
delete from cwd_directory where id = <External Application ID>;
```

Reset passwords

1. All users who were in the External Directory you deleted, including admins, will be unable to log in. Their passwords need to be reset by choosing the 'Forgot your password?' link on the login page. Alternatively, use the instructions at Restoring Passwords To Recover Admin User Rights to reset the administrator password, then set the users' passwords for them via the Manage Users page in the administration screen.

RELATED TOPICS

Configuring User Directories

Connecting to JIRA 4.2 or Earlier for User Management

Atlassian JIRA is an issue and project tracking tool. Like Confluence, JIRA offers the ability to store its users and groups in its database. You can configure Confluence to look for its users and groups in the JIRA database. This page describes the **legacy JIRA database connector**, which provides a direct connection to the JIRA database.

When to use this option: Choose the legacy JIRA database connector if your JIRA server is **JIRA 4.2 or earlier**, for backwards compatibility with the already-existing option for Confluence to use JIRA for user management.

*If you are using **JIRA 4.3 or later**, you cannot use the legacy JIRA database connector. Instead, choose the '**Atlassian JIRA**' directory type.*

On this page:

- Connecting Confluence to JIRA
- JIRA Settings in Confluence

⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Connecting Confluence to JIRA

To connect Confluence to JIRA 4.2 or earlier:

1. Edit the Confluence `server.xml` file, to construct the datasource location, as described below.
2. Restart Confluence.
3. Choose **Browse** > **Confluence Admin**.
4. Click **User Directories** in the left-hand panel.
5. **Add** a directory and select type **Legacy Atlassian JIRA (4.2 and earlier)**. Enter the settings as

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described below.

6. Save the directory settings.
7. Define the directory order by clicking the blue up- and down-arrows next to each directory on the 'User Directories' screen. Here is a summary of how the directory order affects the processing:
   - The order of the directories is the order in which they will be searched for users and groups.
   - Changes to users and groups will be made only in the first directory where the application has permission to make changes.

   For details see Managing Multiple Directories.
8. In order to use Confluence, users must be a member of the `confluence-users` group or have Confluence 'can use' permission. Follow these steps to configure your Confluence groups in JIRA:
   a. Add the `confluence-users` and `confluence-administrators` groups in JIRA.
   b. Add your own username as a member of both of the above groups.
   c. Choose one of the following methods to give your existing JIRA users access to Confluence:
      - Option 1: In JIRA, find the groups that the relevant users belong to. Add the groups as members of one or both of the above Confluence groups.
      - Option 2: Log in to Confluence using your JIRA account and go to the Confluence **Administration Console**. Click '**Global Permissions**' and assign the '**can use**' permission to the relevant JIRA groups.

JIRA Settings in Confluence

Setting	Description
Name	A meaningful name that will help you to identify this JIRA server amongst your list of directory servers. Examples: • `JIRA` • `Example Company JIRA`

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Datasource Location	The JNDI name of the JIRA datasource configured in your application server. Example: `java:comp/env/jdbc/YourJiraDatasource` In JIRA standalone distributions (using the default application server, Tomcat 6) you can construct the datasource location as follows: 1. Open your `<jira_install>/conf/server.xml` file in a text editor. 2. Look for the database setup section in that file. It looks something like this: `<Resource auth="Container" driverClassName="com.mysql.jdbc.Driver" maxActive="20" name="*jdbc/JiraDS*" password="jirauser" type="javax.sql.DataSource" url="jdbc:mysql://localhost/jiradb?useUnicode=true&characterEncoding=UTF8" username="jirauser" validationQuery="select 1"/>` 3. Copy the above lines (the 'Resource' section) and paste it to your Confluence's `server.xml` file (located at `<confluence_install>/conf/server.xml`), under the `Context path`. This will then expose the value of the name attribute as the JNDI resource locator. 4. Copy the JNDI name from the `name` parameter. In this example, the datasource location is: `java:comp/env/jdbc/JiraDS`

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

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Managing Multiple Directories

This page describes what happens when you have defined more than one user directory in Confluence. For example, you may have an internal directory and you may also connect to an LDAP directory server and/or other types of user directories. When you connect to a new directory server, you also need to define the **directory order**.

Duplicate usernames across directories are not supported. If you are connecting to more than one user directory, please ensure that the usernames are unique to one directory. For example, if you have a user `jsmith` in both 'Directory1' and 'Directory2', that is an unsupported configuration.

Overview

Here is a summary of how the directory order affects the processing:

- The order of the directories is the order in which they will be searched for users and groups.
- Changes to users and groups will be made only in the first directory where the application has permission to make changes.

On this page:

- Overview
- Configuring the Directory Order
- Effect of Directory Order
  - Login
  - Permissions
  - Updating Users and groups

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Configuring the Directory Order

You can change the order of your directories as defined to Confluence. Select '**User Directories**' from the Confluence Administration Console and click the blue up- and down-arrows next to each directory.

Directory Name	Type	Order
Confluence Internal Directory	Internal	
OpenLDAP	OpenLDAP (Read-Write)	

Notes:

- Please read the rest of this page to understand what effect the directory order will have on authentication (login) and permissions in Confluence, and what happens when you update users and groups in Confluence.

Effect of Directory Order

This section summarises the effect the order of the directories will have on login and permissions, and on the updating of users and groups.

Login

The directory order is significant during the authentication of the user, in cases where the same user exists in multiple directories. When a user attempts to log in, the application will search the directories in the order specified, and will use the credentials (password) of the *first occurrence of the user* to validate the login attempt.

Permissions

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The directory order is significant when granting the user permissions based on group membership. If the same username exists in more than one directory, the application will look for group membership only in the first directory where the username appears, based on the directory order.

Example:

- You have connected two directories: The Customers directory and the Partners directory.
- The Customers directory is first in the directory order.
- A username `jsmith` exists in both the Customers directory and the Partners directory.
- The user `jsmith` is a member of group `G1` in the Customers directory and group `G2` in the Partners directory.
- The user `jsmith` will have permissions based on membership of `G1` only, not `G2`.

Updating Users and groups

If you update a user or group via the application's administration screens, the update will be made in the first directory where the application has write permissions.

Example 1:

- You have connected two directories: The Customers directory and the Partners directory.
- The application has permission to update both directories.
- The Customers directory is first in the directory order.
- A username `jsmith` exists in both the Customers directory and the Partners directory.
- You update the email address of user `jsmith` via the application's administration screens.
- The email address will be updated in the Customers directory only, not the Partners directory.

Example 2:

- You have connected two directories: A read/write LDAP directory and the internal directory.
- The LDAP directory is first in the directory order.
- All new users will be added to the LDAP directory. It is not possible to add a new user to the internal directory.

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
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- User Management Limitations and Recommendations
- Requesting Support for External User Management
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Administrators Guide Home Confluence Documentation Home

Managing Nested Groups

Some directory servers allow you to define a group as a member of another group. Groups in such a structure are called 'nested groups'. If you are using groups to manage permissions, you can create nested groups to allow inheritance of permissions from one group to its sub-groups.
This page describes how Confluence handles nested groups that exist in one or more of your directory servers.

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Enabling Nested Groups

You can enable or disable support for nested groups on each directory individually. Go to the '**User Directories**' section of the Confluence Administration Console, **edit** the directory and select '**Enable Nested Groups'**. See Configuring User Directories.

Notes:

- Before enabling nested groups for a specific directory type in Confluence, please make sure that your directory server supports nested groups.
- Please read the rest of this page to understand what effect nested groups will have on authentication (login) and permissions in Confluence, and what happens when you update users and groups in Confluence.

On this page:

- Enabling Nested Groups
- Effect of Nested Groups
  - Login
  - Permissions
  - Viewing Lists of Group Members
  - Adding and Updating Group Memberships
- Examples
  - Example 1: User is Member of Sub-Group
  - Example 2: Sub-Groups as Members of the 'jira-developers' group
  - Example 3: Sub-Groups as Members of the 'confluence-users' group
- Notes

The information on this page does not apply to Confluence OnDemand.

Effect of Nested Groups

This section summarises the effect nested groups will have on login and permissions, and on the viewing and updating of users and groups.

Login

When a user logs in, they will be allowed access to the application if they belong to an authorised group or any of its sub-groups.

Permissions

The user will be allowed access to a function if they belong to a group that has the necessary permissions, or if they belong to any of its sub-groups.

Viewing Lists of Group Members

If you ask to view the members of a group, you will see all users who are members of the group and all users belonging its sub-groups, consolidated into one list. We call this a '**flattened**' list.

You cannot view or edit the nested groups themselves. You will not be able to see that one group is a member of another group.

Adding and Updating Group Memberships

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If you add a user to a group, the user is added to the named group and not to any other groups.

If you try to remove a user from a flattened list, the following will happen:

- If the user is a member of the top group in the hierarchy (tree) of groups contained in the flattened list, the user will be removed from the group.
- Otherwise, you will see an error message stating that the user is not a direct member of the group.

Examples

Example 1: User is Member of Sub-Group

Let's assume that the following two groups exist in your directory server:

- `staff`
- `marketing`

Memberships:

- The `marketing` group is a member of the `staff` group.
- User `jsmith` is a member of `marketing`.

You will see that `jsmith` is a member of both `marketing` and `staff`. You will not see that the two groups are nested. If you assign permissions to the `staff` group, then `jsmith` will get those permissions.

Example 2: Sub-Groups as Members of the 'jira-developers' group

In an LDAP directory server, we have groups '**engineering-group**' and '**techwriters-group**'. We want to grant both groups developer-level access to our JIRA site.

- Add a group called '**jira-developers**'.
- Add the '**engineering-group**' as a sub-group of '**jira-developers**'.
- Add the '**techwriters-group**' as a sub-group of '**jira-developers**'.

Group memberships are now:

- **jira-developers** — sub-groups: **engineering-group**, **techwriters-group**
- **engineering-group** — sub-groups: **dev-a**, **dev-b**; users: **pblack**
- **dev-a** — users: **jsmith**, **sbrown**
- **dev-b** — users: **jsmith**, **dblue**
- **techwriters-group** — users: **rgreen**

When JIRA requests a list of users in the '**jira-developers**' group, it will receive the following list:

- **pblack**
- **jsmith**
- **sbrown**
- **dblue**
- **rgreen**

Diagram: Sub-groups as members of the 'jira-developers' group

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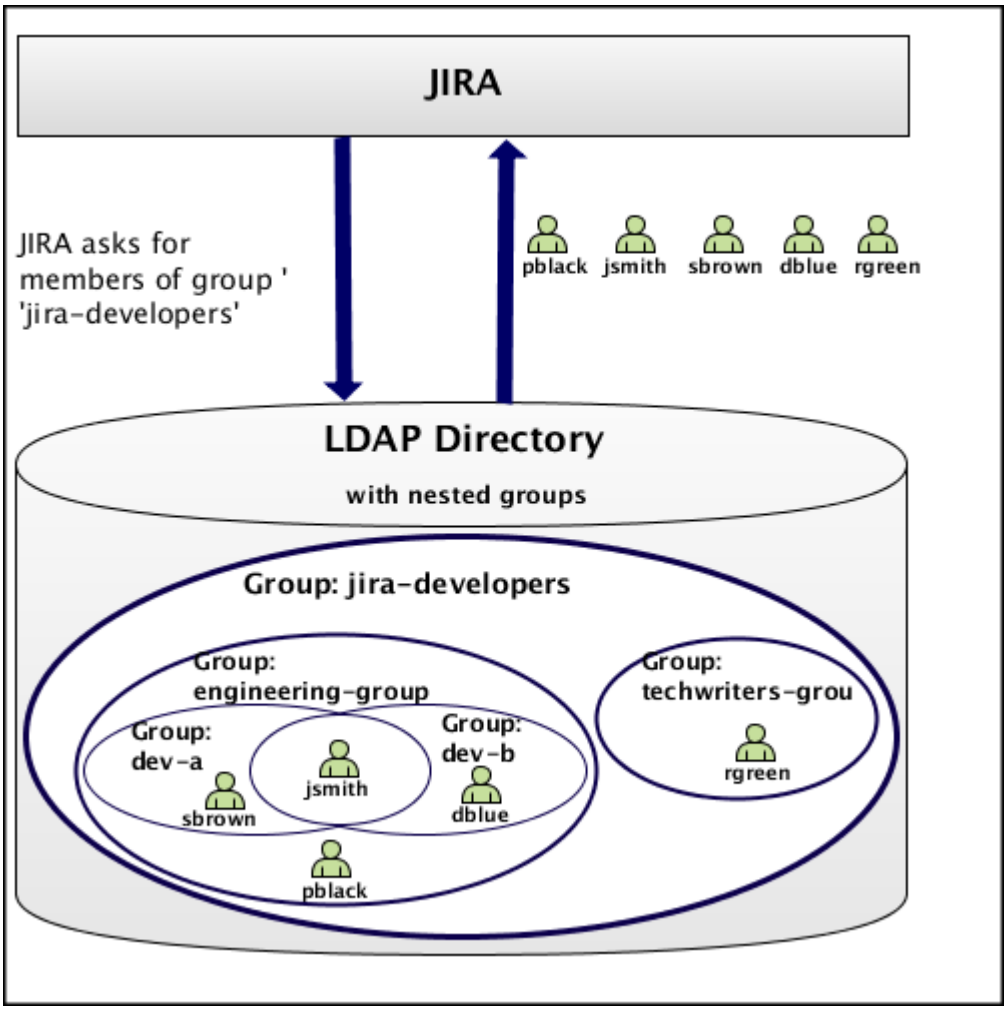

Example 3: Sub-Groups as Members of the 'confluence-users' group

In an LDAP directory server, we have groups '**engineering-group**' and '**payroll-group**'. We want to grant both groups access to our Confluence site.

- Add a group called '**confluence-users**'.
- Add the '**engineering-group**' as a sub-group of '**confluence-users**'.
- Add the '**payroll-group**' as a sub-group of '**confluence-users**'.

Group memberships are now:

- **confluence-users** — sub-groups: **engineering-group**, **payroll-group**
- **engineering-group** — sub-groups: **dev-a**, **dev-b**; users: **pblack**
- **dev-a** — users: **jsmith**, **sbrown**
- **dev-b** — users: **jsmith**, **dblue**
- **payroll-group** — users: **rgreen**

When Confluence requests a list of users in the '**confluence-users**' group, it will receive the following list:

- **pblack**
- **jsmith**
- **sbrown**
- **dblue**
- **rgreen**

Diagram: Sub-groups as members of the 'confluence-users' group

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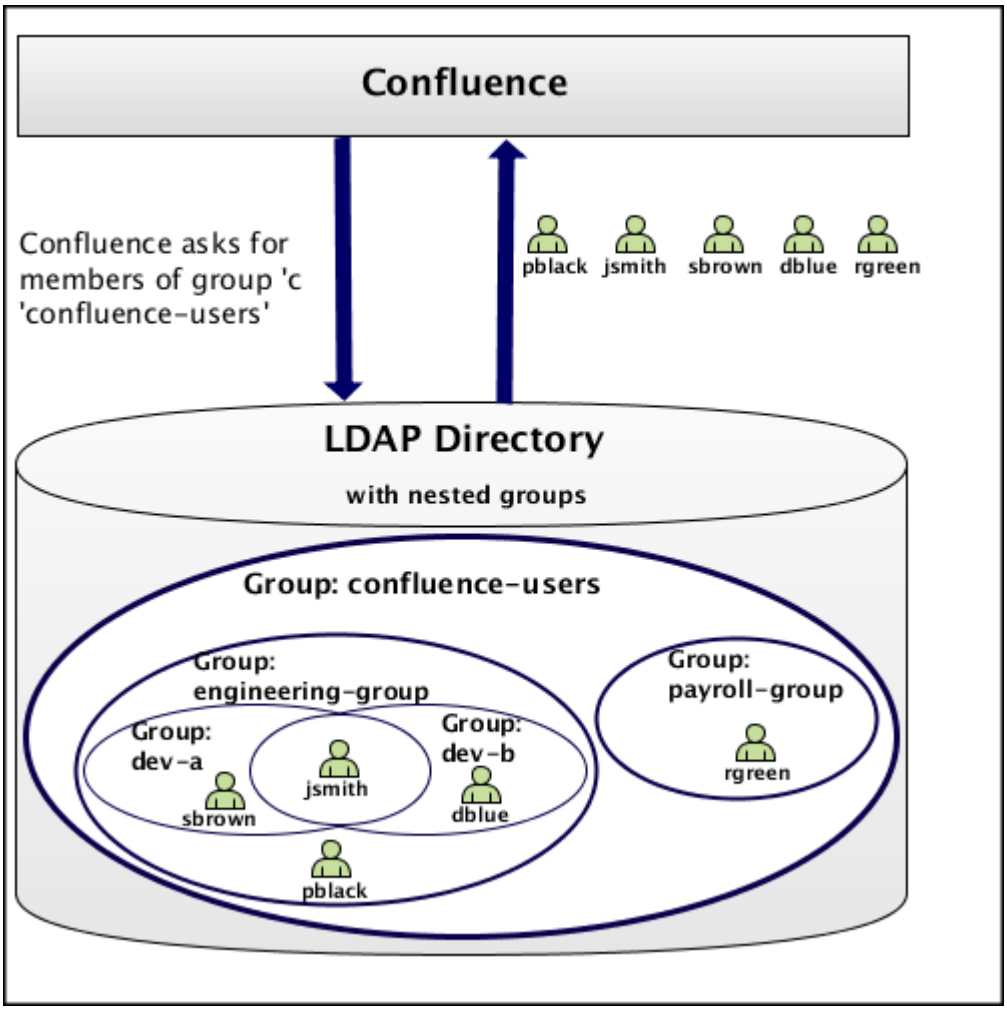

Notes

- **Possible impact on performance.** Enabling nested groups may result in slower user searches.
- **Definition of nested groups in LDAP.** In an LDAP directory, a nested group is defined as a child group entry whose DN (Distinguished Name) is referenced by an attribute contained within a parent group entry. For example, a parent group '**Group One**' might have an `objectClass=group` attribute and one or more `member=DN` attributes, where the DN can be that of a user *or* that of a group elsewhere in the LDAP tree:

```
member=CN=John Smith,OU=Users,OU=OrgUnitA,DC=sub,DC=domain
member=CN=Group Two,OU=OrgUnitBGroups,OU=OrgUnitB,DC=sub,DC=domain
```

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management

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- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

Synchronising Data from External Directories

For certain directory types, Confluence stores a cache of directory information (users and groups) in the application database, to ensure fast recurrent access to user and group data. A synchronisation task runs periodically to update the internal cache with changes from the external directory.

On this page:

- Affected Directory Types
- How it Works
- Finding the Time Taken to Synchronise
- Manually Synchronising the Cache
- Configuring the Synchronisation Interval

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Affected Directory Types

Data caching and synchronisation apply to the following user directory types:

- **LDAP** (Microsoft Active Directory and all supported LDAP directories) where permissions are set to **read only**.
- **LDAP** (Microsoft Active Directory and all supported LDAP directories) where permissions are set to **read only, with local groups**.
- **LDAP** (Microsoft Active Directory and all supported LDAP directories) where permissions are set to **read/write**.
- **Atlassian Crowd**.
- **Atlassian JIRA**.

Data caching and synchronisation do not occur for the following user directory types:

- **LDAP** (Microsoft Active Directory and all supported LDAP directories) where permissions are set to **authentication only, with local groups**.
- **Internal Directory with LDAP Authentication**.
- **Internal Directory**.

How it Works

Here is a summary of the caching functionality:

- The caches are held in the application database.
- When you connect a new external user directory to the application, a synchronisation task will start running in the background to copy all the required users, groups and membership information from the external directory to the application database. This task may take a while to complete, depending on the size and complexity of your user base.
- Note that a user will not be able to log in until the synchronisation task has copied that user's details into the cache.
- A periodic synchronisation task will run to update the database with any changes made to the external directory. The default synchronisation interval, or polling interval, is one hour (60 minutes). You can change the synchronisation interval on the directory configuration screen.

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- You can manually synchronise the cache if necessary.
- If the external directory permissions are set to read/write: Whenever an update is made to the users, groups or membership information via the application, the update will also be applied to the cache and the external directory immediately.
- All authentication happens via calls to the external directory. When caching information from an external directory, the application database does not store user passwords.
- All other queries run against the internal cache.

Finding the Time Taken to Synchronise

The '**User Directories**' screen shows information about the last synchronisation operation, including the length of time it took.

Manually Synchronising the Cache

You can manually synchronise the cache by clicking '**Synchronise**' on the '**User Directories**' screen. If a synchronisation operation is already in progress, you cannot start another until the first has finished.

Screen snippet: User directories, showing information about synchronisation

Configuring the Synchronisation Interval

Note: The option to configure the synchronisation interval for Crowd and JIRA directories is available in **Confluence 3.5.3 and later**. Earlier versions of Confluence allow you to configure the interval for LDAP directories only.

You can set the '**Synchronisation Interval**' on the directory configuration screen. The synchronisation interval is the period of time to wait between requests for updates from the directory server.

The length you choose for your synchronisation interval depends on:

- The length of time you can tolerate stale data.
- The amount of load you want to put on the application and the directory server.
- The size of your user base.

If you synchronise more frequently, then your data will be more up to date. The downside of synchronising more frequently is that you may overload your server with requests.

If you are not sure what to do, we recommend that you start with an interval of 60 minutes (this is the default setting) and reduce the value incrementally. You will need to experiment with your setup.

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management

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- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

Diagrams of Possible Configurations for User Management

The aim of these diagrams is to help people understand each directory type at a glance. We have kept the diagrams simple and conceptual, with just enough information to be correct.

Some things that we do **not** attempt to show:

- In most cases, we do not attempt to show that you can have multiple directory types mapped to Confluence at the same time. We illustrate that fact in just the first two LDAP diagrams.
- We have not included a diagram for Confluence's legacy connection to JIRA database.
- We do not attempt to show all of the possible configurations and layered connections that are available now that you can use JIRA as a directory manager.

On this page:

- Confluence Internal Directory
- Confluence with Read/Write Connection to LDAP
- Confluence with Read-Only Connection to LDAP, with Local Groups
- Confluence Internal Directory with LDAP Authentication
- Confluence with LDAP Authentication, Copy Users on First Login
- Confluence Connecting to JIRA
- Confluence Connecting to JIRA and JIRA Connecting to LDAP
- Confluence and JIRA Connecting to Crowd

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

Confluence Internal Directory

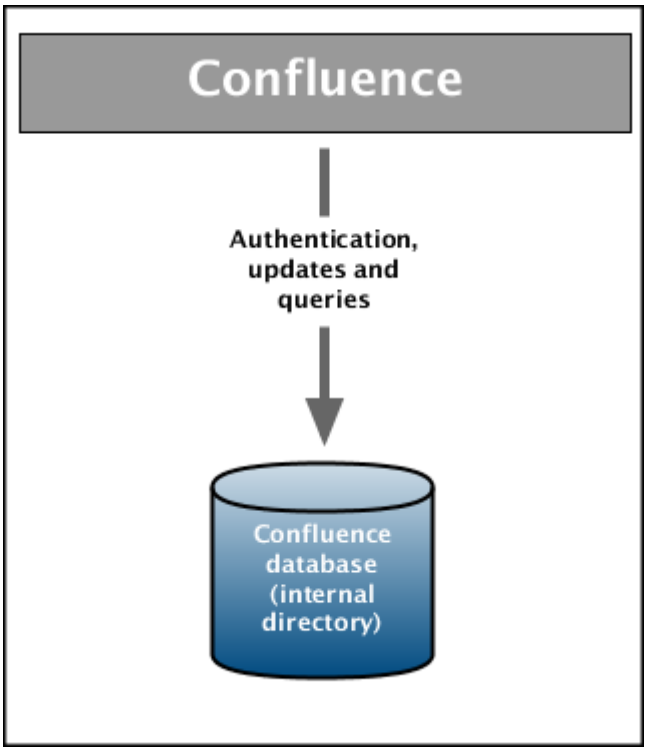

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Diagram above: Confluence using its internal directory for user management.

Confluence with Read/Write Connection to LDAP

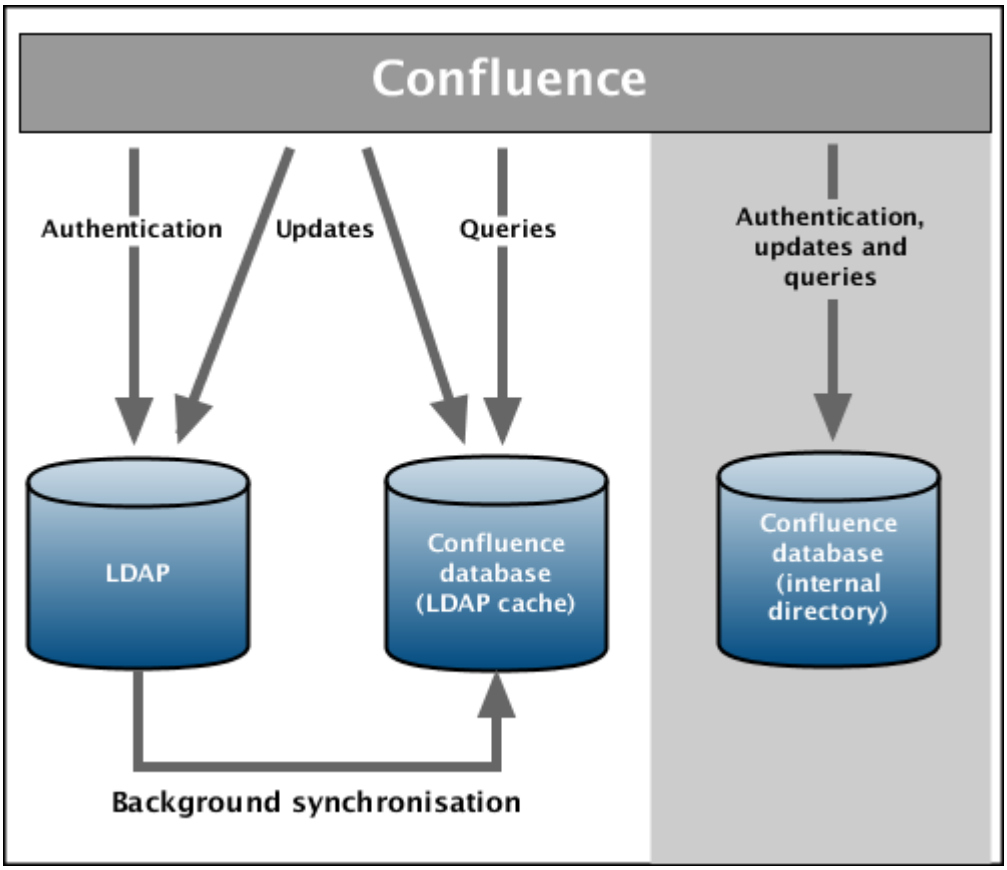

Diagram above: Confluence connecting to an LDAP directory.

Confluence with Read-Only Connection to LDAP, with Local Groups

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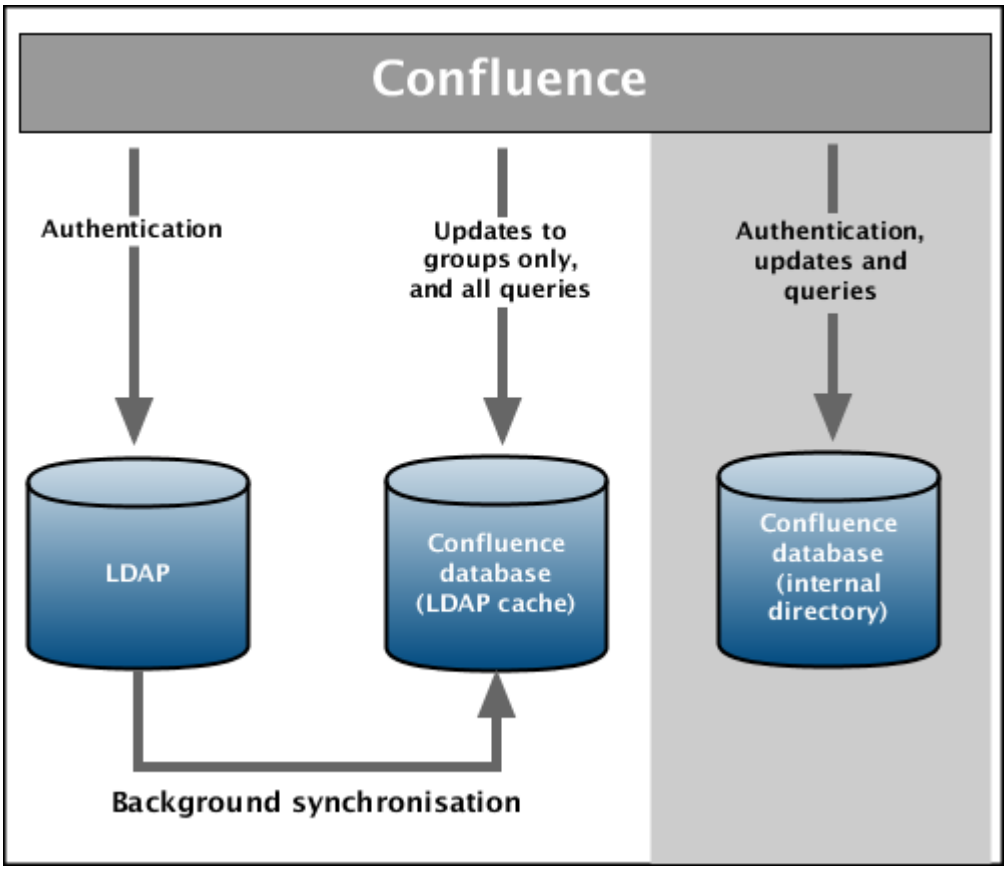

Diagram above: Confluence connecting to an LDAP directory with permissions set to read only and local groups.

Confluence Internal Directory with LDAP Authentication

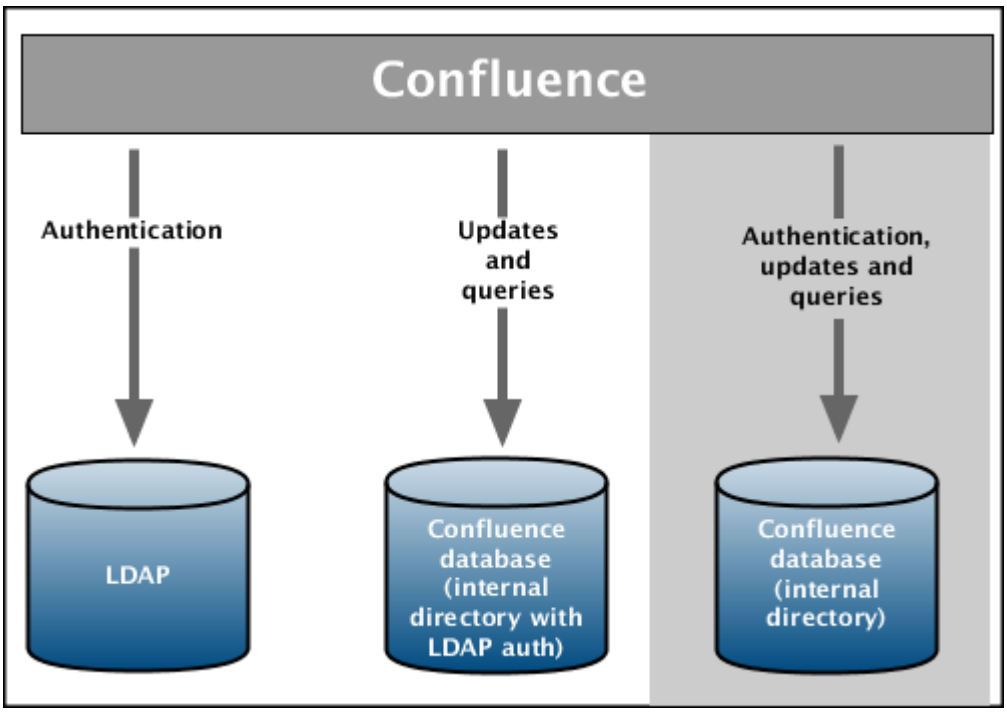

Diagram above: Confluence connecting to an LDAP directory for authentication only.

Confluence with LDAP Authentication, Copy Users on First Login

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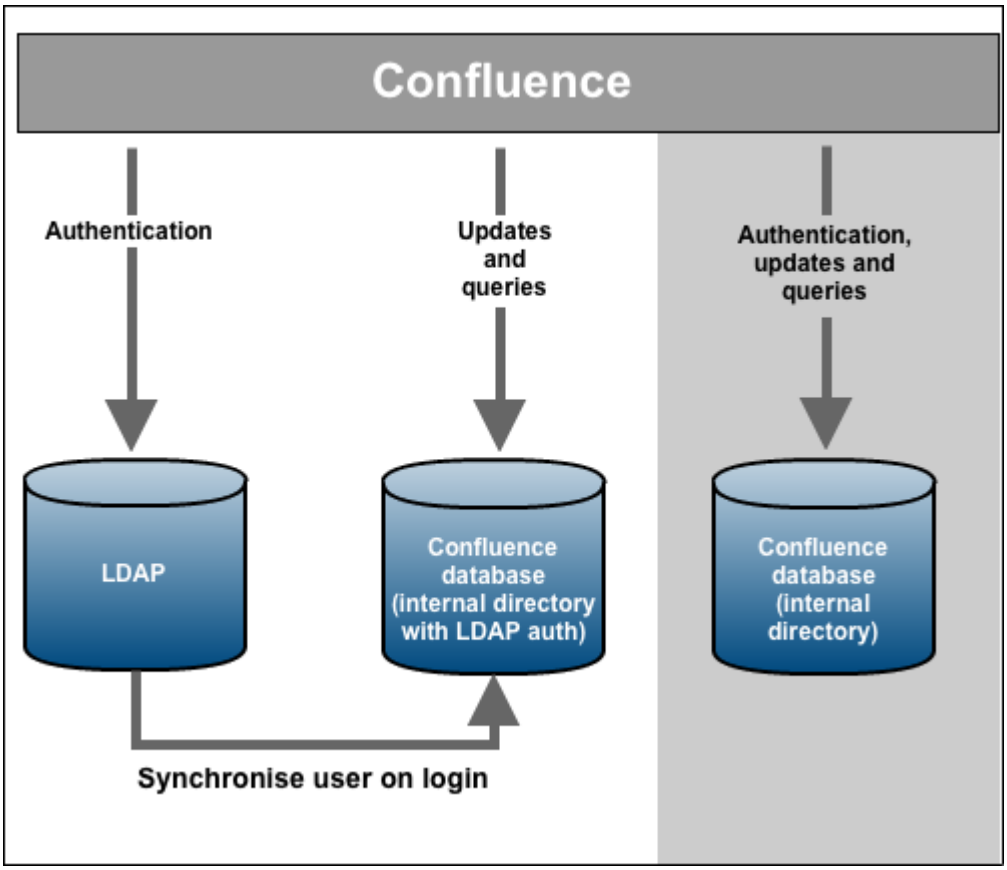

Diagram above: Confluence connecting to an LDAP directory for authentication only, with each user synchronised with the internal directory that is using LDAP authentication when they log in to Confluence.

Confluence Connecting to JIRA

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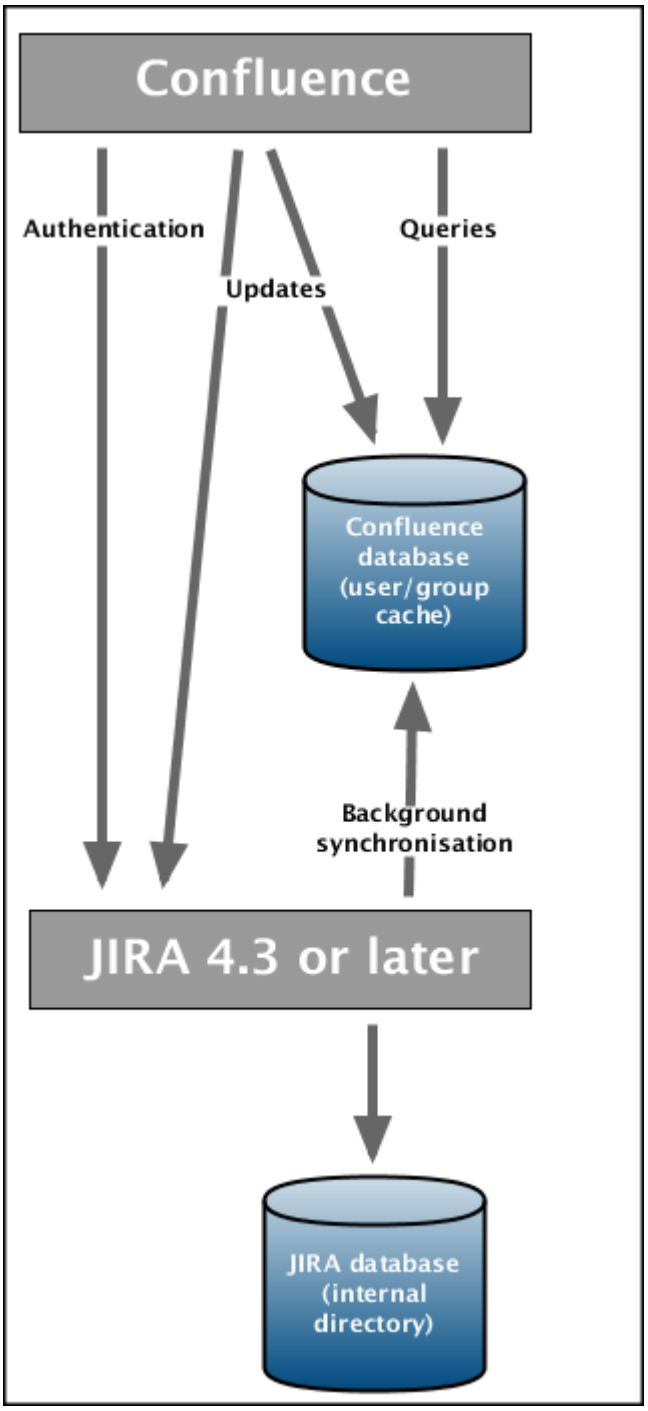

Diagram above: Confluence connecting to JIRA for user management.

Confluence Connecting to JIRA and JIRA Connecting to LDAP

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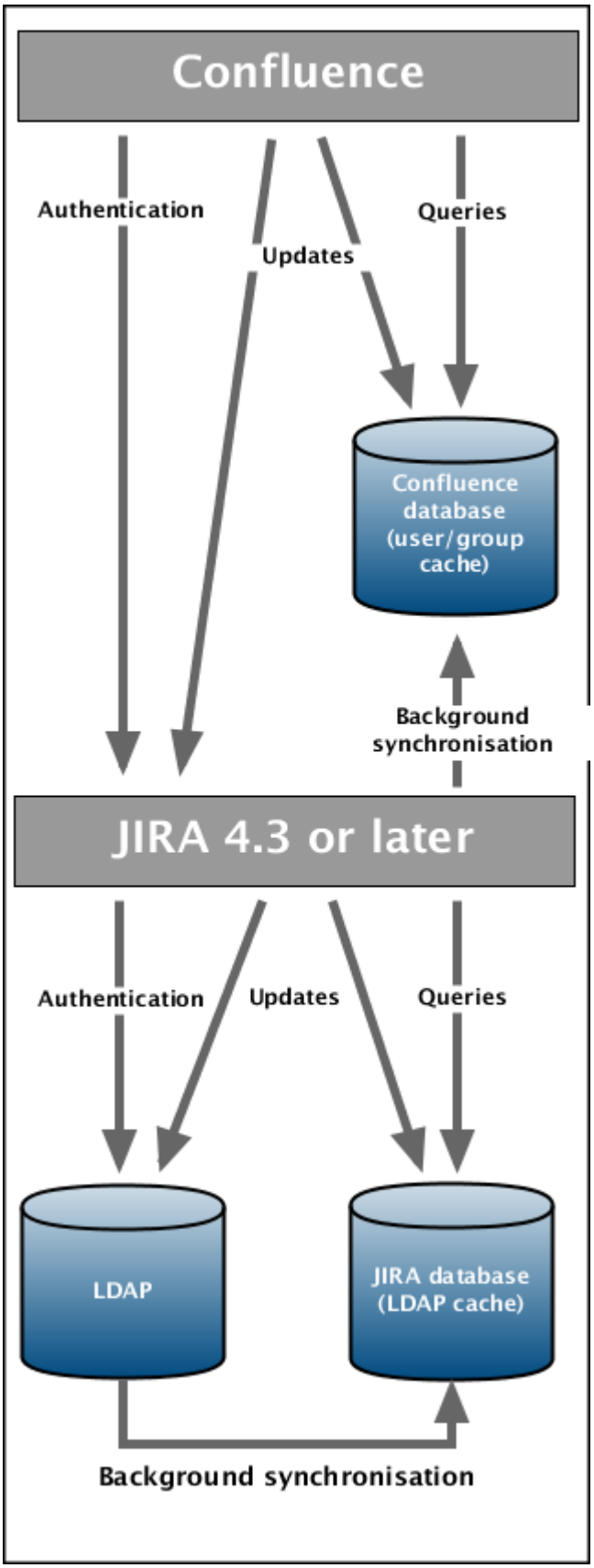

Diagram above: Confluence connecting to JIRA for user management, with JIRA in turn connecting to LDAP.

Confluence and JIRA Connecting to Crowd

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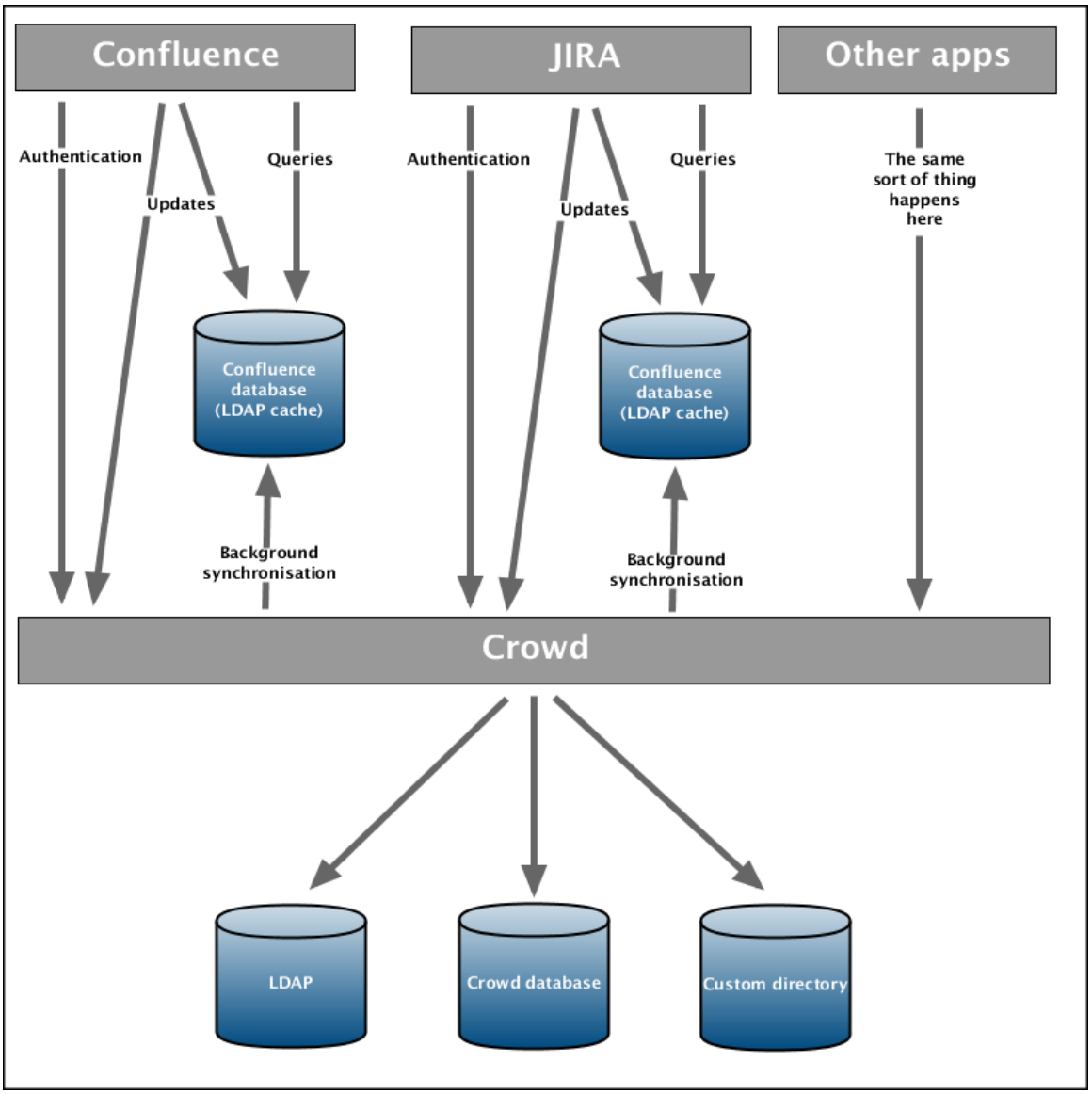

Diagram above: Confluence, JIRA and other applications connecting to Crowd for user management.

RELATED TOPICS

Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

User Management Limitations and Recommendations

This page describes the optimal configurations and limitations that apply to user management in Confluence.

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On this page:

- General Recommendations
- Recommendations for Connecting to LDAP
  - Optimal Number of Users and Groups in your LDAP Directory
  - Redundant LDAP is Not Supported
  - Specific Notes for Connecting to Active Directory
- Recommendations for Connecting to JIRA for User Management
  - Single Sign-On Across Multiple Applications is Not Supported
  - Custom Application Connectors are Not Supported
  - Custom Directories are Not Supported
  - Optimal Number of Users and Applications
  - Recommendations

The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.

General Recommendations

- **Duplicate usernames across directories are not supported**. If you are connecting to more than one user directory, please ensure that the usernames are unique to one directory. For example, if you have a user `jsmith` in both 'Directory1' and 'Directory2', that is an unsupported configuration.
- **Be careful when deleting users in remote directories**. If you are connecting to an LDAP directory, a Crowd directory or a JIRA directory, please take care when deleting users from the remote directory. If you delete a user that is associated with data in Confluence, this will cause problems in Confluence.

Recommendations for Connecting to LDAP

Please consider the following limitations and recommendations when connecting to an LDAP user directory.

Optimal Number of Users and Groups in your LDAP Directory

The connection to your LDAP directory provides powerful and flexible support for connecting to, configuring and managing LDAP directory servers. To achieve optimal performance, a background synchronisation task loads the required users and groups from the LDAP server into the application's database, and periodically fetches updates from the LDAP server to keep the data in step. The amount of time needed to copy the users and groups rises with the number of users, groups, and group memberships. For that reason, we recommended a maximum number of users and groups as described below.

This recommendation affects connections to LDAP directories:

- Microsoft Active Directory
- All other LDAP directory servers

The following LDAP configurations are **not** affected:

- Internal directories with LDAP authentication
- LDAP directories configured for 'Authentication Only, Copy User On First Login'

Please choose one of the following solutions, depending on the number of users, groups and memberships in your LDAP directory.

Your environment	Recommendation

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Up to 10 000 (ten thousand) users, 1000 (one thousand) groups, and 20 (twenty) groups per user	Choose the '**LDAP**' or '**Microsoft Active Directory**' directory type. You can make use of the full synchronisation option. Your application's database will contain all the users and groups that are in your LDAP server.
More than the above	Use LDAP filters to reduce the number of users and groups visible to the synchronisation task.

Our Test Results

We performed internal testing of synchronisation with an AD server on our local network consisting of 10 000 users, 1000 groups and 200 000 memberships.

We found that the initial synchronisation took about 5 minutes. Subsequent synchronisations with 100 modifications on the AD server took a couple of seconds to complete.

Please keep in mind that a number of factors come into play when trying to tune the performance of the synchronisation process, including:

- **Size of userbase.** Use LDAP filters to keep this to the minimum that suits your requirements.
- **Type of LDAP server.** We currently support change detection in AD, so subsequent synchronisations are much faster for AD than for other LDAP servers.
- **Network topology.** The further away your LDAP server is from your application server, the more latent LDAP queries will be.
- **Database performance.** As the synchronisation process caches data in the database, the performance of your database will affect the performance of the synchronisation.
- **JVM heap size.** If your heap size is too small for your userbase, you may experience heavy garbage collection during the synchronisation process which could in turn slow down the synchronisation.

Redundant LDAP is Not Supported

The LDAP connections do not support the configuration of two or more LDAP servers for redundancy (automated failover if one of the servers goes down).

Specific Notes for Connecting to Active Directory

When the application synchronises with Active Directory (AD), the synchronisation task requests only the changes from the LDAP server rather than the entire user base. This optimises the synchronisation process and gives much faster performance on the second and subsequent requests.

On the other hand, this synchronisation method results in a few limitations:

1. **Externally moving objects out of scope or renaming objects causes problems in AD.** If you move objects out of scope in AD, this will result in an inconsistent cache. We recommend that you do not use the external LDAP directory interface to move objects out of the scope of the sub-tree, as defined on the application's directory configuration screen. If you do need to make structural changes to your LDAP directory, manually synchronise the directory cache after you have made the changes to ensure cache consistency.
2. **Synchronising between AD servers is not supported.** Microsoft Active Directory does not replicate the uSNChanged attribute across instances. For that reason, we do not support connecting to different AD servers for synchronisation. (You can of course define multiple different directories, each pointing to its own respective AD server.)
3. **Synchronising with AD servers behind a load balancer is not supported.** As with synchronising between two different AD servers, Microsoft Active Directory does not replicate the uSNChanged attribute across instances. For that reason, we do not support connecting to different AD servers even when they are load balanced. You will need to select one server (preferably one that is local) to synchronise with instead of using the load balancer.

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4. **You must restart the application after restoring AD from backup.** On restoring from backup of an AD server, the uSNChanged timestamps are reverted to the backup time. To avoid the resulting confusion, you will need to flush the directory cache after a Active Directory restore operation.
5. **Obtaining AD object deletions requires administrator access.** Active Directory stores deleted objects in a special container called cn=Deleted Objects. By default, to access this container you need to connect as an administrator and so, for the synchronisation task to be aware of deletions, you must use administrator credentials. Alternatively, it is possible to change the permissions on the cn=Deleted Objects container. If you wish to do so, please see this Microsoft KB Article.
6. **The User DN used to connect to AD must be able to see the uSNChanged attribute.** The synchronisation task relies on the uSNChanged attribute to detect changes, and so must be in the appropriate AD security groups to see this attribute for all LDAP objects in the subtree.

Recommendations for Connecting to JIRA for User Management

Please consider the following limitations and recommendations when connecting to a JIRA server for user management.

Single Sign-On Across Multiple Applications is Not Supported

When you connect to JIRA for user management, you will not have single sign-on across the applications connected in this way. JIRA, when acting as a directory manager, does not support SSO.

Custom Application Connectors are Not Supported

JIRA, Confluence, FishEye, Crucible and Bamboo can connect to a JIRA server for user management. Custom application connectors will need to use the new REST API.

Custom Directories are Not Supported

Earlier versions of JIRA supported OSUser Providers. It was therefore possible write a special provider to obtain user information from any external user directory. This is no longer the case.

Optimal Number of Users and Applications

Please consider the following limitations when connecting to a JIRA server for user management:

- Maximum 500 users.
- Maximum 5 connected applications.

Recommendations

Your environment	Recommendation
If **all** the following are true: • You have fewer than 500 users. • You want to share user and group management across just a few applications, such as one JIRA server and one Confluence server, or two JIRA servers. • You do not need single sign-on (SSO) between JIRA and Confluence, or between two JIRA servers. • You do not have custom application connectors. Or, if you do have them, you are happy to convert them to use the new REST API. • You are happy to shut down all your servers when you need to upgrade JIRA.	Your environment meets the optimal requirements for using JIRA for user management.

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If **one or more** of the following are true: • You have more than 500 users. • You want to share user and group management across more than 5 applications. • You need single sign-on (SSO) across multiple applications. • You have custom applications integrated via the Crowd SOAP API, and you cannot convert them to use the new REST API. • You are not happy to shut down all your servers when you need to upgrade JIRA.	We recommend that you install Atlassian Crowd for user management and SSO.
If you are considering creating a custom directory connector to define your own storage for users and groups...	Please see if one of the following solutions will work for you: • If you have written a custom provider to support a specific LDAP schema, please check the supported LDAP schemas to see if you can use one of them instead. • If you have written a custom provider to support nested groups, please consider enabling nested groups in the supported directory connectors instead. • If you have written a custom provider to connect to your own database, please consider loading the data into the application's database instead. • If you need to keep the custom directory connection, please consider whether Atlassian Crowd meets your requirements. See the documentation on Creating a Custom Directory Connector.

RELATED TOPICS

Connecting to an LDAP Directory
Connecting to Crowd or JIRA for User Management
Configuring User Directories

Requesting Support for External User Management

This page gives guidelines on how to request help from the Atlassian support team if you are having problems with external user management. External user management includes connections to Active Directory, other LDAP servers, Atlassian Crowd or Atlassian JIRA for user management. The information on this page is provided in addition to the more general page on Troubleshooting Problems and Requesting Technical Support.

The cause of such problems may be:

- The LDAP server is not responding.
- The application password is incorrectly configured, causing the LDAP server or other directory to return an authentication error.
- Other LDAP settings are incorrectly configured.

On this page:

- Troubleshooting the Connection to your External User Directory
- Problems During Initial Setup
- Complex Authentication or Performance Problems

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> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Troubleshooting the Connection to your External User Directory

The configuration screen for external directories in Confluence has a '**Test Settings**' button. This will help you to diagnose problems with user management in Active Directory and other LDAP servers.

To test your directory connection:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**User Directories**' in the left-hand panel.
3. **Edit** the relevant directory.
4. Click '**Test Settings**'.
5. The results of the test will appear at the top of the screen.

Please refer to our knowedge base articles for troubleshooting user management and login issues.

If the above resources do not help, continue below.

Problems During Initial Setup

Raise a support request and include the following information.

- Download an LDAP browser to make sure you have the right settings in your LDAP directory. Atlassian recommends LDAP Studio. Include screenshots of your user and group DNs.
- If you can start up Confluence and access the Administration Console, review your directory settings. See Connecting to an LDAP Directory. Attach screenshots of all your settings.

Complex Authentication or Performance Problems

Raise a support request and include the following information.

Confluence Server

Log in to Confluence and access the Administration Console.

- Take a screenshot of the '**System Information**' screen, or save the page as HTML.
- Take a screenshot of the '**Global Permissions**' screen, if people are having problems with logging in.
- Go to '**Space Admin**' for the relevant space and take a screenshot of the '**Permissions**' page, if you are having problems with space or page permissions.

Confluence Configuration Files

- If you have implemented a custom authenticator or in any way modified `seraph-config.xml` or `seraph-paths.xml`, please provide the modified file.

User Management System

- Include the name and version of your LDAP server.
- Does your LDAP server use dynamic or static groups?
- Review your directory settings. See Connecting to an LDAP Directory. Attach screenshots of all your settings.

Diagnostics

- Enable profiling. See Performance Tuning.
- Enable detailed user management logging, by editing `confluence/WEB-INF/classes/log4j.properties`.
  Change this section:

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```
###
# Atlassian User
###
#log4j.logger.com.atlassian.user=DEBUG
#log4j.logger.com.atlassian.confluence.user=DEBUG
#log4j.logger.bucket.user=DEBUG
#log4j.logger.com.atlassian.seraph=DEBUG
#log4j.logger.com.opensymphony.user=DEBUG
```

Remove the '#' signs at the beginning of the lines, so that it looks like this:

```
###
# Atlassian User
###
log4j.logger.com.atlassian.user=DEBUG
log4j.logger.com.atlassian.confluence.user=DEBUG
log4j.logger.bucket.user=DEBUG
log4j.logger.com.atlassian.seraph=DEBUG
log4j.logger.com.opensymphony.user=DEBUG
```

- After enabling both the above, please attempt a Confluence LDAP account login and attach a copy of the log files that are produced when the problem occurs. To do this, locate your install directory or exploded WAR directory, then zip the full `/logs` subdirectory into a single file for us to examine.The logs subdirectory is located in your Confluence Home directory.

RELATED TOPICS

Troubleshooting Problems and Requesting Technical Support
Configuring User Directories

- Configuring the Internal Directory
- Connecting to an LDAP Directory
- Connecting to an Internal Directory with LDAP Authentication
- Connecting to Crowd or JIRA for User Management
- Connecting to JIRA 4.2 or Earlier for User Management
- Managing Multiple Directories
- Managing Nested Groups
- Synchronising Data from External Directories
- Diagrams of Possible Configurations for User Management
- User Management Limitations and Recommendations
- Requesting Support for External User Management
- Disabling the Built-In User Management

Administrators Guide Home Confluence Documentation Home

Disabling the Built-In User Management

By selecting the '**External user management**' option in Confluence, you can disable the group and user management screens in Confluence. You need system administrator permissions to set this option.

You will find it useful to select external user management under the following circumstances:

- When Crowd's directory permissions are configured so that Confluence cannot update the Crowd directories, then Confluence's external user management setting **must** be turned on. Otherwise, a 'System Error' will occur when Confluence attempts to write data into Crowd. For more information about

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integrating Crowd with Confluence, see Connecting to Crowd or JIRA for User Management.
- If you are using JIRA for user management, we recommend that you turn on Confluence's external user management setting. This centralises user management in JIRA. See Connecting to Crowd or JIRA for User Management and Connecting to JIRA 4.2 or Earlier for User Management.

> ⚠ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

To disable management of users and groups within Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Security Configuration**' in the left-hand panel.
3. The '**Edit Security Configuration**' screen will appear. Click '**Edit**'.
4. Tick the '**External user management**' check box.
5. Click '**Save**'.

Notes

- Please refer to the following bugs and improvement requests:
  - CONF-16709 – When the External User Management check box is ticked, the group and user management screens are still functional.
  - CONF-21158 – Enabling both public signup and external user management renders a blank screen during signup.
  - CONF-9830 – This is a request to rename this feature to better reflect its functionality.

RELATED TOPICS

No content found for label(s) external-usermanagement.

Administrators Guide Home Confluence Documentation Home

Installing Plugins and Macros

A **plugin** is an add-on to the core Confluence code, which can extend the Confluence functionality. Some plugins are shipped with Confluence, others are available for you to install yourself.

A **macro** allows a developer to perform programmatic functions within a page, and gives the Confluence user access to more complex content structures. Many macros are made available by plugins.

You need System Administrator permissions in order to install and configure plugins.

Installing and configuring plugins and macros

- Installing and Configuring Plugins using the Universal Plugin Manager
  - Checking Plugin Compatibility for Confluence Upgrades
  - Configuring a Plugin
  - Disabling or Enabling a Plugin
  - Installing a Plugin
  - Uninstalling a Plugin
  - Upgrading your Existing Plugins
  - Viewing the Plugin Audit Log
  - Viewing your Installed Plugins
- Plugin loading strategies in Confluence

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- Removing Malfunctioning Plugins
- Enabling and Configuring Macros
  - Configuring a URL Whitelist for Macros
  - Configuring the User List Macro
  - Enabling HTML macros
    - Enabling the html-include Macro
  - Troubleshooting the Gallery Macro
- Adding, Editing and Removing User Macros
  - Writing User Macros
    - Best Practices for Writing User Macros
    - Examples of User Macros
      - Hello World Example of User Macro
      - Error Box Macro - Example of a User Macro
      - Colour and Size Macro - Example of a User Macro
      - NoPrint Example of a User Macro
      - Panel Preformatted with Specific Colours - Example of a User Macro
      - Preformatted Table - Example of a User Macro
    - Guide to User Macro Templates
- Configuring the Office Connector

Installing and Configuring Plugins using the Universal Plugin Manager

This page provides information about the Universal Plugin Manager (UPM) in Confluence and links to topics on how to install and configure plugins using the UPM. You need System Administrator permissions in order to install and configure plugins.

A note about plugin safety: Plugins are very powerful: they can change the behaviour of almost any part of the Confluence server. It is **very important** that you trust a plugin before you install it. Always be aware of where (and who) a plugin comes from.

Overview of the Universal Plugin Manager

The Universal Plugin Manager (UPM) provides a set of functions for managing your plugins. The UPM is itself a system plugin. It allows you to perform common tasks such as:

- Enabling and disabling plugins and their plugin modules.
- Installing new plugins.
- Configuring advanced plugin options.
- Finding out-of-date plugins and updating them.
- Checking the compatibility of your installed plugins against newer versions of the application.

Through the UPM you can interact with the Atlassian Plugin Exchange. You can use the UPM to browse available plugins for your application, and try or buy any of these plugins without ever leaving your application.

Related pages:

- Confluence Plugin Guide for Developers
- Adding, Editing and Removing User Macros

⚠️ *Some functionality described on this page is restricted in Confluence OnDemand.*

Managing your plugins

- Checking Plugin Compatibility for Confluence Upgrades
- Configuring a Plugin
- Disabling or Enabling a Plugin
- Installing a Plugin

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- Uninstalling a Plugin
- Upgrading your Existing Plugins
- Viewing the Plugin Audit Log
- Viewing your Installed Plugins

Notes

Having problems with the Universal Plugin Manager? Try the Universal Plugin Manager FAQ. (This will redirect you to the Universal Plugin Manager documentation. Use the back button on your browser to return the Confluence documentation.)

Checking Plugin Compatibility for Confluence Upgrades

The **Application Upgrade Check** in the Universal Plugin Manager (UPM) helps you to check whether your plugins will still work with Confluence after a Confluence upgrade.

For example, if you were thinking of upgrading from Confluence 4.1 to Confluence 4.2, the Application Upgrade Check can tell you the following:

- Installed plugins that are compatible with Confluence 4.1 and Confluence 4.2.
- Installed plugins that are not compatible with Confluence 4.2, but will be compatible with Confluence 4.2 if you upgrade them.
- Installed plugins that are not compatible with Confluence 4.2, even if you upgrade them to their latest version.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To check compatibility of your plugins against different Confluence versions:

1. Click the **Upgrade Check** tab.
2. In the **Check compatibility for** dropdown menu, select the version of your application to check the plugins against.
3. Click the **Check** button.
4. The page display any of your installed plugins that are not compatible with the selected application version. The compatibility checker will also check the compatibility of the latest available version of each plugin (if not already upgraded). You can click on the name of any of the plugins to view more information about the plugin.

   The plugins are grouped into sections under the following headings:
   - **Incompatible** – The installed versions of these plugins are not compatible with the selected application version. There are currently no plugin upgrades available that are compatible with the selected application version.
   - **Compatible, if upgraded** – The installed versions of these plugins are not compatible with the selected application version. However, the plugins will be compatible if you upgrade them. There are buttons allowing you to upgrade these plugins.
   - **Compatible if both <the application> and the plugin are upgraded** – The installed versions of these plugins are not compatible with the selected application version. There is a plugin compatible with the newer application version, but it is not compatible with the application version you are currently running. You must upgrade the application and *then* upgrade the plugin. There are buttons allowing you to disable these plugins before proceeding with the upgrade.

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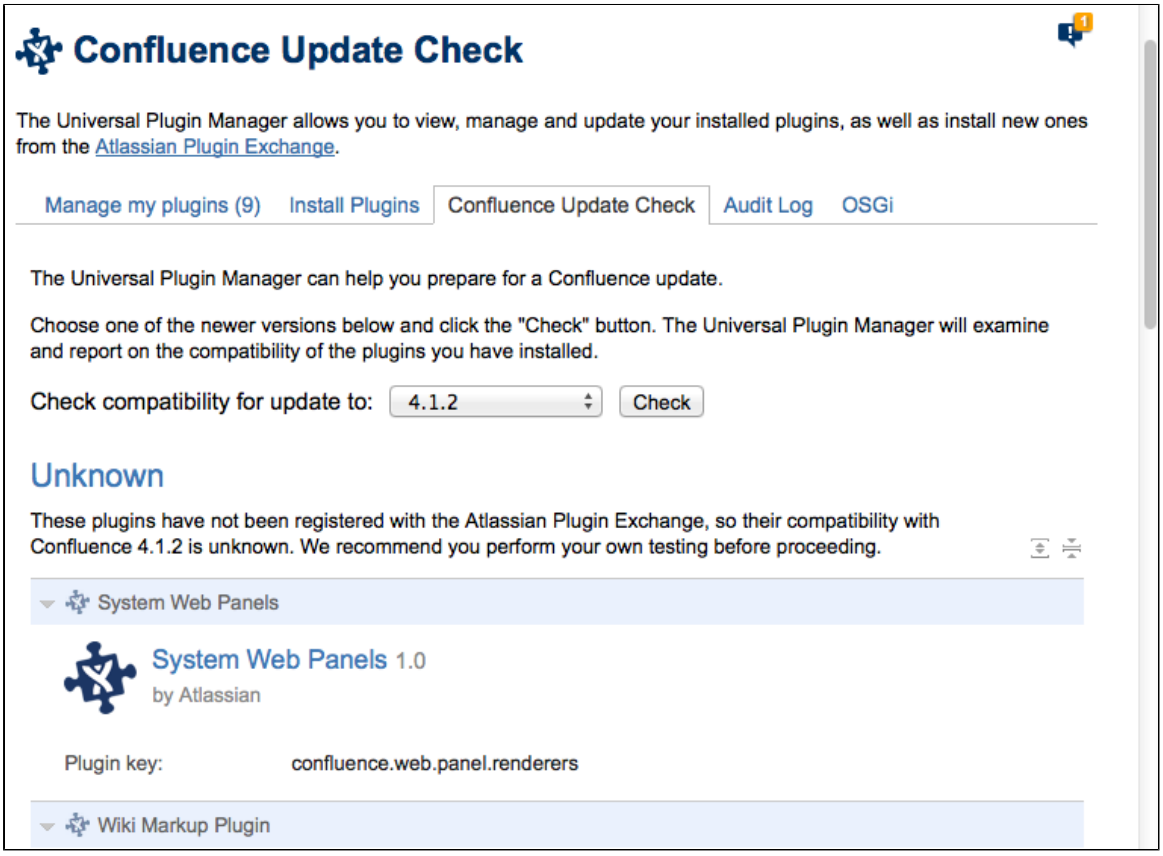
- **Compatible** – The currently installed versions of these plugins are compatible with the selected application version.
- **Unknown** – These plugins may or may not be compatible with the selected application version. If a plugin is not registered with the Atlassian Plugin Exchange, the Universal Plugin Manager cannot check its compatibility with different application versions.

Screenshot: Checking plugin compatibility against different Confluence versions



Configuring a Plugin

A number of Confluence plugins have advanced configuration options. If you have one of these plugins installed on your Confluence site, you can view and update these configuration options via the Universal Plugin Manager (UPM).

If you would like to disable or enable a plugin, please refer to **Disabling or Enabling a Plugin**.

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To configure a plugin in Confluence:

1. Click the **Manage Existing** tab.
2. Locate the plugin that you want to configure and click its title.
   The plugin details section expands.
3. Click the **Configure** button for that plugin.
   The advanced configuration options appear.

> If the plugin is disabled, you cannot configure it and so the Configure **button** does not appear. If there are no advanced configuration options for the plugin, there is no **Confi gure** button.

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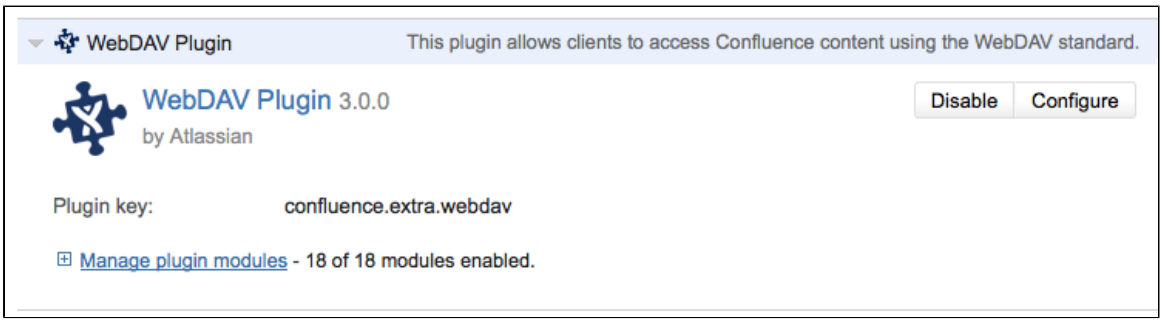
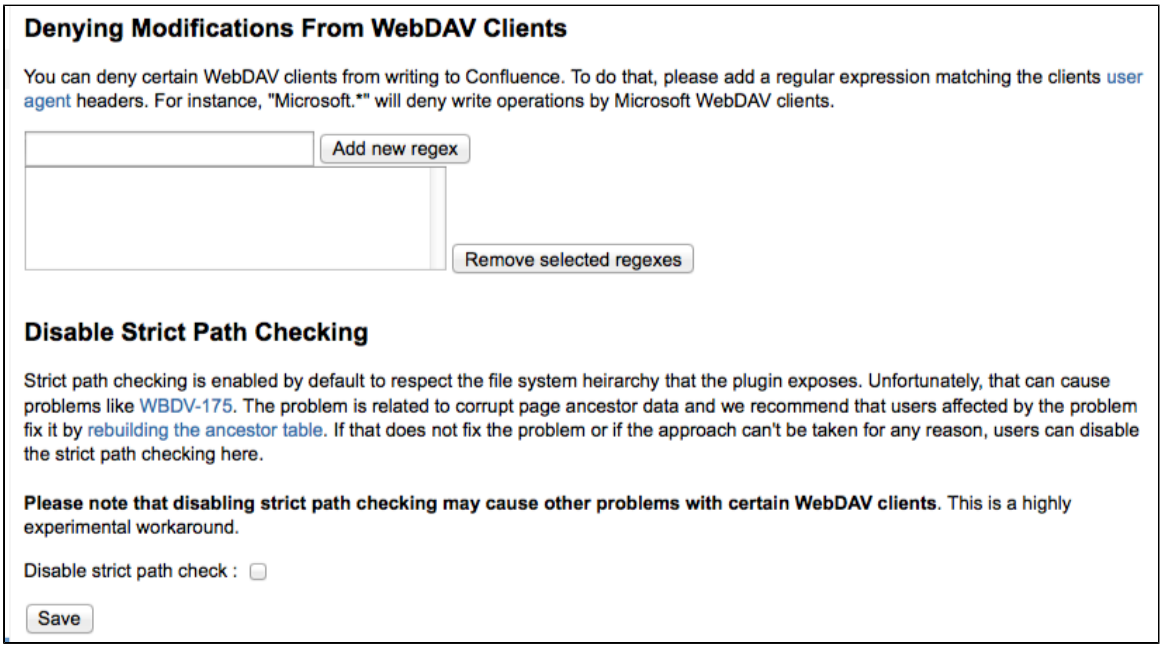
4. Update the configuration settings as desired and save your changes.
   Note: The plugin itself provides advanced configuration options. If you encounter any problems after you click the **Configure** button, the plugin is responsible for the issue, not the UPM.

Screenshot: Configuring a plugin



Screenshot: Example of plugin configuration options – WebDAV configuration



Disabling or Enabling a Plugin

Using the **Universal Plugin Manager (UPM)**, you can disable a plugin on your Confluence site without permanently removing the plugin. You can also enable any plugins that have been previously disabled. In some cases, you may want to disable or enable a specific module in a plugin.

You can also disable all user installed plugins in your application, by enabling **safe mode**. This may help you to diagnose a plugin-related problem more easily.

If you want to add or remove a plugin from your Confluence site, please refer to Installing a Plugin or Uninstalling a Plugin.

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On this page:

- Disabling a plugin
- Enabling a plugin
- Disabling/Enabling a module within a plugin
- Disabling/Enabling all user-installed plugins (safe mode)

Related pages:

- Installing Plugins and Macros
- Confluence Administrator's Guide

Disabling a plugin

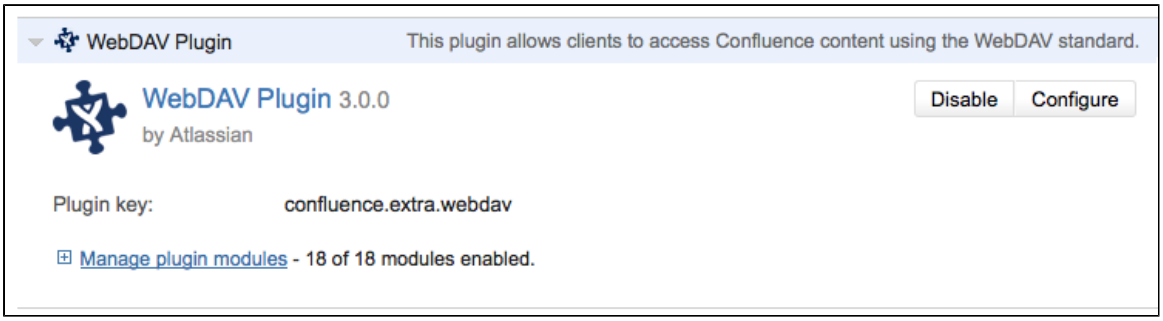
To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To disable a plugin:

1. Click the **Manage my plugins** tab. You will see a list of the plugins installed in your application.
2. Locate the plugin that you want to disable and click the title to expand the plugin details section.
3. Click the **Disable** button.
4. Once a plugin has been disabled, you *may* need to restart your application for your change to take effect. If so, you will see a message for the plugin.
   Once the plugin is fully disabled, you will see an **Enable** link for the plugin.

Screenshot: Disabling a plugin



Enabling a plugin

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To enable a plugin:

1. Click the **Manage Existing** tab. You will see a list of the plugins installed in your application.
2. Locate the plugin that you want to enable and click the title to expand the plugin details section.
3. Click the **Enable** button.
4. Once a plugin has been enabled, you *may* need to restart your application for your change to take effect. If so, you will see a message for the plugin: 'Enabled, requires restart'.
   Once the plugin is fully disabled, you will see a **Disable** link for the plugin.

Screenshot: Enabling a plugin

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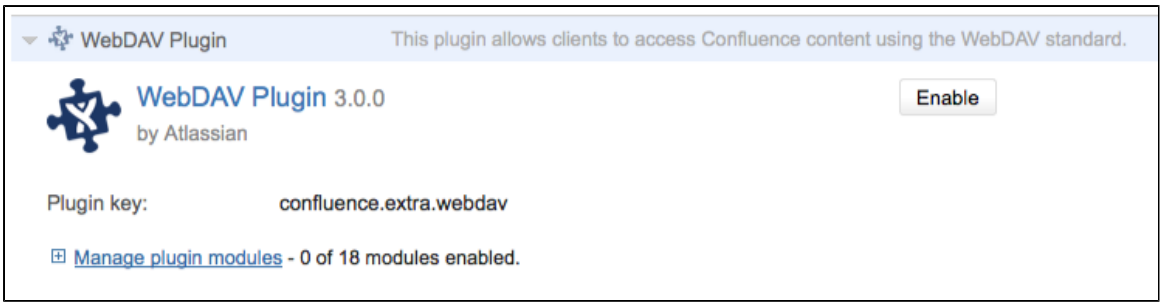

Disabling/Enabling a module within a plugin

In some cases, you may want to turn part of a plugin's functionality off or on, by disabling or enabling a specific module of the plugin.

Note: Be careful when disabling a module within a plugin. This can have unexpected effects on other parts of your Confluence functionality.

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To disable or enable a module within a plugin:

1. Click the **Manage my plugins** tab. You will see a list of the plugins installed in your application.
2. Locate the plugin that contains the module you are interested in, and click the plugin title to expand the plugin details section.
3. Click **Manage plugin modules**.
4. Move your cursor over the module that you are interested in. If the module is enabled, a **Disable** option will appear. If the module is disabled, an **Enable** option will appear. Choose the option you want.

Disabling/Enabling all user-installed plugins (safe mode)

Running your application in safe mode disables all user installed plugins at once. All plugins that were disabled when you entered safe mode will be re-enabled when you exit safe mode.

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To enable safe mode:

1. Click the **Manage my plugins** tab.
   The system displays a list the installed plugins.
2. Click the **Enable Safe Mode** link.
3. Click the **Continue** button in the confirmation window.
   All user installed plugins will be disabled and your application will now be running in safe mode.
4. Make changes to your installed plugins as desired.
   For example, you may want to enable/disable specific plugins or plugin modules.
5. Exit safe mode by clicking one of the links in the Safe Mode banner:
   - Click **Exit Safe Mode and restore the previous configuration** to restore your plugin configuration to its state before you entered Safe Mode.
   - Click **Exit Safe Mode and keep the current configuration** to keep all changes made to your plugin configuration during Safe Mode.

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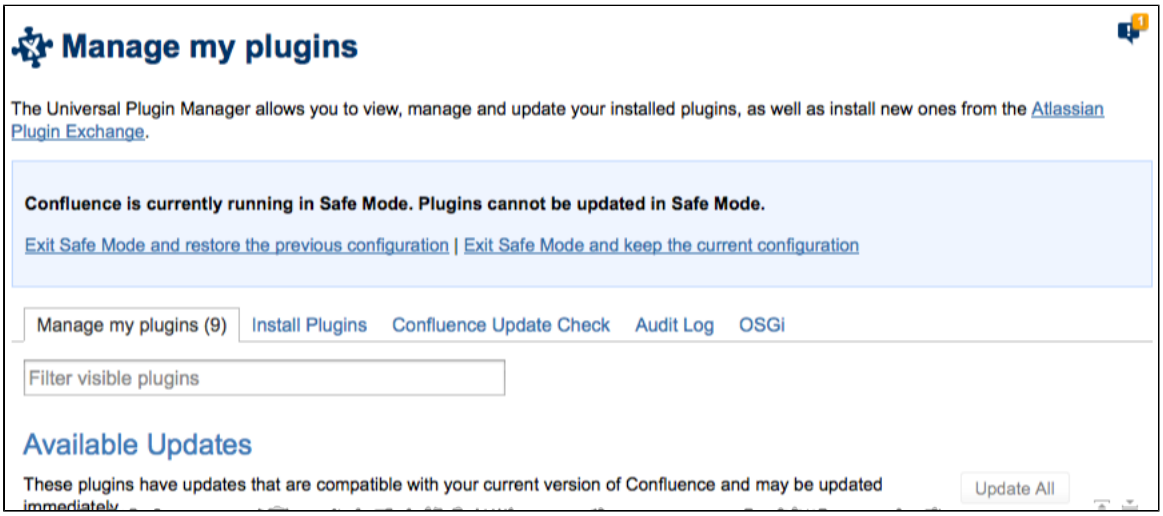
Screenshot: Running Confluence in safe mode



Installing a Plugin

This page describes how to install a plugin into Confluence using the Universal Plugin Manager (UPM). Plugins can be used to customise and extend the functionality available in Confluence.

You can search for plugins in the UPM, or upload your own. The UPM searches the plugins in the Atlassian Plugin Exchange.

On this page:

- Adding a plugin from the Atlassian Plugin Exchange
- Uploading your own plugin
- Notes

The information on this page does not apply to Confluence OnDemand.

Adding a plugin from the Atlassian Plugin Exchange

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To find and add a plugin from the Atlassian Plugin Exchange:

1. Click the **Install** tab in the UPM. You will see a list of featured plugins.
2. Search for your plugin as follows:
   - Enter some keywords that describe the plugin in the **Search the Plugin Exchange** search box and press Enter.
   - Alternatively, browse to the desired plugin in the list. You can choose **Featured**, **Popular**, **Supported** *(by Atlassian)* or **All available** from the **Plugins to show** dropdown to see a different list of plugins.
3. Click the **Install** button for the desired plugin to add it to your application. A confirmation message and the plugin details will appear when the plugin is installed successfully.
   Note: You may need to restart your application for your change to take effect. The Universal Plugin Manager will inform you if this is the case.

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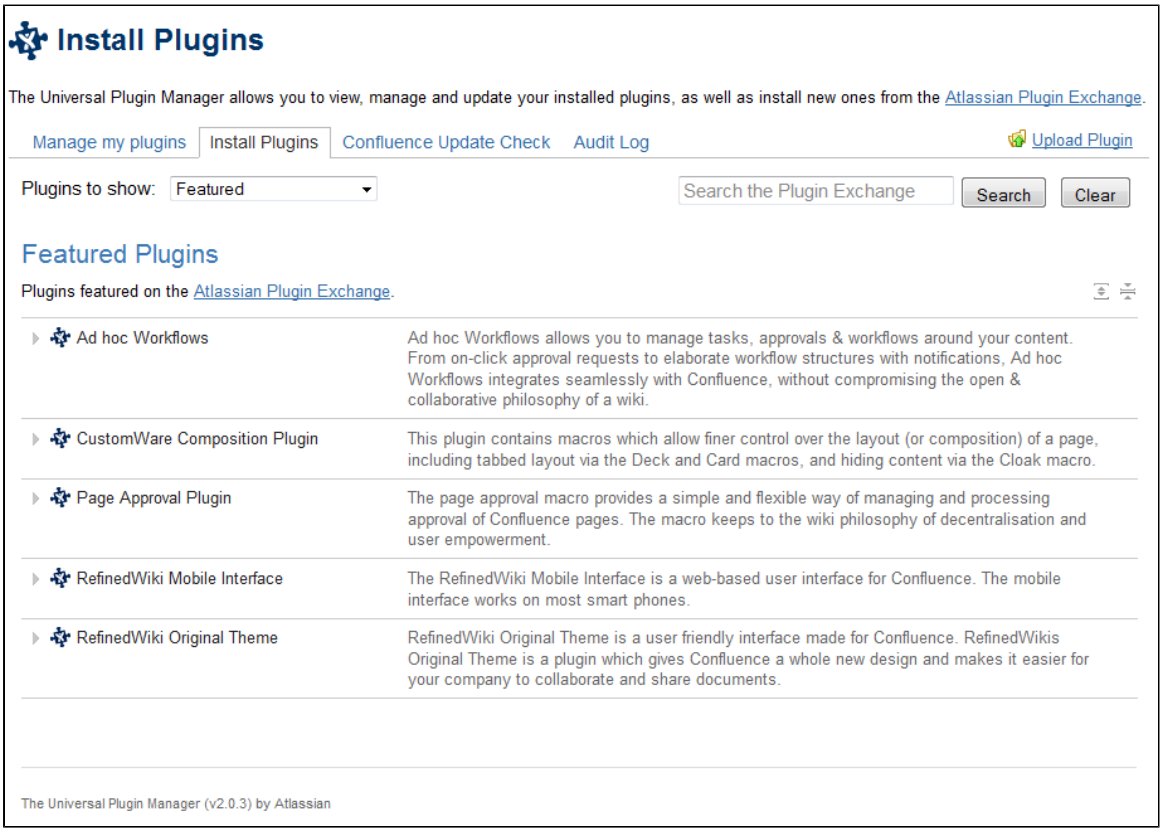
Note: Not all plugins can be automatically installed. Some required manual installation. These plugins will have a **Download** button instead of an **Install** button. In these cases, you should read and follow the plugin's installation instructions.

Screenshot: Finding a new plugin from the Atlassian Plugin Exchange



Uploading your own plugin

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To upload your own plugin to Confluence:

1. Click the **Install** tab in the UPM.
   The system displays a list of featured plugins.
2. Click the **Upload Plugin** link.
   The system displays the **Upload Plugin** window.
3. Specify the location of your plugin:
   - If the plugin you want to install is on your computer, use the **Browse** dialogue to choose the plugin JAR file.
   - If you want to install a plugin from a remote location, enter the URL of the plugin JAR file in the **From this URL** text box.
4. Click the **Upload** button to upload and enable your plugin. A confirmation message will appear when the plugin is successfully installed.
   Note: You may need to restart your application for your change to take effect. The Universal Plugin Manager will inform you if this is the case.

Screenshot: Uploading a new plugin

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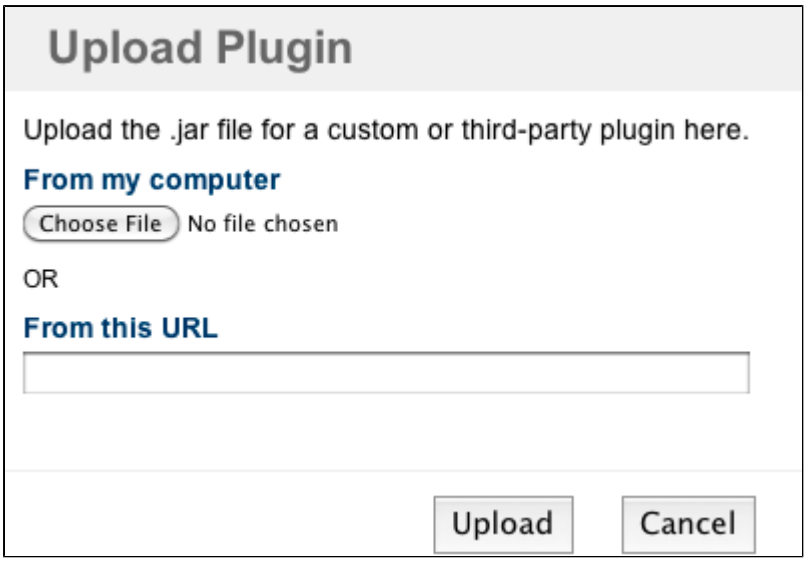

Notes

- In **Confluence**, you can install and uninstall both version 1 and version 2 plugins using the Universal Plugin Manager.
- Some entries that you find listed in the Universal Plugin Manager **are not actually plugins**. These entries will show a 'Download' button which allows you to download the application to your desktop and run it following the instructions given by that application.

Uninstalling a Plugin

If you wish to remove a plugin from Confluence altogether, you can uninstall it via the Universal Plugin Manager (UPM). If you only want to temporarily remove it, you may wish to disable your plugin instead.

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To uninstall a plugin from Confluence:

1. Click the **Manage Existing** tab.
   The systems lists the plugins installed in your application.
2. Click the name of the plugin that you wish to uninstall.
   The system displays the plugin details.
3. Click the **Uninstall** button.
   The information summary displays an **Uninstalling** message and uninstalls the plugin from your application.

> *The information on this page does not apply to Confluence OnDemand.*

Screenshot: Uninstalling a plugin

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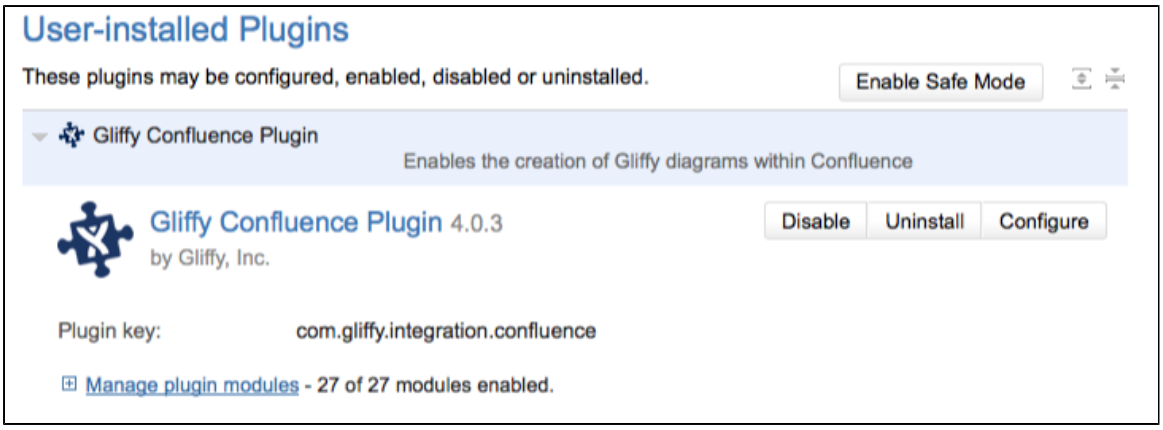

Upgrading your Existing Plugins

Plugins are often developed separately from Confluence. You may wish to upgrade your plugins to more recent versions to allow them to work with your Confluence version or simply to take advantage of new features in a plugin version. The Universal Plugin Manager (UPM) provides you with a list of plugins that have available upgrades and allows you to upgrade each plugin individually or in bulk.

Tip: If you are considering upgrading Confluence, you can use the Universal Plugin Manager to check the compatibility of your plugins with your desired Confluence version. See Checking Plugin Compatibility for Confluence Upgrades.

On this page:

- Upgrading a plugin
- Upgrading all plugins

The information on this page does not apply to Confluence OnDemand.

Upgrading a plugin

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To upgrade a plugin in Confluence:

1. Click the **Manage my plugins** tab. You will see a list of plugins that are available for upgrading, under the heading 'Available Updates'.
   - If there is a later version of a plugin that you have already installed, this page will show the latest **c ompatible** version of the plugin.
   - You can click the plugin name to expand the row and see more information about the plugin.
   - You can filter your list by entering keywords in the **Filter visible plugins** text box.
2. Click the name of the plugin that you want to upgrade, to see more information about the plugin.
3. Click the **Update** button next to the plugin to update it to the version shown.

Upgrading all plugins

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To upgrade all available plugins in Confluence:

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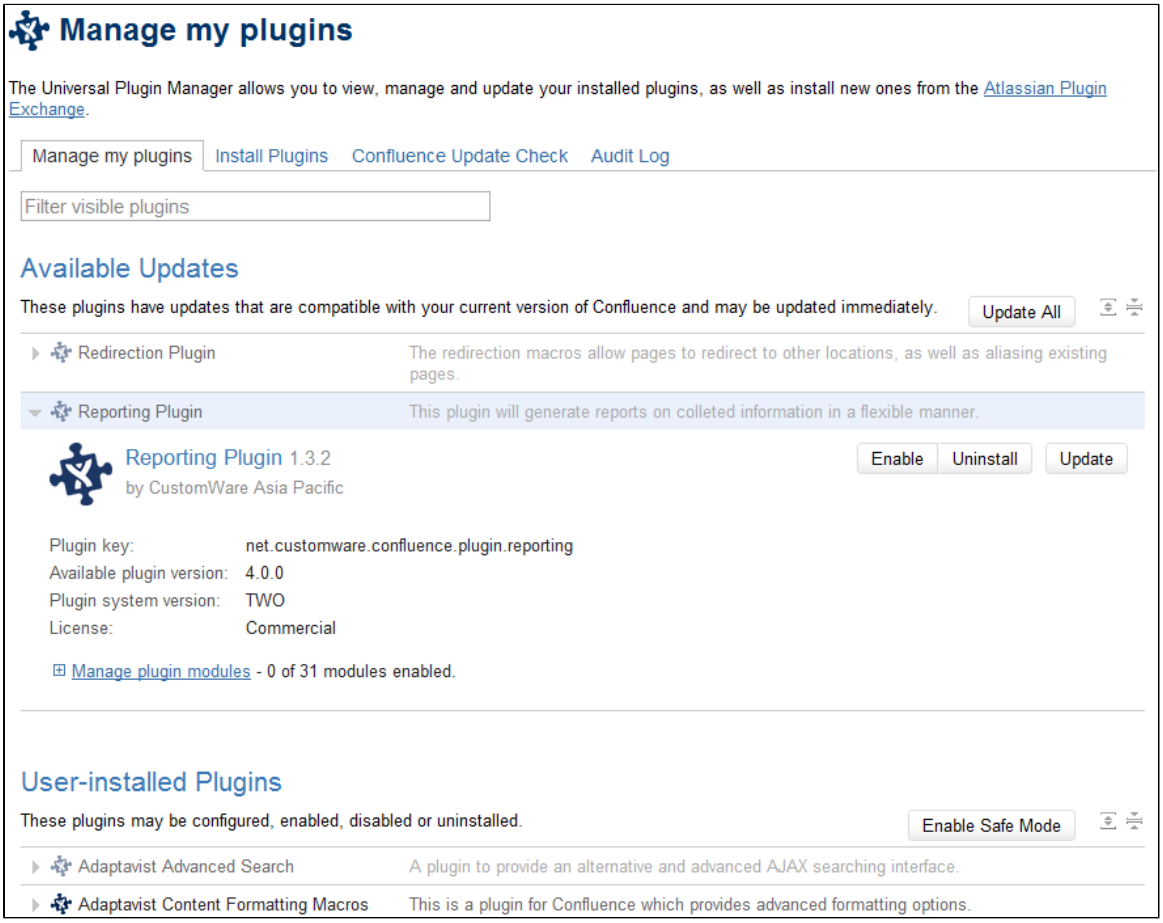
1. Click the **Manage my plugins** tab. You will see a list of plugins that are available for upgrading, under the heading 'Available Updates'.
    - If there is a later version of a plugin that you have already installed, this page will show the latest **c ompatible** version of the plugin.
    - You can click the plugin name to expand the row and see more information about the plugin.
    - You can filter your list by entering keywords in the **Filter visible plugins** text box.
2. Click the **Update All** button to upgrade every plugin to the plugin versions shown.

    Note: Not all plugins can be installed or upgraded via the Universal Plugin Manager. There are some plugins that you must manually install and upgrade.

Screenshot: Upgrading plugins



Viewing the Plugin Audit Log

The Universal Plugin Manager (UPM) keeps a log of all plugin activity in your Confluence instance. For example, adding plugins, and enabling plugins. You can configure the audit log to adjust the period of time for which log entries should be kept.

Viewing the plugin audit log

To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To view the plugin audit log:

1. Click the **Audit Log** tab.
    The plugin audit log appears with a list of the 25 most recent entries.
2. Use the arrows if you want to view older entries.

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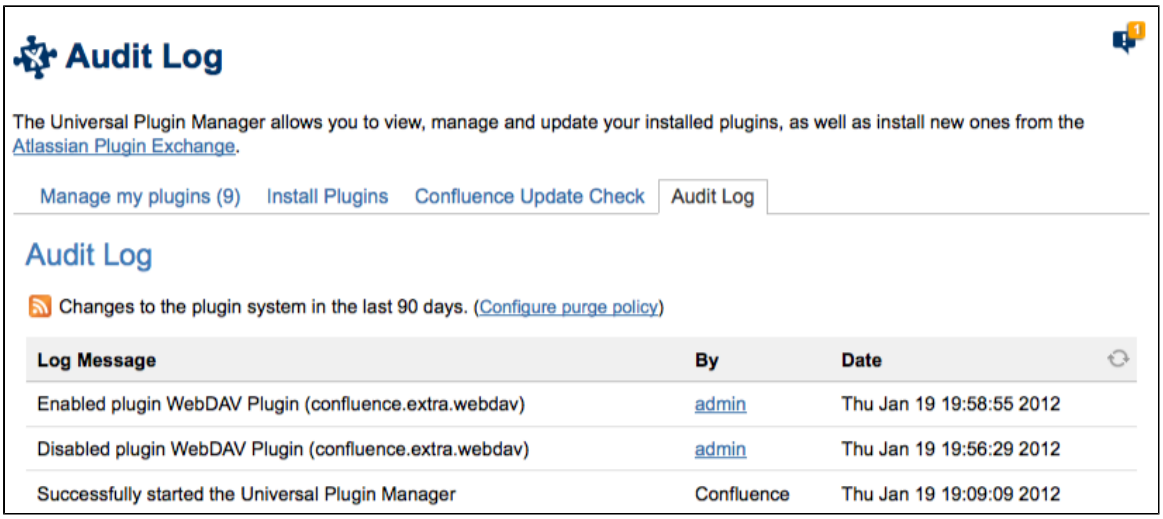
3. Click the orange RSS icon if you want to receive the audit log activity in an RSS feed.

On this page:

- Viewing the plugin audit log
- Configuring the plugin audit log

Screenshot: Viewing the plugin audit log



Configuring the plugin audit log

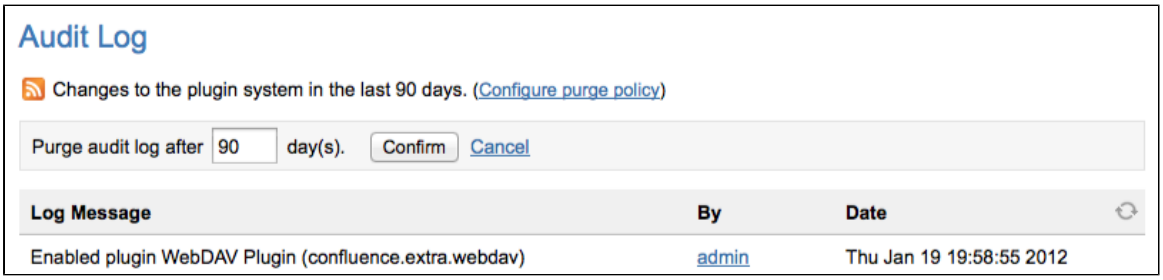
To access the Universal Plugin Manager in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click the **Plugins** link in the **Configuration** section of the left-hand menu. The Universal Plugin Manager will appear.

To configure the amount of time log entries are kept:

1. Click the **Audit Log** tab.
   The plugin audit log appears.
2. Click the **Configure purge policy** link.
3. Specify how many days to keep the logs before purging in the **Purge audit log after** field.
4. Click the **Confirm** button.

Screenshot: Configuring the audit log's purge policy



Viewing your Installed Plugins

The **Universal Plugin Manager (UPM)** allows you to easily view the plugins installed on your Confluence instance. This includes plugins that are bundled with Confluence as well as any third party plugins that you have installed. Both enabled and disabled plugins are displayed.

On this page:

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- Viewing your Installed Plugins
- Viewing a Plugin's Details

Viewing your Installed Plugins

To view your installed plugins,

1. Click the '**Manage Existing**' tab. The plugins installed on your application will be displayed.
   - The plugins will be grouped into 'User-installed Plugins' and 'System Plugins'.
   - You can filter your list by entering keywords in the 'Filter visible plugins' text box.
   - The list of 'System Plugins' will be hidden by default. Click the '**Show System Plugins**' link, if you want to view them.
   - Enabled plugins will be listed with an icon. Disabled plugins will be listed with an icon.
   - Click the name of a plugin to view the plugin's details.
   - Click '**Enable Safe Mode**' to run your application in safe mode. Read 'Disabling or Enabling a Plugin' (see Related Topics below) for more information on Safe Mode.

What is the difference between a 'System Plugin' and a 'User Installed Plugin'?

- **System plugins** are those that shipped with the product when you downloaded it from Atlassian. These plugins are integral to the functioning of the system, and although you can disable some of them, you should not do so unless instructed by an Atlassian Support engineer. Note, not every system plugin can be disabled and you will not be able to uninstall any system plugins at all.
- **User-installed plugins** are those which have been installed in the product after it was set up: either by uploading a plugin jar file, or by placing it in the applications plugin directories. These plugins *can* be uninstalled.

Screenshot: Viewing Installed Plugins (Confluence)

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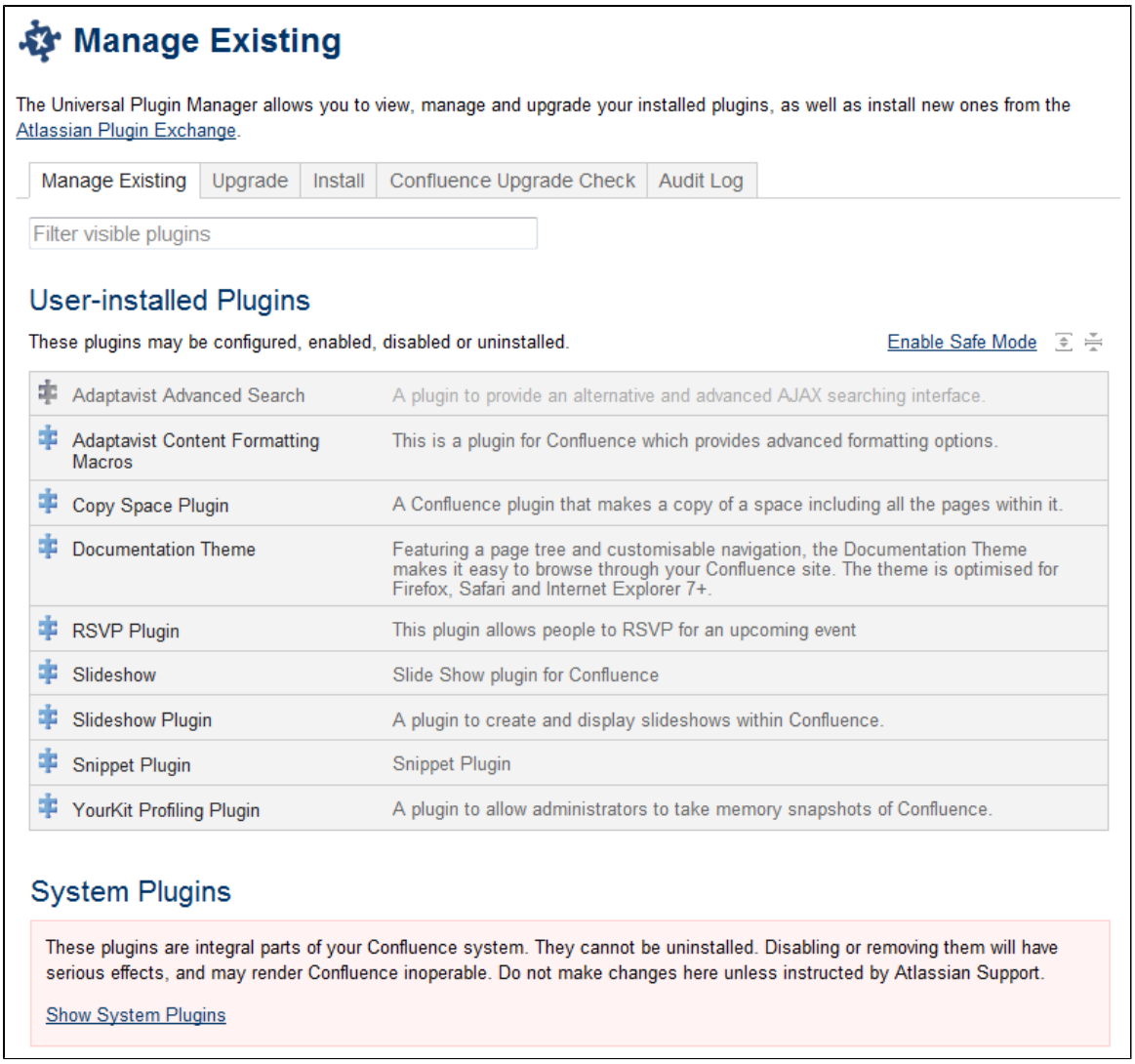
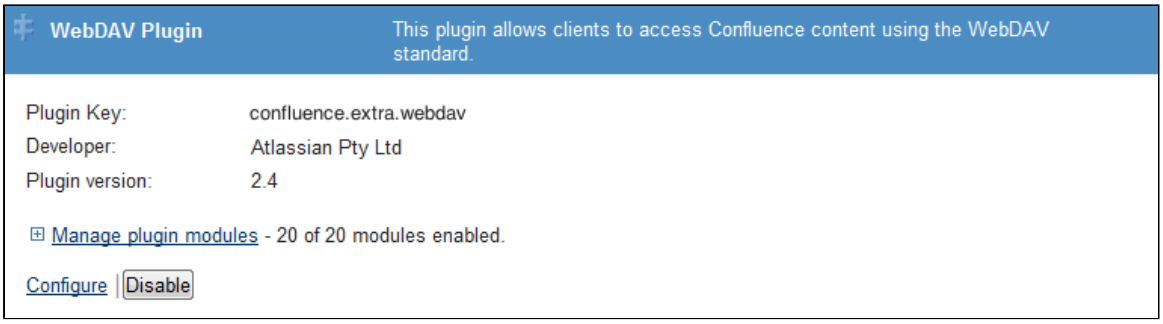


Viewing a Plugin's Details

You can view the details for a plugin when you click the name of a plugin in the installed plugins list (as described above). The summary contains a short description of the plugin as well as buttons/links for plugin operations and related information.

Screenshot: Viewing a Plugin's Details (Confluence)



- **Plugin key** — This field shows the unique key the identifies each plugin in the system.
- **Developer** — This field lists the name of the plugin developer and a link to the developer's homepage, if provided by the plugin developer.
- **Plugin version** — This field lists the version of the plugin currently installed.
- **Manage plugin modules** — Click this link to display the modules below the plugin summary. This link will only display if the plugin has modules, e.g. the Confluence Advanced Macros plugin. If you want to enable

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or disable a plugin module, hover your mouse over the module and click the '**Enable**'/'**Disable**' button that displays.

- **Configure** — Click this link to display the configuration settings for the plugin in the Universal Plugin Manager. This link will be disabled if the plugin is disabled. Please note that not all plugins have settings that can be configured through the Universal Plugin Manager. Refer to 'Configuring a Plugin' (see Related Topics below) for more information.
- **Disable** — Click this button to disable the plugin in your application. This button will only display if the plugin is enabled. Refer to 'Disabling or Enabling a Plugin' (see Related Topics below) for more information.
- **Enable** — Click this button to enable the plugin in your application. This button will only display if the plugin is disabled.
- **Uninstall** — Click this button to uninstall the plugin from your application. This button will only display if the plugin is a user-installed plugin. Refer to 'Uninstalling a Plugin' (see Related Topics below) for more information.

Related Topics

Configuring a Plugin
Disabling or Enabling a Plugin
Uninstalling a Plugin

Plugin loading strategies in Confluence

The categories

Confluence plugins have different behaviour based on how they are loaded by Confluence. The plugins themselves are the same, but based on how they are loaded, they may or may not be upgraded, or may not be disabled, or may not be uninstalled. This chart should explain how plugins can be loaded by Confluence, and the ramifications for each choice.

The category any *particular* plugin is in can vary with Confluence version or circumstance. The examples mentioned here describe the way particular plugins are loaded by default in Confluence 2.8.

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

Category	Description	Example
Static	**cannot be installed or upgraded without a Confluence restart**	

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Core	Included with Confluence and cannot be uninstalled. The classes and plugin.xml are not bundled into plugin jars, but mixed in with Confluence source on the main classpath. Additionally, the plugin.xml definitions are not called "atlassian-plugin.xml" as they are everywhere else, but are named for the plugin e.g., "basic-macros.xml". We would like to separate some of them out and turn them into *Bundled* plugins.	Admin Sections
WEB-INF/lib	Confluence also places some plugin jars inside **WEB-INF/lib**. They are inserted during the build process by Maven. These plugins, likewise, cannot be uninstalled. In ancient times, this was the only way to install plugins, so users are also free to install plugins here. We try to discourage them from doing so, however. As of version 3.0, most of the JAR files in this directory are library dependencies, not plugins.	
Dynamic	**the opposite of static, these can be installed/upgraded while Confluence is running**	

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Bundled	Bundled plugins can be administered from the Plugins console from Administration >> Plugins. You can upload or disable them there. *Bundled* plugins are included in a zip of jars called **atlassian-bundled-plugins.zip** which is on the main Confluence classpath, in a resources directory - `<confluence-install>/confluence/WEB-INF/classes/com/atlassian/confluence/setup`. At Confluence startup, they are extracted and copied into the **$CONFLUENCE_HOME/bundled-plugins** directory, from whence they are loaded. To remove a bundled plugin (you shouldn't normally have to do this), remove the plugin from the atlassian-bundled-plugins.zip file and the bundled-plugins directory, otherwise Confluence will just put it back in place on the next startup. In versions later than 2.6, you'll have to recreate the .jar file (if the jar file is from the lib folder) or recreate the zip folder(if its in the classes folder). Bundled plugins can be upgraded or disabled.	Office Connector
Uploaded	Installed by the user via the plugin repository or the Plugin Manager page. These plugins are stored in the database and then copied to the **$CONFLUENCE_HOME/plugins-cache** folder on each Confluence node.	could be anything

To summarise the relationships of categories in the table, all plugins are either *Static* or *Dynamic*. *Static* plugins can be further categorised into *Core* or *WEB-INF/lib*. *Dynamic* plugins are divided into *Bundled* and *Uploaded*.

Use of the categories in Confluence

Within Confluence, the *Core* and *WEB-INF/lib* categories are not actually named as such, and they don't map neatly to other names (though they do map, as will be explained). They are used here because of the logical distinction they provide.

In Confluence, some of the *Core* plugins are called "System". Plugins can be designated as "System" by adding a flag to the plugin manifest file. To do this, `system=true` should be added to the top-level `atlassian-plugin` element of the manifest file. The manifest file is generally called `atlassian-plugin.xml`, but it could have another name; the *Core* plugins' files do.

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All of the *Core* plugins once were labeled as "System", but it seems the practice has faded over time. If a plugin is designated as "System", then it will not show up in the Plugin Manager page in Confluence and thus cannot be enabled/disabled. However, it *will* show up in the Plugin Repository Client, where it can be disabled; allowing disabling there is probably incorrect behavior.

Static plugins that are not marked as "System" (any remaining *Core* and *WEB-INF/lib* plugins), are simply called *Static* in Confluence. There is no way to tell the *WEB-INF/lib* and *Core* plugins apart from within Confluence. You just have to figure out where the classes are.

Members of the other specific categories - *Bundled* and *Uploaded* - can be determined. We can tell which plugins are *Bundled* and which plugins are *Uploaded*, so we know which plugins are *Uploaded* though this specific term is never used in the Confluence UI. Instead, they are called *Dynamic*.

Upgrading plugins

- *Core* plugins cannot be upgraded.
- *WEB-INF/lib* plugins can be upgraded by replacing the JAR in WEB-INF/lib and restarting Confluence.
- *Bundled* plugins can be upgraded using the Plugin Manager or the Plugin Repository Client. A new plugin jar is uploaded and stored as an *Uploaded* plugin. Confluence compares the version number with the *Bun dled* plugin and uses the newer.
- *Uploaded* plugins are upgradable using the Plugin Manager or the Plugin Repository Client. When a new plugin jar is uploaded, the previous version is discarded from the database and the `$CONFLUENCE_HOME /plugin-cache`.

RELATED TOPICS

Removing Malfunctioning Plugins

Removing Malfunctioning Plugins

Confluence goes to some lengths to prevent itself being unusable due to a problematic plugin. However, sometimes a plugin will manage to do this anyway. This page describes what to do if a plugin cannot be disabled or deleted from the Administration console (from `Administration >> Plugins`).

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Plugin Loading Strategies

1. Read through Plugin loading strategies in Confluence.
2. Determine where your plugin is loaded. The usual options are:
    a. The PLUGINDATA table on the database
    b. The <confluence-home>/bundled-plugins folder
    c. The <confluence-home>/plugin-cache folder
    d. The <confluence-home>/plugins-osgi-cache folder
    e. The <confluence-home>/plugins-temp folder
    f. The <confluence-install>/confluence/WEB-INF/lib folder (deprecated approach)

Check these locations when troubleshooting plugin loading issues.

> ✅ Check the How to display classpath utility for tips on what's loading, and the Knowledge Base Article on plugin malfunctioning.

Deleting a plugin from the Database

To remove a plugin from Confluence when Confluence is not running,

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1. Connect to the Confluence database.
2. Run the following SQL statement in your database:

```
select plugindataid, pluginkey, filename, lastmoddate from
plugindata;
```

3. After you have found the plugindataid for the offending plugin, please run the following:

```
delete from plugindata where plugindataid='XXXXXX';
```

   where XXXXXX is the plugindataid value.

4. Restart Confluence.

Disabling a plugin from the database

To disable in the database,

Run the following query on your Confluence database:

```
select BANDANAVALUE from BANDANA where BANDANAKEY =
'plugin.manager.state.Map'
```

This will return a value like:

```
<map>
  <entry>
    <string>com.atlassian.confluence.ext.usage</string>
    <boolean>true</boolean>
  </entry>
</map>
```

Edit the value `boolean` to have **false**:

```
<map>
  <entry>
    <string>com.atlassian.confluence.ext.usage</string>
    <boolean>false</boolean>
  </entry>
</map>
```

Deleting a Bundled Plugin

Bundled plugins can be administered from the Plugins console from Administration >> Plugins. You can upload or disable them there.

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Bundled plugins are included in a zip of jars called **atlassian-bundled-plugins.zip** which is on the main Confluence classpath, in a resources directory - `<confluence-install>/confluence/WEB-INF/classes/com/atlassian/confluence/setup`. At Confluence startup, they are extracted and copied into the **$CONFLUENCE_HOME/bundled-plugins** directory, from whence they are loaded. To remove a bundled plugin (you shouldn't normally have to do this), remove the plugin from the atlassian-bundled-plugins.zip file and the bundled-plugins directory, otherwise Confluence will just put it back in place on the next startup. In versions later than 2.6, you'll have to recreate the .jar file (if the jar file is from the lib folder) or recreate the zip folder(if its in the classes folder). Bundled plugins can be upgraded or disabled.

If you need to remove a bundled plugin, check to see if you have duplicates in the `<confluence-home>/bundled-plugins` or `<confluence-home>/plugin-cache` directory.

Usually, the problem is that an old plugin is getting loaded along with the properly bundled one, but if you need to remove a bundled plugin, check Plugin loading strategies in Confluence.

Enabling and Configuring Macros

Macros allow you to perform programmatic functions within a page, and can be used for generating more complex content structures.

Generally speaking, a macro is simply a command wrapped inside curly braces {...}. To learn how to write your own macro, or use macros written by other people, read the Confluence Plugin Guide.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

RELATED TOPICS:

- Configuring a URL Whitelist for Macros
- Configuring the User List Macro
- Enabling HTML macros
  - Enabling the html-include Macro
- Troubleshooting the Gallery Macro

Configuring a URL Whitelist for Macros

This page tells you how to restrict some Confluence macros so that they can get information from authorised sources (URLs) only.

Whitelisting URLs for the RSS and HTML Include macros

The RSS and HTML Include macros are used to include content dynamically from other websites onto a Confluence page. The included content may possibly be malicious or harmful to your Confluence instance.

Confluence administrators can set up a list of trusted URLs, thus limiting the locations from which the RSS macro and the HTML Include macro can draw their content.

The form below allows you to define specific URLs and/or URL patterns which are trusted, or to allow inclusion from all URLs without restriction.

To configure the URL whitelist:

1. Choose **Browse** > **Confluence Admin**.
2. Select **Configure Whitelist** in the left-hand panel. The 'Configure Whitelist' screen will appear, as shown in the screenshot below.
3. Select one of the options as follows:
   - **Allow all domains** — There will be no restrictions to the content which can be included onto your

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Confluence pages.

- **Restrict to listed domains** — Confluence will allow content from trusted URLs only. When you select this option, a textbox will open allowing you to enter specific URLs and/or URL patterns. Enter one or more URLs, each on its own line. You can enter the full URL, or use the pattern matching rules described below.

4. Click **Save**.

On this page:

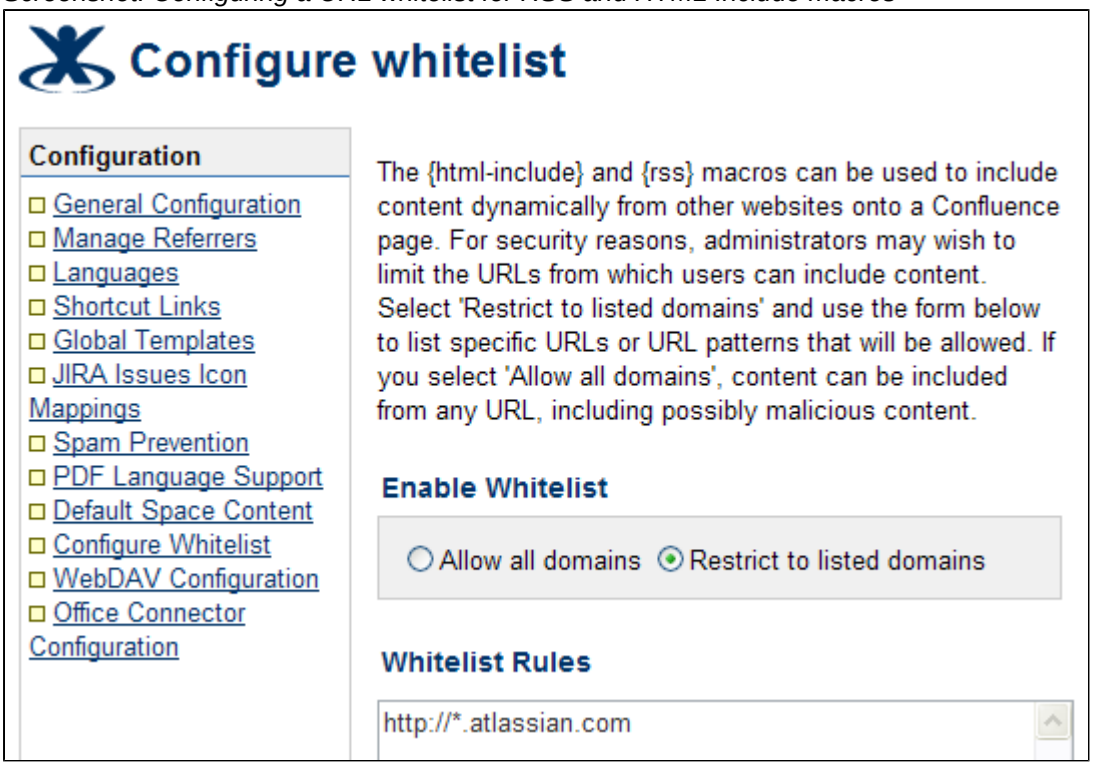
- Whitelisting URLs for the RSS and HTML Include macros
- URL Pattern-Matching Rules
- Notes
- What Happens to a Page Containing a Disallowed URL?

Related pages:

- Enabling HTML macros
- RSS Feed Macro
- HTML Include Macro
- Configuring a URL Whitelist for Gadgets
- Confluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Screenshot: Configuring a URL whitelist for RSS and HTML Include macros



URL Pattern-Matching Rules

Enter one URL or URL pattern per line. You can enter a full URL or use pattern-matching as described below:

- If the rule starts with an equals sign (=), only the exact URL following the '=' will be allowed.
- If the rule starts with a slash (/) then the whole rule will be treated as a regular expression.
- Otherwise, any asterisk (*) will be treated as a wildcard to match one or more characters.

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Notes

Some things to be aware of:

- By default, the RSS and HTML Include macros are disabled in Confluence. A System Administrator can enable them on the 'Plugins' screen of the Confluence Administration Console.
- A user who has the 'Confluence Administrator' permission, but not necessarily the 'System Administrator' permission, can configure the URL whitelist for the HTML Include and RSS macros.

What Happens to a Page Containing a Disallowed URL?

A user can add the RSS Feed macro or the HTML-include macro to a Confluence page. The macro code includes a URL from which the content is drawn. When the page is displayed, Confluence will check the URL against the whitelist. If the URL is not allowed, Confluence will display an error message on the page.

The error message says that Confluence "could not access the content at the URL because it is not from an allowed source" and displays the offending URL. If the person viewing the page is a Confluence Administrator, they will also see a link to the Administration page where they can configure the URL whitelist.

Here is an example of the error message, including the link shown only to Confluence Administrators:

Could not access the content at the URL because it is not from an allowed source.

http://ffeathers.wordpress.com

Configure whitelist >>

Here is an example of the error message, but without the link.

Could not access the content at the URL because it is not from an allowed source.

http://ffeathers.wordpress.com

You may contact your site administrator and request that this URL be added to the list of allowed sources.

Configuring the User List Macro

The User List macro has an optional **Display Online** parameter. If the User Listener plugin is configured to allow this feature, then the page author can select **Display Online** to show a list of all online users.

You need to have System Administrator permissions in order to perform this function.

To enable the Display Online filter in the User List macro:

1. Choose **Browse** > **Confluence Admin**.
2. Select **Plugins** in the left-hand panel. This will list the currently installed plugins.
3. Scroll down and click **User Listener**. The User Listener plugin panel will appear at the top of the screen.
4. Enable the User Log In Listener module by clicking **Enable** on its right.
5. Restart Confluence.

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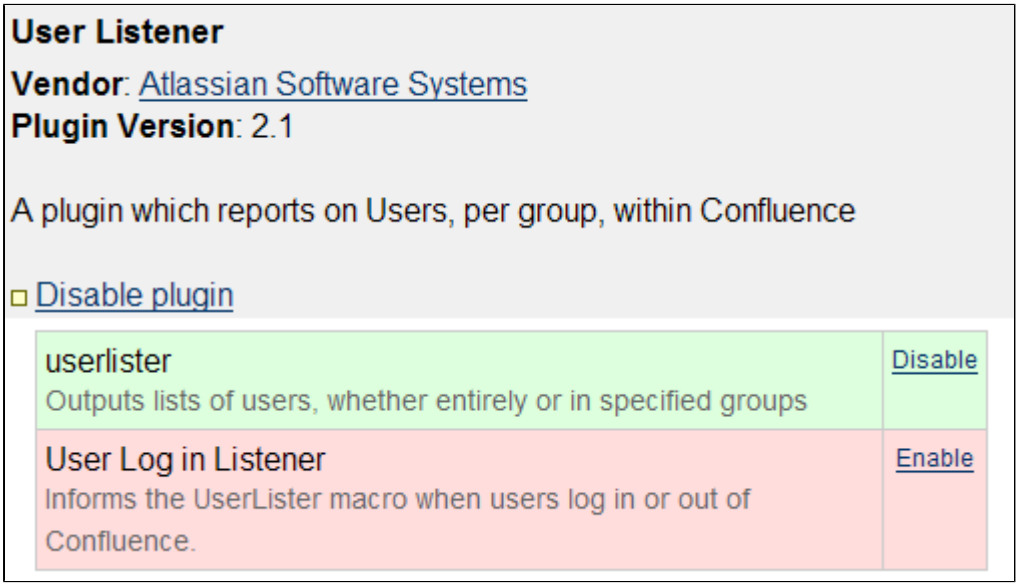
List of online users can be misleading

When the **Display Online** parameter is used, Confluence uses a context listener to generate the list of online users. A context listener is a J2EE term for something that listens for events in the application server. We listen for session open and close events, so a user is 'online' if they have a session on the application server. Some application servers don't correctly despatch close events for sessions – in these cases, the list of online users may be misleading.

Screenshot: Enabling the User Log In Listener



Related Topics

User List Macro
Enabling and Configuring Macros

Enabling HTML macros

The `{html}` macro allows you to use HTML code within a Confluence page.

The `{html-include}` macro allows you to include the contents of an HTML file in a Confluence page.

CAUTION: Including unknown HTML inside a web page is dangerous. Because HTML can contain active scripting components, it would be possible for a malicious attacker to present a user of your site with script that their web browser would believe came from you. Such code could be used, for example, to steal a user's authentication cookie and give the attacker their Confluence login password.
By default, the HTML macros are disabled. You should only turn on these macros if you trust all your users not to attempt to exploit them.

You need System Administrator permissions in order to perform this function.

Related pages:

- Working with Macros
- Confluence Administrator's Guide

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To enable the HTML macros:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Plugins** in the left-hand panel. This will display the installed plugins active for this Confluence installation.
3. Choose **Show System Plugins** to display bundled plugins.
4. Choose **Confluence HTML macros**, then choose **Enable**.
5. Choose **Manage plugin modules** to see the list of modules in the plugin.
6. Ensure that the **html (html-xhtml)** module is enabled.

Enabling the html-include Macro

The `{html-include}` macro allows you to include the content of an HTML file in a Confluence page. This page tells you how to enable the macro, so that it is available on your Confluence site. For help on using the macro, see HTML Include Macro.

CAUTION: Including unknown HTML inside a web page is dangerous.

Because HTML can contain active scripting components, it would be possible for a malicious attacker to present a user of your site with script that their web browser would believe came from you. Such code could be used, for example, to steal a user's authentication cookie and give the attacker their Confluence login password.

The information on this page does not apply to Confluence OnDemand.

Enabling the HTML Macros

By default, the HTML macros are disabled. You should only turn on these macros if you trust all your users not to attempt to exploit them.

You need to have System Administrator permissions in order to perform this function.

To enable the HTML macros,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Plugins**' in the left-hand panel. This will display the installed plugins active for this Confluence installation.
3. Click' '**HTML macros**', then click '**Enable Plugin**'.

To embed an external page,

Use the following syntax:

```
{html-include:url=http://www.example.com}
```

To include HTML inline,

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Use the following syntax:

```
{html}
<b>I like cheese</b>
{html}
```

RELATED TOPICS

HTML Include Macro

No content found for label(s) admin-macros.

Administrators Guide Home Confluence Documentation Home

Troubleshooting the Gallery Macro

Gallery Macro

The page _Gallery Macro Parameters does not exist.

For more information, refer to Gallery Macro.

> *The information on this page does not apply to Confluence OnDemand.*

Troubleshooting

If you encounter the following error message: `System does not support thumbnails: no JDK image support` then ensure that you have following system property available for your JVM:

```
JAVA_OPTS=-Djava.awt.headless=true
```

Also see CONF-1737

> Please note that gallery-ext.jar is available at CONF-6620

Adding, Editing and Removing User Macros

User macros are short pieces of code that perform an often-used function or add some custom formatting to a page. People can call the macro into action by adding the macro keyword to their Confluence pages. You can write a 'user macro' by adding code on a screen in the Confluence Administration Console.

Notes:

- You need System Administrator permissions in order to perform this function.
- See Shared User Macros for a list of community-donated macros.
  Be careful when installing user macros from unknown authors.
- If you remove a user macro that is in use on Confluence pages, you will need to remove the macro from the pages manually. When you remove the user macro, the usage of the macro on the page will become invalid. *Hint:* Use the Confluence search to find all occurrences of the macro on pages and blog posts.

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To add a user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Click **User Macros** in the left-hand panel.
3. Click **Create a User Macro** at the top of the list of macros.
4. Enter the macro details as explained in the guide to writing user macros.
5. Click **Add**.

To edit a user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Select **User Macros** in the left-hand panel. This will list the currently configured user macros.
3. Click **Edit** next to the relevant macro.
4. Update the macro details as explained in the guide to writing user macros.
5. Click **Save**.

To remove a user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Select **User Macros** in the left-hand panel. This will list the currently configured user macros.
3. Click **Remove** next to the relevant macro.

Related Topics

Best Practices for Writing User Macros

Examples of User Macros

Administrators Guide Home Confluence Documentation Home

Writing User Macros

User macros are short pieces of code that perform an often-used function or add some custom formatting to a page. People can add the macro to a page by choosing it from the Macro Browser when editing a Confluence page. The macro is run when the page is loaded by the browser. You can write a user macro by adding code on a screen in the Confluence Administration Console.

You need to have System Administrator permissions in order to create user macros.

Do you need a plugin instead?

If you want to distribute your user macro as a plugin, please refer to the developer's guide to the User Macro plugin module. If you want to create more complex, programmatic macros in Confluence, you may need to write a Macro plugin.

On this page:

- Creating a User Macro
- Examples and Best Practices
- Related Topics

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Creating a User Macro

To create a user macro:

1. Go to the **Confluence Administration Console** and click **User Macros** in the left-hand panel.
2. Click **Create a User Macro**.
3. Supply the information in the input fields as explained below, then click **Add**.

The sections below tell you about each of the input fields.

Macro Name

Enter the text that people will see when looking for the macro in the Macro Browser.

Visibility

Set the visibility options to specify who can see this macro when they are searching using the Macro Browser or Autocomplete.

> User macros must have parameters defined in order to appear in the Confluence 4.0 Macro Browser.

The options are as follows:

Visibility Option	Meaning
Visible to all users	All users will see this macro when searching for a macro using the Macro Browser or Autocomplete.

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Visible only to system administrators	Choose this option if you want the macro to be 'hidden' from most users when the users are looking for a macro to add to a page. Note that this does not completely hide the macro. Instead, it is useful if you want to avoid cluttering the Macro Browser and Autocomplete with unnecessary macros. Specifically, if you are: • **Editing a page and inserting a macro using the Macro Browser:** Only system administrators will see this macro in the Macro Browser. For other users, the macro will not show up in the Macro Browser when the user searches for a macro to add to a page. • **Editing a page and inserting a macro using Autocomplete:** Only system administrators will see this macro in Autocomplete. For other users, the macro will not show up in the Autocomplete list when the user searches for a macro to add to a page. • **Viewing the page:** The macro output will be visible to all users who have permission to see the page. • **Editing a page that already contains the macro:** Provided a user has permission to edit the page, the macro will be visible to all users when editing the page, and all users who have permission to edit the page will also be able to edit or remove the macro. Please note that all the macro information will also be discoverable, including the macro title, description, parameter names and other metadata. Do not include confidential data anywhere in the definition of a user macro, even if it is marked as visible only to system administrators.

Macro Title

Enter the text that should appear in the Macro Browser and in Autocomplete, to identify this macro when people are looking for it to insert onto a page.

Description

Enter the text that should appear in the Macro Browser describing this macro. Note that the Macro Browser's search will pick up matches in the description as well as in the title.

Categories

Select one or more categories for your macro. To select more than one category, hold down the 'Ctrl' key while selecting. These are the categories that appear in the Macro Browser, helping users to choose a macro from a logical set.

Icon URL

If you would like the Macro Browser to display an icon for your macro, enter the URL here. You can enter an absolute URL or a path relative to the Confluence base URL. For example:

- Absolute URL:

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```
http://mysite.com/mypath/status.png
```

- Relative URL:

```
/images/icons/macrobrowser/status.png
```

Documentation URL

Enter the URL pointing to the online help or other documentation for your macro.

Macro Body Processing

Specify how you want Confluence to process the body of your macro before passing it to your macro. Below is an explanation of the macro body and the options available.

What is the macro body?

The macro body is the content that is displayed on the wiki page. If the macro allows a body, users will be able to enter body content when configuring the macro in the Macro Browser.

How can I use the macro body?

If you specify that your macro has a body, you will be able to pass text to the macro when you invoke it from within a page.

If your macro has a body, any body content that the user enters will be available to the macro in the `$body` variable. See the section about the template below. In addition, the options below allow you to tell Confluence to pre-process the body before it is placed in the macro output.

What are the options for macro body?

Body Processing Option	Meaning
No macro body	Select this option if your macro does not need a body.

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Escaped	If your macro has a body, and you make use of the body as `$body` in your template, Confluence will add escape characters to the HTML markup in the macro body. You could use this if you want to show the HTML markup in the rendered page. For example, if the body is: `<b>Hello World</b>` Then value of $body will be: `<b>Hello World</b>` This will render as: `<b>Hello World</b>`
Unrendered	If your macro has a body, and you make use of the body as `$body` in your template, HTML in the body will be processed within the template before being output. Ensure that HTML is ultimately output by the template.
Rendered	If your macro has a body, and you make use of the body as `$body` in your template, Confluence will recognise HTML in the macro body. For example, if the body is: `<b>Hello World</b>` Then value of $body will be: `<b>Hello World</b>` This will render as: **Hello World**

Template

Enter code to specify what the macro will do. For example, to add a macro inside the macro you are writing, you

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would write:

```
<ac:macro ac:name="someOtherMacro" />
```

Quick guide:

- Use HTML and Confluence-specific XML elements in the macro template. Details of Confluence's storage format are in Confluence Storage Format.
- You can use the Velocity templating language. Here is more information on the Velocity project.
- If your macro has a body, your template can refer to the macro body text by specifying '`$body`'.
- Each parameter variable you use must have a matching metadata definition. Use `@param` to define metadata for your macro parameters.
- When using the information passed using parameters, refer to your parameters as $paramXXX where 'XXX' is the parameter name that you specifed in the `@param` metadata definition.
- Use `@noparams` if your macro does not accept parameters. Note that this will prevent your macro appearing in the macro browser.

See our detailed guide to writing a user macro template.

Examples and Best Practices

See:

- Examples of User Macros
- Best Practices for Writing User Macros

Related Topics

Developer documentation:

- User Macro Module
- Macro Module
- Confluence Plugin Guide

Library of user-contributed user macros

- Shared User Macros

> Be careful when installing user macros. Ideally use only macros from authors and sources that are well known to you.

Best Practices for Writing User Macros

This section contains tips and suggestions for best practice in macro coding. To see how to write a user macro and add it to your Confluence site, take a look at our guide to writing user macros.

> *The information on this page does not apply to Confluence OnDemand.*

Add a Descriptive Header to your Macro Template

We recommend that you include a short description of your macro via comments at the top of the **Template** field as shown below. You can see an excellent example in the 'Image rollover' user macro.

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```
## Macro title: My macro name
## Macro has a body: Y or N
## Body processing: Selected body processing option
## Output: Selected output option
##
## Developed by: My Name
## Date created: dd/mm/yyyy
## Installed by: My Name

## Short description of what the macro does
```

Expose your Parameters in the Macro Browser

Confluence offers great options for making your macro look good in the macro browser. You can specify the macro category, link to an icon, define the parameters that the macro browser will use to prompt the user for information, and more.

In particular, read the documentation on defining the macro parameters to be displayed in the macro browser.

Supply Default Values for Macro Parameters

You cannot guarantee that a user will supply parameters, so one of the first things to do in the macro is check that you have received some value if you expect to rely on it later on in the macro code.

In the example below, the macro expects three parameters. It substitutes sensible defaults if they are not supplied:

```
#set($spacekey= $paramspacekey)
#set($numthreads= $paramnumthreads)
#set($numchars= $paramnumchars)

## Check for valid space key, otherwise use current
#if (!$spacekey)
  #set ($spacekey=$space.key)
#end

## Check for valid number of threads, otherwise use default of 5
#if (!$numthreads)
  #set ($numthreads=5)
#end

## Check for valid excerpt size, otherwise use default of 35
#if (!$numchars)
  #set ($numchars=35)
#end
```

Related Topics

Writing User Macros

Examples of User Macros

Below are some sample user macros. To see how to write a user macro and add it to your Confluence site, take a look at our guide to writing user macros.

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Example 1: A macro that displays 'Hello World'

Take a look at an example of a 'Hello World' macro.

Example 2: The 'Error' macro that creates a red box

Let's write a simple macro that creates a red box (using an existing Confluence style) around some text. See Error Box Macro - Example of a User Macro.

Example 3: A macro that demonstrates the use of parameters

See Colour and Size Macro - Example of a User Macro.

Example 4: A macro that prevents text from being printed

See NoPrint Example of a User Macro.

On this page:

- Example 1: A macro that displays 'Hello World'
- Example 2: The 'Error' macro that creates a red box
- Example 3: A macro that demonstrates the use of parameters
- Example 4: A macro that prevents text from being printed
- Example 5: A macro that creates a preformatted panel
- Example 6: A macro that creates a preformatted table
- Community-contributed user macros

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Guide to User Macro TemplatesWorking with Macros

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Example 5: A macro that creates a preformatted panel

This user macro creates a panel preformatted with specific colours. See Preformatted Table - Example of a User Macro.

Example 6: A macro that creates a preformatted table

This user macro creates a table with predefined headings headings. See Panel Preformatted with Specific Colours - Example of a User Macro.

Community-contributed user macros

You may want to take a look at the library of shared user macros.
Be careful when installing user macros from unknown authors.

Hello World Example of User Macro

This page tells you how to create a user macro that displays the text 'Hello World!' and any text that the user places in the body of the macro. For full details about creating a user macro, see the guide to writing user macros.

Defining the 'Hello World' user macro

To create the 'Hello World' user macro:

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1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
   - Macro Name: `helloworld`
   - Visibility: `Visible to all users in the Macro Browser`
   - Macro Title: `Hello World`
   - Description: `Displays "Hello World" and the macro body.`
   - Categories: `Confluence Content`
   - Icon URL: You can leave this field empty.
   - Documentation URL: You can leave this field empty.
   - Macro Body Processing: `Rendered`
   - Template:

```
## @noparams
Hello World!
$body
```

5. Choose **Save**.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Screenshot: Defining the 'Hello World' user macro

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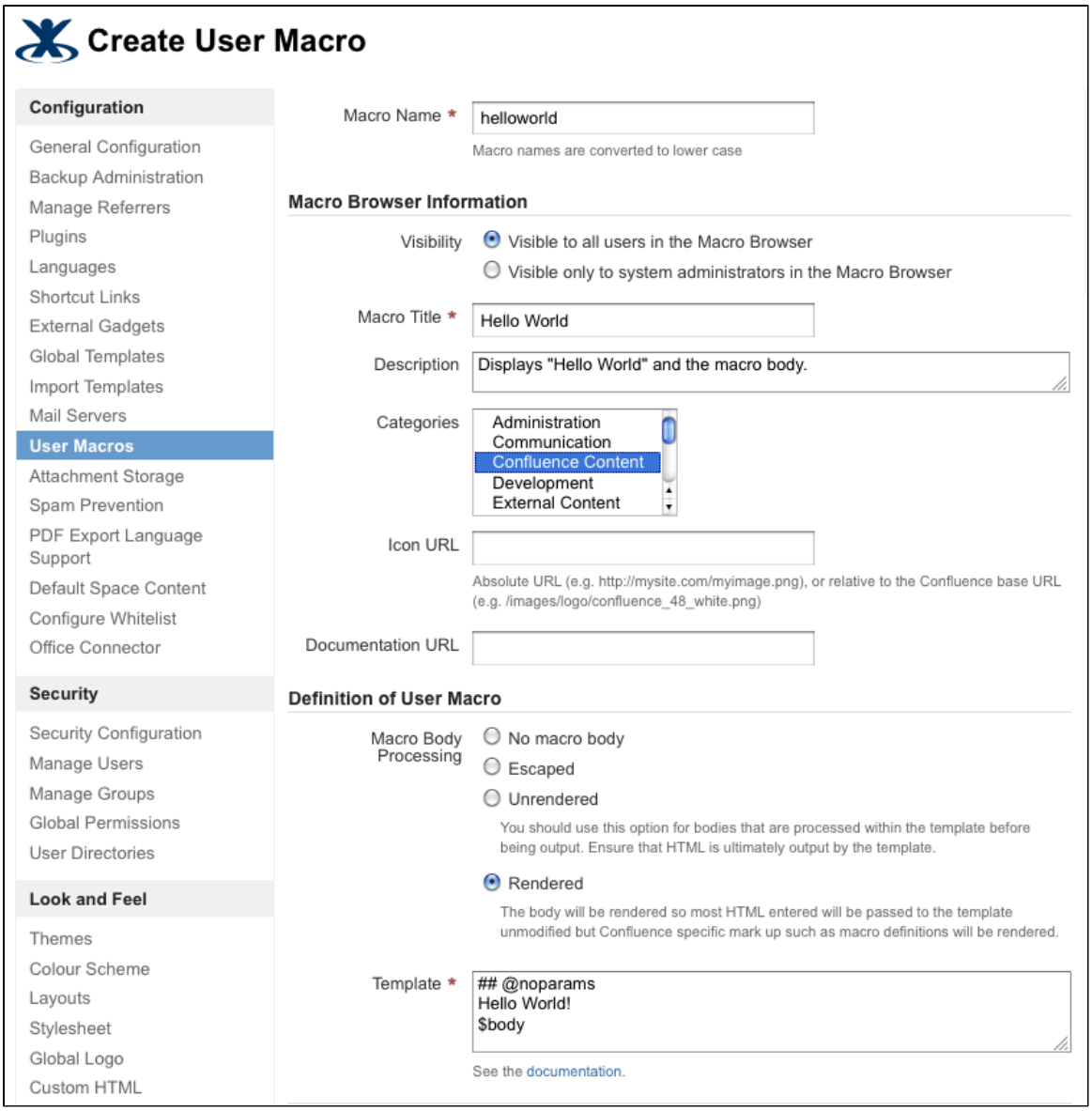

Using the 'Hello World' macro on a page

Now you can add the macro to your Confluence page using the Macro Browser:

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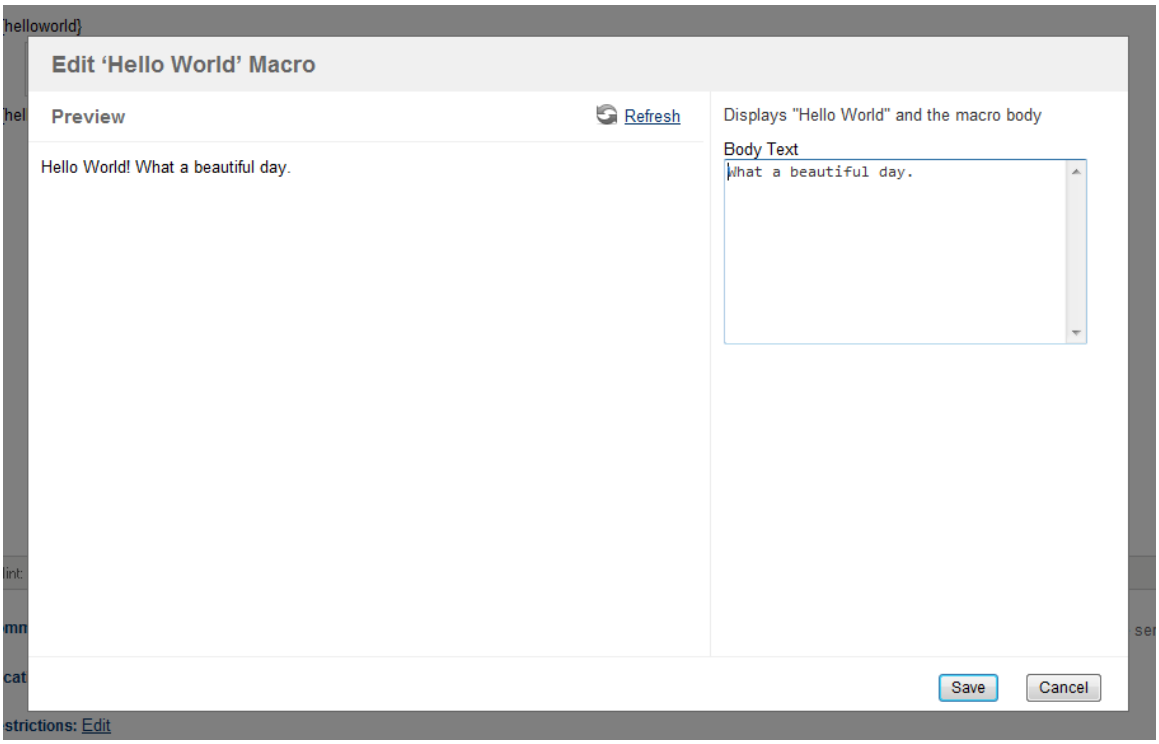

The result is:

You can also use autocomplete to add the macro onto your page: start typing '{hello' in the editor, and select the 'Hello World' macro from the list of suggestions that appears.

Error Box Macro - Example of a User Macro

Let's write a simple macro that creates a red box (using an existing Confluence style) around some text. This may be useful for writing about error conditions, for example. For full details about creating a user macro, see the guide to writing user macros.

Defining the 'Error' user macro

To create the 'Error' user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
    - Macro Name: `error`
    - Visibility: `Visible to all users in the Macro Browser`
    - Macro Title: `Error`
    - Description: `Displays a red box around some text`
    - Categories: `Confluence Content`
    - Icon URL: You can leave this field empty.
    - Documentation URL: You can leave this field empty.

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- Macro Body Processing: `Rendered`
- Template:

```
## @noparams
<div class="error">$body</div>
```

5. Choose **Save**.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Using the 'Error' macro on a page

To add the macro to a page, edit the page and choose **Insert** > **Other Macros** and find the 'Error' macro. (Or use autocomplete: start typing '{err' in the editor, and select the 'Error' macro from the list of suggestions that appears.)

Your page will display an error box, like this:

(Write your error message here.)

Colour and Size Macro - Example of a User Macro

This example demonstrates how you can pass parameters into your macro. Let's say you want to write your own font colour macro, with a parameter allowing the user to specify the colour. Then perhaps you want to add another parameter, that allows the user to specify the font size.

For full details about creating a user macro, see the guide to writing user macros.

Defining the 'Colour' user macro

This example uses a single parameter.

To create the 'Colour' user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
   - Macro Name: `colour`
   - Visibility: `Visible to all users in the Macro Browser`
   - Macro Title: `Colour`
   - Description: `Colours a block of text`
   - Categories: `Confluence Content`
   - Icon URL: You can leave this field empty.
   - Documentation URL: You can leave this field empty.
   - Macro Body Processing: `Rendered`
   - Template:

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```
## @param 0:title=colour|type=string
<span style="color: $param0">$body</span>
```

5. Choose **Save**.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Using the 'Colour' macro on a page

To add the macro to a page, edit the page and choose **Insert** > **Other Macros** and find the 'Colour' macro. (Or use autocomplete: start typing '{colo' in the editor, and select the 'Colour' macro from the list of suggestions that appears.)

Defining the 'Stylish' user macro

If your macro requires more than one parameter, you can use variables $param0 to $param9 to represent them. Let's say that you want to add a parameter that allows the user to specify the size of the text.

Enter the macro attributes as follows:

- Macro Name: `stylish`
- Visibility: `Visible to all users in the Macro Browser`
- Macro Title: `Stylish`
- Description: `Applies colour and size to text`
- Categories: `Confluence Content`
- Icon URL: You can leave this field empty.
- Documentation URL: You can leave this field empty.
- Macro Body Processing: `Rendered`
- Template:

```
## @param 0:title=colour|type=string
## @param 1:title=size|type=string
<span style="color: $param0; font-size: $param1">$body</span>
```

Naming your parameters

Alternatively, you can also use explicitly-named parameters in your macro. These macro parameters will appear as variables with the name $param<x> where <x> is the name of your parameter.

```
## @param Colour:title=colour|type=string
## @param Size:title=size|type=string
<span style="color: $paramColour; font-size: $paramSize">$body</span>
```

NoPrint Example of a User Macro

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This page gives an example of a user macro, the 'NoPrint' macro, that you can use to prevent text from being printed. For full details about creating a user macro, see the guide to writing user macros.

Defining the 'NoPrint' user macro

To create the 'NoPrint' user macro:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
   - Macro Name: `noprint`
   - Visibility: `Visible to all users in the Macro Browser`
   - Macro Title: `NoPrint`
   - Description: `Hides text from printed output.`
   - Categories: `Confluence Content`
   - Icon URL: You can leave this field empty.
   - Documentation URL: You can leave this field empty.
   - Macro Body Processing: `Rendered`
   - Template:

```
## @noparams
<div class="noprint">$body</div>
```

5. Choose **Save**.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Using the 'NoPrint' Macro on a page

Now you can add the macro to your Confluence page using the Macro Browser. Text entered into the body of the macro placeholder will not be printed, but will appear when the page is viewed online.

NoPrint

This text will not be printed.

Making the PDF export recognise the NoPrint macro

See Advanced PDF Export Customisations.

Panel Preformatted with Specific Colours - Example of a User Macro

This user macro creates a panel pre-formatted to specific colours. It will create a panel that looks like this:

(Title)

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Note: The panel's title will be empty if the user does not give a value for the title parameter.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Defining the 'Formatted Panel' user macro

1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
   - Macro Name: `formpanel`
   - Visibility: `Visible to all users in the Macro Browser`
   - Macro Title: `Formatted Panel`
   - Description: `Creates a panel preformatted with specific colours`
   - Categories: `Formatting`
   - Icon URL: You can leave this field empty.
   - Documentation URL: You can leave this field empty.
   - Macro Body Processing: `Escaped`
   - Template:

```
## @param Title:title=Title|type=string|desc=Title

<ac:macro ac:name="panel">
        <ac:parameter ac:name="titleBGColor">#ccc</ac:parameter>
        <ac:parameter ac:name="borderStyle">solid</ac:parameter>
        <ac:parameter ac:name="borderColor">#6699CC</ac:parameter>
        <ac:parameter ac:name="borderWidth">2</ac:parameter>
        <ac:parameter ac:name="titleColor">#000000</ac:parameter>
    <ac:parameter ac:name="title">$!paramTitle</ac:parameter>
    <ac:rich-text-body>$body</ac:rich-text-body>
</ac:macro>
```

5. Choose **Save**.

Explanation of the code in the macro template

Item	Description

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`## @param Title:title=Title|type=string|desc=Title`	@param defines the metadata for your macro parameters. When users select this macro, the macro will contain a parameter called "Title" where they can enter data. A macro dialog window appears when the user selects this macro using **Insert > Other Macros** or when a user clicks the macro placeholder and chooses **Edit**. The macro will, later on, use the data stored in this parameter to enter data in the title section of the Panel macro.
	
	`@param Title`
	
	This parameter is called "Title".
	
	`title=Title`
	
	defines the parameter title that will appear in the macro dialog window as "Title".
	
	`type=string`
	
	defines the field type for the parameter as a text field.
	
	`desc=Title`
	
	defines the description of the parameter.

`<ac:macro ac:name="panel">`	This command activates the Confluence Panel macro . Hint: To discover the code name of a Confluence macro, see Confluence Storage Format for Macros. If the macro you want is not documented there, follow these steps: 1. Create and save a page containing a Confluence macro you want to investigate. 2. Choose **Tools** > **View Storage Format**. This option is available to Confluence administrators only, and shows the XML source code for the page. (See Confluence Storage Format.) 3. A Confluence macro starts with the following string: `<ac: macro ac:name=`

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`<ac:parameter ac:name="titleBGColor">#ccc</ac:parameter>`
`<ac:parameter ac:name="borderStyle">solid</ac:parameter>`
`<ac:parameter ac:name="borderColor">#6699CC</ac:parameter>`
`<ac:parameter ac:name="borderWidth">2</ac:parameter>`
`<ac:parameter ac:name="titleColor">#000000</ac:parameter>`
	Sets the parameters for the macro: the background colour, border style, border colour, border width and title colour.
	
	Hint: To discover the names of the parameters for a Confluence macro, see Confluence Storage Format for Macros. If the macro you want is not documented there, follow these steps:
	
	1. Create and save a page containing a Confluence macro you want to investigate.
	2. Choose **Tools** > **View Storage Format**. This option is available to Confluence administrators only, and shows the XML source code for the page. (See Confluence Storage Format.)
	3. The macro parameters start with the following string: `<ac: parameter ac:name`

`<ac:parameter ac:name="title">$!paramTitle</ac:parameter>`	Enters the value stored in the 'Title' parameter into the title section of the macro. The ! tells the macro to leave the title blank, when there is no data in the "Title" parameter.
`<ac:rich-text-body>$body</ac:rich-text-body>`	Users can enter data that is stored in the body of the macro. This line enables the macro to access and store the body content passed to your macro.
`</ac:macro>`	This command marks the end of the macro.

Preformatted Table - Example of a User Macro

This user macro creates a 2 x 2 table, with the headings defined as 'Parameter' and 'Description'. It will create a table that looks like this:

Parameter	Description

Note: As the macro is written, the user cannot amend the heading titles when using the macro on a Confluence page.

Related pages:

- Writing User Macros
- Guide to User Macro Templates
- Examples of User Macros

The information on this page does not apply to Confluence OnDemand.

Defining the 'Formatted Table' user macro

1. Choose **Browse** > **Confluence Admin**.
2. Choose **User Macros** in the left-hand panel.
3. Choose **Create a User Macro** at the bottom of the list of macros.
4. Enter the macro attributes as follows:
    - Macro Name: `formtable`

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- Visibility: `Visible to all users in the Macro Browser`
- Macro Title: `Formatted Table`
- Description: `Creates a simple 2 x 2 table with the column headings filled in`
- Categories: `Formatting`
- Icon URL: You can leave this field empty.
- Documentation URL: You can leave this field empty.
- Macro Body Processing: `Escaped`
- Template:

```
## @param Head1:type=string|desc=Heading
## @param Head2:type=string|desc=Heading
## @param Cell1:type=string|desc=cell
## @param Cell2:type=string|desc=cell
#set ($paramHead1 ="Parameter")
#set ($paramHead2 ="Description")

<div id="preformattedtable">
<table>
<tr>
<th>$paramHead1</th>
<th>$paramHead2</th>
</tr>
<tr>
<td>$!paramCell1</td>
<td>$!paramCell2</td>
</tr>
</table>
</div>
```

5. Choose **Save**.

Using the macro on a Confluence page

To add the macro to a page:

1. In the Confluence editor, choose **Insert** > **Other Macros**.
2. Find and select the 'Formatted Table' macro.
3. Enter the cell contents into the form.
4. Choose **Insert**.

Amending the contents of the table

To change the content in the cells of the table:

1. Edit the page.
2. Click the macro placeholder for the 'Formatted Table' macro, to see the properties panel.
3. Choose **Edit**.
4. Enter the cell contents into the form.
5. Choose **Save**

Note: Content entered into the body of the 'Formatted Table' macro will not appear on the page.

Guide to User Macro Templates

You write a user macro in a screen in the Confluence Administration Console. The 'template' is one of the fields that you define when writing a user macro. (See the rest of the guide to writing user macros.) This page gives

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you guidelines about the code you can enter in a user macro template.

Quick guide to user macro tempates:

- Use HTML and Confluence-specific XML elements in the macro template. Details of Confluence's storage format are in Confluence Storage Format.
- You can use the Velocity templating language. Here is more information on the Velocity project.
- If your macro has a body, your template can refer to the macro body text by specifying '`$body`'.
- Each parameter variable you use must have a matching metadata definition. Use `@param` to define metadata for your macro parameters.
- When using the information passed using parameters, refer to your parameters as $paramXXX where 'XXX' is the parameter name that you specifed in the `@param` metadata definition.
- Use `@noparams` if your macro does not accept parameters. Note that this will prevent your macro appearing in the macro browser.

On this page:

- Accessing your Macro's Body
- Using Parameters in your User Macro
- Objects Available to your Macro
- Controlling Parameter Appearance in the Editor Placeholder
- Related Topics

The information on this page does not apply to Confluence OnDemand.

Accessing your Macro's Body

Use the `$body` object within your user macro template to access the content passed to your macro in the macro body.

The `$body` object is available if you have specified that your macro has a body (in other words, if you have *not* s elected **No macro body**).

Example: Let's assume your macro is called `helloworld`.
Enter the following code in your template:

```
Hello World: $body
```

A user, when editing a Confluence page, chooses your macro in the Macro Browser and then enters the following in the macro placeholder that is displayed in the edit view:

```
From Matthew
```

The wiki page will display the following:

> *Hello World: From Matthew*

Using Parameters in your User Macro

You can specify parameters for your macro, so that users can pass it information to determine its behaviour on a

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Confluence page.

How your Macro's Parameters are Used on a Confluence Page

When adding a macro to a Confluence page, the Macro Browser will display an input field for each of your macro's parameters. The field type is determined by the parameter type you specify for each parameter.

Defining the Parameters

Briefly, a parameter definition in the template contains:

- `@param`
- The parameter name
- A number of attributes (optional)

Format:

```
## @param MYNAME:title=MY TITLE|type=MY TYPE|desc=MY
DESCRIPTION|required=true|multiple=true|default=MY DEFAULT VALUE
```

Additional notes:

- The order of the parameters in the template determines the order in which the Macro Browser displays the parameters.
- We recommend that you define the parameters at the top of the template.
- There may be additional attributes, depending on the parameter type you specify.

The sections below describe each of the attributes in detail.

Attribute Name	Description	Required / Recommended / Optional
(an unnamed, first attribute)	A unique name for the parameter. The parameter name is the first attribute in the list. The name attribute itself does not have a name. See the section on name b elow.	Required
title	The parameter title will appear in the Macro Browser. If you do not specify a title, Confluence will use the parameter name.	Recommended
type	The field type for the parameter. See the section on type below.	Recommended
desc	The parameter description will appear in the Macro Browser.	Optional
required	Specifies whether the user must enter information for this parameter. Defaults to 'false'.	Optional

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multiple	Specifies whether the parameter accepts multiple values. Defaults to 'false'.	Optional
default	The default value for the parameter.	Optional

Parameter Name

The parameter name is the first attribute in the list. The name attribute itself does not have a name.

Example: The following code defines 2 parameters, named 'foo' and 'bar':

```
## @param foo
## @param bar
```

Parameter Type

The field type for the parameter. If you do not specify a type, the default is `string`.

Parameter Type	Description
boolean	Displays a checkbox to the user and passes the value 'true' or 'false' to the macro as a string.
enum	Offers a list of values for selection. You can specify the values to appear in a dropdown in the Macro Browser. Example of specifying the enum values: `## @param colour:title=Colour|type=enum|enumValues=Grey,Red,Yellow,Green` *Note about i18n:* Confluence does not support internationalisation of the enum values.The value the user sees is the one passed to the macro as the parameter value, with the capitalisation given. In this case 'Grey', 'Red', etc.

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string	A text field. This is the default type. Example with a required field: `## @param status:title=Status|type=string|required=true|desc=Status to display`
confluence-content	Offers a control allowing the user to search for a page or blog post. Example: `## @param page:title=Page|type=confluence-content|required=true|desc=Select a page do use`
username	Search for user. `## @param user:title=Username|type=username|desc=Select username to display`
spacekey	Offers a list of spaces for selection. Passes the space key to the macro. Example: `## @param space:title=Space|type=spacekey`
date	Confluence accepts this type, but currently treats it in the same way as 'string'. Example: `## @param fromDate:title=FromDate|type=date|desc=Date to start from. Format: dd/mm/YYYY` *Note about dates:* A user can enter a date in any format, you should validate the date format in your user macro.

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int	Confluence accepts this type, but currently treats it in the same way as 'string'. Example with a default value: `## @param numPosts:title=Number of Posts|type=int|default=15|desc=Number of posts to display`
percentage	Confluence accepts this type, but currently treats it in the same way as 'string'. Example: `## @param pcent:title=Percentage|type=percentage|desc=Number of posts to display`

Using the Parameters in your Macro Code

The parameters are available in your template as `$paramfoo`, `$parambar` for parameters named "foo" and "bar".

Normally, a parameter like `$paramfoo` that is missing will appear as '$paramfoo' in the output. To display nothing when a parameter is not set, use an exclamation mark after the dollar sign like this: `$!paramfoo`

Using No Parameters

If your macro does not accept parameters, you should use `@noparams` in your template. That will let Confluence know that it need not display a parameter input field in the Macro Browser.

If the user macro contains no parameters and does not specify `@noparams`, then the Macro Browser will display a free-format text box allowing users to enter undefined parameters. This can be confusing, especially if the macro does not accept parameters.

Example: Add the following line at the top of your template:

```
## @noparams
```

Objects Available to your Macro

Including the macro body and parameters, the following Confluence objects are available to the macro:

Variable	Description	Class Reference
`$body`	The body of the macro (if the macro has a body)	String

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`$paramfoo`, `$parambar`, ... `$param<name>`	Named parameters ("foo", "bar") passed to your macro.	String
`$config`	The `BootstrapManager` object, useful for retrieving Confluence properties.	BootstrapManager
`$renderContext`	The `PageContext` object, useful for (among other things) checking `$renderContext.outputType`	PageContext
`$space`	The `Space` object that this content object (page, blog post, etc) is located in (if relevant).	Space
`$content`	The current `ContentEntity` object that this macro is a included in (if available).	ContentEntityObject

Macros can also access objects available in the default Velocity context, as described in the developer documentation.

Controlling Parameter Appearance in the Editor Placeholder

A macro developer (or author of a user macro) can control which fields of the macro should appear in the placeholder in the Confluence Editor.

Plugin Macro Metadata

The macro metadata for a plugin macro now has parameter options as shown in the following example:

```
<macro name="panel" documentation-url="help.panel.macro">
            <category name="formatting"/>
            <parameters>
                <parameter name="title" type="string">
                    <option key="showNameInPlaceholder" value="false" />
                    <option key="showValueInPlaceholder" value="true" />
                </parameter>
                <parameter name="borderStyle" type="string"/>
                <parameter name="borderColor" type="color"/>
<snip
```

The option `showNameInPlaceholder` specifies that in the above example the '`title`' parameters name should not be shown.

The option `showValueInPlaceholder` specifies that the user entered value for this parameter should be shown.

So, for the above example, the macro placeholder could show something like 'panel | my panel title'.
If `showNameInPlaceholder` was true instead of false it would show something like 'panel | title = my panel title'.

If a macro has neither option on any of it's parameters then the default behaviour is to show all parameters: full title and value. If one or more parameters has either option set then all parameters without the options set will default to false (i.e. will not be shown).

User Macro Metadata

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The behaviour for a user macro is as described above, however the method of configuration is within the @param entry in the template.
So, the example from above would look something like:

```
## @param
title:type=string|option-showNameInPlaceholder=false|option-showValueInPlaceholder
=true
```

Related Topics

Writing User Macros
Examples of User Macros

Configuring the Office Connector

The Office Connector is a Confluence plugin that allows Confluence users to interact with Microsoft Office and Open Office in various ways. You can display content from Office documents on a wiki page and import content from an Office document into Confluence. Please refer to the User Guide for details of these interactions.

A System Administrator can enable or disable parts of the Office Connector and can configure options as described below.

On this page:

- Enabling and Disabling the Office Connector and its Modules
- Configuring the Office Connector Options
- Related Topics

⚠️ *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

Enabling and Disabling the Office Connector and its Modules

The Office Connector is bundled with Confluence 2.10 and later, so you should not need to install it. But you may wish to enable or disable some of its modules.

A System Administrator can install, enable or disable plugins and plugin modules. You can read a general overview in Installing Plugins and Macros.

To enable or disable the Office Connector and its modules:

1. Select **Plugins**, under 'Configuration' in the left-hand panel of the Confluence Administration Console.
2. Click **Show system plugins** under 'System Plugins'.
3. Search the page for **Office Connector plugin** and select the link.
4. The 'Office Connector plugin' panel will appear near the top centre of the page, as shown in the screenshot below.
5. Now you can do one of the following:
    - **Configure plugin** – This will take you to the separate plugin configuration screen described below.
    - **Disable plugin** – Click this link if you want to disable all modules of the plugin, but leave the plugin installed on your Confluence site.
    - **Uninstall plugin** – Click this link if you want to remove the Office Connector permanently from your Confluence site. To restore it at a later date, you will need to re-install it from the Confluence Plugin Repository.
    - **Manage plugin modules** – You can also enable or disable one or more of the Office Connector

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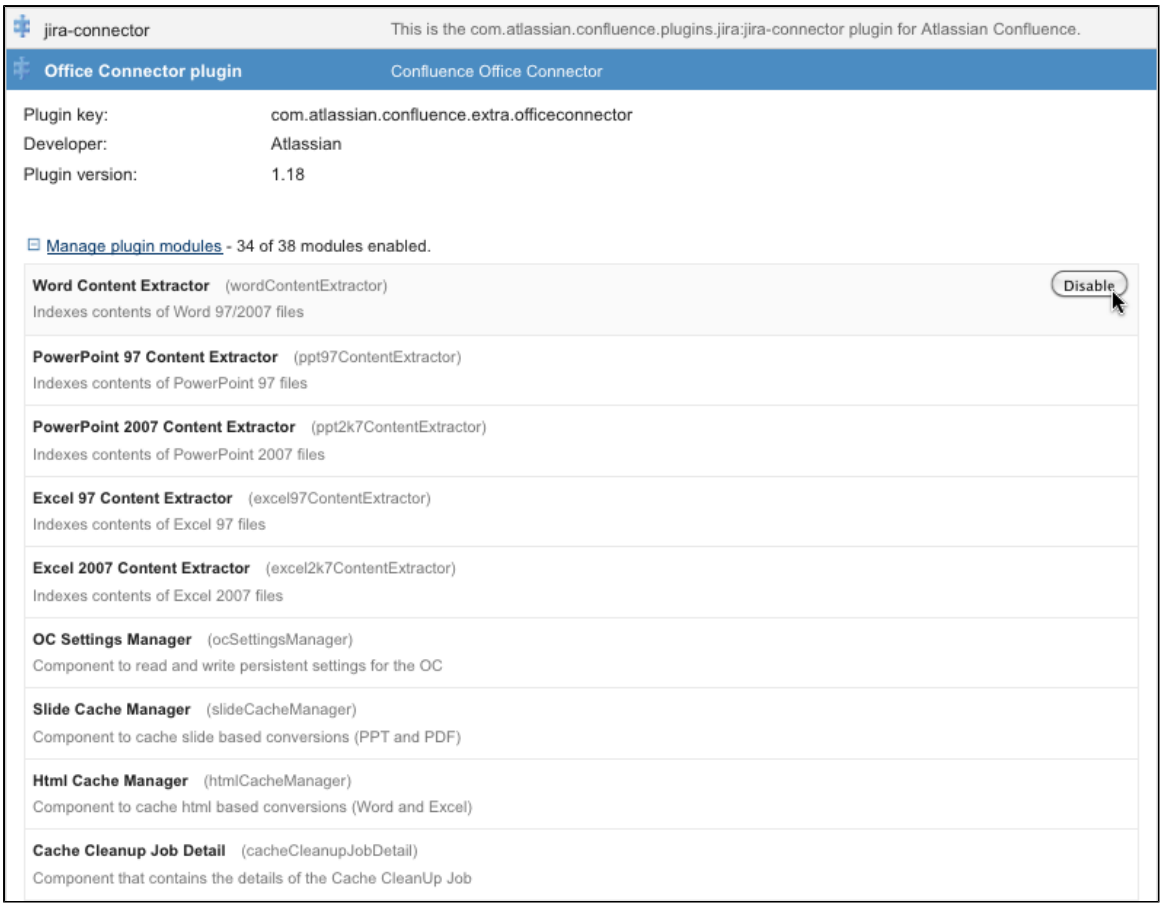
modules, as described in the table below.

Screenshot: Enabling the Office Connector plugin and its modules



The following modules are available for the Office Connector plugin:

Module	Description
OC Settings Manager	Component to read and write persistent settings for the Office Connector.
Slide Cache Manager	Component to cache slide-based conversions when displaying PowerPoint and PDF documents.
Html Cache Manager	Component to cache HTML-based conversions when displaying Word and Excel documents.
File Cache Cleanup Job	This module is a recurring task that cleans up the Office Connector file cache.
File Cache Cleanup	This module is the trigger for the File Cache Cleanup Job.

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Office Connector administration link	This module supplies the 'Office Connector Configuration' link in the left-hand panel of the Confluence Administration Console. The link gives access to the plugin configuration screen described below.
Link for previewing a search result	This modules supplies the 'View' link which appears next to attachments displayed in search results, where the attachment is an Office document.
Link for previewing an attachment	This modules supplies the 'View' link which appears next to attachments displayed on the 'Attachments' view of a page, where the attachment is an Office document.
viewfile	This module supplies the {viewfile} macro. See View File Macro.
viewdoc	This module supplies the Word document component of the {viewfile} macro.
viewxls	This module supplies the Excel document component of the {viewfile} macro.
viewppt	This module supplies the PowerPoint document component of the {viewfile} macro.
viewpdf	This module supplies the PDF document component of the {viewfile} macro.
editgrid	This module is used to migrate editgrid users to the Office Connector.
Import Word UI on page tabs	This module supplies a 'Doc Import' tab which appears in older versions of Confluence, next to the 'View', 'Edit', 'Attachments' and 'Info' tabs. Not relevant to Confluence 2.10 or later, except for custom themes.
Import Word UI on drop down menu	This modules supplies the 'Doc Import' link which appears in the Confluence 'Tools' dropdown menu.
Edit in Office javascript resource	This module contains the javascript resources for launching the desktop applications for editing Office documents.
Office Connector Servlet	This module allows Confluence users to edit their Confluence pages in Microsoft Word. It performs the conversion to and from Word.
Office Authenticator Filter	This module authenticates HTTP requests from Office applications.

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PPT slide web service	This module allows Confluence users to view a PowerPoint presentation on a wiki page. It provides the slide images to the Flash control which displays the slides on the wiki page.
DOC and XLS image cache web service	This module is required if Confluence users want to view a Word document or an Excel spreadsheet on a wiki page. It allows images to be stored in a cache on the server, so that they can be retrieved when the browser renders the HTML page.
Office Connector Actions	This module must be enabled if the Office Connector is used.

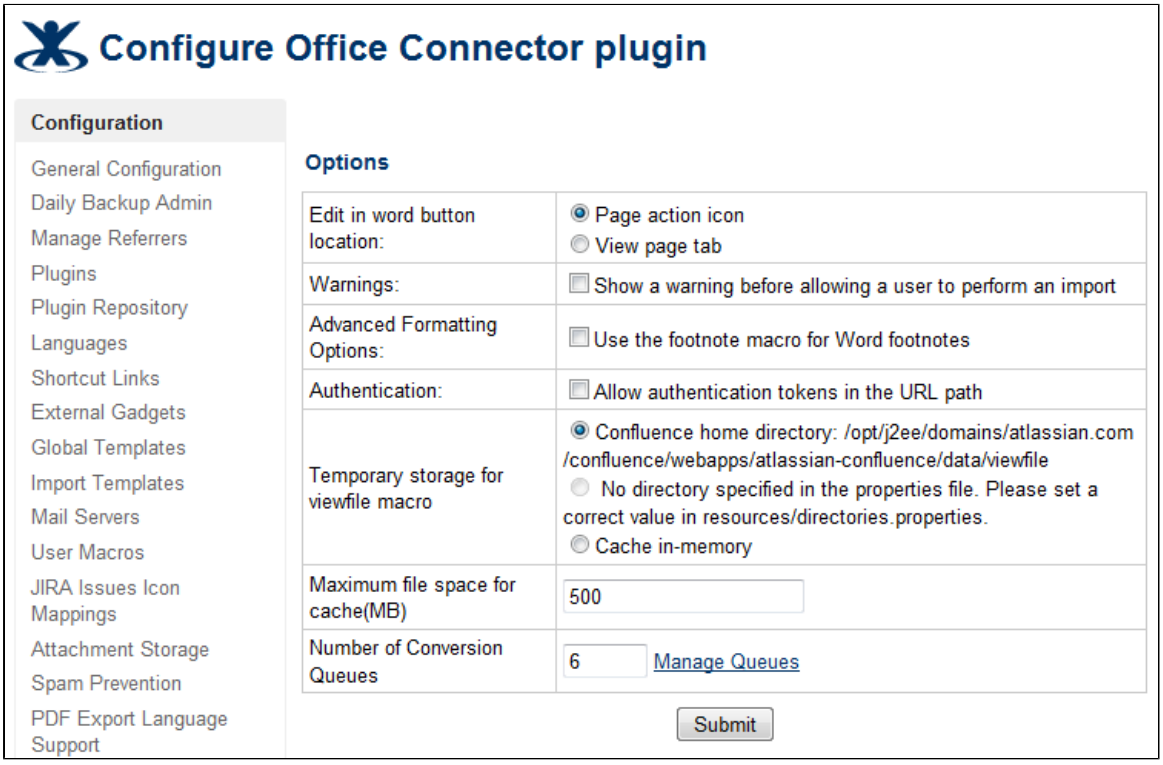
Configuring the Office Connector Options

A Confluence administrator can set the options described below, to determine the behaviour of the Office Connector on your Confluence site.

To set the configuration options for the Office Connector:

1. Select **Office Connector** under 'Configuration' in the left-hand panel of the 'Confluence Administration Console'. The 'Configure Office Connector plugin' screen will appear.
2. Set the configuration options as described in the table below.

Screenshot: Configuring the Office Connector options



The configuration options are described in the table below:

Option	Default Value	Description

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Warnings: Show a warning before allowing a user to perform an import	Disabled	If this option is enabled, the user will receive a warning when importing a Word document. The warning will tell the user when they are about to overwrite existing content.
Advanced Formatting Options: Use the footnote macro for Word footnotes	Disabled	If this option is enabled, a Confluence page created from an imported Word document will use the {footnote} macro from Adaptavist to render any footnotes contained in the document. Note that you will need to install the Footnotes plugin onto your Confluence site. For more information about this plugin and macro, please refer to the Footnotes plugin.
Authentication: Allow authentication tokens in the URL path	Disabled	If this option is enabled, the Office Connector will use authentication tokens in the URL.
Temporary storage for viewfile macro	The Confluence Home directory.	The {viewfile} macro will cache data temporarily. This option allows you to set the location of the cache. Available settings are: • **Confluence home directory** – The temporary file will be stored in your Confluence Home directory. • **A directory specified in the `directories.properties` file** – You can specify a location by editing the Office Connector's `directories.properties`file: 1. Go to the `bundled-plugins` directory in your Confluence Home directory. 2. Copy the Office Connector JAR file to a temporary location: `OfficeConnector-x.xx.jar`, where 'x.xx' is the version number.

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3. Unzip the JAR file and find the `directories.properties` file in the `resources`directory. The content of the file looks like this:

```
#Complete the following line to set a custom cache directory.
#If resetting to blank, don't delete anything before or including the '='
com.benryan.confluence.word.edit.cacheDir=
```

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4. Edit the last line, adding the path to your required temporary location directly after the '=' character. For example:
    - On Windows:

```
com
.be
nry
an.
con
flu
enc
e.w
ord
.ed
it.
cac
heD
ir=
c:\
my\
pat
h\
```

    - On Linux:

```
com
.be
nry
an.
con
flu
enc
e.w
ord
.ed
it.
cac
heD
ir=
/ho
me/
myu
ser
nam
e/m
y/p
ath
```

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		5. Save the file, recreate the JAR and put it in the bun `dled-plugins` directory in your Confluence Home directory, overwriting the original JAR. • **Cache in-memory** – The temporary file will be held in memory. We recommend this option if you are running in a clustered environment.
Maximum file space for cache (MB)	500	This is the maximum size of the cache used by the {viewfile} macro. (See above.)
Number of Conversion Queues	6	This is the maximum number of threads used to convert PowerPoint or PDF slide shows. You can use this setting to manage Confluence performance, by limiting the number of threads so that the Office Connector does not consume too many resources. Click **Manage Queues** to view attachments that are still pending conversion.

Related Topics

Office Connector Prerequisites
Office Connector Limitations and Known Issues
Working with the Office Connector
Installing Plugins and Macros

Administration

- Viewing and Editing License Details
  - Reducing the User Count for your Confluence License
- Cache Statistics
- Confluence Data Directory Configuration
- Content Index Administration
- Finding Unused Spaces
- Important Directories and Files
  - Confluence Home Directory
  - Confluence Installation Directory
- Installing a Language Pack
- Site Backup and Restore
  - Production Backup Strategy
- Configuring Backups
  - User Submitted Backup & Restore Scripts
- Manually Backing Up the Site
- Restoring a Site
- Restoring a Space

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    - Changing the version of a space backup
- Restoring a Test Instance from Production
- Restoring Data from other Backups
- Retrieve file attachments from a backup
- Troubleshooting failed XML site backups
- Troubleshooting XML backups that fail on restore
    - Migrating from HSQLDB to MySQL
- Rebuilding the Ancestor Table
- Viewing System Information
    - Live Monitoring Using the JMX Interface
    - Tracking Customisations Made to your Confluence Installation
    - Viewing Site Statistics
    - Viewing System Properties
- Installing Patched Class Files
- Finding Your Confluence Support Entitlement Number (SEN)

Administrators Guide Home Confluence Documentation Home

Viewing and Editing License Details

When you upgrade or renew your Confluence license, you will receive a new license key. You will need to update your Confluence installation with the new license key.

You can access your existing license key, or generate an evaluation license key, at http://my.atlassian.com.

Updating your license details in Confluence

To update your Confluence license:

1. If you do not already have a license key, get your existing license key, or generate an evaluation license key, at http://my.atlassian.com.
2. Log in to Confluence as a user with Confluence Administrator or System Administrator permissions.
3. Choose **Browse** > **Confluence Admin**.
4. Choose **License Details** in the left-hand panel.
5. Enter your new license details into the **License** field.
6. Choose **Save**.

If you are running a Confluence cluster, you will need to:

- Update each server's Confluence license separately.
- Ensure that the new license has enough nodes to cover all servers that are currently running in your cluster. To check the number of active servers in your cluster, see the Cluster Administration page.

On this page:

- Updating your license details in Confluence
- Viewing your license details
- Understanding the user count for your Confluence license
- Downgrading your Confluence license to pay for fewer users

Related pages:

- Reducing the User Count for your Confluence License
- Managing Confluence Users
- Confluence Administrator's Guide

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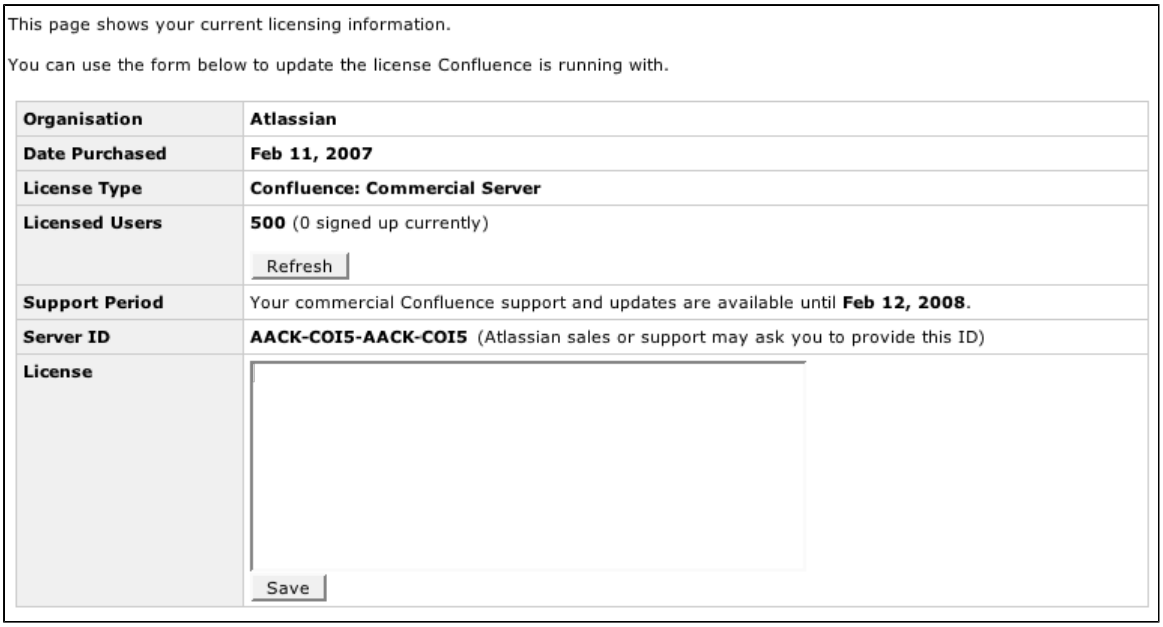
The information on this page does not apply to Confluence OnDemand.

Screenshot: License details



Viewing your license details

To view the details of your Confluence license:

1. Log in to Confluence as a user with Confluence Administrator or System Administrator permissions.
2. Choose **Browse** > **Confluence Admin**.
3. Choose **License Details** in the left-hand panel.

The 'License Details' screen tells you:

- What type of license you have (for example: Commercial, Academic, Community, or Evaluation).
- How many users your Confluence site is licensed to support, and how many are currently registered ('signed up currently'). See below for more about the user count.
  Choose **Refresh** button to make sure you see the latest count.
- How much time remains in your one-year support and upgrades period (for full licenses) or 30-day trial (for trial licenses).
- Your server ID, which:
  - is generated when you install Confluence for the first time
  - exists for the life of the Confluence installation
  - survives an upgrade
  - is held in the database
  - is not bound to a specific license
  - is the same for all servers in a cluster.

Understanding the user count for your Confluence license

The number of registered users allowed on your Confluence site may be limited, depending on your license type. See the licensing and pricing overview on the Atlassian website. If you have an 'unlimited' license, then the number of registered users is not significant.

The number of registered users is also called the 'user count' or the number of users 'signed up currently'. It is

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determined as follows:

- It includes only those users who have the 'can use' global permission for the Confluence site. (See Global Permissions Overview for more about the 'can use' permission.)
- It does not include anonymous users, who may access your Confluence site if you have allowed anonymous access. (See Setting Up Public Access for more about allowing anonymous access.)
- It does not include deactivated users.

Downgrading your Confluence license to pay for fewer users

If you want to downgrade your Confluence license to one which allows fewer users, please make sure first that your new license covers your current user count.

- View your license details as described above.
- Check whether the number of users 'signed up currently' is lower than the number allowed by the new license.
- If you currently have more users signed up than the new license allows, please follow these instructions on reducing the user count.
- When the number of users 'signed up currently' is lower than the number allowed by your new license, you can add the new license key to Confluence as described above.

Reducing the User Count for your Confluence License

This page tells you how to reduce the number of users that count towards your Confluence license. You may want to reduce your user count in Confluence if you have exceeded your license limit, or if you want to change to a lower-tier license to reduce costs.

Understanding the user count for your Confluence license

The number of registered users allowed on your Confluence site may be limited, depending on your license type. See the licensing and pricing overview on the Atlassian website. If you have an 'unlimited' license, then the number of registered users is not significant.

The number of registered users is also called the 'user count' or the number of users 'signed up currently'. It is determined as follows:

- It includes only those users who have the 'can use' global permission for the Confluence site. (See Global Permissions Overview for more about the 'can use' permission.)
- It does not include anonymous users, who may access your Confluence site if you have allowed anonymous access. (See Setting Up Public Access for more about allowing anonymous access.)
- It does not include deactivated users.

On this page:

- Understanding the user count for your Confluence license
- Reducing the user count

Related pages:

- Viewing and Editing License Details
- Managing Confluence Users
- Confluence Administrator's Guide

Reducing the user count

The recommended method for reducing your user count is to remove or deactivate the users. You can remove users who do not require access to Confluence and have never created content in Confluence. You can deactivate users who have created content but no longer require access to Confluence. See Removing or Deactivating Users.

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Alternatively, if you have connected Confluence to an LDAP directory, you may want configure Confluence to synchronise a subset of users from LDAP rather than all users. This is described in the following knowledge base article: Changing the Number of Users Synchronized from LDAP to Confluence. This can be a complicated procedure and we recommend that you do not use this method unless necessary.

Cache Statistics

Confluence provides statistics about its internal caches that allow you to track the size and hit ratio of each cache and tune it for better performance (if necessary). See Performance Tuningfor more information.

Configurable Caches

System administrators can change the sizes of Confluence's internal caches through the Administration Console and these changes will take effect without the need to first shut down and then restart Confluence. The maximum number of units for any of the defined cache regions can be adjusted individually.

Note that larger cache sizes will require more memory at runtime, so you should review the memory allocation of the Confluence Java process and the physical memory available on your server.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Viewing Cache Statistics and Modifying Cache Sizes

To view the cache statistics:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Cache Statistics**' in the left-hand panel. There you will find a list of all objects cached within Confluence.
3. Click the '**Advanced**' tab for more detail. Below is an example for one of the most frequently used caches, the 'Content Object' cache.

Name	Percent Used	Effectiveness	Objects / Size	Hit / Miss / Expiry	Adjust Size	Flush
Content Object	80%	73%	4023 / 5000	374550 / 140460 / 55044	*Adjust Size*	*Flush*

About the generated numbers:

Percent Used:	=(Objects)/(Size)
Effectiveness:	=(Hits)/(Hits + Misses)
Objects / Size:	The number of entries in the cache / the number of total possible entries allowed (configurable).
Hit / Miss / Expiry:	The number of reads accessing cache where required content was found / the number of reads accessing cache where required content was not found / the number of objects evicted from the cache.

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Adjust Size	Use this option to specify a different maximum cache size. Enter a new cache size and click the '**Adjust Size**' button to set it.
Flush:	Flushes the cache.

For instance, to calculate **Percent Used**:

```
Percent Used = Objects / Size

Percent Used = 4023/5000 = 80%
```

To calculate **Effectiveness**:

```
Effectiveness = (Hits)/(Hits + Misses)

Effectiveness = 374550 / (374550 + 140460) = 73%
```

The clustered versions of Confluence use distributed cache called Tangosol Coherence.

Watching the Cache Contents

To see the specific items in the caches, view the cache statistics at `<baseUrl>/admin/cachecontents.jsp`.

Additional Notes about Configurable Caches

Changes to cache size configurations persist across confluence restarts as they are saved in the `<confluence-home>/config/ehcache.xml` file (or `<confluence-home>/config/confluence-coherence-cache-config-clustered.xml` for a clustered instance). In most cases, a Confluence administrator will never need to know about these files. However, if it is necessary to tune cache options other than the maximum cache size, this can be done by manually editing these files. See Cache Performance Tuning for details.

Important note about clustered Confluence installations

The cache configuration file is stored in a home directory of each cluster node. When a Confluence administrator changes a cache size, all running cluster nodes will automatically update their own configuration files in their respective home directories. However, if a cluster node is not running when an administrator adjusts a cache size, the `/config/confluence-coherence-cache-config-clustered.xml` file in its home directory will not be updated. Since cluster caches are configured by the first node to start, if a node with an outdated cache configuration is the first to start up, the whole cluster would end up using the configuration of that node. However, copying this file from one node to another would resolve this issue.

Performance Tuning

If you need to tune your application when under high usage, you may like to review this document for suggestions.

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Related Topics

No content found for label(s) system-information.

Administrators Guide Home Confluence Documentation Home

Confluence Data Directory Configuration

Here is a link listing important Confluence files.

The home directory defines the location of the directory where Confluence will store its data, including attachments, indexes and backups. Administrators can set this location by defining a value for the file `<MY-INSTALL>/confluence/WEB-INF/classes/confluence-init.properties`. To find what your home directory is currently set to, open this file and check the `confluence.home` property. It is unset on new installations.

> *The information on this page does not apply to Confluence OnDemand.*

Windows Configuration

On Windows, this path:

```
C:\confluence\data
```

will be written like so:

```
confluence.home=C:/confluence/data
```

Note that all backslashes (\) are written as forward slashes (/).

Linux/Solaris Configuration

On any Linux-based system, the property is defined using the normal directory syntax:

```
confluence.home=/var/confluence/
```

Symbolic links

If your `confluence.home` directory contains a symbolic link, you must define the absolute path.

> Please note that there can be no symbolic links within the `confluence.home` directory. If disk space is an issue, place the entire `confluence.home` directory on a disk partition where there is enough space.
>
> The absolute path of generated files (such as exports) is compared with the absolute path of the `confluence.home` directory when constructing URLs. When a sub-directory has a different path, the URL will be incorrect, and you may receive "Page not found" errors. These measures are in place to prevent "directory traversal" attacks.

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Fixing the Confluence Configuration

The Confluence configuration file: `confluence-cfg.xml` inside the home directory may contain references to the original location of your Confluence home. You will need to edit this file to update these references to also point to the new location. The two properties in this file that need to change are:

- `daily.backup.dir` if you have not configured your backups to be placed elsewhere already
- `hibernate.connection.url` if you are using the embedded HSQL database.

Content Index Administration

The content indexes power Confluence's search functionality. They are also used for a number of related functions such as building email threads in the mail archive, the space activity feature and lists of recently-updated content. The Gliffy plugin also uses them for some of its functionality.

For reasons of efficiency, Confluence does not immediately add content to the index. New and modified Confluence content is first placed in a queue and the queue is processed once every minute (by default).

On this page:

- Viewing the Content Index Summary
- Rebuilding the Content Indexes
- Slow Reindexing
- Viewing the Index Browser
- More Hints and Tips

The information on this page does not apply to Confluence OnDemand.

Viewing the Content Index Summary

To see information about your Confluence instance's content indexing,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Content Indexing**' under the heading '**Administration**' in the left-hand panel.

Screenshot: Index summary

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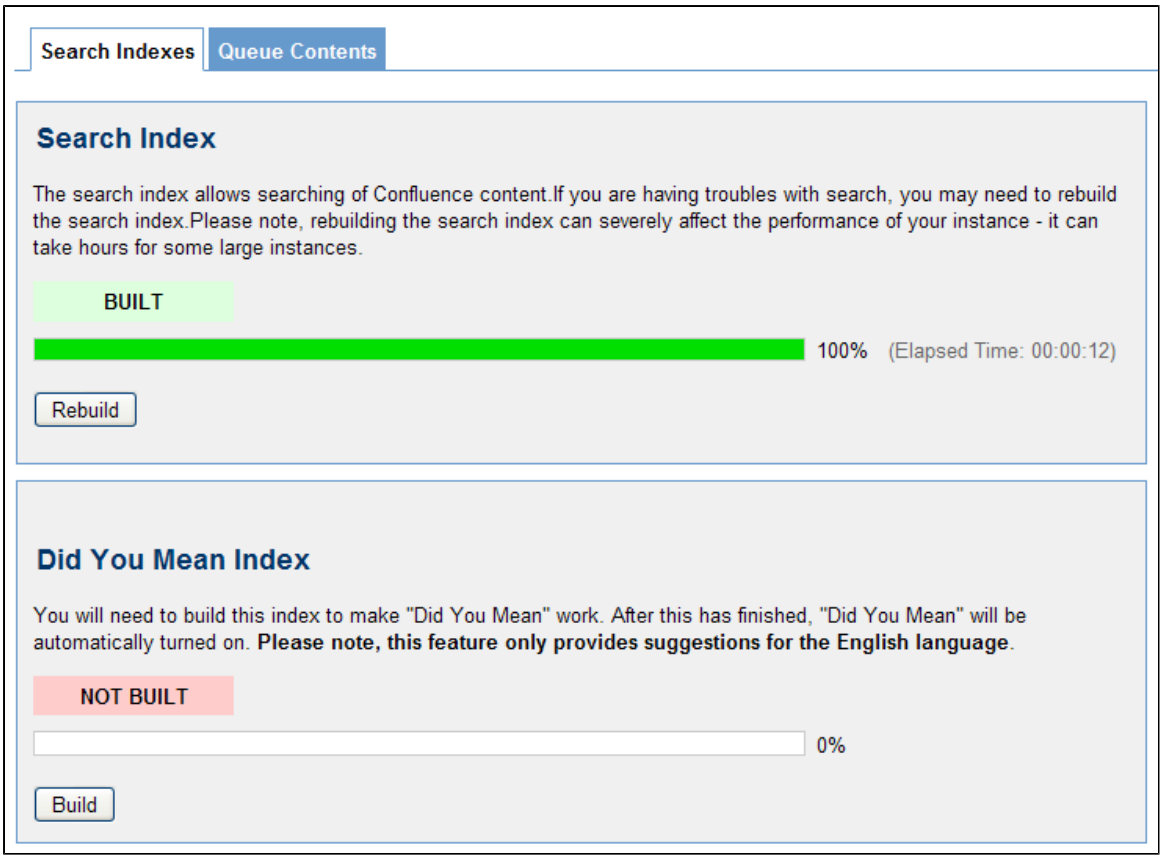

Rebuilding the Content Indexes

The content indexes are maintained automatically, but you may need to rebuild one or both of them manually under circumstances such as these:

- Your searching and mail threading are malfunctioning. (Rebuild the Search Index.)
- The Did You Mean feature is malfunctioning. (Rebuild the Did You Mean Index.)
- After an upgrade. If a content re-index is required after an upgrade, it will be noted in an upgrade subsection of the relevant Confluence Release Notes.

> In new Confluence installations, the 'Did You Mean' feature is not initially activated. To activate it, you first need to build its index by clicking its '**Build**' button on this page.

To rebuild either of the content indexes,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Content Indexing**' under the heading '**Administration**' in the left-hand panel.
3. Click the '**Rebuild**' button in either the 'Search Index' or 'Did You Mean Index' sections on this page, depending on the particular index you want to rebuild.

> - If one of these indexes has not yet been built, its button will indicate 'Build' instead of 'Rebuild).
> - As shown in the image below, only one index can be (re)built at a time.

Screenshot: Content Indexing

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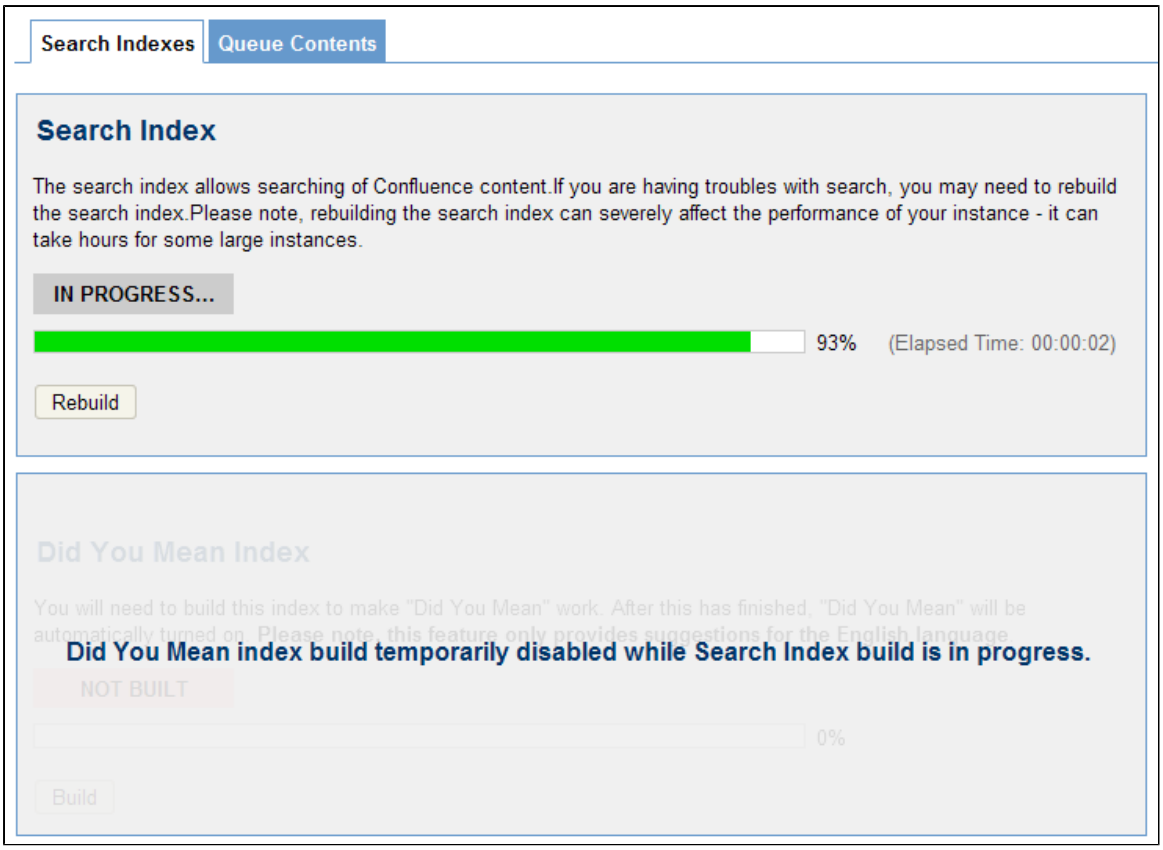

Slow Reindexing

Does the reindexing take a long time to complete? The length of time depends on the following factors:

- Number of pages in your Confluence instance.
- Number, type and size of attachments.
- Amount of memory allocated to Confluence.

It may help to increase the heap memory allocation of Confluence by following the instructions in the JIRA documentation.

If you are running an older version of Confluence and find that the index rebuild is not progressing, you may need to shut down Confluence, and restart it with the following *Java system property* set: `bucket.indexing.threads.fixed=1`. This will cause the re-indexing to happen in a single thread and be much more stable (but slower).

Viewing the Index Browser

Confluence uses a search engine called Lucene. If you need to see more details of the indexed pages in your Confluence site, you can download and run Luke. Luke is a development and diagnostic tool that accesses existing Lucene indexes and allows you to display and modify their content in several ways.

Start Luke and use it to open the `index` directory, located in your Confluence Home directory. For example: `c:\confluence\data\confluence-home\index`.

More Hints and Tips

- If you are still experiencing problems after performing the above rebuild, the next step might be to remove the index and rebuild it from scratch.
  ⚠️ The space activity feature uses the index to store data. If you remove the index file, the existing activity data will disappear.
- A tip for the development community: If you have the Confluence source, you can look for references to the SmartListManager to find the screens and lists that rely on the content index.

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RELATED TOPICS

No content found for label(s) index.

Administrators Guide Home Confluence Documentation Home

Finding Unused Spaces

Sometimes, you want to know what is *not* being used. It's great to know what's getting most attention, but what about stagnant pages, or even entire spaces that are no longer active?

While viewing space activity can provide hints, it doesn't always provide enough detail. The simple way is to go directly to the database. We recommend DbVisualizer, and have basic instructions for connecting it to HSQLDB.

The following query identifies the last date on which content was modified in each space within a single Confluence instance:

```
SELECT spaces.spacename, MAX(content.lastmoddate)
FROM content, spaces
WHERE content.spaceid = spaces.spaceid
GROUP BY spaces.spacename;
```

It returns a list of spacenames, and the last date and time at which any content was added or changed.

> *The information on this page does not apply to Confluence OnDemand.*

Alternatively, this one simply identifies spaces whose content hasn't changed since a specified date:

```
SELECT spaces.spacename
FROM content, spaces
WHERE content.spaceid = spaces.spaceid
GROUP BY spaces.spacename
HAVING MAX(content.lastmoddate) < '2006-10-10';
```

The result is a simple list of space names.

It's also possible to present the information in a wiki page, using the SQL plugin, which can be installed using the Plugin Exchange. You'll also need to define a database resource in `conf/server.xml` and `confluence/WEB-INF/web.xml`, as described here. Having done so, you can use wiki markup code like the following, replacing `confluenceDS` with the name of your own local datasource:

```
h3. Space activity
{sql:dataSource=confluenceDS|output=wiki}
SELECT spaces.spacename AS Space, MAX(content.lastmoddate) AS LastModified
FROM content, spaces
WHERE content.spaceid = spaces.spaceid
GROUP BY Space;
{sql}
```

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The result will be something like this:

Space activity:

space	lastmodified
Private Space	2007-10-11 11:34:04.914
Another space	2007-10-11 11:39:39.716
More space	2007-10-11 11:40:11.688

You can try the Chart plugin in combination with the SQL plugin to give more visually attractive results.

Important Directories and Files

The Installation Directory

The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory is also sometimes called the 'Confluence Install directory'.

Important Files and Directories

- `confluence/WEB-INF/classes/confluence-init.properties` : This file tells Confluence where to find the Confluence Home Directory. This file is modified by the administrator when installing Confluence.
  `confluence/WEB-INF/classes/osuser.xml` : This file is modified when connecting Confluence to an external user management system such as an LDAP server or JIRA instance in Confluence 2.0 and earlier. For more information, refer to Managing Confluence Users.
- `confluence/WEB-INF/classes/atlassian-user.xml` : This file is modified when connecting Confluence to an external user management system such as an LDAP server or Crowd. For more information, refer to Managing Confluence Users.
- `confluence/WEB-INF/lib/` : This directory is used when deploying plugins, especially those plugins that cannot automatically be loaded through the Administration Console.
- `confluence/WEB-INF/classes/log4j.properties` : Confluence's logging configuration file. See Working with Confluence Logs.
- `confluence/WEB-INF/classes/ehcache.xml` : This is where you can configure the size of Confluence's internal caches
- `confluence/WEB-INF/classes/styles/site-css.vm` : Confluence's main stylesheet, modify at your own risk
- `conf/server.xml` : SSL configuration.

Memory Settings

The file used to edit JAVA_OPTS memory settings will depend on the method used to install Confluence, as well as the operating system used for your installation.

- Windows Users
  - **Confluence** — `bin/setenv.bat`
  - **Confluence Installer** — `wrapperwin32.conf`
- Mac/Linux Users
  - **Confluence** — `bin/setenv.sh`
  - **Confluence Installer** — `wrapperosx.conf`

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

The Temp Directory

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The temp directory is configured in the Java runtime and some Confluence components write temporary files or lockfiles into this directory.

For EAR/WAR installations typically, this directory is `/tmp` on Linux systems, or `C:\Temp` on Windows.

For Standalone installations the temp directory is located in the installation directory as /temp.

To change the location of this directory, start the Java Virtual Machine in which confluence is running with the argument:

`-Djava.io.tmpdir=/path/to/your/own/temp/directory`.

The Confluence Home Directory

The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'.

Administrators can expect the Confluence Home Directory to grow quite large in a busy site.

The location of this directory is configured by the system administrator during installation (see `confluence-init.properties` above).

Important Files and Directories

- `confluence.cfg.xml` : Confluence's core configuration file; includes the configuration for connecting to its database.
- `default-formatting.properties` : Some auxiliary configuration data concerning default number and date formats.
- `attachments/` : All file attachments in the Confluence site are stored under this directory. This is the only place Confluence keeps attachment files.
- `backups/` : If Confluence is configured to produce daily backups, these are kept in this directory. Administrators should occasionally delete old or unwanted backups from this directory to prevent it from growing too large.
- `config/` : Miscellaneous global and per-space configuration files are kept in this directory.
- `database/` : If Confluence is being run from the embedded HSQL database, the database files will be kept in this directory.
- `index/` : The full-text search index is kept in this directory. Removing or modifying files in this directory may cause search to no longer function. Rebuilding the search index from Confluence's global administration screen will completely regenerate the contents of this directory.
- `plugins/` : Dynamically uploaded plugins are stored in this directory. Administrators can install new plugins by copying them into this directory and triggering a scan from the plugin management page.
- `temp/` : Confluence stores temporary files in this directory, especially during backups and exports. A daily job within Confluence deletes files that are no longer needed.
- `thumbnails/` : Stores temporary files for image thumbnails. The contents of this directory can be safely deleted, as Confluence will regenerate thumbnails as required.
- `velocity/` : Storage for customised page layouts, globally and per-space.

Database

All other data — page contents, links, archived mail and so on — is kept in the database. If you have configured Confluence to use the embedded HSQL database, the database will store its files under `database/` in the Confluence Home Directory. Otherwise, the database management system you are connecting to is responsible for where and how your remaining data is stored.

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> **Tip**
>
> All of Confluence's persistent data is stored either in the Confluence Home Directory, or the database. If you have backup copies of both of these, taken at the same time, you will be able to restore Confluence from them (see Restoring Data from other Backups).

RELATED TOPICS

Confluence Home Directory
Confluence Installation Directory
The Embedded HSQLDB Database
Database Configuration

Administrators Guide Home Confluence Documentation Home

Confluence Home Directory

Often in the documentation, you'll see a reference to the 'Confluence Home directory'.

What is the Confluence Home Directory?

The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'.

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

Finding the Confluence Home Directory

The location of the Confluence Home directory is defined when you install Confluence. This location is stored in a configuration file called `confluence-init.properties`, which is located inside the `confluence/WEB-INF/classes` directory in your Confluence Installation directory.

When Confluence first starts up, it reads the `confluence-init.properties` file to determine where to look for the Home directory.

Once Confluence is running you can find the Confluence Home directory via the Administration console, under Administration > System Information > Confluence Information - Confluence Home.

Content of the Confluence Home Directory

The Confluence home directory contains some of the configuration data used by Confluence. Other data is stored in the database. This section outlines the purpose of the files and directories in the Confluence home directory.

`confluence.cfg.xml`

This file contains all of the information necessary for Confluence to start up, such as:

- Product license
- Context path
- Database details, such as location and connection pool settings
- Paths to important directories

`attachments`

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This directory contains every version of each attachment stored in Confluence. This directory is not used when Confluence is configured to store attachments in the database. Attachments are always stored in the database in clustered instances of Confluence.

Paths within this directory have the following structure:

```
/attachments/PAGE_ID/ATTACHMENT_ID/VERSION
```

You can specify an alternative directory for attachment storage by setting the `attachments.dir` property in `confluence.cfg.xml`.

backups

Confluence will place its daily backup archives in this directory, as well as any manually generated backups. Backup files in this directory take the following form:

```
daily-backup-YYYY_MM_DD.zip
```

You can specify an alternative directory for backups by setting the `daily.backup.dir` property in `confluence.cfg.xml`.

bundled-plugins

Confluence ships with a set of *bundled* plugins. These are plugins written by the Atlassian and the Confluence community that we think provide useful and broadly applicable functionality in Confluence. The `bundled-plugins` directory is where Confluence will unpack its bundled plugins when it starts up. This directory is refreshed on every restart, so removing a plugin from this directory will not uninstall the plugin. It will simply be replaced the next time Confluence starts up.

database

This is where Confluence stores its database when configured to run with the HSQL embedded database. In such cases this directory contains all Confluence runtime data. Installations configured to run using an external database such as MySQL will not use this directory.

index

This is where Confluence stores its indexes for rapid retrieval of often used data. The Confluence index is used heavily by the application for content searching and recently updated lists and as such is critical for a running Confluence instance. It is important to note however that should the data in this directory be lost or corrupted, it can be restored by running a full reindex from within Confluence. This can take a long time depending on how much data is stored Confluence's database.

An alternative directory may be specified for the index by setting the `lucene.index.dir` property in `confluence.cfg.xml`. As this is the most heavily accessed directory in the Confluence home directory you might want to consider hosting it on the fastest disk available. It would also be useful if the disk holding the Confluence index was not heavily used by any other application to reduce access contention.

plugin-cache

All Confluence plugins are stored in the Confluence database. To allow for quicker access to classes contained within the plugin JARs, Confluence will cache these plugins in the `plugin-cache` directory. This directory is updated as plugins are installed and uninstalled from the system and is completely repopulated from the

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database every time Confluence is restarted. Removing plugins from this directory does not uninstall them.

resources

The `resources` directory stores any space logos used in your Confluence instance. For each space with a space logo, there is a directory within `resources` named after the space's key. That directory contains the space's logo.

temp

The `temp` directory is used for various runtime functions such as exporting, importing, file upload and indexing. As the name suggests, and file in this directory is of temporary importance and is only used during runtime. This directory can be safely emptied when Confluence is offline.

An alternative directory may be specified for temporary data by setting the `webwork.multipart.saveDir` property in `confluence.cfg.xml`.

thumbnails

When Confluence generates a thumbnail of an image (for example when the `gallery` macro is used), the resulting thumbnail is stored in this directory for quicker retrieval on subsequent accesses. This directory is essentially a thumbnail cache, and deleting files from this directory simply means the thumbnail will have to be regenerated on the next access.

RELATED TOPICS

Confluence Installation Directory
Important Directories and Files
The Embedded HSQLDB Database

Confluence Installation Directory

The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory is also sometimes called the 'Confluence Install directory'.

> *The information on this page does not apply to Confluence OnDemand.*

RELATED TOPICS

Confluence Home Directory
Important Directories and Files

Installing a Language Pack

Confluence ships with a number of bundled language packs. These languages appear as options on the 'Language Configuration' screen in the Administration Console when choosing a default language and as 'Language' options for users in their user settings. You can make additional languages available for selection by installing language packs. Please note, you must be a Confluence administrator to install a language pack.

Language packs are plugins. The process of installing a language pack is the same as installing a new plugin.

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Installing a Language Pack using the Plugin Manager

To install a language pack using the plugin manager:

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1. Click '**Plugins**' in the Confluence Administration Console.
2. Click '**Install**'.
3. Locate the language pack and install it via the plugin manager interface.

Installing a Language Pack Manually

To install a language pack manually, you will need to upload the language pack plugin as described below. The language pack plugin will be enabled by default once you have installed it.

Plugins are distributed as a jar file. To install a plugin:

1. In the 'Administration' section of Confluence, click **Plugins**.
2. Use **Browse** to find the plugin jar you wish to install from your hard drive or network location, and select it.
3. Click **Upload**.
4. The plugin will be uploaded to Confluence and will be automatically installed.
5. Check the 'Plugin Administration' screen to ensure that the plugin is available.
6. Enable the plugin if necessary. (Some plugins will be enabled by default when they are installed. Others will have to be manually enabled from the 'Plugin Administration' screen.)

Finding more Language Packs

- You can download official language packs from the Atlassian Plugin Exchange. You can also download language packs developed by the Confluence user community from the Language Pack Translations page.

Showing User Interface Key Names for Translation

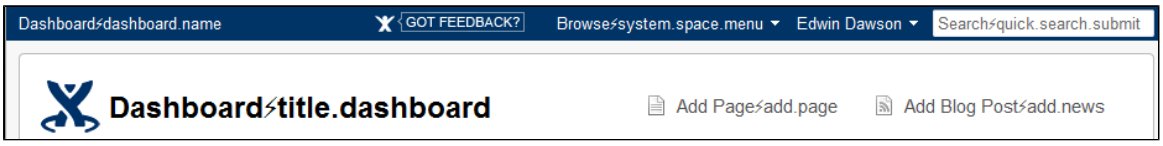
For those customers working on creating translations of the Confluence user interface, from 4.1 onwards there is a feature that will help. After opening the Confluence dashboard, you can simply add this text to the end of your Confluence URL, like so:

```
?i18ntranslate=on
```

Then press Enter.

This will then cause each element of the user interface to display its special **key name** while Confluence is still in an interactive mode. This makes it easier to find the essential context for each key, which can then be searched on http://translations.atlassian.com where you can enter an appropriate translation for your custom language pack.

The key names are displayed with a "lightning bolt" graphic between elements of the names. For example, the buttons will show up with elements shown like so:



For example, for the **Browse** button, the associated key **system.space.menu** can be found on http://translations.atlassian.com, allowing you to write a better translation for the term **Browse**, being able to see the full context of where the UI element belongs and what it means to the user.

To turn off the translation view, add this code to the end of the Confluence URL:

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```
?i18ntranslate=off
```

RELATED TOPICS

Choosing a Default Language
Configuring Indexing Language
Installing a Plugin

Site Backup and Restore

> Atlassian suggests establishing a backup strategy using a native database tool for a production instance of Confluence.

By default, Confluence backs up all data and attachments once a day to a backup file. These files are called XML site backups, and are stored in the `backups` directory of Confluence home. You can also create XML site backups manually. This mechanism is intended for small to medium-sized deployments of Confluence. It is not intended for use with large deployments with lots of pages and attachments (see below).

- Restore your site from an XML site backup
- Manually create an XML site backup
- Configuring Backups
- User Submitted Backup & Restore Scripts

XML site backups are fine for most small to medium-sized instances of Confluence, containing a few thousand pages and attachments. However, large instances of Confluence may find that backups become slow to create and use large amounts of disk space.

> *The information on this page does not apply to Confluence OnDemand.*

Backups For Large Instances

XML site backups are unsuitable for instances of Confluence that contain thousands of pages, as XML backups take progressively longer to complete as the amount of text increases. Another issue with XML site backups is that Confluence instances with gigabytes of attachments will consume disk space rapidly. This is because each site backup contains all content needed for a site restore. For example, if a 1 GB instance of Confluence is backed up daily, it will create 30 GB of backups per month if left unattended. When administering a large instance, you can reduce disk space by setting XML site backups to exclude attachments, then manually scheduling a backup of your attachments from the Confluence home directory or database. The backup manager can save space by saving changed files instead of all content.

Creation Delay	Disk Usage	Recommended Backup Method
Acceptable	Acceptable	XML site backup with attachments
Acceptable	Unacceptable	XML site backup minus attachments, plus manual backup of attachments
Unacceptable	Unacceptable	Manual backup of database and attachments

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Creation Delay is the time it takes to create an XML site backup *minus attachments*.
Disk Usage can be estimated by multiplying the frequency of your XML site backups by their current size.

Manual Backups

Confluence's Attachment Storage Configuration can be set to store attachments in the Confluence home directory, or in the database.

Database Backup
Use your Database Administration Tool to create a backup of your Confluence database. If your database is storing your attachments, importing this later will restore all content. For instances with big attachments, please note that currently Confluence migrate attachments in a single transaction: CONF-9888.

Attachment Backup
If stored on the filesystem, attachments are placed under the `attachments` directory of your Confluence home directory. Copy this directory to create a backup of all attachments.

To restore from these backups, please refer to Restoring Data from other Backups.

Related Topics

Production Backup Strategy
Backup FAQ

Production Backup Strategy

Confluence automatic daily XML backup is suitable if you:

- are evaluating Confluence
- do not have database administration familiarity, and your Confluence installation is small

Once your Confluence installation reaches more than a few thousand pages, the XML backup facility can be inefficient compared to your database's own backup tools. The built in backup functionality requires a lot of memory to run and is less reliable when restoring data.

Related pages:

- Site Backup and Restore
- Backup FAQ

> *The information on this page does not apply to Confluence OnDemand.*

Establishing a production system backup solution

Atlassian recommends establishing an alternative database backup strategy:

- Create a backup or dump of your database using tools provided by your database
- Create a file system backup of your Confluence home directory

Once this is in place, disable the daily backups through the scheduled jobs feature via **'Administration Console > Administration > Scheduled Jobs'**.

We want to stress that creating these two backups is *better* than having a Confluence XML backup. It is more robust and far more reliable for large production instances. You will be able to restore your whole site, including all data, attachments and configuration information intact with these two backups. See Restoring Data from other Backups.

Which files need to be backed up?

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Backing up the whole home directory is the safest option, however most files and directories are populated on startup and can be ignored. At minimum, these files/directories *must* be backed up:

- **attachments** – but If you store your attachments in the database then you can ignore the attachments directory
- **confluence-cfg.xml**

The rest of the directories will be auto-populated on start up. You may also like to backup these directories:

- **config** – if you have modified your ehcache.xml file.
- **index** – if your site is large or reindexing takes a long time – this will avoid the need for a full reindex when restoring.

How do I restore?

Take a look a the Migrating Confluence Between Servers document for instructions on restoring a backup using this technique.

Other processes

XML backups are described and used for other processes in Confluence, like upgrading and moving servers. Using the backup strategy described above will work for those processes too.

- Our upgrade guide does not require the use of an XML backup (although the earlier Confluence upgrade procedure, and the JIRA upgrade guide, do use XML backups).
- Our migrate server procedure– used to set up a test server – can use a SQL dump as well.
- The database migration procedure uses the XML backup for small data sets. Large data sets will require third party database migration tools.

Note: The XML export built into Confluence is not suited for the backup or migration of large data sets. There are a number of third party tools that may be able to assist you with the data migration. If you would like help in selecting the right tool, or help with the migration itself, we can put you in touch with one of the Atlassian Experts .

Configuring Backups

Confluence backs up your data regularly into a zipped XML file. By default, this backup is performed at 2.00 a.m. each day and the backup files are stored in the `backups` folder under the Confluence Home directory. The default naming convention for the backup files is '`backup-yyyy_MM_dd`'. Confluence can write backups to both local and mapped network drives.

From the **Backup Administration** section of Confluence's administration console, you can:

- Include or exclude attachments in backups.
- Configure a different path to store backup files. (By default, this option is not available. See below for information about enabling the configuration option.)
- Change the naming format used for the files.

✅ You can also change the schedule of this backup using Confluence's scheduled jobs feature.

ℹ You need to have System Administrator permissions in order to configure these options.

On this page:

- Configuring Confluence Backups
- Enabling Backup Path Configuration
- Notes

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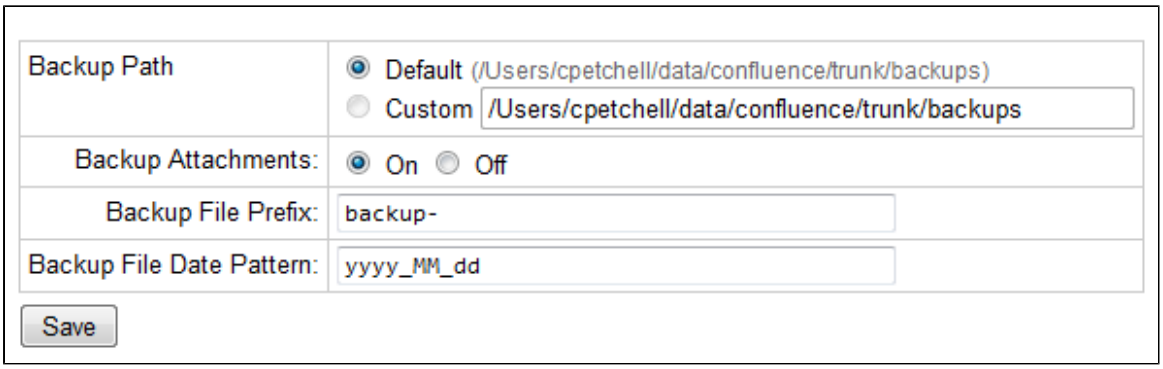
Configuring Confluence Backups

To configure Confluence backups:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Backup Administration**' in the '**Configuration**' section.
3. Click the '**Edit**' button on the '**Backup Administration**' screen.
4. Now you can do the following:
    - To specify an alternate path to store backup files — Select '**Custom**' and then enter the path. The directory must be on either a local drive or a mounted network drive.
      Notes:
      - By default, this option is not available. See below for information about enabling the configuration option.
      - Please ensure the mapped drive is on a physical server, not a Virtual Machine image.
    - To exclude attachments from backups — Select '**Off**' beside '**Backup Attachments**'. By default, this feature is 'On'.
    - To use a different naming prefix format — Enter the new format in the '**Backup File Prefix**' input field.
    - To use a different date format — Enter the date format in the '**Backup File Date Pattern**' input field using the syntax described in this document from Sun.
5. '**Save**' your changes.

✅ You can disable Confluence backups through the scheduled jobs feature.



Screenshot above: Editing the Backup Configuration

Enabling Backup Path Configuration

By default, it is not possible to specify a backup path via the Confluence Administration Console. This feature is disabled by default for security reasons. Administrators can restore this functionality by updating the relevant configuration property as described below. However, we recommend that you turn the feature **off** in production environments. For production environments, please review our Production Backup Strategy.

To enable the configuration option:

1. Edit the `confluence.cfg.xml` file found in the Confluence Home Directory.
2. Set the value of property `admin.ui.allow.daily.backup.custom.location` to '`true`' (without the quotation marks).
3. Restart Confluence.

If the value of the above configuration property is 'true', it will be possible to specify a backup path via the Confluence Administration Console. If the value of this property is 'false' or the property is not present in the configuration file, the backup path is not configurable.

Notes

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Time is derived from the Confluence server

The time zone is taken from the server on which Confluence is running.

To check the time according to the server, do the following:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**System Information**' in the left-hand panel and look at the '**System Time**'.

Backup strategy for large Confluence sites

Consider using the production backup strategy if your Confluence site is large or you are encountering problems with your automated backup.

RELATED TOPICS

No content found for label(s) daily-backup.

Administrators Guide Home Confluence Documentation Home

User Submitted Backup & Restore Scripts

These scripts are user-submitted and should be used with caution as they are not covered by Atlassian technical support. If you have questions on how to use or modify these scripts, please post them to Atlassian Answers. Feel free to submit new scripts or post updates by logging in and adding them to the page as a comment.

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Delete Old Backups - Wscript Script On Windows

This script examines backup filename and deletes them if necessary, it may need to be edited.

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```
'If you want 3 day old files to be deleted then insert 3 next to Date - "your
number here"
'This script will search out and delete files with this string in them
".2005-12-04-" This of course depends on the number you enter.
'You can always do a wscript.echo strYesterday or strFileName to see what the
script thinks you are searching for.

dtmYesterday = Date - 3

strYear = Year(dtmYesterday)

strMonth = Month(dtmYesterday)
If Len(strMonth) = 1 Then
    strMonth = "0" & strMonth
End If

strDay = Day(dtmYesterday)
If Len(strDay) = 1 Then
    strDay = "0" & strDay
End If

strYesterday = strYear & "-" & strMonth & "-" & strDay

strFileName = "C:\test*." & strYesterday &"-*"

Set objFSO = CreateObject("Scripting.FileSystemObject")
objFSO.DeleteFile(strFileName)
```

Delete Old Backups - Basic Bash Script For Linux

Old XML backups can be deleted automatically by inserting a nightly or weekly automation script or cron similar to the following:

```
ls -t <path to your backup dir>/* | tail -n +6 | xargs -i rm {}
```

Or, using the older form of the `tail` command if your system does not support the standard form:

```
ls -t <path to your backup dir>/* | tail +6 | xargs -i rm {}
```

Delete Old Backups - Advanced Bash Script For Linux

Old XML backups can be deleted automatically by inserting a nightly or weekly automation script or cron similar to the following. Set the BACKUP_DIR and DAYS_TO_RETAIN variables to appropriate values for your site. Between runs, more files than DAYS_TO_RETAIN builds up.

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```
#!/bin/sh

# Script to remove the older Confluence backup files.
# Currently we retain at least the last two weeks worth
# of backup files in order to restore if needed.

BACKUP_DIR="/data/web/confluence/backups"
DAYS_TO_RETAIN=14

find $BACKUP_DIR -maxdepth 1 -type f -ctime +$DAYS_TO_RETAIN -delete
```

Manual Database & Home Backup - Bash Script For Linux

This backs up a mySQL database and the Confluence home directory.

```
#!/bin/bash
CNFL=/var/confluence
CNFL_BACKUP=/backup/cnflBackup/`date +%Y%m%d-%H%M%S`

rm -rf $CNFL/temp/*
mkdir $CNFL_BACKUP
mysqldump -uroot -p<password> confluence|gzip >
$CNFL_BACKUP/confluence.mysql.data.gz
tar -cjvf $CNFL_BACKUP/data.bzip $CNFL > $CNFL_BACKUP/homedir.status
```

Backup by Date - Postgres

```
export d=`date +%u`
mkdir -p /home/backup/postgres/$d

sudo -u postgres pg_dumpall | bzip2 > /home/backup/postgres/$d/sql.bz2
```

Related Topics

- Site Backup and Restore
- Backup FAQ

Manually Backing Up the Site

Confluence is configured to back up its data automatically. You can also manually perform this backup from the **Administration Console**.

You need to have System Administrator permissions in order to perform this function.

Note: Atlassian recommends that you follow the Production backup strategy if your Confluence site is large or you are encountering problems with your automated backup.

Creating the site backup

To manually back up your site:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Backup & Restore** in the left-hand panel.
3. Choose **Archive to backups folder** to store a copy of the backup in the same folder as Confluence's bac

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kups.
If you do not archive the backup it will be made available for you to download, and then deleted from the server after 24 hours.
4. Choose **Backup attachments** to include attachments in your backup.
5. Choose **Backup**.
The process will take a few minutes.

Related pages:

- Restoring a Site
- Configuring Backups
- Production Backup Strategy
- Confluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Retrieving the Backup File

Confluence stores the backup as a zipped XML file in the '`backups`' directory under the Confluence Home directory on your Confluence server. To find your Confluence Home directory, see the documentation. You will need access to the Confluence server in order to retrieve this file.

Enabling the download of the backup file via the administration console

By default, it is not possible to retrieve the backup file via the Confluence Administration Console. This feature is disabled for security reasons.

Administrators can enable this functionality by updating the relevant configuration property as described below. If this functionality is enabled, Confluence will prompt you to download the backup file when the backup process finished. However, we recommend that you turn the feature **off** in production environments.

To enable download of the backup file from the Administration Console:

1. Edit the `confluence.cfg.xml` file found in the Confluence Home Directory.
2. Set the value of property `admin.ui.allow.manual.backup.download` to '`true`' (without the quotation marks).
3. Restart Confluence.

If the value of the above configuration property is 'true', it will be possible to download the backup file after manually backing up the site via the Confluence Administration Console. If the value of this property is 'false' or the property is not present in the configuration file, you will need to retrieve the backup file from the file system on the Confluence server. By default, the value is 'false'.

Notes

If you experience timeout errors, please consider bypassing Apache and creating the export directly from Tomcat. This will speed up the process and prevent timeouts. For example, your URL might be something like `http://<domain>.com`. To bypass this and access Tomcat directly, use this URL: `http://localhost:8080/confluence/admin/backup.action`.

Restoring a Site

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CAUTION: Restoring a backup of an entire confluence site will:

- Wipe out all Confluence content in the database. Please ensure that your database is backed up before you start.
- Log you out after the restoration process. Please make sure you know the login details contained in the data that you are about to restore.

This page describes how to restore data from an XML backup file into an existing Confluence installation. If you want to restore data into a new site, follow the instructions on Restoring from Backup During Setup.

You need System Administrator permissions in order to perform this function.

Notes before you start:

- **All content replaced.** Restoring a site from backup will replace all your content, as described in the warning above.
- **Selective space restoration not possible.** You cannot select a single space to restore from the entire site backup when the backup contains more than one space.
- **Backward version compatibility.** Confluence supports backward compatibility for site backups (but **not** f or space backups). You can successfully restore backups of a site from an older version of Confluence to a newer version of Confluence. You cannot restore backups from a newer version to an older version. For example, if you create a site backup in Confluence 2.4.3, it cannot be restored into a Confluence 2.2.2 site. It can however, be restored into 2.4.5 or 2.5.x, because 2.4.5 and 2.5.x are newer versions of Confluence.

Related pages:

- Production Backup Strategy
- Manually Backing Up the Site
- Confluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Restoring data from an XML backup

You can restore data from an XML backup file located somewhere on your local computer or a shared drive, or you can copy the XML file into the Confluence installation and restore it from there. The second option is recommended for large backup files. Both options are described below.

To restore data from an XML backup located outside Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Backup and Restore** in the left-hand panel.
3. Choose **Choose File** and browse for the backup file.
4. Uncheck **Build Index** if you want to create the index at a later stage.
5. Choose **Upload and Restore**.

To restore data from an XML backup located in your Confluence installation:

1. Copy your XML backup zip file into the `restore` directory in your Confluence home directory. For example:
   - On UNIX: `/opt/java/src/confluence/deployments/conf.atlassian.com/home/restore`
   - On Windows: `C:\Program Files\Atlassian\Application Data\Confluence x.x\restore`
2. Choose **Browse** > **Confluence Admin**.
3. Choose **Backup and Restore** in the left-hand panel.

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4. The zip file that you copied in step 1 will appear in the list of files under the heading **Restore a backup from the Confluence Home Directory** on your Confluence Administration Console. Select the zip file.
5. Uncheck **Build Index** if you want to create the index at a later stage.
6. Choose **Restore**.

Notes

- **Production backup strategy preferred.** Atlassian recommends that you follow the Production Backup Strategy for your production Confluence site, because Confluence XML backups are not recommended for non-evaluation sites.
- **Restoring from other backups.** If your daily backup zip files cannot be restored for some reason, but you have backups of both your database and your Confluence home directory, then it is still possible to restore from these backups.

Restoring a Space

This page tells you how to import the contents of a Confluence space into another Confluence site, via an XML backup file.

You can export the content of a space, including pages, comments and attachments. The process involves converting the data in the space into XML format. The end product is a zip file that contains XML file(s) and optionally, all the attachments in the space. To transfer this data to another Confluence site, you simply restore this zip file as described below.

Confluence will only allow you to restore a space if there is not already a space by that name on the site. If you already have a space with the identical name, you will need to delete or rename the existing space before restoring the new one.

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

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Cannot restore to a different major Confluence release

Confluence only supports forward and backward compatibility for space import and export when executed within the **same major version** of Confluence.

Clarifying our terminology: By **major version**, we mean the version defined in the first two sections of the release number. For example, Confluence 2.2 and Confluence 2.3 are different major versions. Confluence 2.2.1 and Confluence 2.2.6 are the same major version.

Restoration Data Must Share the Same Major Version Number
This means that a space export created in one major version of Confluence cannot be imported into a different major version of Confluence. For example, if you create a space export in Confluence 2.3.5, it cannot be imported into a Confluence 2.2.2 site. It can be however imported into 2.3.6. Similarly, a space export created in 2.2.2 can not be imported into 2.3.5. However, it can be restored into a Confluence 2.2.6 site.

If you try to carry out such an operation, an error message similar to the one below will be displayed and the import action will be stopped.

Screenshot: Major Version Clash on Space Restore

The following error(s) occurred:
- Restore denied. You can only restore space backups exported from the same major version (e.g. 2.2.x or 2.3.x).

Workaround for restoring Spaces between Major Releases

You'll need to set up a test server, download and install the same version of confluence as the version you exported the space from, then import the space into this test server. Next upgrade Confluence on your test installation to the right major version so that you can perform the export and import this space into your production confluence successfully. Otherwise, you can try to Change the version of the space export, but please try this on a test site as well.

You need to have System Administrator permissions in order to perform this function.

To restore a space,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Backup and Restore**' in the 'Administration' section of the left-hand panel.

You can restore data in one of two ways:

1. **Upload a zipped backup to Confluence:**
   - Browse for the backup file.
   - Uncheck '**Build Index**' if you want to create the index at a later stage.
   - Click '**Upload and Restore**'.
2. **Restore a backup from the file system:**
   - Select the backup file from the form field displayed. If you do not see your backup file, make you sure that it has been copied into the `/opt/java/src/confluence/deployments/conf.atlassian.com/home/restore` directory.
   - Uncheck '**Build Index**' if you want to create the index at a later stage.
   - Click '**Restore**'.

RELATED TOPICS

No content found for label(s) restoring-data.

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Changing the version of a space backup

Confluence prevents the import of space backups which aren't from the same major version. The reason for this is that any schema change between the export and imported version of Confluence will cause the import to fail, leaving you with an incomplete import. Even worse, the failure can be database-dependent, so it may work fine on one particular database but your backup will fail to import later.

> Do not import a modified space backup on a production server. Import the modified space backup on a test server, then export from the test server to create a pristine space backup for the new version.

> *The information on this page does not apply to Confluence OnDemand.*

To change the version of a space backup, do the following:

- extract the space backup ZIP file
- edit `exportDescriptor.properties` in a text editor
- change the buildNumber to the buildNumber of the Confluence version you wish to import into
- zip up the modified contents of the backup into a ZIP file again.

This will allow you to import a backup into a test instance of Confluence. After checking the imported space for errors, export it cleanly from the test server and import the fresh backup into your production server.

If your import fails on the test server due to Hibernate errors, this indicates a schema incompatibility and cannot be worked around. You will need to restore your entire site on an old version of Confluence, and export the space from there. See the last section of Restoring a Space for details.

Restoring a Test Instance from Production

> See Migrating Confluence Between Servers for a more comprehensive explanation.

Many Confluence administrators will have a production instance running the "live" version of Confluence, as well as a test instance for testing upgrades and so on. In this situation, it's quite common that the two instances are running different versions of Confluence. This document describes how to copy the data from a production instance to a test instance, where the production version may be different to the test version.

Before proceeding with this guide, ensure you have read and understood the normal procedure for upgrading Confluence.

> *The information on this page does not apply to Confluence OnDemand.*

Upgrading a test Confluence instance with production data

Essentially, we are copying both the production home directory and database to the test instance. We then update the database details on the test instance to point to the test database, leaving all other instance metadata (most importantly the Confluence *build number*) the same as production.

1. Shut down your test instance.
2. Restore the production database to the test database server.
3. Create a backup of the `confluence.cfg.xml` file found in the home directory of the test instance.
4. Copy the production confluence-home directory to the test application server.
5. Open the `confluence.cfg.xml` which has been copied in a text editor. Change the database settings

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to match the test database server. **Ensure you do not point to your production database.** (You can compare with the backup you made in Step 3 if you need to get the database settings. Don't just copy this file – you need the build number unchanged from production to indicate the database is from an older version of Confluence.)

Before starting your test instance, you need to do the following steps to ensure no contact with production systems.

Ensuring no contact with production systems

To ensure no contact with external systems, you will need to disable both inbound and outbound mail services.

1. Disable global outbound mail by running the following database query:

```
SELECT * FROM BANDANA WHERE BANDANAKEY =
'atlassian.confluence.smtp.mail.accounts';
```

2. Disable space-level mail archiving by running the following database query:

```
SELECT * FROM BANDANA WHERE BANDANAKEY =
'atlassian.confluence.space.mailaccounts';
```

Change the 'SELECT *' to a 'DELETE' in the above queries once you are sure you want to remove the specified accounts.

Once this is done, you can start your test instance without any mails being sent or retrieved. Think carefully about other plugins which may access production systems (SQL macro, etc.). These should be disabled promptly after starting the test instance.

You can create a developer license for this server and update the License Details after starting up.

See also

Upgrading Confluence
Migrating Confluence Between Servers
Restoring to a Test Instance of Confluence from Production

Restoring Data from other Backups

Typically, Confluence data is restored from the Administration Console or from the Confluence Setup Wizard.

If you are experiencing problems restoring from an zipped XML backup file, it is still possible to restore provided you have:

1. A backup of your home directory.
2. A backup of your database (if you're using an external database).

Instructions for this method of restoring differ depending on whether you are using the embedded database or an external database (like Oracle, MS SQL Server, MySQL or Postgres).

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Embedded Database

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If you are running against the embedded database, the database is located inside the `database` folder of your Confluence Home Directory. Hence, all you need to do is:

1. Retrieve the most recent backup of your home directory.
2. Unpack the Confluence distribution and point the `confluence-init.properties` file to this directory.

External Database

If you're using an external database, you need to do the following.

1. Prepare backups of your home directory and database (preferably backups that are dated the same). That is, make sure the home directory is accessible on the filesystem and the database available to be connected to.
2. If this database happens to have a different name, or is on a different server, you need to modify the jdbc url in the `confluence.cfg.xml` file inside the Confluence Home Directory. The value of this property is specified as `hibernate.connection.url`.
3. Unpack the Confluence distribution and point the `confluence-init.properties` file to the home directory.

RELATED TOPICS

Important Directories and Files
Migrating to a Different Database

Administrators Guide Home Confluence Documentation Home

Retrieve file attachments from a backup

File attachments on pages can be retrieved from a backup without needing to import the backup into Confluence. This is useful for recovering attachments that have been deleted by users.

Both automated and manual backups allow this, as long as the 'Include attachments' property was set. Users wanting to restore pages, spaces or sites should check out the Confluence Administrator's Guide instead.

Before following the instructions for recovering attachments, please review how backups store file and page information.

> *The information on this page does not apply to Confluence OnDemand.*

How Backups Store File and Page Information

The backup zip file contains entities.xml, an XML file containing the Confluence content, and a directory for storing attachments.

Backup Zip File Structure

Page attachments are stored under the attachments directory by page and attachment id. Here is an example listing:

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```
Listing for test-2006033012_00_00.zip
\attachments\98\10001
\attachments\98\10002
\attachments\99\10001
entities.xml
```

Inside the attachment directory, each numbered directory inside is one page, and the numbered file inside is one attachment. The directory number is the page id, and the file number is the attachment id. For example, the file \attachments\98\10001 is an attachment with page id 98 and attachment id 10001. You can read entities.xml to link those numbers to the original filename. Entities.xml also links each page id to the page title.

Entities.xml Attachment Object

Inside the entities.xml is an Attachment object written in XML. In this example, the page id is 98, the attachment id is 10001 and the filename is myimportantfile.doc. The rest of the XML can be ignored:

```
<object class="Attachment" package="com.atlassian.confluence.pages">
<id name="id">98</id>
<property name="fileName"><![CDATA[myimportantfile.doc]]></property>
...
<property name="content" class="Page"
package="com.atlassian.confluence.pages"><id name="id">10001</id>
</property>
...
</object>
```

Entities.xml Page Object

This XML describes a page. In this example, the page id is 98 and the title is Editing Your Files. The rest of the XML can be ignored:

```
<object class="Page" package="com.atlassian.confluence.pages">
<id name="id">98</id>
<property name="title"><![CDATA[Editing Your Files]]></property>
...
</object>
```

Instructions for Recovering Attachments

Each file must be individually renamed and re-uploaded back into Confluence by following the instructions below. Choose one of the three methods:

Choice A - Recover Attachments By Filename

Best if you know each filename you need to restore, especially if you want just a few files:

1. Unzip the backup directory and open entities.xml.
2. Search entities.xml for the filename and find the attachment object with that filename. Locate its page and attachment id.
3. Using the page and attachment id from entities.xml, go to the attachments directory and open that

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directory with that page id. Locate the file with the attachment id.
4. Rename the file to the original filename and test it.
5. Repeat for each file.
6. To import each file back into Confluence, upload to the original page by attaching the file from within Confluence.

Choice B - Restore Files By Page

Best if you only want to restore attachments for certain pages:

1. Unzip the backup directory and open entities.xml.
2. Search entities.xml for the page title and find the page object with that title. Locate its page id.
3. Go to the attachments directory and open that directory with that page id. Each of the files in the directory is an attachment that must be renamed.
4. Search entities.xml for attachment objects with that page id. Every attachment object for the page will have an attachment id and filename.
5. Rename the file with that attachment id to the original filename and test it.
6. Repeat for each page.
7. To import each file back into Confluence, upload to the original page by attaching the file from within Confluence.

Choice C - Restore All Files

Best if you have a small backup but want to restore many or all the attachments inside:

> Following process is applicable to **space** export only. Site xml backups do not require page id to be updated manually due to the nature of persistent page_id's.

1. Unzip the backup directory and open entities.xml.
2. Go to the attachments directory and open any directory. The directory name is a page id. Each of the files in the directory is an attachment that must be renamed.
3. Search entities.xml for attachment objects with that page id. When one is found, locate the attachment id and filename.
4. Rename the file with that attachment id to the original filename and test it.
5. Find the next attachment id and rename it. Repeat for each file in the directory.
6. Once all files in the current directory are renamed to their original filenames, search entities.xml for the page id, eg directory name. Find the page object with that page id and locate its page title.
7. Rename the directory to the page title and move on to the next directory. Repeat for each un-renamed directory in the attachments directory.
8. To import each file back into Confluence, upload to the original page by attaching the file from within Confluence.

> To obtain detailed information about lost attachments, **location**, **name** and **type** of the attachments, you may use the findattachments script

Troubleshooting failed XML site backups

> XML site backups are only necessary for migrating to a new database. Setting up a test server or Establishing a reliable backup strategy is better done with an SQL dump.

Seeing an error when creating or importing a backup?

Problem	Solution
Exception while creating backup	Follow instructions below

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Exception while importing backup	Follow Troubleshooting XML backups that fail on restore instead

The information on this page does not apply to Confluence OnDemand.

Resolve Errors With Creating An XML Backup

The errors may be caused by a slightly corrupt database. If you're seeing errors such as 'Couldn't backup database data' in your logs, this guide will help you correct the error on your own. We strongly recommend that you backup your database and your Confluence home directory beforehand, so that you can restore your site from those if required. If you are unfamiliar with SQL, we suggest you contact your database administrator for assistance.

Preferable solution

The Production Backup Strategy is a very reliable and more efficient way to do backups. If you are running into problems with XML backups - whether memory related or because of problems like the one described here - use the native backup tool as an alternate solution.

To Identify And Correct The Problem

To work out where the data corruption or problems are, increase the status information reported during backup, then edit the invalid database entry:

1. Stop Confluence.
2. If you have an external database, use a database administration tool to create a manual database backup.
3. Backup your Confluence home directory. You will be able to restore your whole site using this and the database backup.
4. Open the `my_confluence_install/confluence/WEB-INF/classes/log4j.properties`and add this to the bottom and save:

```
log4j.logger.com.atlassian.confluence.importexport.impl.XMLDatabinder=DEBUG
, confluencelog
log4j.additivity.com.atlassian.confluence.importexport.impl.XMLDatabinder=f
alse
```

5. Find your atlassian-confluence.log. Move or delete all existing Confluence logs to make it easier to find the relevant logging output.
6. Restart Confluence and login.
7. Begin a backup so that the error reoccurs.
8. You must now check your log files to find out what object could not be converted into XML format. Open c`onfluence-home/logs/atlassian-confluence.log`. Scroll to the bottom of the file.
9. Do a search for 'ObjectNotFoundException'. You should see an error similar to this:

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```
01 2005-08-24 00:00:33,743 DEBUG
[DOCPRIV2:confluence.importexport.impl.XMLDatabinder] Writing
object: com.atlassian.confluence.core.ContentPermission with ID: 5
to XML.
02 2005-08-24 00:00:33,743 DEBUG
[DOCPRIV2:confluence.importexport.impl.XMLDatabinder] Writing
property: type
03 2005-08-24 00:00:33,743 DEBUG
[DOCPRIV2:confluence.importexport.impl.XMLDatabinder] Writing
property: group
04 2005-08-24 00:00:33,743 DEBUG
[DOCPRIV2:confluence.importexport.impl.XMLDatabinder] Writing
property: expiry
05 2005-08-24 00:00:33,743 DEBUG
[DOCPRIV2:confluence.importexport.impl.XMLDatabinder] Writing
property: content
06 [DOCPRIV2:ERROR] LazyInitializer - Exception initializing proxy
<net.sf.hibernate.ObjectNotFoundException: No row with the given
identifier exists: 2535,
07 of class:
com.atlassian.confluence.core.ContentEntityObject>net.sf.hibernate.
ObjectNotFoundException:
08 No row with the given identifier exists: 2535, of class:
com.atlassian.confluence.core.ContentEntityObject
09 at
net.sf.hibernate.ObjectNotFoundException.throwIfNull(ObjectNotFound
Exception.java:24)
10 at
net.sf.hibernate.impl.SessionImpl.immediateLoad(SessionImpl.java:19
46)
11 at
net.sf.hibernate.proxy.LazyInitializer.initialize(LazyInitializer.j
ava:53)
12 at
net.sf.hibernate.proxy.LazyInitializer.initializeWrapExceptions(Laz
yInitializer.java:60)
13 at
net.sf.hibernate.proxy.LazyInitializer.getImplementation(LazyInitia
lizer.java:164)
14 at
net.sf.hibernate.proxy.CGLIBLazyInitializer.intercept(CGLIBLazyInit
ializer.java:108)
15 at
com.atlassian.confluence.core.ContentEntityObject$$EnhancerByCGLIB$
$cc2f5557.hashCode(<generated>)
16 at java.util.HashMap.hash(HashMap.java:261)
17 at java.util.HashMap.containsKey(HashMap.java:339)
18 at
com.atlassian.confluence.importexport.impl.XMLDatabinder.toGenericX
ML(XMLDatabinder.java:155)
```

10. Open a DBA tool such as DbVisualizer and connect to your database instance. Scan the table names in the schema. You will have to modify a row in one of these tables.

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11. To work out which table, open `catalina.out`, check the first line of the exception. This says there was an error writing the `ContentPermission` object with id 5 into XML. This translates as *the row with primary key 5 in the CONTENTLOCK table*needs fixing. To work out what table an object maps to in the database, here's a rough guide:
    - Pages, blogposts, comments --> CONTENT table
    - attachments --> ATTACHMENTS table
    - More information can be found in the schema documentation
12. Now you must find the primary key of the incorrect row in this table. In this case, you can check the first line and see that the row has a primary key of 5.
13. Each property is written to a column, so the last property that was being written has the incorrect value. The row being written to when the exception was thrown was `CONTENT` (line 5) with a value of `2535` (line 6). Now you know the column and value. This value `2535` is the id of an entry that no longer exists.
14. Using a database administrative tool, login ot the Confluence database. Locate the row in the relevant table and correct the entry. Check other rows in the table for the default column value, which may be null, 0 or blank. Overwrite the invalid row value with the default.
15. Restart Confluence.
16. Attempt the backup again. If the backup fails and you are stuck, please lodge a support request with your latest logs.

Troubleshooting "Duplicate Key" related problems

If you are encountering an error message such as:

```
could not insert:
[bucket.user.propertyset.BucketPropertySetItem#bucket.user.propertyset.B
ucketPropertySetItem@a70067d3]; SQL []; Violation of PRIMARY KEY
constraint 'PK_OS_PROPERTYENTRY314D4EA8'. Cannot insert duplicate key in
object 'OS_PROPERTYENTRY'.; nested exception is java.sql.SQLException:
Violation of PRIMARY KEY constraint 'PKOS_PROPERTYENTRY_314D4EA8'.
Cannot insert duplicate key in object 'OS_PROPERTYENTRY'.
```

this indicates that the Primary Key constraint 'PK_OS_PROPERTYENTRY_314D4EA8' has duplicate entries in table 'OS_PROPERTYENTRY'.
You can locate the constraint key referring to 'PK_OS_PROPERTYENTRY_314D4EA8' in your table 'OS_PROPERTYENTRY' and locate any duplicate values in it and remove them, to ensure the "PRIMARY KEY" remains unique. An example query to list duplicate entries in the 'OS_PROPERTYENTRY' table is:

```
SELECT ENTITY_NAME,ENTITY_ID,ENTITY_KEY,COUNT(*) FROM OS_PROPERTYENTRY
GROUP BY ENTITY_NAME,ENTITY_ID,ENTITY_KEY HAVING COUNT(*)>1
```

To Help Prevent This Issue From Reoccuring

1. If you are using the embedded database, be aware that it is bundled for evaluation purposes and does not offer full transactional integrity in the event of sudden power loss, which is why an external database is recommended for production use. You should migrate to an external database.
2. If you are using an older version of Confluence than the latest, you should consider upgrading at this point.

RELATED TOPICS

Enabling detailed SQL logging

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Troubleshooting XML backups that fail on restore

> XML site backups are only necessary for migrating to a new database. Upgrading Confluence, Setting up a test server or Production Backup Strategy is better done with an SQL dump.

> If migrating from HSQLDB to MySQL, you might have a better experience using the MySQL Migration Toolkit.

Seeing an error when creating or importing a site or space backup?

Problem	Solution
Exception while creating backup	Follow Troubleshooting failed XML site backups inste ad
Exception while importing backup	Follow instructions below

> *The information on this page does not apply to Confluence OnDemand.*

Resolve Errors When Attempting To Restore An XML Backup

The errors may be caused by a slightly corrupt database. You will need to find the XML backup file entry that is violating the DB rules, modify the entry and recreate the XML backup:

1. On the instance being restored, follow the instructions to disable batched updates (for simpler debugging), log SQL queries and log SQL queries **with parameters** at Enabling Detailed SQL Logging.
2. Once all three changes have been made, restart Confluence.
3. Attempt another restore.
4. Once the restore fails, check your log files to find out what object could not be converted into XML format. For Confluence distribution users, check your Confluence install directory under the `/logs/` and check both `atlassian-confluence.log` and `catalina.out` file. The correct file will contain SQL debug output.
5. Scroll to the bottom of the file and identify the last error relating to a violation of the database constraint. For example:

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```
2006-07-13 09:32:33,372 ERROR
[confluence.importexport.impl.ReverseDatabinder] endElement
net.sf.hibernate.exception.ConstraintViolationException:
  could not insert: [com.atlassian.confluence.pages.Attachment#38]
net.sf.hibernate.exception.ConstraintViolationException: could not
insert: [com.atlassian.confluence.pages.Attachment#38]
...
Caused by: java.sql.SQLException: ORA-01400: cannot insert NULL
into ("CONFUSER"."ATTACHMENTS"."TITLE")
at
oracle.jdbc.driver.DatabaseError.throwSqlException(DatabaseError.ja
va:112)
at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:331)
at oracle.jdbc.driver.T4CTTIoer.processError(T4CTTIoer.java:288)
```

This example indicates a row in your attachment table with ID = 38 that has a null title.

6. Go to the server that the backup was created on. You must have a copy of the database from which the backup was created. If you do not have this, use a DBA tool to restore a manual backup of the database.
7. Open a DBA tool and connect to the original database instance and scan the table names in the schema. You will have to modify a row in one of these tables.
8. To work out which table, open `catalina.out`, check the first line of the exception. To work out what table an object maps to in the database, here's a rough guide:
   - Pages, blogposts, comments --> CONTENT table.
   - attachments --> ATTACHMENTS table.
9. To correct the example error, go to the attachment table and find that attachment object with id 38. This will have a a null title. Give a title using the other attachments titles as a guide. You may have a different error and should modify the database accordingly.
10. Once the entry has been corrected, create the XML backup again.
11. Import the backup into the new version.
12. If the import succeeds, revert the changes made in your SQL logging to re-enable disable batched updates and turn off log SQL queries and log SQL queries with parameters.
13. Restart Confluence.

Troubleshooting "Duplicate Entry" for key "cp_" or "cps_"

If you are encountering an error message such as:

```
com.atlassian.confluence.importexport.ImportExportException: Unable to
complete import because the data does not match the constraints in the
Confluence schema. Cause: MySQLIntegrityConstraintViolationException:
Duplicate entry '1475804-Edit' for key 'cps_unique_type'
```

This indicates that the XML export came from a version of Confluence with a corrupt permissions database, caused by some 3rd party plugin. This is an issue that was fixed when CONF-22123 was implemented in Confluence 3.5.2. The simplest workaround is to export the space again after upgrading the instance to 3.5.2 or above. If that is not an option, then either the export will need to be edited manually to remove the duplicate permission entries or the source instance will need to have the offending entries removed. The following SQL queries can be used to look for such entries:

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```
SELECT * FROM CONTENT_PERM WHERE USERNAME IS NULL AND GROUPNAME IS NULL;

SELECT cp.ID, cp.CP_TYPE, cp.USERNAME, cp.GROUPNAME, cp.CPS_ID, cp.CREATOR,
cp.CREATIONDATE, cp.LASTMODIFIER, cp.LASTMODDATE
FROM CONTENT_PERM cp
WHERE cp.USERNAME IS NOT NULL AND cp.GROUPNAME IS NOT NULL;

SELECT cps1.ID, cps1.CONTENT_ID, cps1.CONT_PERM_TYPE FROM CONTENT_PERM_SET cps1,
CONTENT_PERM_SET cps2
WHERE cps1.ID <> cps2.ID AND
cps1.CONTENT_ID = cps2.CONTENT_ID AND
cps1.CONT_PERM_TYPE = cps2.CONT_PERM_TYPE
ORDER BY cps1.CONTENT_ID, cps1.CONT_PERM_TYPE, cps1.CREATIONDATE ASC;

SELECT cp.ID, cp.CP_TYPE, cps.CONTENT_ID,
(SELECT scps.ID FROM CONTENT_PERM_SET scps WHERE scps.CONTENT_ID = cps.CONTENT_ID
AND scps.CONT_PERM_TYPE = cp.CP_TYPE) AS suggested_cps_id
FROM CONTENT_PERM cp, CONTENT_PERM_SET cps
WHERE cp.CPS_ID = cps.ID AND
cp.CP_TYPE <> cps.CONT_PERM_TYPE;

SELECT DISTINCT cp1.ID, cp1.CP_TYPE, cp1.USERNAME, cp1.GROUPNAME, cp1.CPS_ID,
cp1.CREATOR, cp1.CREATIONDATE, cp1.LASTMODIFIER, cp1.LASTMODDATE
FROM CONTENT_PERM cp1, CONTENT_PERM_SET cps1, CONTENT_PERM cp2, CONTENT_PERM_SET
cps2
WHERE
cp1.CPS_ID = cps1.ID AND
cp2.CPS_ID = cps2.ID AND
cp1.ID <> cp2.ID AND
cps1.CONTENT_ID = cps2.CONTENT_ID AND
cp1.CP_TYPE = cp2.CP_TYPE AND
cp1.USERNAME = cp2.USERNAME
ORDER BY cp1.CPS_ID, cp1.CP_TYPE, cp1.USERNAME, cp1.CREATIONDATE;

SELECT DISTINCT cp1.ID, cp1.CP_TYPE, cp1.USERNAME, cp1.GROUPNAME, cp1.CPS_ID,
cp1.CREATOR, cp1.CREATIONDATE, cp1.LASTMODIFIER, cp1.LASTMODDATE
FROM CONTENT_PERM cp1, CONTENT_PERM_SET cps1, CONTENT_PERM cp2, CONTENT_PERM_SET
cps2
WHERE
cp1.CPS_ID = cps1.ID AND
cp2.CPS_ID = cps2.ID AND
cp1.ID <> cp2.ID AND
cps1.CONTENT_ID = cps2.CONTENT_ID AND
cp1.CP_TYPE = cp2.CP_TYPE AND
cp1.GROUPNAME = cp2.GROUPNAME
ORDER BY cp1.CPS_ID, cp1.CP_TYPE, cp1.GROUPNAME, cp1.CREATIONDATE;

SELECT * FROM CONTENT_PERM_SET
WHERE ID NOT IN (SELECT DISTINCT CPS_ID FROM CONTENT_PERM);
```

Remove all matching entries and perform the export again.

Troubleshooting "Duplicate Key" related problems

If you are encountering an error message such as:

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```
could not insert:
[bucket.user.propertyset.BucketPropertySetItem#bucket.user.propertyset.B
ucketPropertySetItem@a70067d3]; SQL []; Violation of PRIMARY KEY
constraint 'PK_OS_PROPERTYENTRY314D4EA8'. Cannot insert duplicate key in
object 'OS_PROPERTYENTRY'.; nested exception is java.sql.SQLException:
Violation of PRIMARY KEY constraint 'PKOS_PROPERTYENTRY_314D4EA8'.
Cannot insert duplicate key in object 'OS_PROPERTYENTRY'.
```

This indicates that the Primary Key constraint 'PK_OS_PROPERTYENTRY_314D4EA8' has duplicate entries in table 'OS_PROPERTYENTRY'.
You can locate the constraint key referring to 'PK_OS_PROPERTYENTRY_314D4EA8' in your table 'OS_PROPERTYENTRY' and locate any duplicate values in it and remove them, to ensure the "PRIMARY KEY" remains unique. An example query to list duplicate entries in the 'OS_PROPERTYENTRY' table is:

```
SELECT ENTITY_NAME,ENTITY_ID,ENTITY_KEY,COUNT(*) FROM OS_PROPERTYENTRY
GROUP BY ENTITY_NAME,ENTITY_ID,ENTITY_KEY HAVING COUNT(*)>1
```

Troubleshooting "net.sf.hibernate.PropertyValueException: not-null" related problems

If you're receiving a message like:

```
ERROR [Importing data task]
[confluence.importexport.impl.ReverseDatabinder] endElement
net.sf.hibernate.PropertyValueException: not-null property references a
null or transient value:
com.atlassian.user.impl.hibernate.DefaultHibernateUser.name
```

This means there's an unexpected null value in a table. In the above example, the error is in the name column in the USERS table. We've also seen them in the ATTACHMENTS table.

Remove the row with the null value, redo the xml export, and reimport.

To Help Prevent this Issue from Recurring

1. If you are using the embedded database, be aware that it is bundled for evaluation purposes and does not offer full transactional integrity in the event of sudden power loss, which is why an external database is recommended for production use. You should migrate to an external database.
2. If you are using an older version of Confluence than the latest, you should consider upgrading at this point.

> The problem with different settings for case sensitivity varies between databases. The case sensitivity of the database is usually set through the collation that it uses. Please vote on the existing issue

RELATED TOPICS

Troubleshooting failed XML site backups
Confluence Administrator's Guide

Migrating from HSQLDB to MySQL

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> If you've gone through Migrate to Another Database and cannot migrate because of a failed xml backup, this page might help.

Disclaimer

MySQL Migration Toolkit is released by the makers of MySQL and as such, problems with the software should be directed to them. Atlassian Support does not offer support for the Migration Toolkit, nor do we provide support for this migration path. These instructions are offered for strictly informational purposes, and your mileage may vary.

> **Backup Reminder**
>
> Please backup your database and your home folder before attempting this.

> *The information on this page does not apply to Confluence OnDemand.*

Resources needed

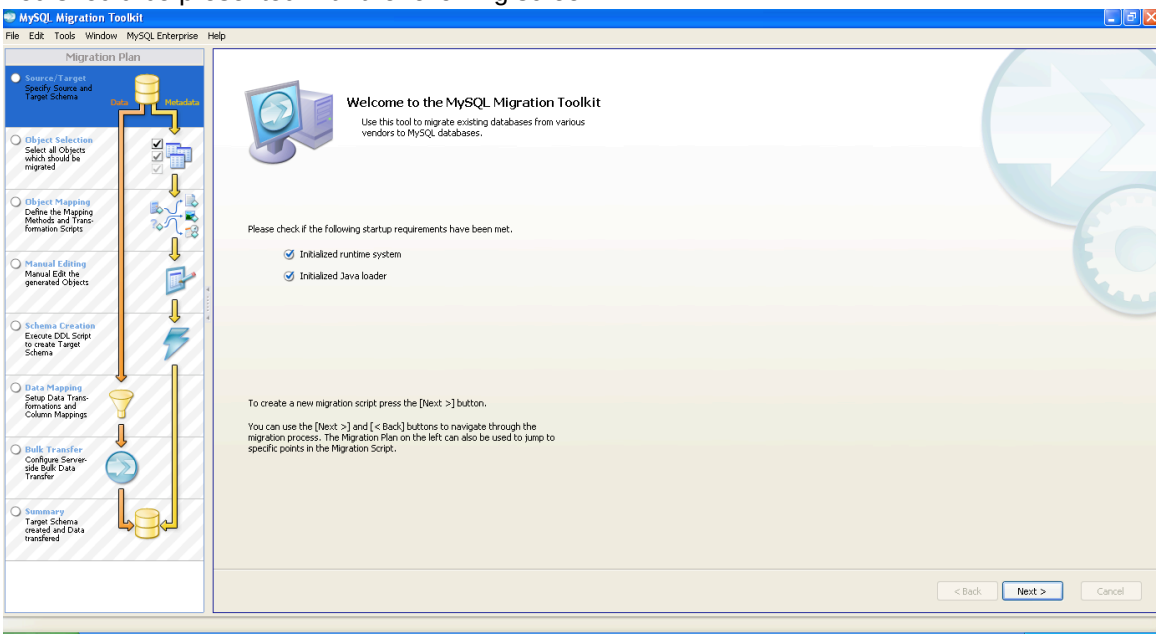
- Empty MySQL DB with appropriate credentials to allow creation, deletion, and insertion of tables and rows.
- A Windows machine that can both communicate to the Confluence server and the destination DB.
- MySQL Migration Toolkit
- HSQL Database Engine

Preparation for migrating to MySQL from HSQLDB

1. Shutdown Confluence
2. Make a copy of the confluence home folder for backup purposes
3. Install the Migration Toolkit
4. Unzip the hsqldb package.
5. Copy the hsqldb.jar from hsqldb/lib into C:\Program Files\MySQL\MySQL Tools for 5.0\java\lib
6. Start the MySQL Migration Toolkit

Running the Migration Toolkit

You should be presented with the following screen.



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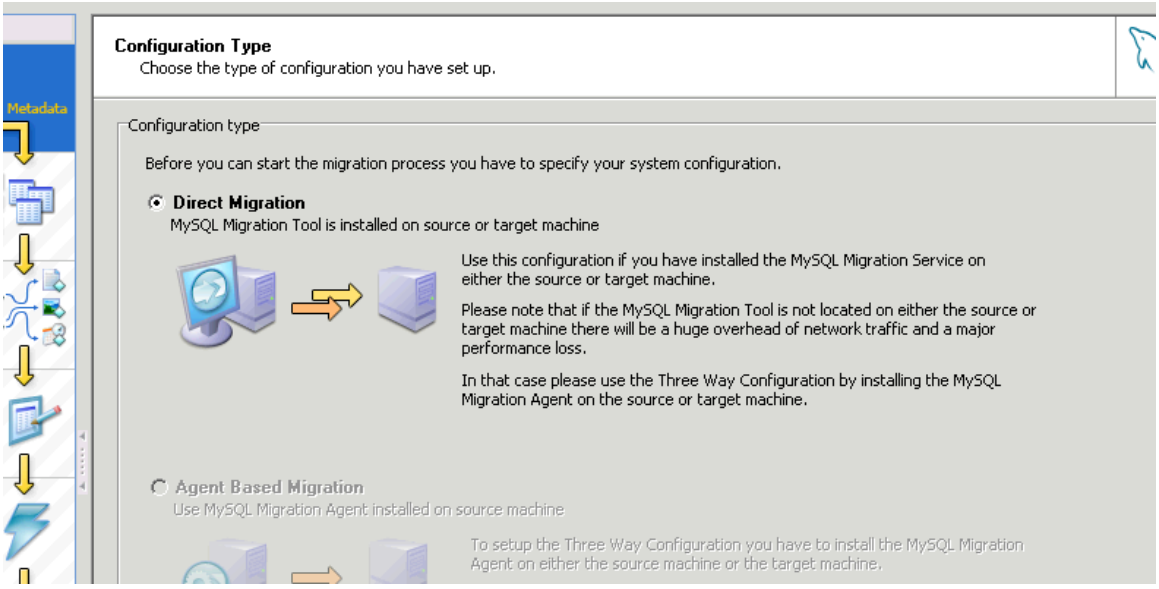
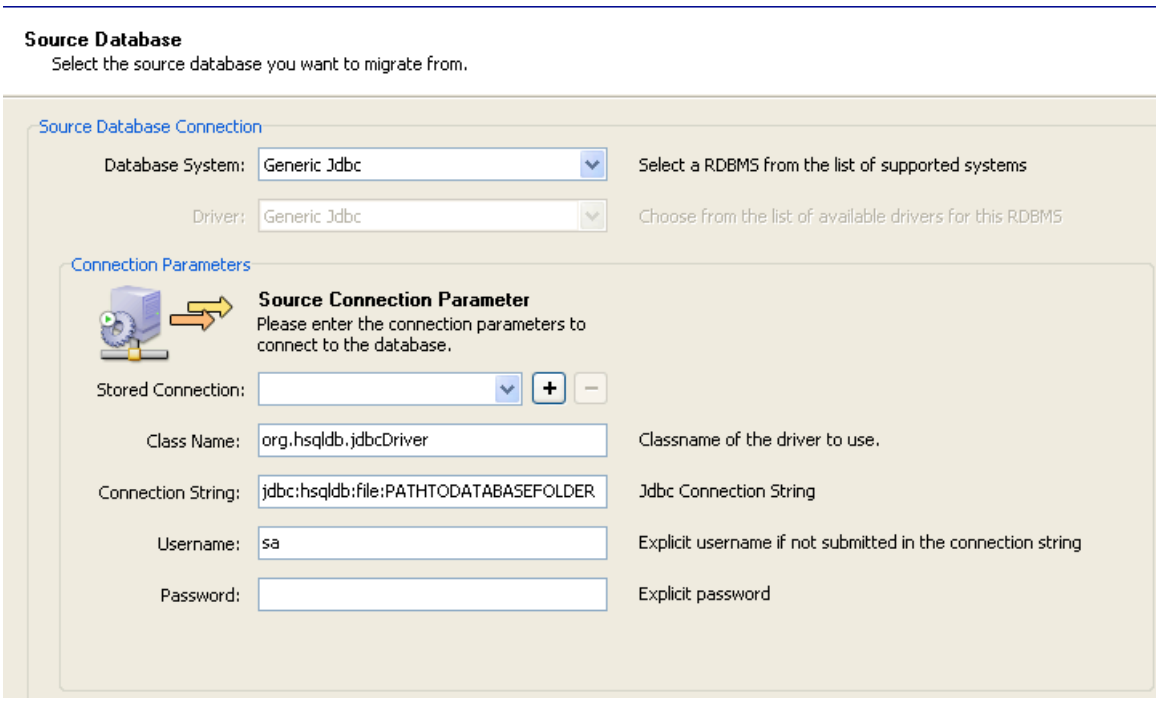
Choose Direct Migration



Source Database



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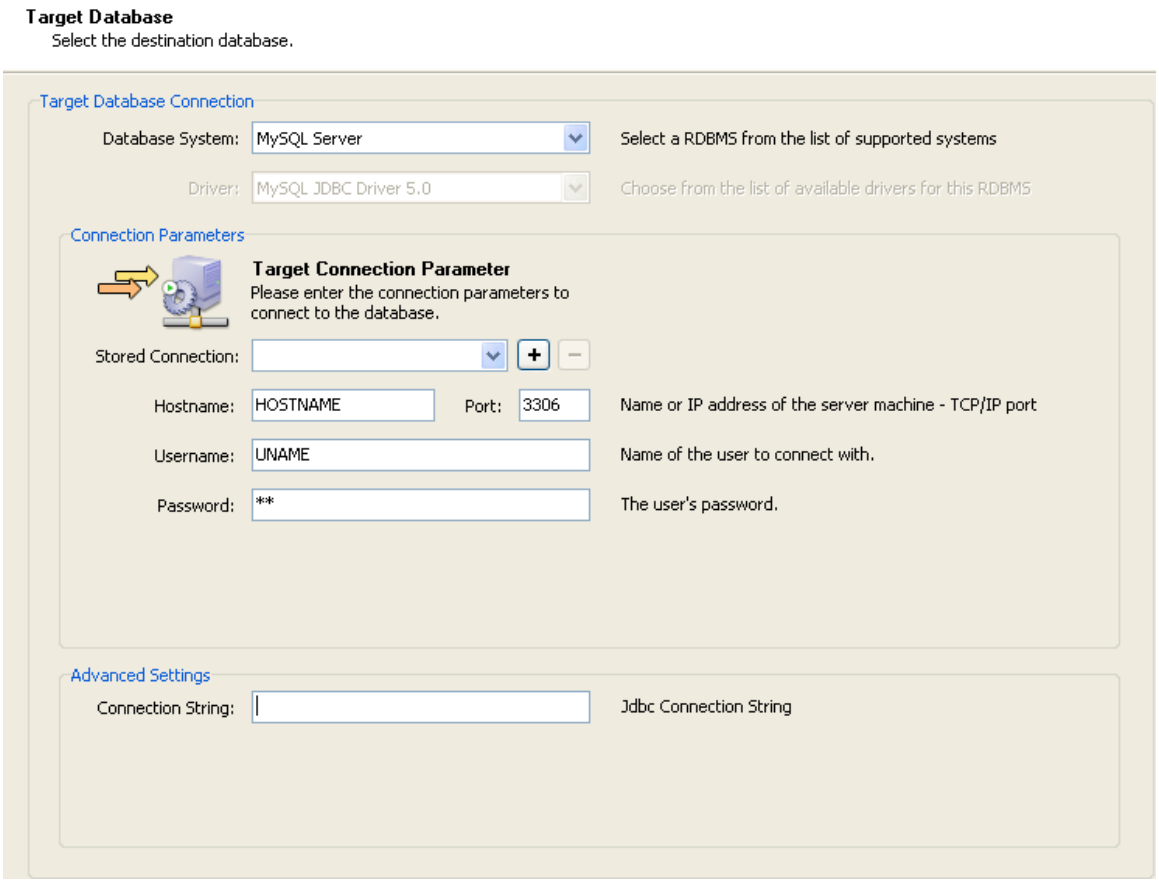
Database System:	Generic JDBC
Connection String:	jdbc:hsqldb: file:PATHTODATABASEFOLDER\confluencedb\\
Username:	sa
Password:	*No password. Leave this field blank*

Destination Database

Please make sure that the computer that is running MySQL Toolkit is able to access the MySQL server and that the user listed has the ability to create, drop, insert, and update tables.

If your MySQL user has a $ character in the password (such as 'pa$sword'), please change the password or create a temporary account with full permissions. If you do not, the toolkit will throw an "Illegal group reference" error and you will not be able to proceed with the migration.



Connecting to Servers

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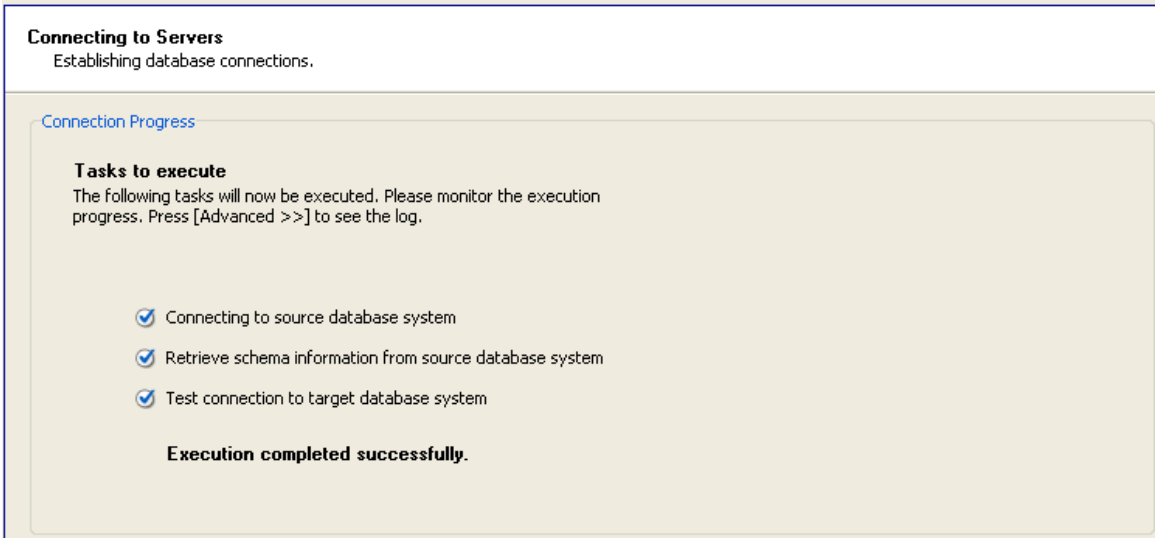
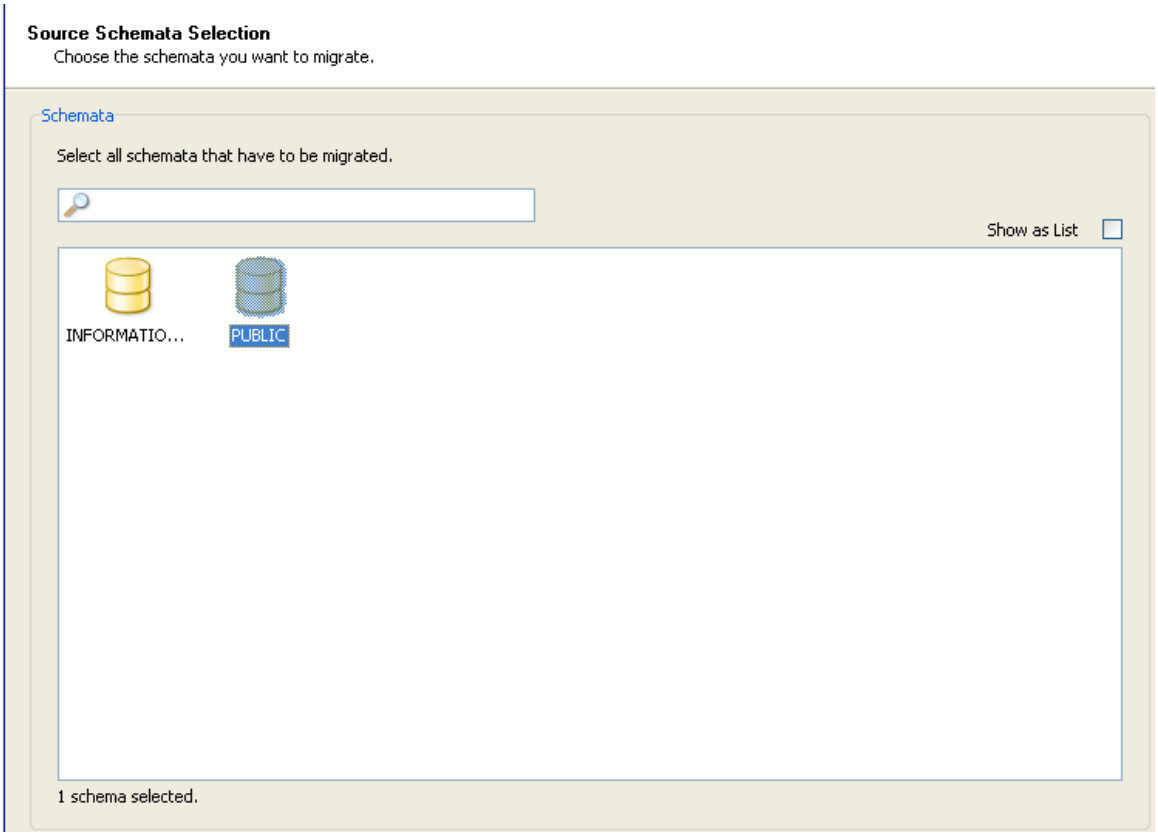


You should see the toolkit trying to connect. If you have problems, please click on the advanced options and sql will show you debugging information. Click Advanced to see the log. If you see "Java Heap Space: Out of Memory", you can start the *MySQL Migration Toolkit* with a -Xmx flag to allocate more memory to the JVM.

After this screen you should come to reverse engineering. Click next.

Source Schemata Selection



You should see 2 databases, **INFORMATION_SCHEMA** and **PUBLIC**. Choose **PUBLIC**

Object Type Selection

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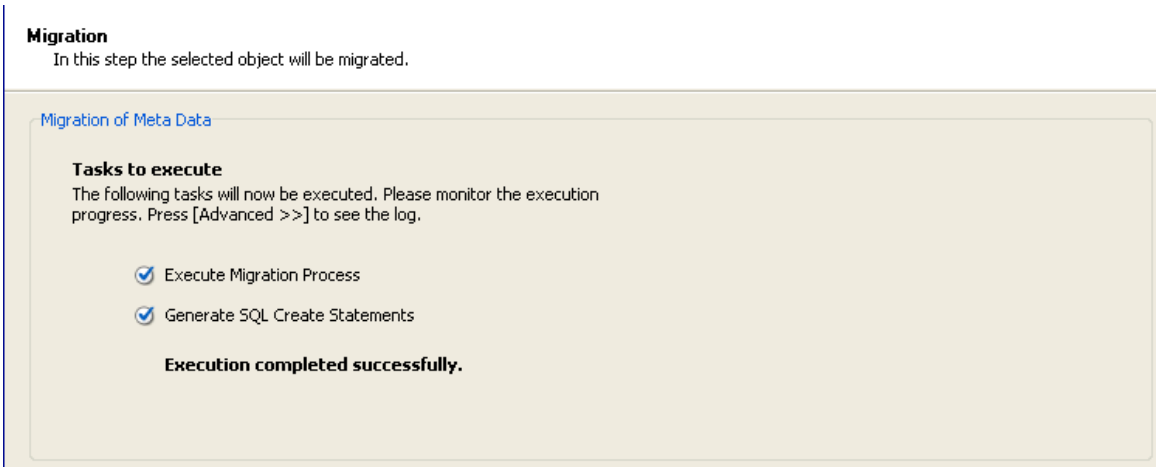
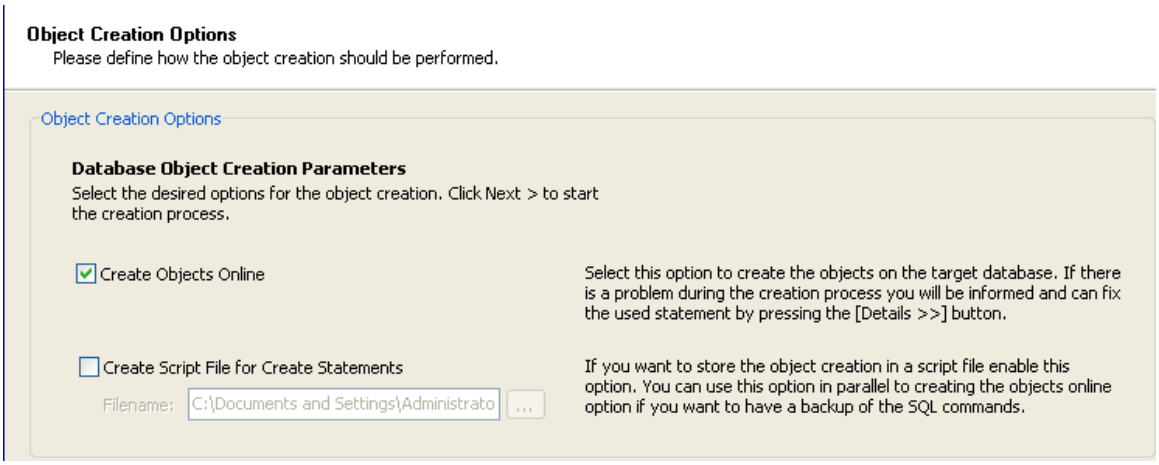


Click Next.

Object Type Mapping



Click **Show Details** on both sections. For **Migration Method for Type Schema**, choose **Multilanguage**. For **Migration Method for Type Table**, choose **Data Consistancy/Multilanguage**

Click **Advanced**. Check **Enabled Detailed Mappings in Next Step**

Detailed Object Mapping

Click to rename the **destination database** to be the one set aside to migrate to.

From this point on, you should be able to click next all the way through to finish the migration.

Rebuilding the Ancestor Table

In Confluence, the ancestor table defines what pages are ancestors or descendants of other pages (which can be used by search restrictions with the ancestorids restriction). Occasionally, the ancestor table will become out of sync. When this happens, you can rebuild the table to restore everything to normal.

Simply access this URL:

```
http://yoursite/admin/permissions/pagepermsadmin.action
```

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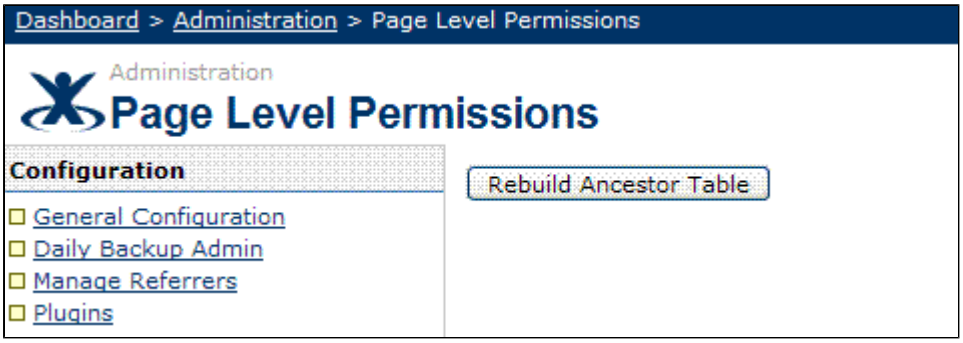
> *The information on this page does not apply to Confluence OnDemand.*

Screenshot: Page Level Permissions



RELATED TOPICS

Administrators Guide Home Confluence Documentation Home

Viewing System Information

The System Information screen provides information about Confluence's configuration, and the environment in which Confluence has been deployed. Your system configuration information is helpful to us when diagnosing errors you may face using Confluence. If you file a support request or bug report, the more detail you can provide about your installation and environment the faster we will be able to help.

To view your system information,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**System Information**' in the 'Administration' section.

> The handy **Memory Graph** helps you keep track of Confluence's memory usage.

> *The information on this page does not apply to Confluence OnDemand.*

RELATED TOPICS

Cache Statistics
Viewing Site Statistics
Viewing and Editing License Details
Viewing and Managing Installed Plugins
Live Monitoring Using the JMX Interface
Tracking Customisations Made to your Confluence Installation

Administrators Guide Home Confluence Documentation Home

Live Monitoring Using the JMX Interface

With the JMX interface (introduced in Confluence 2.8), you can monitor the status of your Confluence instance in real time. This will provide you with useful data such as the resource usage of your instance and its database latency, allowing you to diagnose problems or performance issues. To read the JMX data, you will need to use a JMX client.

Disable JMX

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If you experience any problems during Confluence startup that are related to JMX, it is possible to disable the JMX registration process. Please place jmxContext.xml in your `<confluence-install>/confluence/WEB-INF/classes` folder to do so.

The information on this page does not apply to Confluence OnDemand.

What is JMX?

JMX (Java Management eXtensions) is a technology for monitoring and managing Java applications. JMX uses objects called MBeans (Managed Beans) to expose data and resources from your application.

1. Enabling JMX Remote with Tomcat

By default, Confluence uses the Apache Tomcat web server. To use JMX, you must enable it on your Tomcat server, by carrying out the steps under the Apache Tomcat documentation, entitled Enabling JMX Remote. With those steps completed, restart your Tomcat server.

For the stand-alone, add the startup parameter -Dcom.sun.management.jmxremote to setenv.sh or setenv.bat. See instructions for the Windows Service - enter it in the same place as PermGen Memory.

2. Selecting your JMX Client

You need to use a JMX client in order to view the JMX output from Confluence. JConsole is a readily available JMX client that is included with the supported Java Developer Kit (version 5 onwards). The full name is the '*Java Monitoring and Management Console*', but we will refer to it as JConsole for the purposes of this document.

3. Adding the JMX Client to your Path

You must add the location of the JConsole binary file to your path environment variable. As JConsole resides in the 'bin' (binaries) folder under your Java directory, the path should resemble something like this:

```
JDK_HOME/bin/
```

In this example, replace 'JDK_HOME' with the full system path to your Java directory.

4. Configuring JConsole

To configure JConsole:

1. Run the JConsole application.
2. You will be prompted to create a new connection. Choose **remote process** and enter the hostname of your Confluence instance and a port of your choosing.

To connect easily, add the startup parameters to setenv.bat or setenv.sh:
-Dcom.sun.management.jmxremote -Dcom.sun.management.jmxremote.port=8086
-Dcom.sun.management.jmxremote.authenticate=false
Port 8086 is unlikely to be used. Then, connect remotely using port 8086.

JConsole, or any JMX client, will not see applications which are not owned by the same user. For example under Windows, if an application is started as a service, it is the System User which owns the process, and not the Current User.

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3. Click **Connect**.

Note: Other JMX clients besides JConsole can read JMX information from Confluence.

What can I monitor with JMX?

The JMX interface allows you to see live internal information from your Confluence instance, via the following MBeans:

IndexingStatistics

This MBean shows information related to search indexing.

Property name	Function	Values
Flushing	Shows state of cache (i.e. flushing, or not).	True/False
LastElapsedMilliseconds	Time taken during last indexing.	Milliseconds
LastElapsedReindexing	Time taken during last re-indexing.	Milliseconds
TaskQueueLength	Shows number of tasks in the queue.	Integer

SystemInformation

This MBean shows information related to database latency. It also contains most of the information presented on the System Information page.

Property name	Function	Values
DatabaseExampleLatency	Shows the latency of an example query performed against the database.	Milliseconds

RequestMetrics

This MBean shows information related to system load and error pages served.

Property name	Function	Values
AverageExecutionTimeForLastTenRequests	Average execution time for the last ten requests.	Milliseconds
CurrentNumberOfRequestsBeingServed	Number of requests being served at this instant.	Integer
ErrorCount	Number of times the Confluence error page was served.	Integer
NumberOfRequestsInLastTenSeconds	Obviously, the Number Of Requests In the Last Ten Seconds.	Integer

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MailServer-SMTPServer

This MBean shows information related to email dispatch attempts and failures. There will be an MBean for every SMTP Mailserver that has been configured in the Confluence instance.

Property name	Function	Values
EmailsAttempted	The number of email messages Confluence has tried to send.	Integer
EmailsSent	The number of email messages sent successfully.	Integer

MailTaskQueue

This MBean shows information related to the email workload.

Property name	Function	Values
ErrorQueueSize	Number of errors in the queue.	Integer
Flushing	Shows state (i.e. flushing, or not)	True/False
FlushStarted	Time that operation began.	Time
RetryCount	The number of retries that were performed.	Integer
TaskSize	Number of email messages queued for dispatch.	Integer

SchedulingStatistics

This MBean shows information related to current jobs, scheduled tasks and the time that they were last run.

High CPU consuming threads

For Java 1.6, add the Top Threads Plugin to monitor whether CPU is spiking. Download it to a directory and run JConsole like this:
JConsole -pluginpath /pathto/topthreads.jar

This works only with JDK 1.6, but that can be on the remote machine if the server is running a lower version.

> Please note, adding live monitoring to a production instance may itself have an impact on performance.

Related Topics

- Viewing System Information
- Cache Statistics
- Viewing and Editing License Details
- Viewing and Managing Installed Plugins

Tracking Customisations Made to your Confluence Installation

The '**Modification**' section of the Confluence '**System Information**' screen lists the files that have been changed since your Confluence application was installed. You will find this information particularly useful when

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upgrading Confluence to a new version, because you will need to re-apply all customisations after the upgrade.

> *The information on this page does not apply to Confluence OnDemand.*

To see the modifications made to files in your Confluence installation,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**System Information**' in the 'Administration' section of the left-hand panel.
3. Scroll down to the section titled '**Modification**'.

Screenshot: Modifications tracker on the Confluence System Information screen

Modification	
Modified	decorators/main.vmd, pages/page-breadcrumbs.vm, template/includes/macros.vm, decorators/mail.vmd, decorators/space.vmd, template/includes/personal-sidebar.vm
Removed	No files removed

Notes

- The modification tracker does not detect changes to class files from the `confluence.jar` or other JAR files. If you modify classes, the Confluence modification detection does not report the modification. See issue CONF-20993.

RELATED TOPICS

Administrators Guide Home Confluence Documentation Home

Viewing Site Statistics

Note that the site activity information is **disabled by default**. See notes below.

If enabled, the global activity screen displays statistics on the activity in your Confluence site. These include:

- How many pages and blog posts have been viewed, added or updated over a given period.
- Which spaces are the most popular (most frequently viewed).
- Which spaces are the most active (most frequently edited).
- Which people are the most active contributors/editors of content.

> *The information on this page does not apply to Confluence OnDemand.*

To view the activity on your site,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Global Activity**' in the 'Administration' section of the left-hand panel.

Screenshot: Global Activity

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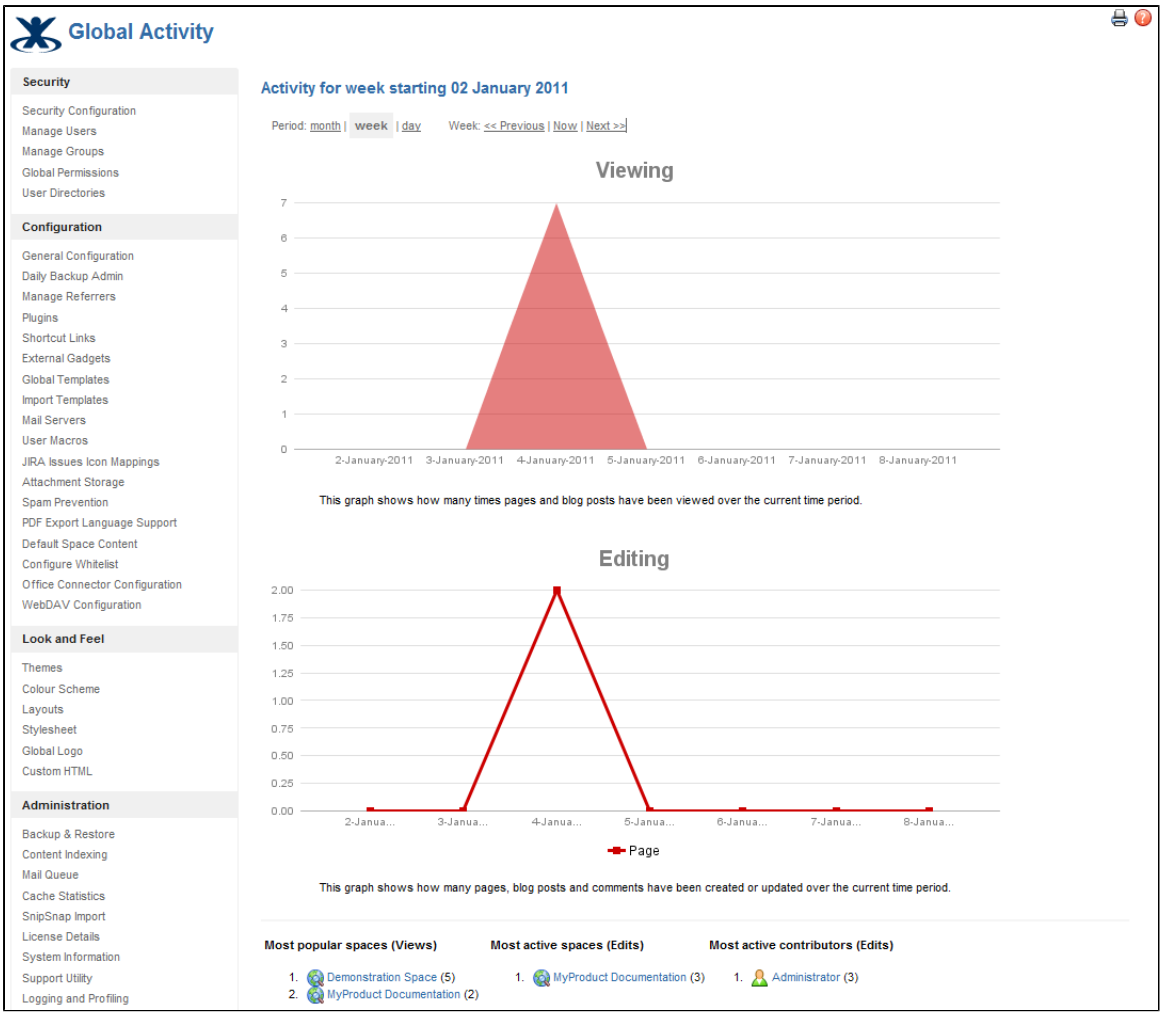

The top ten most popular and most active pages and/or blog posts will be listed, with a link to each.

Notes

- The Confluence Usage Stats plugin, which provides the 'Global Activity' screen, is known to cause performance problems on large installations. This plugin is **disabled by default**. A status report on the progress of the performance issues with this plugin is available in this issue: USGTRK-15.
- Your Confluence system administrator can enable the plugin, but please be aware of the possible impact upon your site's performance.
- The plugin is sometimes called 'Confluence Usage Tracking'.
- If your Confluence site is clustered, the global activity information will not be available.

RELATED TOPICS

How Do I Get More Statistics from Confluence?
Cache Statistics
Viewing Space Activity
Live Monitoring Using the JMX Interface
Installing and Configuring Plugins

Administrators Guide Home Confluence Documentation Home

Viewing System Properties

After adding memory, setting a proxy or changing other Java options, it can be difficult to diagnose whether the system has picked them up. This page tells you how to view the system properties that your Confluence site is using.

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> *The information on this page does not apply to Confluence OnDemand.*

In Confluence 3.0.2 and Later

You can see the expanded system properties on the 'System Information' screen of the Confluence Administration Console.

To see the system properties recognised by your Confluence installation:

1. Choose **Browse** > **Confluence Admin**.
2. Select **System Information** in the 'Administration' section of the left-hand panel.
3. Scroll down to the section titled 'System Properties'.

In Confluence Versions Earlier than 3.0.2

To find out more about what properties are being picked up, download the file systemproperties.jsp (attached to this page). Place it in your `<confluence-install>/confluence/admin` directory. Access the following URL:

```
http://<yourbaseurl>/admin/systemproperties.jsp
```

No restart of Confluence is required.

Installing Patched Class Files

Atlassian support or the Atlassian bug-fixing team may occasionally provide patches for critical issues that have been resolved but have not yet made it into a release. Those patches will be class files which are attached to the relevant issue in our JIRA bug-tracking system.

> *The information on this page does not apply to Confluence OnDemand.*

Installation Instructions for the Confluence Distribution

Follow these steps to install a patched class file:

1. Shut down your confluence instance.
2. Copy the supplied class files to `<installation-directory>/confluence/WEB-INF/classes/<subdirectories>`, where:
   - `<installation-directory>` must be replaced with your Confluence Installation directory. (If you need more information, read about the Confluence Installation Directory.)
   - `<subdirectories>` must be replaced by the value specified in the relevant JIRA issue. This value will be different for different issues. In some cases, the subdirectories will not exist and you will need to create them before copying the class files. Some issues will contain the patch in the form of a ZIP file which will contain the desired directory structure.
3. Restart your Confluence instance for the changes to become effective.

Class files in the `/WEB-INF/classes` directory of a web application will be loaded before classes located in JAR files in the `/WEB-INF/lib` directory. Therefore, classes in the first directory will effectively replace classes of the same name and package which would otherwise be loaded from the JAR files.

RELATED TOPICS

How Do I Edit Files in Confluence JAR Files?
Where are the files that used to be in my Confluence installation directory?

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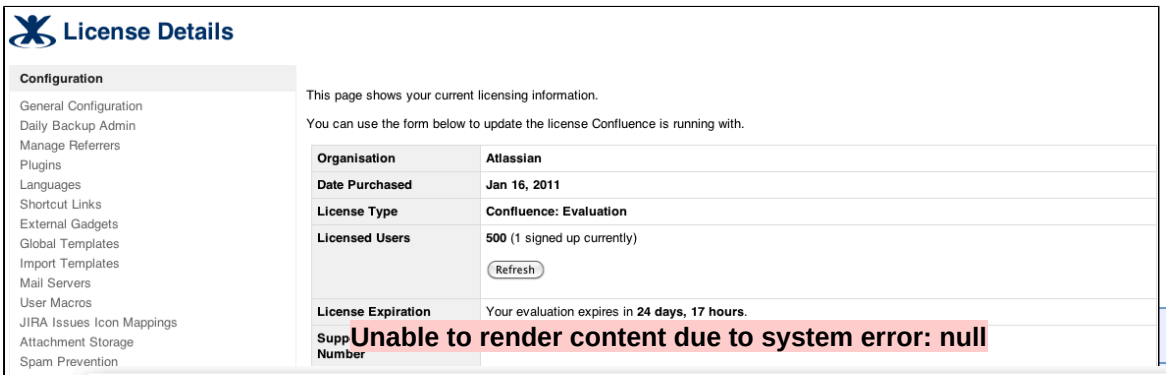
Administrators Guide Home Confluence Documentation Home

Finding Your Confluence Support Entitlement Number (SEN)

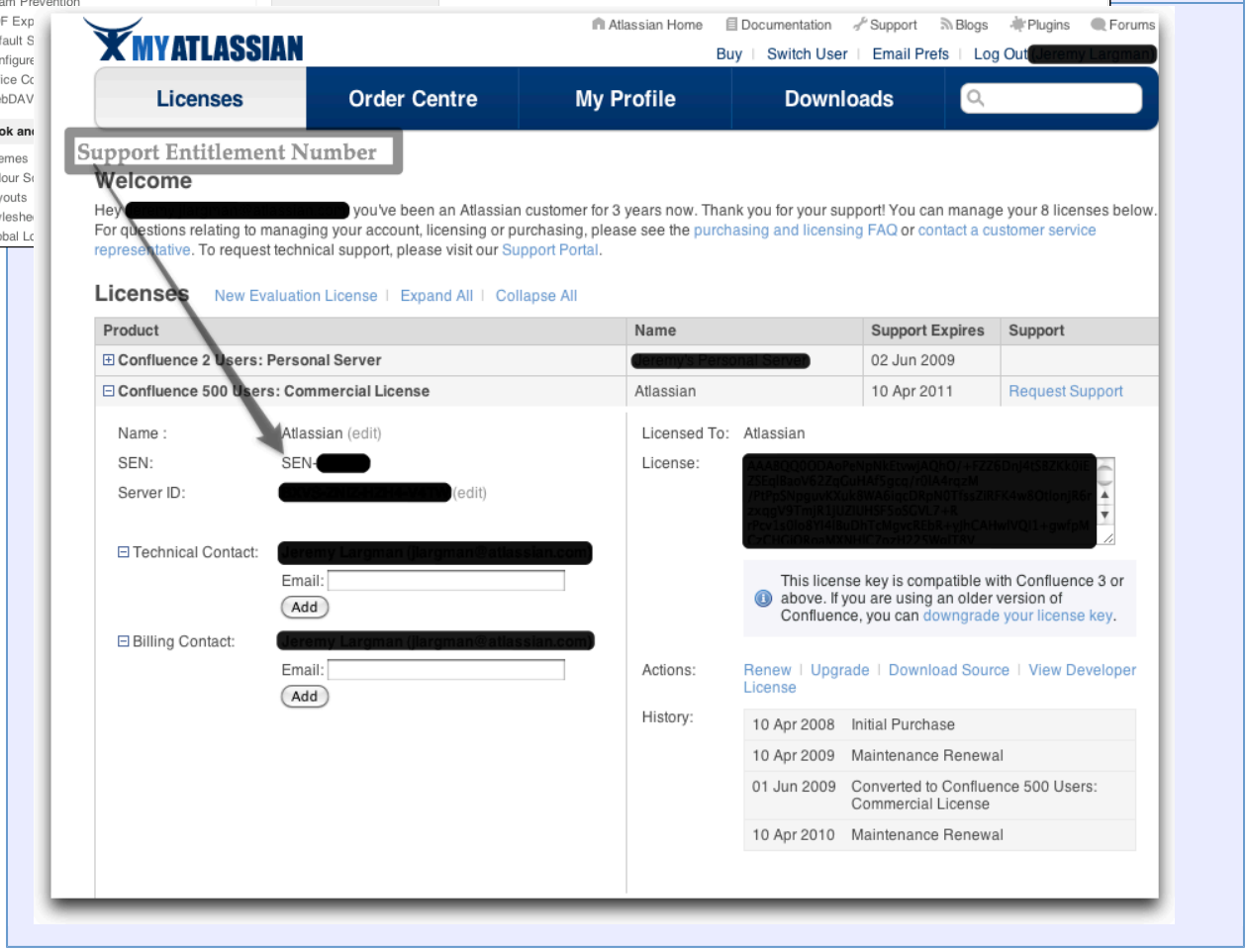
There are three ways to find you Support Entitlement Number (SEN):

Method 1: Check in the Confluence Administration Interface

Select `Administration >> License Details`. The SEN is shown:



Method 2: Log into my.atlassian.com as the Account Holder or Technical Contact



Method 3: Atlassian Invoice

Your Support Entitlement Number (SEN) appears on the third page of your Atlassian Invoice.

See Finding Your Support Entitlement Number in the support space for more general information about how Atlassian Support uses this number.

> *The information on this page does not apply to Confluence OnDemand.*

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Configuring Confluence

The pages listed below contain instructions on configuring Confluence. If you cannot find what you are looking for, try searching this documentation via the search box in the left-hand navigation panel.

- Site Configuration
  - Configuring the Site Home Page
  - Configuring the Administrator Contact Page
  - Editing the Site Title
  - Editing the Global Logo
  - Configuring the Server Base URL
  - Customising Default Space Content
  - Configuring the Destination of View Space Links
  - Editing the Site Welcome Message
  - Configuring the What's New Dialog
- Configuring Encoding
  - Character encodings in Confluence
  - Troubleshooting Character Encodings
    - "€" Euro character not displaying properly
    - MySQL 3.x Character Encoding Problems
- Configuring Mail
  - Configuring a Server for Outgoing Mail
  - Setting Up a Mail Session for the Confluence Distribution
  - Configuring the Recommended Updates Email Notification
  - The Mail Queue
- Optional Settings
  - Attachment Storage Configuration
    - Hierarchical File System Attachment Storage
  - Configuring a WebDAV client for Confluence
  - Configuring Quick Navigation
  - Enabling OpenSearch
  - Enabling the Did You Mean Feature
  - Enabling the Remote API
  - Enabling Threaded Comments
  - Enabling Trackback
- Other Settings
  - Configuring Attachment Size
  - Configuring Character Encoding
  - Configuring HTTP Timeout Settings
  - Configuring Indexing Language
  - Configuring Number Formats
  - Configuring Shortcut Links
  - Configuring Time and Date Formats
  - Known Issues with Enterprise or Webhosting environments
- Configuring System Properties
  - Recognised System Properties
- Application Server Configuration
  - Application Server URL encoding
    - Configuring Tomcat's URI encoding
  - Managing Application Server Memory Settings
  - Switching to Apache Tomcat
- Database Configuration
  - Known Issues For Supported Databases
    - Configuring Database Character Encoding
  - Database Setup Guides
    - Database JDBC drivers
    - Database Setup for Oracle

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- Database Setup for SQL Server
  - Configuring a SQL Server Datasource in Apache Tomcat
- Database Setup For Any External Database
- Database Setup for PostgreSQL
  - Configuring a PostgreSQL Datasource in Apache Tomcat
- Database Setup For MySQL
  - Configuring a MySQL Datasource in Apache Tomcat
- Creating Database Schema Manually
- Migrate to Another Database
  - The Embedded HSQLDB Database
- Troubleshooting the Embedded Database (HSQL DB)
  - Connecting to HSQLDB using DBVisualizer
    - Database Tables Reference
- Troubleshooting External Database Connections
  - Configuring database query timeout
- Improving Database Performance
  - Creating a Lowercase Page Title Index
- Surviving Database Connection Closures
- Webserver Configuration
  - Configuring Web Proxy Support for Confluence
  - Running Confluence behind Apache
    - General Apache Configuration Notes
    - Using Apache with mod_proxy
    - Using Apache with virtual hosts and mod_proxy
    - Using Apache with mod_jk
    - Using mod_rewrite to Modify Confluence URLs
    - Configuring Apache to Cache Static Content via mod_disk_cache
- Starting Confluence Automatically on System Startup
  - Start Confluence Automatically on Linux
  - Start Confluence Automatically on Windows as a Service
- Configuring a Large Confluence Installation
- Configuring Logging
  - Troubleshooting SQL Exceptions
- Registering External Gadgets
  - Configuring a URL Whitelist for Gadgets
- Confluence Data Model

RELATED TOPICS

Tracking Customisations Made to your Confluence InstallationConfiguring Confluence

Administrators Guide Home Confluence Documentation Home

Site Configuration

- Configuring the Site Home Page
- Configuring the Administrator Contact Page
- Editing the Site Title
- Editing the Global Logo
- Configuring the Server Base URL
- Customising Default Space Content
- Configuring the Destination of View Space Links
- Editing the Site Welcome Message
- Configuring the What's New Dialog

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Configuring the Site Home Page

You can configure Confluence to send users to any of the space home pages on the site when they log in, rather than to the dashboard.

To configure the site-wide home page:

1. Go to the '**Administration Console**' and click '**General Configuration**' in the left-hand panel.
2. Click '**Edit**' next to the '**Site Configuration**' panel.
3. Select a space from the '**Site Homepage**' dropdown menu. When users log in, Confluence will open the home page of the space you choose here.
    a. The spaces available to set as the site home page will depend on the access permissions of the space and the site.
        i. The site home page must be accessible to the '**confluence-users'** group
        ii. If the site allows anonymous access, the site home page must also be accessible to **anony mous users**, that is, people who have not logged in to Confluence.
4. Ensure that the '**View Space Goes to Browse Space**' option is set to '**Off**' if you want users to be sent to the space **home page** and not the **space summary page**.
5. Click the '**Save**' button at the bottom of the screen.

Notes

- The user's personal settings will override the global setting.

Related Topics

No content found for label(s) site-configuration.

Administrators Guide Home Confluence Documentation Home

Configuring the Administrator Contact Page

The administrator contact page is a form that allows a user of Confluence to send a message to the administrators of their Confluence site. (In this context, administrators are those users who are members of the *'confluence-administrators'* group. See the explanation of site administrators.)

The title of the administrator contact page is 'Contact Site Administrators'. Typically, Confluence users may get to this page by clicking a link on an error screen such as the '500 error' page.

On this page:

- Customising the Administrator Contact Message
    - The Default Administrator Contact Message
    - Customisation Examples
- Disabling the Administrator Contact Form
- Configuring Spam Prevention
- Related Topics

Customising the Administrator Contact Message

You can customise the message that is presented to the user on the '**Contact Site Administrators**' page.

To edit the administrator contact message:

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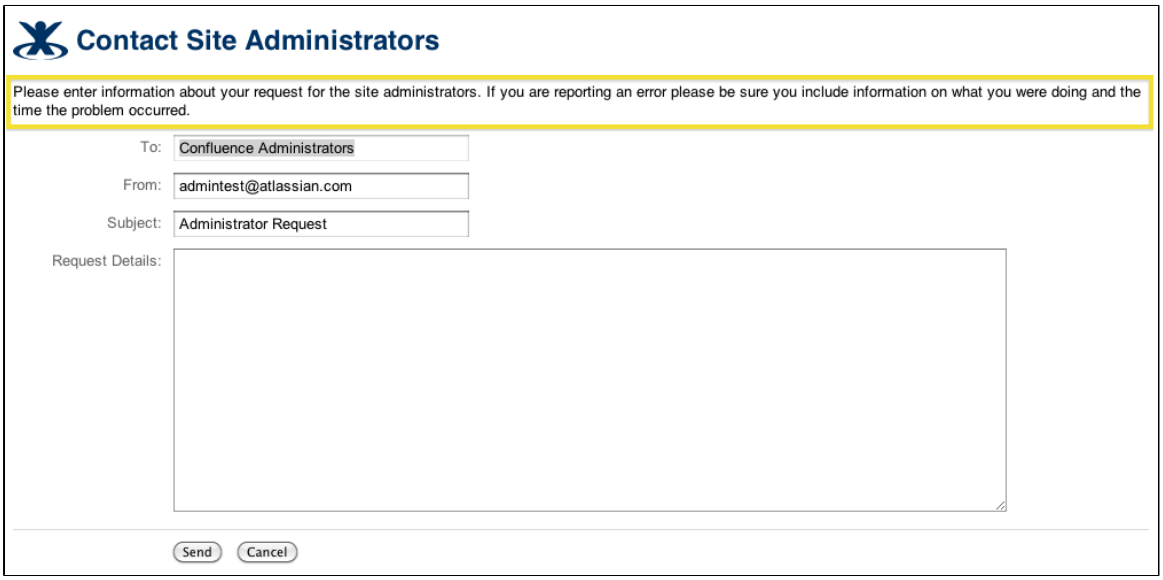
1. Go to the 'Administration Console' and click **General Configuration** in the left-hand panel.
2. Click **Edit** at the top of the 'Site Configuration' section.
3. Enter your text in the **Custom Contact Administrators Message** box. You can enter any text or Confluence wiki markup.
4. Click **Save**.

The Default Administrator Contact Message

By default, the 'contact administrators message' looks much like the highlighted area in the screenshot below, starting with 'Please enter information...'.

Screenshot: The default 'Contact Site Administrators' message



To restore the message to its default simply remove the custom message you entered when following the instructions above, so that the 'Custom Contact Administrators Message' field is empty.

Customisation Examples

When entering the 'Custom Contact Administrators Message', you can use text and Confluence wiki markup.

This is similar to entering your own text and markup for the 'Site Welcome Message'. For examples of the kind of customisations possible, take a look at the guide to editing the site welcome message.

Disabling the Administrator Contact Form

If you prefer to disable the ability for users to send an email message to the site administrators, you can disable the form portion of this screen. You can only disable the form if you first provide a 'Custom Contact Administrators Message' as described above.

To enable or disable the administrator contact form:

1. Go to the 'Administration Console' and click **General Configuration** in the left-hand panel.
2. Click **Edit** at the top of the 'Site Configuration' section.
3. Select **on** or **off** for the 'Contact Administrators Form'.
4. Click **Save**.

Configuring Spam Prevention

You can configure Confluence to use Captcha to help prevent spam, including the spamming of Confluence administrators. The administrator contact form is covered by the site-wide Captcha settings as documented in C

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onfiguring Captcha for Spam Prevention.

Related Topics

Contacting Confluence Administrators
Configuring Captcha for Spam Prevention

Editing the Site Title

The site title appears in your browser's title bar. By default, it is set to 'Confluence'.

To change the title of your Confluence site:

1. Go to the '**Administration Console**' and click '**General Configuration**' in the left-hand panel.
2. Click '**Edit**' at the top of the '**Site Configuration**' screen.
3. Enter a new title for your site in the input field next to '**Site Title**'.
4. Click '**Save**'.

Related Topics

No content found for label(s) site-configuration.

Administrators Guide Home Confluence Documentation Home

Editing the Global Logo

By default, the global logo appears beside the page title on all pages in the site. You can disable the logo or replace it with one of your own.

You need to be a Confluence Administrator to configure the global logo.

To configure the global logo:

1. Choose **Browse** > **Confluence Admin**.
2. Click **Global Logo**, under 'Look and Feel' in the left panel.
3. Click **Off** to disable the current logo, or click **Browse** to upload a new logo.

Related Topics

No content found for label(s) site-configuration.

Administrators Guide Home Confluence Documentation Home

Configuring the Server Base URL

The **Server Base URL** is the URL via which users access Confluence. The base URL **must** be set to the same URL by which browsers will be viewing your Confluence site.

Confluence will automatically detect the base URL during setup, but you may need to set it manually if your site's URL changes or if you set up Confluence from a different URL to the one that will be used to access it publicly.

You need to have System Administrator permissions in order to perform this function.

> *The information on this page does not apply to Confluence OnDemand.*

To configure the Server Base URL:

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1. In Confluence, open the '**Browse**' menu and select '**Confluence Admin**'. The 'Administration Console' will open.
2. Click '**General Configuration**' in the left-hand panel.
3. Click the '**Edit**' button next to '**Site Configuration**'.
4. Enter the new URL in the '**Server Base URL**' text box.
5. '**Save**' your changes.

Example

If Confluence is installed to run in a non-root context path (that is, it has a context path), then the server base URL should include this context path. For example, if Confluence is running at:

```
http://www.foobar.com/confluence
```

then the server base URL should be:

```
http://www.foobar.com/confluence
```

Notes

- **Using different URLs.** If you configure a different base URL or if visitors use some other URL to access Confluence, it is possible that you may encounter errors while viewing some pages.
- **Changing the context path.** If you change the context path of your base URL, you may also need to edit the web server's `server.xml`file to reflect the new path:
  1. Stop the Confluence server.
  2. Go to your Confluence 'destination directory'. This is the directory where the Confluence installation files are stored. For example, `C:\Program Files\Atlassian\Confluence`. Let's call this directory '`{CONFLUENCE_INSTALLATION}`'.
  3. Edit the configuration file at `{CONFLUENCE_INSTALLATION}\conf\server.xml`.
  4. Change the value of the `path` attribute in the `Context` element to reflect the context path. For example, if Confluence is running at `http://www.foobar.com/confluence`, then your `path` a ttribute should look like this:

     ```
     <Context path="/confluence" docBase="../confluence" debug="0" reloadable=
     ```
  5. Save the file.

RELATED TOPICS

No content found for label(s) site-configuration.

Customising Default Space Content

Confluence Administrators can define **default content for a space home page**. This content will appear on the home page whenever someone adds a new space. You can define different content for global spaces and for personal spaces.

The default content will appear only for new spaces that are created after you have defined the content. Content in existing home pages will not be changed.

To define default content for home pages in global spaces:

1. Choose **Browse** > **Confluence Admin**.

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2. Click **Default Space Content** under 'Configuration' in the left-hand panel.
3. The **Space Home Pages** tab will open on the 'Default Space Content' page.
4. Click **Customise**. (This step is necessary only if the content is still set to the default. If it has already been customised, the 'Customise" option will not appear.)
5. Enter the content that you want to appear on the home page for new global spaces. You can use special characters within the content as variables (place holders). Confluence will replace the curly brackets and digits with the corresponding information as shown below:
    - **{0}** — The space name.
6. Click **Save**.

To define default content for home pages in personal spaces:

1. Choose **Browse** > **Confluence Admin**.
2. Click **Default Space Content** under 'Configuration' in the left-hand panel.
3. The 'Default Space Content' screen will open. Click the **Personal Space Home Pages** tab.
4. Click **Customise**. (This step is necessary only if the content is still set to the default. If it has already been customised, the 'Customise" option will not appear.)
5. Enter the content which you want to appear on the home page for new personal spaces. You can use special characters within the content as variables (place holders). Confluence will replace the curly brackets and digits with the corresponding information as shown below:
    - **{0}** — The space owner's full name.
    - **{1}** — The space owner's e-mail address.
    - **{2}** — Any personal information the space owner has entered on their user profile in the 'Information about me' section.
6. Click the '**Save**' button.

You can also undo all customisations of the default home page content, and go back to the default content as originally supplied with Confluence.

To restore the original default content:

1. Choose **Browse** > **Confluence Admin**.
2. Click **Default Space Content** under 'Configuration' in the left-hand panel.
3. Choose either the **Space Home Pages** tab or the **Personal Space Home Pages** tab, as required.
4. Click **Revert**. (This option appears only if the content has been customised. If the content is still set to the default, the 'Revert' option is not present.)

Screenshot: Defining default space content

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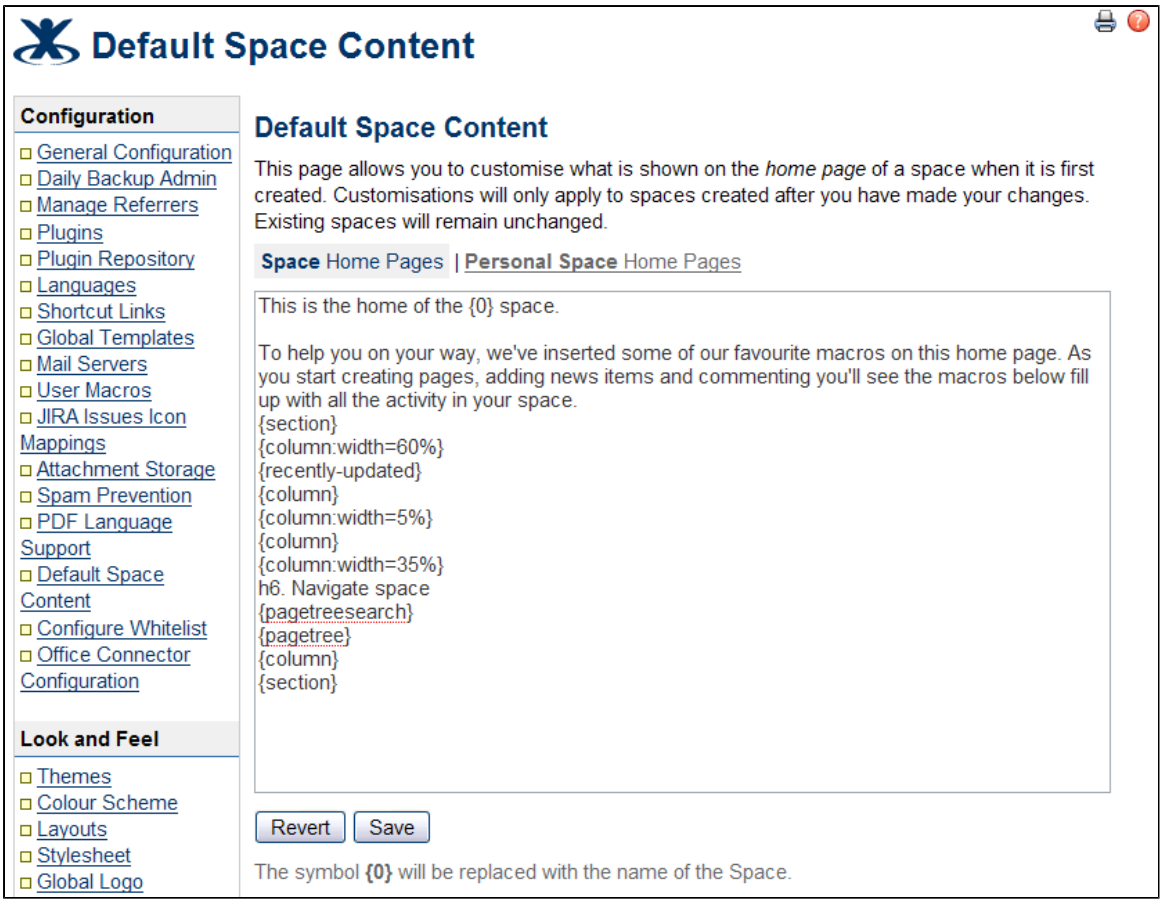

Configuring the Destination of View Space Links

By default, when you click a space link in order to view the space, you are taken to the space's home page. If you wish, you can configure Confluence to redirect all space links on the site to the '**Browse Space**' view of the space instead.

To direct the space link to the 'browse space' view:

1. Go to the '**Administration Console**' and click '**General Configuration**' in the left-hand panel.
2. Click '**Edit**' at the top of the '**Site Configuration**' screen.
3. Select '**On**' next to '**View Space goes to Browse Space**'.
4. Click '**Save**'.

Related Topics

No content found for label(s) site-configuration.

Administrators Guide Home Confluence Documentation Home

Editing the Site Welcome Message

The site welcome message appears at the top left of the Confluence dashboard, between the site logo and the list of spaces. You can use it to display an introduction to the site or a message of the day.

To edit the site welcome message:

1. Go to the **Administration Console** and click **General Configuration** in the left-hand panel.
2. Click **Edit** at the top of the **Site Configuration** section.
3. Type into the **Site Welcome Message** box. You can enter text or Confluence wiki markup.
4. Click **Save**.

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On this page:

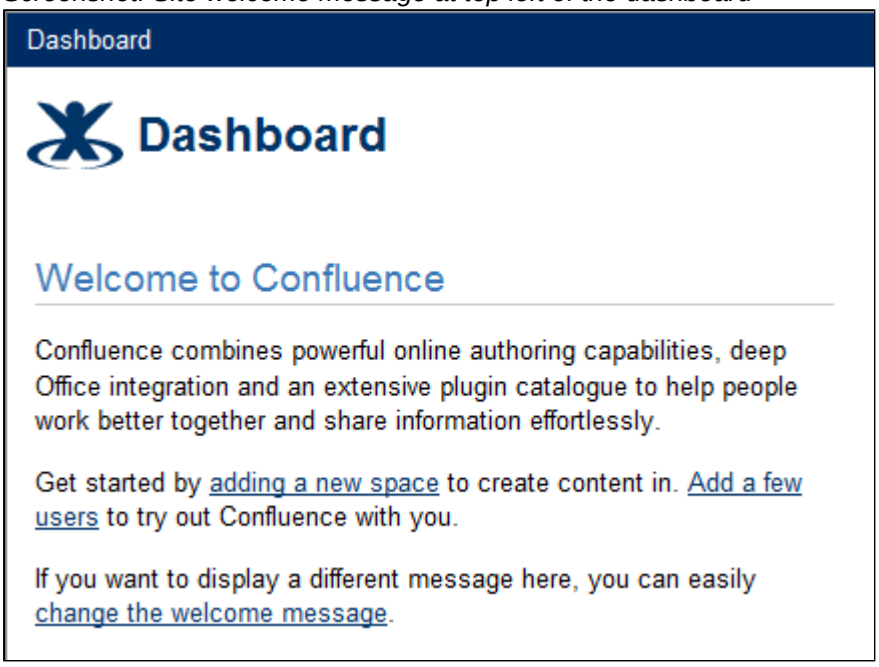
- The Default Site Welcome Message
- Example 1. Adding a Simple Welcome Message
- Example 2. Formatting your Welcome Message
- Example 3: Including Content from Another Page
- Example 4. Adding Blog Posts Filtered by Labels to your Welcome Message
- How We Use the Site Welcome Message at Atlassian
- Related Topics

The Default Site Welcome Message

By default, the site welcome message looks more or less like the screenshot below, starting with the words **Welcome to Confluence** and ending above the list of spaces.

To restore the default site welcome message and remove your customised message, just delete the text in the **Site Welcome Message** text box. Provided that you have not customised Confluence, your Confluence users will see the default message if there is no text in the **Site Welcome Message** text box in your Administration Console.

Screenshot: Site welcome message at top left of the dashboard



Example 1. Adding a Simple Welcome Message

Let's say you want to display a simple message like this at the top of your dashboard:

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To produce the above welcome message, follow the step-by-step instructions above and add the following wiki markup into the **Site Welcome Message** text box:

```
h2. Welcome to the MyCompany Wiki

New to MyCompany? [Find out about your induction|DS:Company Induction].

Otherwise, [have fun|DS:Have Fun], because you can't always work!
```

In our example, the links point to two pages in the Confluence Demonstration Space, 'DS'. If your Confluence site does not have a 'DS' space, the links will be broken. That's OK, because you will want to replace them with links to your own pages anyway. This is just an example.

Example 2. Formatting your Welcome Message

Now let's say you want to put the words into a panel and add some spacing, so that your dashboard looks like this:

To produce the above welcome message, follow the step-by-step instructions above and add the following wiki markup into the **Site Welcome Message** text box:

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```
{panel}
h2. Welcome to the MyCompany Wiki

New to MyCompany? [Find out about your induction|DS:Company Induction].

Otherwise, [have fun|DS:Have Fun], because you can't always work!
\\
\\
{panel}
\\
```

Example 3: Including Content from Another Page

It may be easier to write your welcome message on a normal Confluence page and include the page into the **Site Welcome Message** text box. Using a normal page means that you can:

- Write the message using the editor rather than wiki markup.
- Preview the content of the welcome message before saving it, using the page editor's preview feature.
- Allow other people, who are not Confluence administrators, to edit the welcome message.

To include content from another page:

1. Create a Confluence page as usual and add your welcome message as the page content. Remember to limit the size of the content, because it must fit nicely onto the dashboard. For this example, let's assume you put your page in the 'DS' space and the title of your page is 'Dashboard Welcome Message'.
2. Add page permissions or space permissions to suit your requirements. You may want to restrict the editing of the page to a group of people, or you may want to allow any employee to edit the page. This will determine who can update the welcome message on the dashboard.
3. Follow the step-by-step instructions above and add the following wiki markup into the **Site Welcome Message** text box:

   ```
   {include:DS:Dashboard Welcome Message}
   ```

   In the above example we use the `{include}` macro to display the content from the given page. See the guide to the include macro. In our example, the space key 'DS' and the page name 'Dashboard Welcome Message' are variables. You can use any space and page you like.
4. Save the site welcome message. The dashboard will display the content of the page immediately. Similarly, if you or anyone else edits the page, the welcome message on the dashboard will change as soon as you save the page.

Example 4. Adding Blog Posts Filtered by Labels to your Welcome Message

Looking for more advanced ideas?

This video shows you how to display a list of blog posts on your dashboard and how to choose the blog posts by labelling them.

Video title: '*Bring "Must Read" Content to the Dashboard*'

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Summary of the procedure shown in the video:

1. Create a page containing the `{blog-posts}` macro. Choose to display only the blog posts that are labelled with '**dashboard-blog**'. (This is just an example of a label. You can choose any label text you like.) See the guide to the Blog Posts macro.
2. Add the label to a blog post. (In the video, we just add the label to one blog post. You will probably want to add it to a number of posts.)
3. Edit your site welcome message to include the above page, using the include macro.

app.episodic.com

How We Use the Site Welcome Message at Atlassian

Atlassian makes great use of the welcome message on our internal Confluence wiki. Here is an example of the dashboard as it appeared on a certain day:

Dashboard

Dashboard

Experimental blogroll: All posts labelled "extranet-dashboard"

Title	Author	Date Posted
Open Studio - open source dev powered by JIRA Studio	Michael Knighten	Jun 25, 2009
Actioning Your Feedback - June Update	Jodette Cleary	Jun 23, 2009
Feedback wanted - Employee Recognition Program	Jodette Cleary	Jun 23, 2009
The Big Build System Update	James Dumay	Jun 23, 2009
Knowledge Sharing Deputy Position Open	Agnes Ro	Jun 19, 2009
Limiting noise on extranet	Don Willis	Jun 18, 2009

If you want to promote a good post to stand out from the eac white noise, just add the label **extranet-dashboard**. To avoid inflation please use the label carefully.

(edit me)

The welcome message itself contains just an `{include}` macro:

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```
{include:STAFF:Extranet Homepage}
```

The include macro allows you to include the content an entire page onto another page. This particular page lives in the STAFF space, where anyone can edit it. It usually shows some amusing picture or company-wide notice. The featured photo generally changes once a week or so – whenever someone feels like changing it. The page itself has over 600 edits by many different people.

The page also includes an edit link, for quick access to change the welcome message. We have the Composition plugin installed which allows you to use the {float} macro.

Our wiki markup in the 'Extranet Homepage' page looks something like this:

```
!Clover Dukey.jpg|width=200!

{nodisplay}
This is the content that goes on the Extranet homepage, above the spaces list.

NOTE: KEEP YOUR PICTURES SMALL (<80KB) -- USE JPG FOR PICTURES, WIDTH 400
{nodisplay}
h4. Experimental blogroll: All posts labelled "extranet-dashboard"

{blog-posts:content=titles|labels=extranet-dashboard|spaces=@all|max=10}
If you want to promote a good post to stand out from the eac white noise,
just add the label *extranet-dashboard*. To avoid inflation please use the
label carefully.

{float-right}
([edit me|http://extranet.atlassian.com/pages/editpage.action?pageId=603422736])
{float-right}
```

Related Topics

No content found for label(s) site-configuration.

Administrators Guide Home Confluence Documentation Home

Configuring the What's New Dialog

The 'What's New' dialog automatically displays when a user first logs in after a major Confluence upgrade (e.g. upgrading to Confluence 4.0). The dialog displays a summary of the new features for the release, sourced from our website (by default).

Confluence administrators can configure the behaviour of the 'What's New' dialog, as follows:

- Change the URL that the 'What's New' dialog retrieves information from.
- Disable the dialog.

On this page:

- Changing the 'What's New' Dialog URL
- Disabling the 'What's New' Dialog
- Notes

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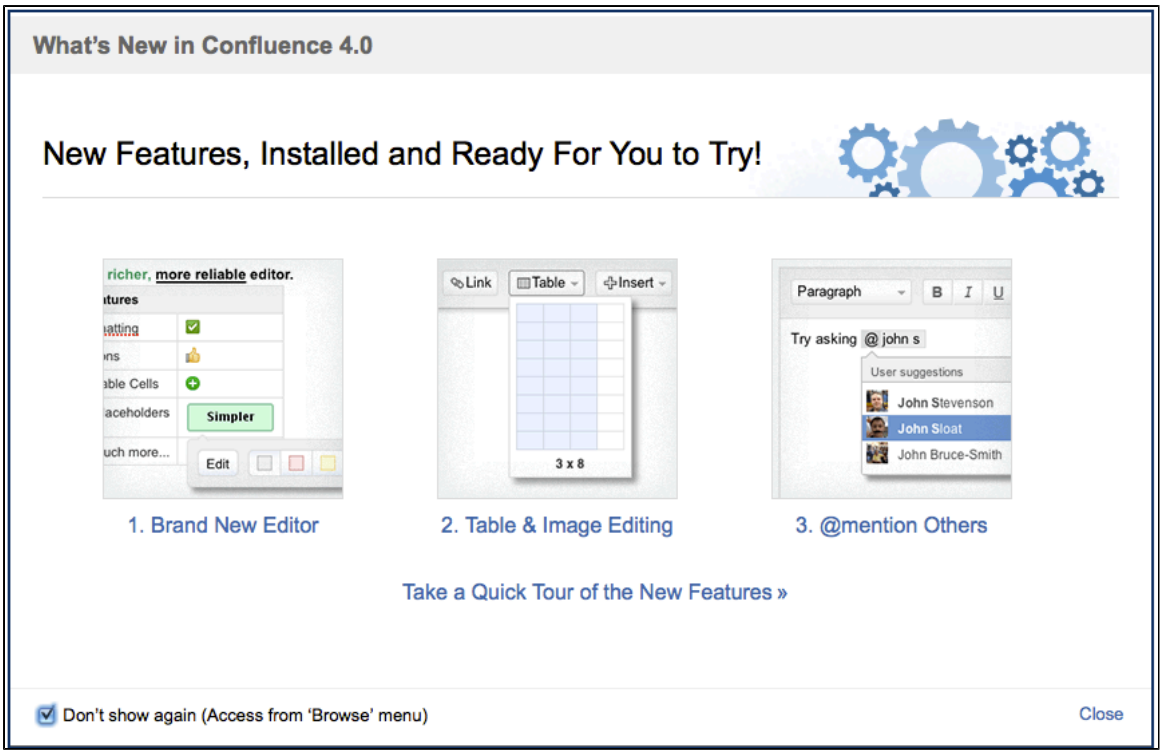

Screenshot above: An example of the 'What's New' dialog

Changing the 'What's New' Dialog URL

The 'What's New' dialog URL is stored in your Confluence `help-paths.properties` file. This URL is a concatenation of the `help.prefix` property with the `help.whats.new.iframe.link`.

Before you begin:

- The `help.prefix` property also defines the base URL for Confluence help links, i.e. help links in the Confluence application.

To change the 'What's New' Dialog URL:
Follow the instructions in the 'Changing the Links for Individual Help Pages' section on Local Confluence Documentation. You will need to update the '`help.prefix`' and '`help.whats.new.iframe.link`' properties, as desired.

For example, you may have installed your Confluence documentation behind a firewall at `http://www.example.com/` and created a page `http://www.example.com/whatsnew` that you use for change management. In this case, you would do the following:

- Set `help.prefix` to `http://www.example.com/`
- Set `help.whats.new.iframe.link` to `whatsnew`

There is an additional property '`help.whats.new.full.link`'. This is only used if the content pointed to by the updated URL isn't loaded in 10 seconds, in which case a 'timeout' screen is displayed with a link to the full 'What's New' content. For locally-hosted pages you can just set this property to the same value as `help.whats.new.iframe.link`.

Disabling the 'What's New' Dialog

The 'What's New' dialogue is enabled via a plugin. To disable the 'What's New' dialogue, you need to disable the '**Confluence What's New**' plugin in Confluence.

To disable the 'Confluence What's New' plugin:
Follow the instructions on Disabling or Enabling a Plugin. Please note, the '**Confluence What's New**' plugin is a

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'System Plugin'. Click '**Show System Plugins**' on the Plugins administration page to display the system plugins.

Notes

Related Topics

Disabling or Enabling a Plugin
Local Confluence Documentation

Configuring Encoding

Confluence allows the configuration of which character encoding is used to deliver pages.

> While different character encodings are supported, we strongly recommend that **UTF-8** is used. Confluence is heavily tested on UTF-8, and users are likely to have less problems with this encoding than others.

> **Mac Users**
>
> Mac Users please note that **MacRoman** encoding is compatible with UTF-8. You do not need to change your encoding settings if you are already using MacRoman.

To avoid problems with character encoding, make sure the encoding used across the different components of your system are the same:

- Configuring Database Character Encoding
- Application Server URL encoding
- Confluence Character Encoding

If you are having problems with the character encoding in Confluence, please see the Troubleshooting Character Encodings page.

> *The information on this page does not apply to Confluence OnDemand.*

Character encodings in Confluence

Character encoding advice

In general, **always set all character encodings to UTF-8**. That includes database, JDBC drivers, application server, filesystem and Confluence.

In certain isolated cases (e.g. Microsoft Windows), it might not be possible to use a fully Unicode filesystem (that is, a default Windows install doesn't support Unicode filenames properly). If so, stick with UTF-8 for the other two and be aware that your operating system might have limitations around international attachments (pre-2.2), backup and restore of international data, etc.

The remainder of the document explains the encoding settings that are applicable in Confluence and how they relate to application behaviour.

> *The information on this page does not apply to Confluence OnDemand.*

Where character encoding is used

There are three places that character encoding matters to Confluence:

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1. **Database encoding** - usually the most important; it is where almost all user data is stored.
2. **Filesystem encoding** - important for attachment storage (pre-2.2), reading Velocity templates and writing exported files.
3. **HTTP request and response encoding** - important for form parsing, correct rendering by the browser and browser interpretation of encoded URLs.

Problems generally arise when Confluence thinks one of the above encoding is different to what it actually is. For example, Confluence might believe the database is using ISO-8859-1 encoding, when in fact it is UTF-8 encoded.

Java character encoding

Java *always* uses the multibyte UTF-16 character encoding for all `String` data*. This means that each of the encodings above defines how, at that particular point, characters are converted to and from Java's native UTF-16 format into some other format that the browser, filesystem or database might understand.

So when a request comes in to Confluence, we convert it from the request encoding to UTF-16. Then we store that data into the database, converting from UTF-16 to the database's encoding. Retrieving information from the database and sending it back to the browser is the same process in the opposite direction.

*A `char` represents single Unicode code point from the Base Multilingual Plane (BMP), encoded as UTF-16. Multiple `chars` are used as surrogate pairs for characters beyond U+FFFF.

Problems with character encodings

If Confluence has the wrong idea about encoding for one of the above, it manifests itself in different ways:

1. Incorrect database encoding - user data is corrupted between saving and restoring from the database. This often happens after a delay, as we cache data as it is written to the database and only later retrieve the corrupted copy from the database.
2. Incorrect/non-Unicode filesystem encoding - international filenames break attachment download/upload/removal (pre-2.2); exports break with international content or attachments.
3. Incorrect HTTP encoding - incorrect encoding selected by browser, resulting in incorrect rendering of characters. Changing browser encoding causes page to render properly. Broken URLs when linking to pages or attachments with non-ASCII characters.

Configuration of character encodings

The **Confluence character encoding** is a configuration setting found in `Administration > General Configuration`, and at runtime available in Settings.defaultEncoding. It is subsequently used in the following parts of the system:

- ConfluenceWebWorkConfiguration sets `webwork.i18n.encoding` to the this encoding, which WebWork uses in the response Content-Type header.
- AbstractEncodingFilter sets the HTTP request encoding to this encoding. This seems unnecessary, since the Content-Type header from the client should include the encoding used. This affects form submissions and file uploads.
- VelocityUtils reads in Velocity templates using this encoding when reading templates from disk.
- AbstractXmlExporter creates its output using this encoding.
- GeneralUtil uses this encoding when doing URLEncode and URLDecode. Different browsers have different support for character sets in URLs, so it's uncertain how much benefit this provides.

In summary, changing the Confluence character encoding will change your **HTTP request and response encoding** and your **Filesystem encoding** as used by exports and velocity templates.

The **database encoding** is the responsibility of your JDBC drivers. The drivers are responsible for reading and writing from the database in its native encoding and translating this data to and from Java Strings (which are UTF-16). For some drivers, such as MySQL, you must set Unicode encoding explicitly in the JDBC URL. For others, the driver is smart enough to determine the database encoding automatically.

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Ideally, your database itself should be in a Unicode encoding (and we recommend doing this for the simplest configuration), but that is not necessary as long as:

- the database encoding supports all the characters you want to store in Confluence
- your JDBC drivers can properly convert from the database encoding to UTF-16 and vice-versa.

The **filesystem encoding** is mostly ignored by Confluence, except for the cases where the above configuration setting above plays a part (exports, velocity). When attachments are uploaded, they are written as a stream of bytes directly to the filesystem. It is the same when they are downloaded: the bytes from the file InputStream are written directly to the HTTP response.

In some places in Confluence, we use the *default filesystem encoding* as determined by the JVM and stored in the `file.encoding` system property (it can be overridden by setting this property at startup). This encoding is used by the Java InputStreamReader and InputStreamWriter classes by default. This encoding should probably never be used; for consistent results across all filesystem access we should be using the encoding set in the General Configuration.

In certain cases we explicitly hard-code the encoding used to read or write data to the filesystem. Two important examples are:

- importing Mbox mailboxes which are known to be ISO-8859-1
- Confluence Bandana config files are always stored as UTF-8.

Some application servers, Tomcat for example, have an encoding setting that modifies Confluence URLs before they reach the application. This can prevent access to international pages and attachments (really anything with international characters in the URL). See configuring your Application Server URL encoding.

RELATED TOPICS:

- Configuring Database Character Encoding
- Troubleshooting Character Encodings

Troubleshooting Character Encodings

Often users may have problems with certain characters in a Confluence instance. Symptoms may include:

- Non-ASCII characters appearing as question marks (?)
- Page links with non-ASCII characters not working
- Single characters being displayed as two characters
- Garbled text appearing

In most cases, it is due to a mis-configuration in one of the components that Confluence uses.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Follow these steps to diagnose the problem:

1. Run the encoding test

Confluence includes an encoding test that can reveal problems with your configuration.

To perform the test, access the Encoding Test page via the `<confluence base-url>/admin/encodingtest.action` page on your Confluence instance. You will be required to copy and paste a line of text and submit a form. The test will take the text and pass it through Confluence, the application server and the database, and return the results.

You should also test pasting some sample text (Japanese for example) if you are experiencing problems with a specific language.

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Example:

```
http://confluence.atlassian.com/admin/encodingtest.action
```

or

```
http://<host address>:<port>/admin/encodingtest.action
```

If the text displayed in the encoding test is different to what was entered, then there are problems with your character encoding settings.

A successful test looks like the following:

The encoding test has now been run. Below, you can compare the raw text delivered from Confl
a round-trip through the database. All the test results should appear identical.

Iñtërnâtiônàlizætiøn	This image is how all of the test results below *should* appear. this page, and all of your System Information.

Test 1: Raw text

This is the test string generated in Confluence

Iñtërnâtiônàlizætiøn

Test 2: Form submission

This is the test string pasted by you into the web form and submitted back to Confluence

Iñtërnâtiônàlizætiøn

Test 3: Database round-trip (select as LOWER)

This is the string from Test 2 after being stored in the database and then retrieved

iñtërnâtiônàlizætiøn

Expected result (converting Java string to lowercase)

iñtërnâtiônàlizætiøn

Test 4: Database round-trip (select as UPPER)

This is the string from Test 2 after being stored in the database and then retrieved

IÑTËRNÂTIÔNÀLIZÆTIØN

Expected result (converting Java string to uppercase)

IÑTËRNÂTIÔNÀLIZÆTIØN

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> **MySQL 3.x**
>
> MySQL 3.x is known to have some problems with the upper- and lower-casing of some characters, and may fail the last two tests. For more information, see MySQL 3.x Character Encoding Problems.

2. Ensure the same encoding is used across all components

As mentioned in the Configuring Encoding document, the same character encoding should be used across the database, application server and web application (Confluence).

- To change the character encoding used in **Confluence**, see Configuring Character Encoding.
- To change the character encoding used in the **application server**, please ensure you set the Application Server URL encoding and view your application server's documentation on any other settings required to enable your encoding.
- To change the character encoding used in the **database**, see Configuring Database Character Encoding.

3. Requesting support

If there are still problems with character encoding after following the above steps, create a support request, and our support staff will aid in solving your problem.

Entering in the following details will help us to identify your problem:

- Attach screenshots of the problem
- Attach the results of the encoding test (above)
- Select which application server (and version) you are using
- Select which database (and version) you are using
- Copy the contents of the System Information page into the 'Description' field

"€" Euro character not displaying properly

The € (euro) symbol is a three byte character, with byte values in file (UTF-8) of 0xE2, 0x82, 0xAC.

Sometimes, if the character encoding is not set consistently among all participating entities of the system, Confluence, server and the database, one may experience strange behaviour.

> ...
> I write a page with a Euro sign in it (€). All is well, the Euro sign shows up in the wiki markup text-box, and the preview, and the display of the saved page.
> One day later, the Euro sign has changed into a question mark upside down!
> ...
> What is going on? Why does the Euro sign mysteriously change? How do I prevent it?

Interestingly enough the character encoding test passes with no problems, demonstrating that Confluence and the connected Database both recognise the € symbol.

> *The information on this page does not apply to Confluence OnDemand.*

There are two potential reasons for this behaviour:

Database and Confluence is using utf-8 encoding. The connection is not.

When data transferred to it via the connection which does not use utf-8 encoding gets encoded incorrectly. Hence, updating the connection encoding may resolve this problem from now on, yet it probably would not affect already existing data.

Database is not using utf-8. Confluence and your connection are.

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If your Database encoding is not set to UTF-8, yet is using some other encoding such as *latin1*, it could be one of the potential reasons why you lose the "€" characters at some stage. It could be occurring due to **caching**. When Confluence saves data to the database, it may also keep a local cached copy. If the database encoding is set incorrectly, the Euro character may not be correctly recorded in the database, but Confluence will continue to use its cached copy of that data (which is encoded correctly). The encoding error will only be noticed when the cache expires, and the incorrectly encoded data is fetched from the database.

> For instance the *latin1* encoding would store and display all 2-byte UTF8 characters correctly except for the euro character which is replaced by '?' before being stored. As Confluence's encoding was set to UTF-8, the 2-byte UTF-8 characters were stored in *latin1* database assuming that they were two *latin1* different characters, instead of one utf8 character. Nevertheless, this is not the case for 3-byte utf8 characters, such as the Euro symbol.

Please ensure that you set the character encoding to UTF-8 for all the entities of your system as advised in this guide.

MySQL 3.x Character Encoding Problems

MySQL 3.x is known to have some problems upper- and lower-casing certain (non-ASCII) characters.

Diagnosing the problem

1. Follow the instructions for Troubleshooting Character Encodings.
2. If the upper- and lower-cased strings displayed on the Encoding Test are different, then your database is probably affected.

An example (faulty) output of the Encoding Test is shown below:

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Screenshot: Encoding Test Output

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The encoding test has now been run. Below, you can compare the raw text delivered from Co
round-trip through the database. All the test results shoulc appear identical.

Iñtërnâtiônàlizætiøn	This image is how all of the test results below *should* appe this page, and all of your System Information.

Test 1: Raw text

This is the test string generated in Confluence

Iñtërnâtiônàlizætiøn

Test 2: Form submission

This is the test string pasted by you into the web form and submitted back to Confluence

Iñtërnâtiônàlizætiøn

Test 3: Database round-trip (select as LOWER)

This is the string from Test 2 after being stored in the database and then retrieved

iñtërnâtiônàlizætiøn

Expected result (converting Java string to lowercase)

iñtërnâtiônàlizætiøn

Test 4: Database round-trip (select as UPPER)

This is the string from Test 2 after being stored in the database and then retrieved

IñTËRNâTIÔNÀLIZæTIøN

Expected result (converting Java string to uppercase)

IÑTËRNÂTIÔNÀLIZÆTIØN

Solution

Upgrade to a newer version of MySQL. (4.1 is confirmed to work.)

Configuring Mail

- Configuring a Server for Outgoing Mail
- Setting Up a Mail Session for the Confluence Distribution
- Configuring the Recommended Updates Email Notification
- The Mail Queue

Customising the eMail Templates

Administrators Guide Home Confluence Documentation Home

The information on this page does not apply to Confluence OnDemand.

Configuring a Server for Outgoing Mail

Configuring your Confluence server to send email messages allows your Confluence users to:

- Receive emailed notifications and daily reports of updates.
- Send a page via email.

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You can personalise email notifications by configuring the 'From' field to include the name and email address of the Confluence user who made the change.

You need System Administrator permissions in order to configure Confluence's email server settings.

On this page:

- Configuring Confluence to send email messages
- Testing the email settings
- Troubleshooting

Related pages:

- The Mail Queue
- Setting Up a Mail Session for the Confluence Distribution

⚠ *The information on this page does not apply to Confluence OnDemand.*

Configuring Confluence to send email messages

To configure Confluence to send outgoing mail:

1. Choose **Browse** > **Confluence Admin**.
2. Select **Mail Servers** under **Configuration** in the left-hand panel. This will list all currently configured SMTP servers.
3. Click **Add New SMTP Server** (or **edit** an existing server).
4. Edit the following fields as required:
   - **Name**: By default, this is simply 'SMTP Server'.
   - **From Address**: Enter the email address that will be displayed in the 'from' field for email messages originating from this server.
     This field is mandatory. You will not be able to complete the Confluence mail server configuration until this field has been specified.
   - **From Name**: Enter the name that will be displayed in the 'from' field for email messages originating from this server. This is the text which appears before the user's registered email address (in angled brackets).
     This field accepts the following variables, which reference specific details defined in the relevant Confluence user's profile:

Variable	Description
${fullname}	The user's full name.
${email}	The user's email address.
${email.hostname}	The domain/host name component of the user's email address.

     The default is '`${fullname} (Confluence)`'.
     Hence, if Joe Bloggs made a change to a page he was watching and the Confluence site's 'From Address' was set to `confluence-administrator@example-company.com`, then the 'From' field in his email notification would be: `Joe Bloggs (Confluence) <confluence-administrator@example-company.com>`.
   - **Subject Prefix**: Enter some text to appear at the beginning of the subject line.
5. Manually enter your **Host Address**, **User Name** and **Password** details (recommended)

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OR

Specify the **JNDI location** of a mail session configured in your application server.

Testing the email settings

A Confluence administrator can test the email server as follows:

1. Set up a mail server at **Confluence Admin** > **Mail Servers**, as described above
2. Click **Send Test Email** to check that the server is working. Check that you get the test email in your inbox.
3. You can flush the email queue to send the email message immediately. Go to **Confluence Admin** > **Mail Queue**, and click **Flush Mail Queue**. See The Mail Queue.

A user can test that notifications are working as follows:

1. Go to your user profile (using the **Settings** link) and edit your email preferences. See Subscribing to Email Notifications of Updates to Confluence Content.
2. Enable **Notify On My Actions**. (By default, Confluence does not send you notifications for your own changes.)
3. Go to a page you wish to get notifications about.
4. Choose **Tools** > **Watch**. See Watching a Page or Blog Post.
5. Edit the page, make a change, and save the page.
6. Check your email inbox. You may need to wait a while for the email message to arrive.

Troubleshooting

If you experience problems with these configurations, please check that your `<Confluence-Install>/confluence/WEB-INF/lib` contains only one copy of the following JAR files:

1. activation-x.x.x.jar
2. mail-x.x.x.jar

Ideally, these should be:

- activation-1.0.2.jar
- mail-1.3.2.jar (or later)

You will then need to move these into the proper directory: Please move (not copy) the two jar files from the `<Confluence-Install>/confluence/WEB-INF/lib` directory to `<confluence-install>/lib` and restart Confluence.

Setting Up a Mail Session for the Confluence Distribution

Set up a mail session for the Confluence distribution to use Gmail as follows:

1. Stop Confluence.
2. Move (don't copy) activation-1.0.2.jar and mail-1.4.1.jar from <confluence-install>/confluence/WEB-INF/lib to <confluence-install>/lib.
3. Add the following to your server.xml file found in <confluence-install>/conf/ (add it just before the </Context> tag):

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For Confluence 3.5.x

```
<Resource name="mail/GmailSMTPServer"
    auth="Container"
    type="javax.mail.Session"
    mail.smtp.host="smtp.gmail.com"
    mail.smtp.port="465"
    mail.smtp.auth="true"
    mail.smtp.user="yourEmailAddress@gmail.com"
    password="yourPassword"
    mail.smtp.starttls.enable="true"
    mail.transport.protocol="smtps"
    mail.smtp.socketFactory.class="javax.net.ssl.SSLSocketFactory"
/>
```

4. Restart Confluence.
5. Go to **Browse** > **Confluence Admin** and click on **Mail Servers**. Choose either **Edit an existing configuration**, or **Add a new SMTP mail server**.
6. Edit the server settings as necessary, and set the **JNDI Location** as:

```
java:comp/env/mail/GmailSMTPServer
```

   Note that the JNDI Location is case sensitive and must match the resource name specified in server.xml.

7. Submit, and send a test email.

Configuring the Recommended Updates Email Notification

Confluence sends a regular email report to subscribers, containing the top content that is relevant to the person receiving the message. This is called the 'Recommended Updates' notification.

If you have Confluence Administrator or System Administrator permissions, you can configure the default settings that determine how often the Recommended Updates notification is sent. When new users are added to Confluence, the default settings will be applied to their user profiles.

Confluence users can choose their personal settings, which will override the defaults. See Subscribing to Email Notifications of Updates to Confluence Content.

Initial settings of the defaults

When you install Confluence, the initial values of the default settings are as follows:

- The default frequency is weekly.
- If your Confluence site has public signup enabled, the Recommended Updates notification is disabled by default. If public signup is not enabled, the notification is enabled by default.

You can change the above settings, specifying a different default value for the site.

Notes:

- The Recommended Updates notification is sent only to people who have a user profile in Confluence. If your Confluence site uses external user management, such as LDAP, then people will receive the report only after they have logged in for the first time. (The first login creates their user profile.)
- The daily email message is sent at 1 p.m. in the user's configured time zone.

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- The weekly email message is sent at 1 p.m. on Thursdays in the user's configured time zone.

On this page:

- Initial settings of the defaults
- Configuring the Recommended Updates notification
- Disabling the Recommended Updates notification for the entire site

Related pages:

- Subscribing to Email Notifications of Updates to Confluence Content
- Confluence Administrator's Guide

Configuring the Recommended Updates notification

You can set the the default send option (send / do not send) and the default schedule (daily or weekly).

To configure the Recommended Updates email notification:

1. Choose **Browse** > **Confluence Admin**.
2. Click **Recommended Updates Email** in the left-hand panel.

Disabling the Recommended Updates notification for the entire site

You can also turn off the **recommended updates** notification for the entire site, by disabling the 'Confluence daily summary email' plugin. See Disabling or Enabling a Plugin.

The Mail Queue

Email messages waiting to be sent are queued in a mail queue and periodically flushed from Confluence once a minute. A Confluence administrator can also manually flush messages from the mail queue.

If there is an error sending messages, the failed email messages are sent to an error queue from which you can either try to resend them or delete them.

To view the mail queue:

1. Choose **Browse** > **Confluence Admin**.
2. Choose **Mail Queue** in the left-hand panel. This will display the email messages currently in the queue.
3. Choose **Flush Mail Queue** to send all email messages immediately.
4. Choose **Error Queue** to view failed email messages. You can try to **Resend** the messages, which will flush the mails back to the mail queue, or you can **Delete** them from here.

Related pages:

- Configuring a Server for Outgoing Mail
- Setting Up a Mail Session for the Confluence Distribution

The information on this page does not apply to Confluence OnDemand.

Optional Settings

- Attachment Storage Configuration
- Configuring a WebDAV client for Confluence
- Configuring Quick Navigation
- Enabling OpenSearch
- Enabling the Did You Mean Feature

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- Enabling the Remote API
- Enabling Threaded Comments
- Enabling Trackback

Attachment Storage Configuration

Confluence allows you to store attachments in one of three places:

- Filesystem - locally in the Confluence home directory
- Database - in Confluence's configured database
- WebDAV - remotely on a WebDAV server (***deprecated***)

A System Administrator can configure Confluence's attachment storage via the '**Attachment Storage**' option on the '**Administration Console**'.

You need to have System Administrator permissions in order to perform this function.

On this page:

- Attachment Storage Options
  - Local File System
  - Database
  - WebDAV
- Migration between Attachment Storage Systems
- Troubleshooting

Related pages:

- Working with Confluence Logs
- Working with Confluence LogsConfluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Attachment Storage Options

Local File System

By default, Confluence stores attachments in the `attachments` directory within the configured Confluence home folder. If you are looking to run Confluence Clustered, attachments must be stored in the database.

Database

Confluence gives administrators the option to store attachments in the database that Confluence is configured to use.

Here are some reasons why, as an administrator, you may want to choose this storage system:

- Ease of backup.
- Avoiding issues with certain characters in attachment file names.

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While storing attachments in the database can offer some advantages, please be aware that the amount of space used by the database will increase because of the greater storage requirements.

WebDAV

Confluence also allows administrators to set an external WebDAV repository as the location for attachment storage.

WebDAV attachment manager deprecated

The option to store Confluence attachments on a WebDAV server has never worked in a useful fashion, and has not been maintained for many versions.

- The WebDAV attachment manager will be **deprecated** from Confluence 2.7, and will be removed from a later version of Confluence.
- If you store attachments on external WebDAV servers, we recommend that you migrate to file-system or database-backed attachment storage as soon as possible. Refer to CONF-9313 and CONF-2887.
- This DOES NOT affect the operation of the WebDAV plugin.

Migration between Attachment Storage Systems

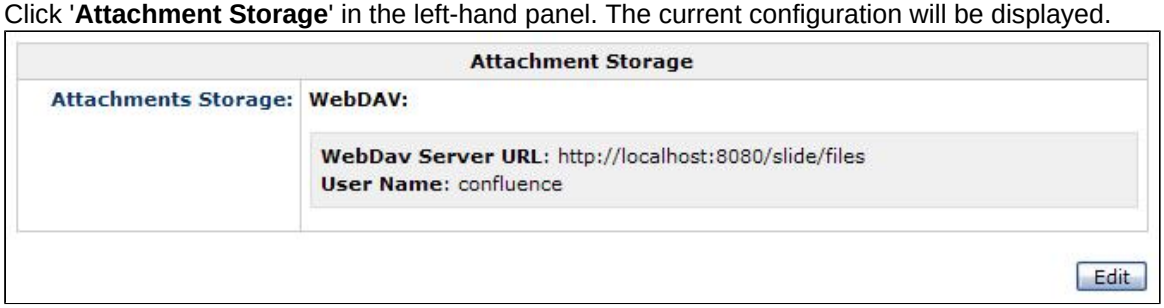
You can 'migrate' your attachments from one storage system to another. All existing attachments will be moved over to the new attachment storage system.

When the migration occurs, all other users will be locked out of the Confluence instance. This is to prevent modification of attachments while the migration occurs. Access will be restored as soon as the migration is complete.

When migrating attachments from your database to a filesystem, the attachments are removed from the database after migration. However, when migrating attachments from a filesystem to your database, the attachments remain on the filesystem after migration. If you wish to change this function's behaviour from 'copy' to 'move', please see CONF-14802 and cast your vote.

To perform a migration, follow the steps below:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Attachment Storage**' in the left-hand panel. The current configuration will be displayed.



Attachment storage configuration

3. Click the '**Edit**' button to modify the configuration.
4. Select the storage system you desire.

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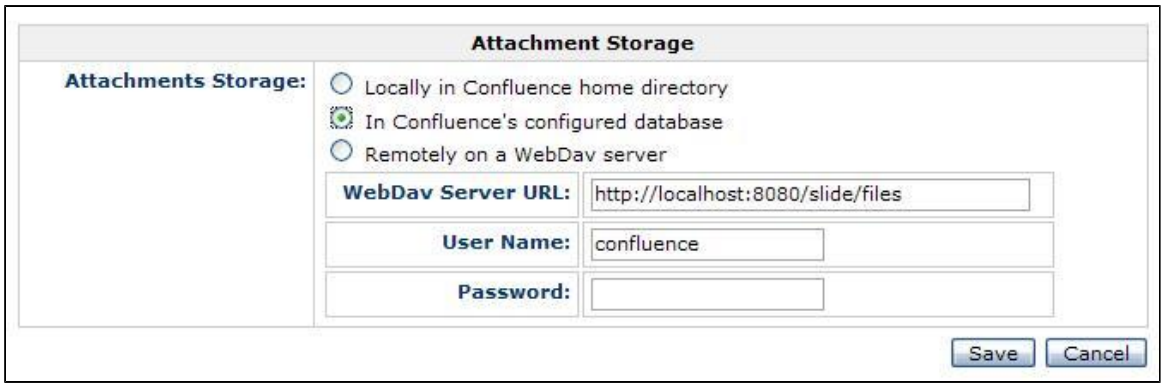
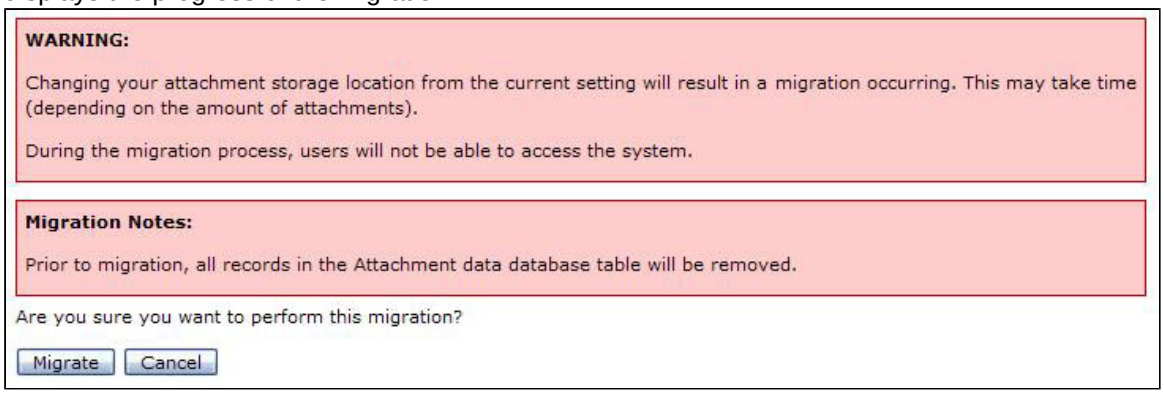


Edit attachment storage

5. Click the '**Save**' button to save the changes.
6. A screen will appear, asking you to confirm your changes. Clicking 'Migrate' will take you to a screen that displays the progress of the migration.



Migration warning

Troubleshooting

To enable debug logging for WebDAV attachment storage, add the following to the bottom of `WEB-INF/classes/log4j.properties` and restart Confluence:

```
log4j.logger.com.atlassian.confluence.pages.persistence.dao=DEBUG,confluencelog
log4j.additivity.com.atlassian.confluence.pages.persistence.dao=false

log4j.logger.org.apache.webdav=DEBUG,confluencelog
log4j.additivity.org.apache.webdav=false
```

For more about log file configuration, see Working with Confluence Logs.

Hierarchical File System Attachment Storage

For Confluence version 3.0, the structure of attachments stored on the filesystem was changed. In versions of Confluence prior to 3.0, attachments were stored in directories corresponding to the id of the content to which they belong. The more content in Confluence with attachments, the more directories you would have immediately beneath your configured attachments directory. This directory structure has been changed in Confluence 3.0 and since the default configuration of Confluence is to store attachments in the filesystem, this change is likely to have relevance to administrators of most existing Confluence installations.

If you are installing Confluence for the first time, there will be no consequences as a result of this change. If you are upgrading from a previous version of Confluence, the migration to this new filesystem structure should happen automatically during the upgrade.

The reason for introducing this change was to address the issue CONF-13004. Certain file systems have a limit on the number of files that can be stored in a directory and large Confluence installations were reaching this

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limit. In addition, storing too many files at a single directory level can cause performance degradation in some circumstances. This new attachment storage strategy ensures this will no longer be the case.

> *The information on this page does not apply to Confluence OnDemand.*

> **Backup Confluence Home**
>
> Before upgrading to Confluence 3.0, as with any upgrade you must ensure you have a backup of your Confluence home directory before you proceed.

The New Directory Layout

The attachment storage layout was chosen to fulfil the following main requirements:

1. Limit the number of entries at any single level in a directory structure.
2. Partition attachments per space making it possible for a system admin to selectively back up attachments from particular spaces (see the JIRA issue for more details).

An attachment in Confluence can be thought of as having a number of identifying attributes: *id*, *space id* and *content id*. That is to say, the attachment logically belongs to a piece of content which logically belongs in a space (not all content belongs to a space). For attachments within a space in Confluence, the directory structure is typically 8 levels, with the name of each directory level based on the following algorithm:

level	Derived From
1 (top)	Always 'ver003' indicating the Confluence version 3 storage format
2	The least significant 3 digits of the *space id*, modulo 250
3	The next 3 least significant digits of the *space id*, modulo 250
4	The full *space id*
5	The least significant 3 digits of the *content id*, modulo 250
6	The next 3 least significant digits of the *content id*, modulo 250
7	The full *content id*
8	The full *attachment id*

Within the 8th level will be a file for each version of that attachment, named to match the version number e.g. 1

An example:

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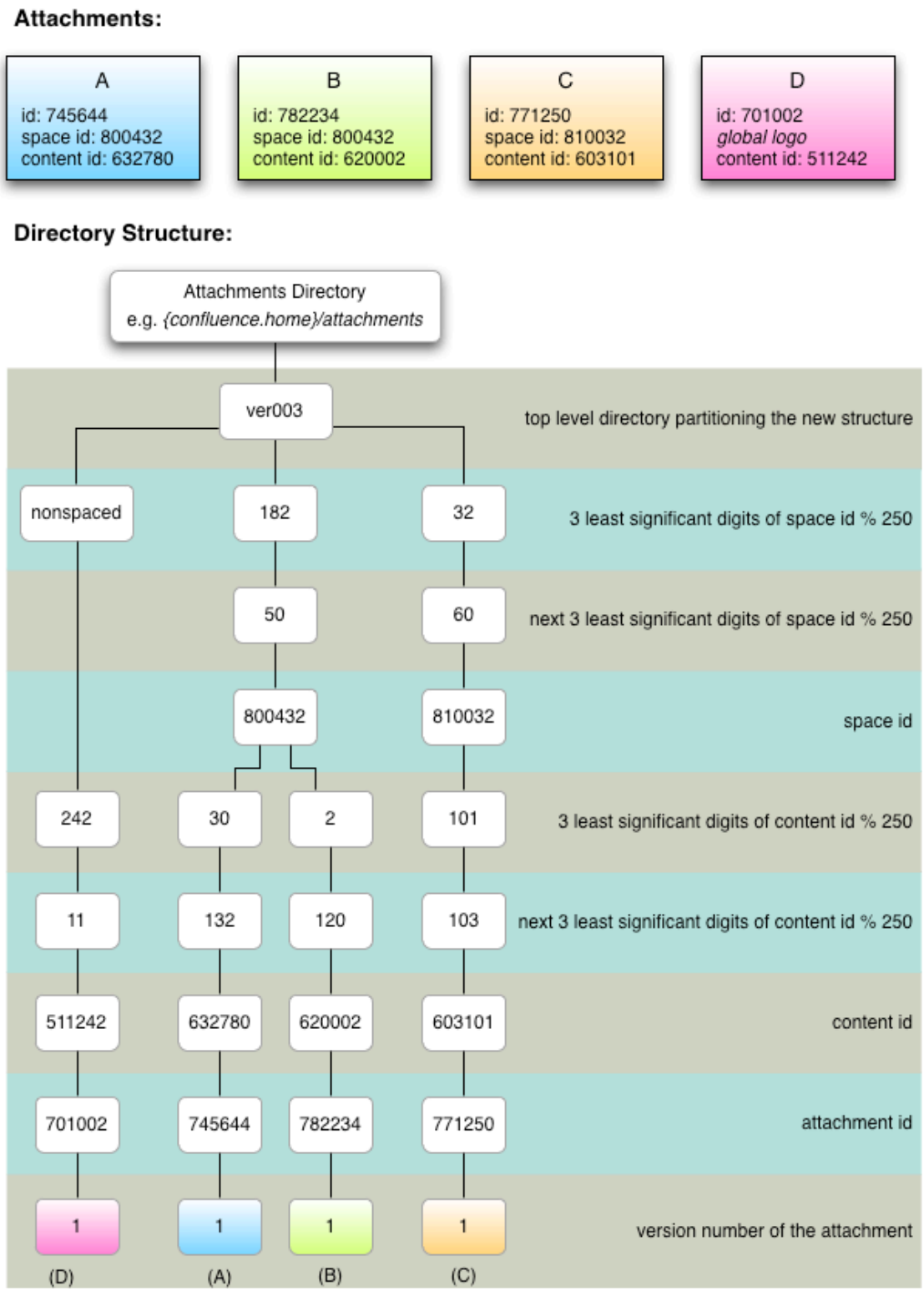

To find the directory where attachments for a particular space are stored, you can use the JSP findspaceattachments.jsp at the location `<confluence url>/admin/findspaceattachments.jsp`. This JSP requires a space key and returns the directory on the file system where attachments for that space are stored.

Attachment D in the above diagram is stored in a slightly different structure. Attachments that are not conceptually within a space replace the level 2 - 4 directories with a single directory called 'nonspaced'. Examples of such attachments are the global site logo and also attachments on draft content.

Upgrading to the new attachment storage structure

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As mentioned previously, this upgrade is only necessary if you have Confluence configured to store attachments on the file system.

If migration is not necessary due to a different storage configuration (for example, because attachments are stored in the database), then no migration will occur during upgrade and the Confluence log will simply show the following messages -

```
INFO [main] [AbstractUpgradeManager] upgradeStarted Starting automatic
upgrade of Confluence
INFO [main] [UpgradeTask] isUpgradeNeeded The configured
attachmentDataDao does not store
    attachment data on the file system so the
HierarchicalFileSystemAttachmentUpgradeTask is not necessary.
INFO [main] [AbstractUpgradeManager] upgradeFinished Upgrade completed
successfully
```

Should migration be required, it will occur automatically during upgrade and the log will show output similar to this -

```
INFO [main] [UpgradeTask] doUpgrade Beginning
HierarchicalFileSystemAttachmentUpgradeTask. Depending on the size of
the
    attachment data this may take some time.
INFO [main] [UpgradeTask] run 4023 pages may have attachments to be
moved to a new hierarchical structure.
INFO [main] [UpgradeTask] run 0 of 4023 pages have had their attachments
moved to the new structure
INFO [main] [UpgradeTask] run 500 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 1000 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 1500 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 2000 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 2500 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 3000 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 3500 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run 4000 of 4023 pages have had their
attachments moved to the new structure
INFO [main] [UpgradeTask] run Successfully moved the attachments for all
4023 pages to the new hierarchical structure.
INFO [main] [UpgradeTask] doUpgrade Completed
HierarchicalFileSystemAttachmentUpgradeTask.
INFO [main] [AbstractUpgradeManager] upgradeFinished Upgrade completed
successfully
```

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> It should be noted that for most implementations of Java, the migration to the new data structure involves moving the files (not copying them). Hence, there should not be a need to have additional disk space available. It also means that the migration should be relatively fast.

Have you previously applied the CONF-8298 patch?

The patch or workaround on the CONF-8298 issue changed the structure of attachment storage but not to the most efficient possible structure. So during the Confluence 3.0 upgrade process this intermediate (CONF-8298) structure will be detected and automatically upgraded.

Troubleshooting the upgrade

⚠ It should be noted that in the event of a failure, your attachment directory may be in an inconsistent state and your first step in troubleshooting should be to restore the backup of your home directory.

There are a number of reasons the migration could fail. This will be shown in the log with a message similar to "`Failed to move the attachments for all pages to the new hierarchical structure.`".

Immediately preceding this message in the log will be entries for each page whose attachments could not be moved. The following table shows examples of these messages and offers some possible explanations.

Example Message	Description
The configured attachment directory `<directory name>` could not be found or was not a directory.	The configured Confluence attachment directory is not accessible. Check confluence home for the attachment directory and ensure the permissions are correct to allow reading and writing for this directory.
It is not possible to migrate the attachments to the new structure since files already exist which the attachment process may need to create.	Your attachments directory contains files or directories which the upgrade task wants to create. That is, a top level directory called ver003 containing directories or files with names containing up to 3 digits (e.g. 1, 213). This could be due to a previous failed attempt to migrate the attachments. You should restore a previous good copy of your attachments directory and remove any files or directories with this naming pattern before retrying.
Couldn't find current Confluence content for the id `<content Id>`. The attachment is a non-spaced attachment (e.g. global logo, draft attachment, etc) and will be migrated to the nonspaced directory.	This is a normal message indicating that the attachment being migrated does not belong to a space e.g. global logo.
Problem while accessing the database for content id `content Id` so its attachments will not be migrated.	It was not possible to access the database at this point during the migration. You will need restore your Confluence attachment directory from the backup and attempt the upgrade again, once the database is accessible again.

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Could not create the new attachment directory `directory`.	The upgrade task could not create the new directory to contain the attachment being moved. Does the server user have sufficient permission to perform this operation in the indicated directory? Is there sufficient disk space?
Failed to move the current attachment directory `<some path>` to the new location of `<some other path>`.	The upgrade task could not move the directory. Does the server user have sufficient permission to perform this operation in the indicated directory?

Configuring a WebDAV client for Confluence

WebDAV allows users to access Confluence content via a WebDAV client, such as 'My Network Places' in Microsoft Windows. Provided that the user has permission, they will be able to read and write to spaces, pages and attachments in Confluence. Users will be asked to log in and the standard Confluence content access permissions will apply to the equivalent content available through the WebDAV client.

Introduction to Confluence's WebDAV Client Integration

By default, all WebDAV clients have permission to write to Confluence. Write permissions include the ability for a WebDAV client to create, edit, move or delete content associated with spaces, pages and attachments in a Confluence installation.

On the '**WebDAV Configuration**' screen in the Confluence Administration Console, you can:

- Deny a WebDAV client write permissions to a Confluence installation using a regular expression (regex).
- Disable or enable strict path checking.
- Enable or disable access to specific virtual files/folders.

Note:

- The 'WebDav Configuration' page is only be available if the WebDAV plugin has been enabled. Refer to Installing Plugins and Macros for more information on enabling Confluence plugins. Note that this plugin is bundled with Confluence, and can be enabled or disabled by the System Administrator.
- The settings on the 'WebDav Configuration' page do **not** apply to external attachment storage configuration.

On this page:

- Introduction to Confluence's WebDAV Client Integration
- Restricting WebDAV Client Write Access to Confluence
- Disabling Strict Path Checking
- Virtual Files and Folders
- Using a WebDAV Client to Work with Pages
- Known Issues

Restricting WebDAV Client Write Access to Confluence

In earlier versions of the WebDAV plugin, separate options for restricting a WebDAV client's write permissions (that is, create/move, edit and delete actions), were available. However, in the current version of this plugin, they have been simplified and combined into a general write permission restriction that covers all of these actions.

WebDAV clients are now denied write permission to your Confluence installation by setting a regex that matches specific content within the WebDAV client's user agent header. Upon setting a regex, it will be added to a list of restricted WebDAV clients. Any WebDAV clients whose user agent header matches a regex in this list will be denied write permission to your Confluence installation.

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Example: A PROPFIND method header generated by a Microsoft Web Folder WebDAV client, showing the user agent header field:

```
PROPFIND /plugins/servlet/confluence/default HTTP/1.1
Content-Language: en-us
Accept-Language: en-us
Content-Type: text/xml
Translate: f
Depth: 1
Content-Length: 489
User-Agent: Microsoft Data Access Internet Publishing Provider DAV
Host: 127.0.0.1:8082
Connection: Keep-Alive
```

Unlike earlier versions of the WebDAV plugin which could only restrict write permissions for **all** WebDAV clients, the current version of this plugin allows you to restrict write permissions to specific WebDAV clients selectively.

To restrict a WebDAV client's write access permissions to your Confluence installation,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**WebDav Configuration**' under 'Configuration' in the left panel. The 'WebDAV Configuration' page is displayed.
3. Enter a regex that matches a specific component of the user agent header sent by the WebDAV client you want to restrict.
4. Click the '**Add new regex**' button. The regex is added to the list of restricted WebDAV clients.
   You can repeat steps 3 and 4 to add a regex for each additional WebDAV client you want to restrict.
5. Click the '**Save**' button to save the configuration changes.

To restore one or more restricted WebDAV client's write access permissions to your Confluence installation,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**WebDav Configuration**' under 'Configuration' in the left panel. The 'WebDAV Configuration' page is displayed.
3. Select the regex(es) from the list that match(es) the user agent header sent by the restricted WebDAV client(s) you want to restore.
4. Click the '**Remove selected regexes**' button. The regexes you had selected are removed from the list of restricted WebDAV clients.
5. Click the '**Save**' button to save the configuration changes.

Screenshot: WebDAV configuration

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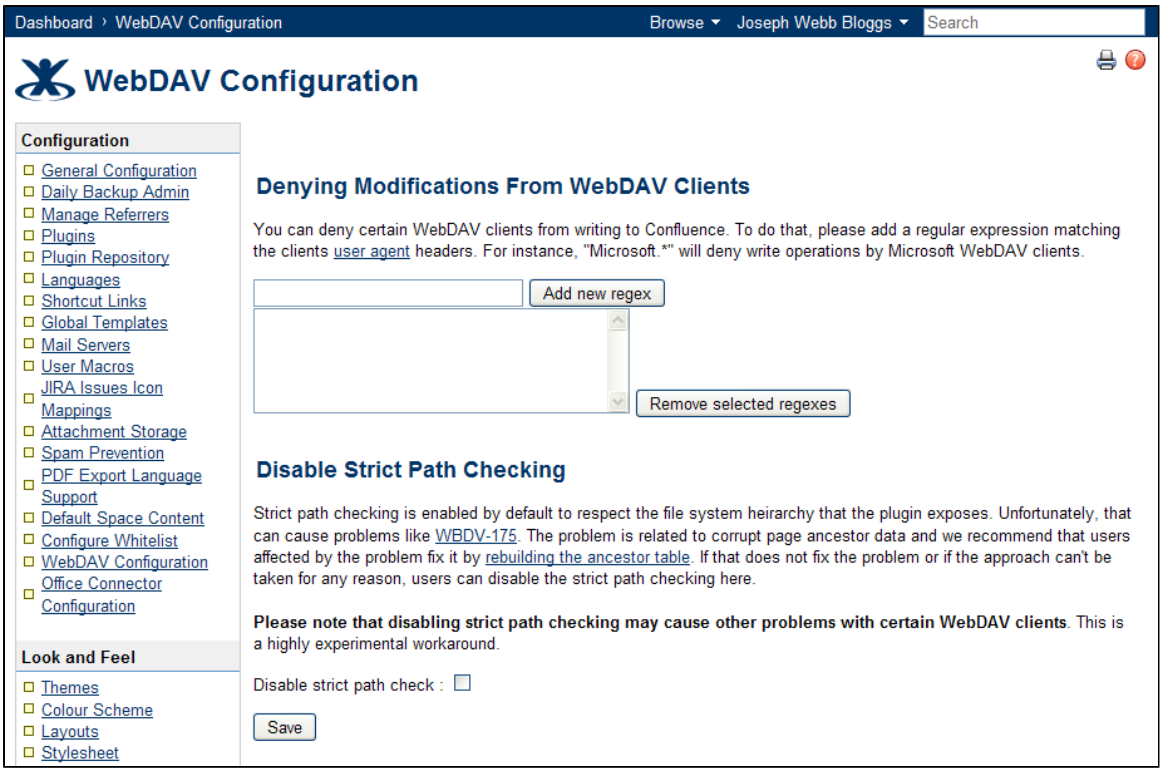

Disabling Strict Path Checking

If you observe any idiosyncrasies with your WebDAV client, such as a folder that does exist on your Confluence site but is missing from the client, you can disable the WebDAV plugin's strict path checking option, which may minimise these problems.

To disable the WebDAV plugin's strict path checking option,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**WebDav Configuration**' under 'Configuration' in the left panel. The 'WebDAV Configuration' page is displayed.
3. Clear the 'Disable strict path check' check box.
   You can re-enable this option at a later point in time by simply selecting this check box.
4. Click the '**Save**' button to save this configuration change.

Virtual Files and Folders

In the unlikely event that you observe any problems with the WebDAV client's performance or stability, you can enable access to automatically generated (that is, virtual) files and folders.

By default, these options are hidden on the 'WebDAV Configuration' page. To make them visible, you must append the parameter `?hiddenOptionsEnabled=true` to the end of your URL and reload the page. For example:

```
<Confluence base
URL>/admin/plugins/webdav/config.action?hiddenOptionsEnabled=true
```

Screenshot: The Hidden Virtual Files and Folders Option

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To enable or disable access to virtual files and folders,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**WebDav Configuration**' under 'Configuration' in the left panel. The 'WebDAV Configuration' page is displayed.
3. Amend your URL as described in the note above and reload the 'WebDav Configuration' page.
4. Select or clear the check box options in the 'Virtual Files and Folders' section as required.
5. Click the '**Save**' button to save the configuration changes.

Using a WebDAV Client to Work with Pages

The following sections tell you how to set up a WebDAV client natively for a range of different operating systems. WebDAV clients typically appear as drives in your operating system's file browser application, such as Windows Explorer in Microsoft Windows, or Konqueror in Linux.

Setting Up a WebDAV Client in Microsoft Windows

This section covers the two methods for configuring a WebDAV client natively in Microsoft Windows:

- As a network drive
- As a web folder

If possible, use the network drive method as this will enable more comprehensive WebDAV client interaction with Confluence than that provided by a web folder. However, your Confluence instance must meet several environmental constraints if you use this method. If you cannot configure your instance to meet these requirements, then use the web folder method or third-party WebDAV client software.

If you run into any problems with the procedures in this section, please refer to the Troubleshooting WebDAV page.

Windows Network Drive

To map a Confluence WebDAV client network drive, your Confluence instance must be configured so that *all* of the following criteria is met:

- Uses HTTP (not HTTPS)
- Listens on port 80 (not 8080, which is the default port value used by the popular application server Apache Tomcat that runs many Confluence EAR / WAR installations, or 8090, the default for Confluence distributions)
- Has no context root
- There is an issue (WBDV-208) that can prevent Network Drives from being mapped. Please use the Network Folders steps below as a workaround.

The reason for these restrictions results from limitations in Microsoft's Mini-Redirector component. For more information, please refer to Microsoft's server discovery issue.

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To map a Confluence WebDAV client network drive in Microsoft Windows,

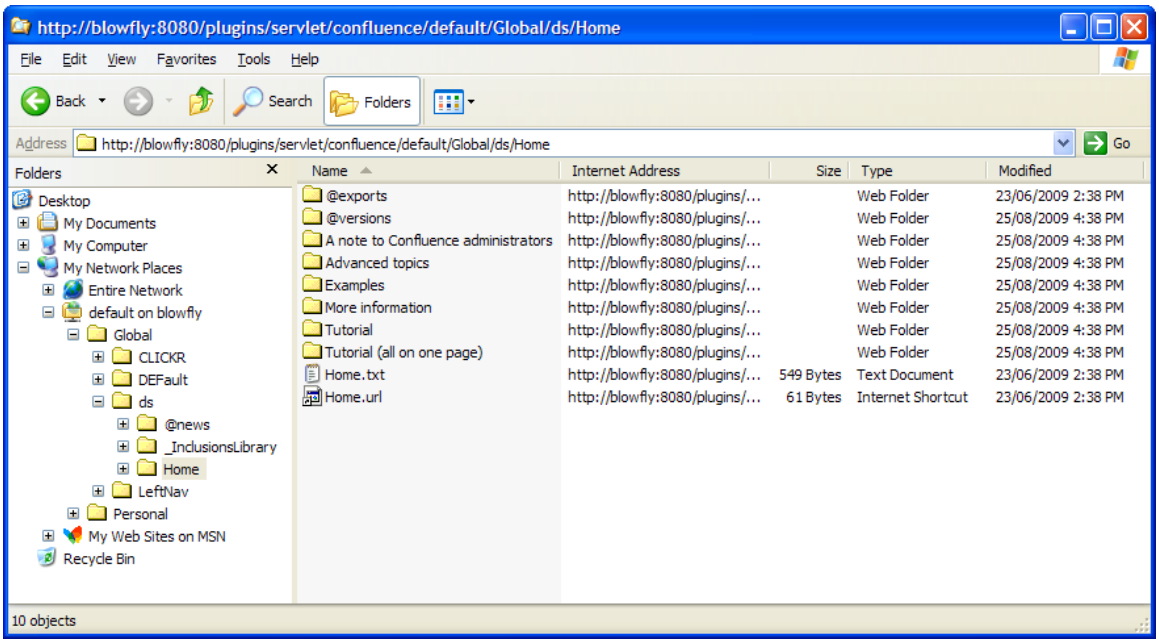
1. In Windows XP, go to **My Computer -> Tools menu -> Map Network Drive**.
   In Windows Vista, go to **Computer -> Map Network Drive**.
   The 'Map Network Drive' dialog box opens.
2. Specify the following input to map the WebDAV client as a network drive:
   - **Drive:** `<Any drive letter>` (for example, `Z:`)
   - **Folder:** `\\<hostname>\webdav` (for example, `\\localhost\webdav`)
3. Click '**Finish**'.
   When prompted for login credentials, specify your Confluence username and password.

Windows Web Folder

To map a Confluence WebDAV client web folder in Windows XP,

1. Go to **My Network Places** and choose '**Add a network place**'. The 'Add Network Place Wizard' opens.
2. Click '**Next**', ensure that '**Choose another network location**' is selected and then click '**Next**' again.
3. In the 'Internet or network address' field, enter the URL for the Confluence WebDAV location (for example, `http://<confluence server url>/confluence/plugins/servlet/confluence/default` or `http://<confluence server url>/plugins/servlet/confluence/default`) and then click '**Next**'.
   When prompted for login credentials, specify your Confluence username and password.
4. Provide a meaningful name for your web folder and proceed with the remainder of the wizard.
5. Click '**Finish**'.

Screenshot: A Confluence WebDAV Client Web Folder in Windows XP



To map a Confluence WebDAV client web folder in Windows Vista,

This procedure is very similar to the one for Windows XP. However, the following procedure includes the slight interface differences that are specific to Windows Vista.

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1. Open the 'Map Network Drive' dialog box (refer to first step of the procedure above for mapping a network drive) and choose '**Connect to a Web site that you can use to store your documents and pictures**'. The 'Add Network Location' wizard opens.
2. Click '**Next**', ensure that '**Choose a custom network location**' is selected and then click '**Next**' again.
3. In the 'Internet or network address' field, enter the URL for the Confluence WebDAV location (for example, `http://<confluence server url>/confluence/plugins/servlet/confluence/default` or `http://<confluence server url>/plugins/servlet/confluence/default`) and then click '**Next**'.
   When prompted for login credentials, specify your Confluence username and password.
4. Provide a meaningful name for your network location/web folder and proceed with the remainder of the wizard.
5. Click '**Finish**'.

Setting up a WebDAV client in Linux or Solaris

There are many tools and mechanisms available for configuring WebDAV clients in these operating systems. Therefore, we have chosen to demonstrate this using the file manager Konqueror, which is part of the Linux K Desktop Environment.

To set up a Confluence WebDAV client in Konqueror,

1. Open Konqueror.
2. In the 'Location' field, enter the URL for the Confluence WebDAV location using the 'protocol' `webdavs` (for example, `webdavs://<confluence server url>/confluence/plugins/servlet/confluence/default` or `webdavs://<confluence server url>/plugins/servlet/confluence/default`) and press `Enter`.
   If prompted for login credentials, specify your Confluence username and password.
   You should be able to click to load many, but not all files. In practice, you would normally save a modified file locally, then drag it to the Konqueror window to upload it to Confluence.

Known Issues

Please refer to the WebDAV plugin documentation for a description of the known issues and suggested workarounds.

RELATED TOPICS

No content found for label(s) data-storage,webdav.

Administrators Guide Home Confluence Documentation Home

Configuring Quick Navigation

When a user is searching Confluence (see Using the Quick Navigation Aid) the quick navigation aid automatically offers a dropdown list of pages and other items, matched by title to the search query. By default, this feature is enabled, with the maximum number of simultaneous quick navigation requests set to 40. However, these options can be modified as described below.

> The maximum number of simultaneous quick navigation requests defines the maximum number of individuals who can use this feature simultaneously on the same Confluence server. If your Confluence server serves a large number of individuals who use this feature regularly, some of whom are being denied access to it, you may wish to increase this value.

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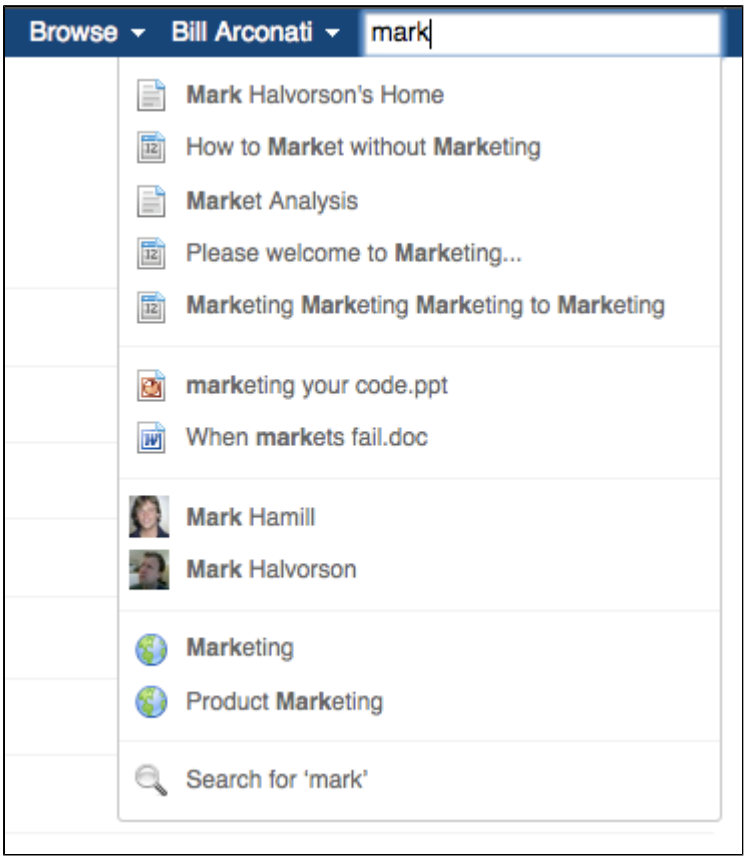
> ⚠ *The information on this page does not apply to Confluence OnDemand.*

To modify the quick navigation feature's options,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' in the left-hand panel.
3. In the '**General Configuration**' screen, click '**Edit**'.
4. To disable this feature, select '**Off**' beside '**Quick Navigation**'.
5. To modify the maximum number of simultaneous quick navigation requests, enter the appropriate number in the field beside '**Max Simultaneous Requests**'.
6. Click '**Save**'.

The following screenshot demonstrates the user interface of the quick navigation aid.

Screenshot: The quick navigation aid showing titles matching the query 'mark'



RELATED TOPICS

Searching Confluence

Administrators Guide Home Confluence Documentation Home

Enabling OpenSearch

With OpenSearch autodiscovery, you can add Confluence search to your Firefox or IE7 search box (see Searching Confluence from your Browser's Search Box). By default, OpenSearch autodiscovery is enabled. This feature can be enabled or disabled as described below.

To enable or disable OpenSearch autodiscovery,

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1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' in the left-hand panel.
3. In the '**General Configuration**' screen, click '**Edit**'.
4. Select '**On**' beside '**Open Search**' to enable this feature, or '**Off**' to disable it.
5. Click '**Save**'.

RELATED TOPICS

Searching Confluence

Administrators Guide Home Confluence Documentation Home

Enabling the Did You Mean Feature

When you perform a full Confluence search, Confluence may offer you an alternative spelling of your search query. The alternative spelling will appear next to the words 'Did you mean'. By default, this feature is disabled. You can enable it as described below.

To enable the 'Did You Mean' feature,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' in the left-hand panel.
3. In the '**General Configuration**' screen, click '**Edit**'.
4. Select '**On**' beside '**Did You Mean**'.
   If you have no 'Did you mean' feature index or you have not yet created it, this option will not be available. To create this index, click '**build the did-you-mean index**' and on the subsequent page, click '**Build**' in the '**Did You Mean Index**' section. Then return to the '**General Configuration**' screen in Edit mode.
5. Click '**Save**'.

Languages and Locales

The 'Did You Mean' feature supports only the English language. In addition, the 'Did You Mean' index requires the built-in UK-English locale (**en_UK**). If your Confluence site uses a different language pack, such as English (US), the 'Did You Mean' feature will not work. You will see an error message like this:

> *For Did You Mean both the indexing language and the global default language must be set to English.*

For more information about how the 'Did You Mean' feature works, please refer to the user guide.

You can track the request to support other languages by watching issue CONF-14768.

RELATED TOPICS

Searching Confluence

Administrators Guide Home Confluence Documentation Home

Enabling the Remote API

Confluence provides XML-RPC and SOAP remote APIs (application programming interfaces). You need to enable the APIs from the **Administration Console** before you can access Confluence remotely.

You need System Administrator permissions in order to perform this function.

To enable the remote API:

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1. Choose **Browse** > **Confluence Admin**.
2. Click **General Configuration** in the left-hand panel.
3. Click **Edit**.
4. Click the check box next to **Remote API (XML-RPC & SOAP)**.
5. Click **Save**.

Related pages:

Confluence Remote API Reference

> *The information on this page does not apply to Confluence OnDemand.*

Enabling Threaded Comments

Comments on pages or blog posts are displayed in one of two views:

- **Threaded**: Shows the comments in a hierarchy of responses. Each reply to a comment is indented to indicate the relationships between the comments.
- **Flat**: Displays all the comments in one single list and does not indicate the relationships between comments.

By default, comments are displayed in **threaded** mode. A Confluence Administrator (see Global Permissions Overview) can enable or disable the threaded view for the entire Confluence site.

To enable or disable the threaded view:

1. Choose **Browse** > **Confluence Admin**.
2. Select **General Configuration** in the left-hand panel.
3. Click **Edit**.
4. Check **Threaded Comments** to enable threaded mode. Clear the check box to disable threaded mode and display all comments in flat mode.
5. Click **Save**.

> **Related pages:**
>
> - Commenting on pages and blog posts
> - Confluence Administrator's Guide

Enabling Trackback

When Trackback is enabled, any time you link to an external webpage that supports Trackback Autodiscovery, Confluence will send a trackback ping to that page to inform it that it has been linked to.

Confluence pages also support Trackback Autodiscovery and when Trackback is enabled, can receive trackback pings sent by other sites.

To enable trackback,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' in the left panel.
3. In the '**Feature Settings**' screen, click '**Edit**'.
4. Select "**On**' beside '**Trackback**' and click '**Save**'.

RELATED TOPICS

No content found for label(s) security-options.

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Other Settings

- Configuring Attachment Size
- Configuring Character Encoding
- Configuring HTTP Timeout Settings
- Configuring Indexing Language
- Configuring Number Formats
- Configuring Shortcut Links
- Configuring Time and Date Formats
- Known Issues with Enterprise or Webhosting environments

Configuring Attachment Size

Confluence gives you the option of limiting the maximum size of a single file attachment. Confluence administrators should keep in mind that the amount of disk space used by Confluence is directly proportional to the number and size of attachments put into the system.

To configure the maximum size allowed for an attachment:

1. Go to the '**Administration Console**' and click '**General Configuration**' in the left-hand panel.
2. Click '**Edit**' on the '**General Configuration**' screen.
3. Enter the maximum size next to '**Attachment Maximum Size**'. The default is 10 MB.
4. '**Save**' your changes.

To configure the maximum 'index-able size of attachments':

By default, large attachment is defined as greater than 1 MB.
The threshold for attachments that won't get excerpts can be modified using the system property `atlassian.indexing.contentbody.maxsize`, which takes a size in bytes.

Example

To specify 250 kb you would use the following JVM parameter:
`-Datlassian.indexing.contentbody.maxsize=256000`

Outcomes of Limiting Attachment Indexing Size

Limiting the size of attachment indexing has the following effects:

- Decreases the size of the index when large attachments are present.
- Decreases the memory used in indexing large attachments.
- Prevent excerpts of large attachments being displayed in search results.

For more details, please refer to the following JIRA issue.

Related Topics

No content found for label(s) other-settings.

Administrators Guide Home Confluence Documentation Home

Configuring Character Encoding

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Confluence uses UTF-8 character encoding to deliver its pages.

⚠ While it is possible to change the character encoding, unless you are certain of what you are doing, we recommend that you leave this as it is.

To change the character encoding:

1. Go to the '**Administration Console**' and click on '**General Configuration**' in the left panel.
2. Click '**Edit**' at the bottom of the '**Formatting and International Settings**' screen. For Confluence version earlier than 2.6.2, look for the '**Options and Settings**' screen.
3. Beside '**Encoding**', enter the new character encoding of your choice.
4. '**Save**' your changes.

Related Links

Joel Spolsky: The Absolute Minimum Every Software Developer Absolutely, Positively Must Know About Unicode and Character Sets (No Excuses!)

Related Topics

No content found for label(s) other-settings.

Administrators Guide Home Confluence Documentation Home

Configuring HTTP Timeout Settings

When macros such as the RSS Macro make HTTP requests to servers which are down, a long timeout value is used. You can set this timeout value through a system parameter to avoid this.

To configure the HTTP Timeout Settings:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' under the 'Configuration' heading in the left-hand panel.
3. Find the '**Connection Timeouts**' section in the lower portion of the screen.
4. Click '**Edit**' to adjust the settings:
    - **Adjust External connections enabled**: This setting allows system administrators to disable external connections so macros like the RSS Macro wont be allowed to make connections to an external server. It's provides protection against external servers providing insecure HTML, timing out or causing performance problems. The default setting is 'true'.
    - **Connection Timeout (milliseconds)**: Sets the maximum time for a connection to be established. A value of zero means the timeout is not used. The default setting is ten seconds (10000).
    - **Socket Timeout (milliseconds)**: Sets the default socket timeout (SO_TIMEOUT) in milliseconds, which is the maximum time Confluence will wait for data. A timeout value of zero is interpreted as an infinite timeout. The default setting is ten seconds (10000).

Configuring Indexing Language

Changing the indexing language defined in Confluence may improve the accuracy of Confluence search results, if the majority of the content of your site is in some language other than English. Confluence supports content indexing in English (default), German, Russian, Chinese, CJK, Custom Japanese, French, Brazilian, Czech and Greek.

To configure a different indexing language:

1. Go to the '**Administration Console**' and click '**General Configuration**' in the left-hand panel.
2. Click any of the '**Edit**' links..
3. Select the '**Indexing Language**' from the dropdown list in the '**Formatting and International Settings**'

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section.
4. Click '**Save**'.

Related Topics

Choosing a Default Language
Installing a Language Pack
Content Index Administration
Rebuild the Content Indices from Scratch
Creating a Lowercase Page Title Index

Configuring Number Formats

To change the number formats:

1. Go to the '**Administration Console**' and click on '**General Configuration**' in the left panel.
2. Click '**Edit**' at the bottom of the '**Options and Settings**' screen.
    - There are two number format settings:
        - Long Number Format
        - Decimal Number Format
3. Change the formats using the guidelines in this document.
4. '**Save**' your changes.

Related Topics

No content found for label(s) other-settings.

Administrators Guide Home Confluence Documentation Home

Configuring Shortcut Links

Shortcut links provide a quick way of linking to resources that are frequently referenced from Confluence. When you create a shortcut link, you assign a key to an URL so that, when editing, a user can type just the key instead of the complete URL.

Here is an example:

Most Google searches look like this: `http://www.google.com/search?q=`. If you create a shortcut for this search with the key 'google', every time a user needs to use `http://www.google.com/search?q=`**`searchterms`**, they can just type `[`**`searchterms`**`@google]` instead.

Here is a screenshot showing the shortcuts currently defined on http://confluence.atlassian.com:

Key	Expanded Value	Default Alias	Operations
cache	http://www.google.com/search?q=cache:		Remove
imdb	http://us.imdb.com/Title?		Remove
jira	http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=	JIRA Issue %s	Remove
googlegroups	http://groups.google.com/groups?q=		Remove
google	http://www.google.com/search?q=		Remove
dictionary	http://www.dict.org/bin/Dict?Database=*&Form=Dict1&Strategy=*&Query=		Remove

Shortcut links are added and maintained by Confluence administrators from the **Administration Console**.

Creating Shortcut Links

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To create a shortcut link:

1. Go to the Administration Console and click **Shortcut Links** in the left panel.
2. Enter a **Key** for your shortcut. This is the shortcut name a user will use to reference the URL.
3. Enter the **Expanded Value**. This is the URL for the link. You can use '%s' in the URL to specify where the user's input is inserted. If there is no '%s' in the URL, the user's input will be put at the end.
4. *(Optional. Available in Confluence version 2.3 and later.)* Enter a **Default Alias**. This is the text of the link which will be displayed on the page where the shortcut is used, with the user's text being substituted for '%s'.
5. Click **Save**.

Using Shortcut Links

Enter a shortcut link on the **Advanced** tab of the Insert Link dialog. See Linking to Pages for details.

Specify in the link what should be appended to the end of the shortcut URL, followed by an at-sign (@) and the key of the shortcut. Shortcut names are case-insensitive. So, for example, using the keys shown in the above screenshot:

To link to...	Type this	Resulting URL	Demonstration
a JIRA issue	CONF-1000@JIRA	http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=CONF-1000	CONF-1000
a Google search	Atlassian Confluence@Google	http://www.google.com/search?q=Atlassian+Confluence	Atlassian Confluence@Google

Deleting Shortcut Links

Shortcut links are listed on the **Shortcut Links** tab of the Administration Console. Click **Remove** to delete the shortcut.

Related Topics

Administrators Guide Home Confluence Documentation Home

Configuring Time and Date Formats

Confluence allows you to localise the formats used to display dates and times within the web interface. The settings use the syntax of Java's SimpleDateFormat class (described below).

To change the time and date formats:

1. Go to the '**Administration Console**' and click on '**General Configuration**' in the left panel.

2. Click '**Edit**' at the bottom of the '**Options and Settings**' screen.

    - There are three time and date format settings:
        - Time Format : displaying only the time of day (for example, when each news item is posted)
        - Date Time Format : displaying both the date and the time of day (for example, in historical versions of pages)
        - Date Format : displaying only the date (for example, the creation and most recent modification dates of pages)

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3. Change the formats using the guidelines in this document.

4. '**Save**' your changes.

Related Links

- Java 1.4.2 SimpleDateFormat API

Related Topics

No content found for label(s) other-settings.

Administrators Guide Home Confluence Documentation Home

Known Issues with Enterprise or Webhosting environments

When you attempt to run Confluence, you may get the following error:

```
java.security.AccessControlException: access denied (java.lang.RuntimePermission
accessDeclaredMembers)
        at
java.security.AccessControlContext.checkPermission(AccessControlContext.java(Comp
iled Code))
        at
java.security.AccessController.checkPermission(AccessController.java(Compiled
Code))
        at
java.lang.SecurityManager.checkPermission(SecurityManager.java(Compiled Code))
```

Some of the libraries Confluence relies on to function make use of features of the Java language that may be restricted by Java security policies. This does not normally cause any problems: the default security configuration of most application servers will happily run Confluence. However, in some shared-hosting or enterprise environments, security settings may be such that Confluence can not function.

The permissions required by Confluence to run are detailed in the sample policy file below. You may need to give this information to your systems administrator so that they can be deployed with the Confluence application.

```
grant codeBase "file:${catalina.home}/webapps/confluence/-" {
permission java.security.AllPermission;
};

grant {
permission java.lang.RuntimePermission "accessDeclaredMembers";
permission java.lang.reflect.ReflectPermission "suppressAccessChecks";
permission java.lang.RuntimePermission "defineCGLIBClassInJavaPackage";
};
```

Configuring System Properties

This page describes how to set Java properties and options on startup for Confluence Stand-alone and EAR/WAR versions.

> ✅ See How to Fix Out of Memory Errors by Increasing Available Memory for specific instructions for OutOfMemory Errors.

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On this page:

The information on this page does not apply to Confluence OnDemand.

Linux

To Configure System Properties in Linux Installations,

1. From `<confluence-install>/bin` (Stand-alone) or `<Tomcat-home>/bin` (EAR-WAR installation), open **setenv.sh**.
2. Find the section **JAVA_OPTS=**
3. Refer to the list of parameters below.

Add all parameters in a space-separated list, inside the quotations.

Windows (starting from .bat file)

To Configure System Properties in Windows Installations When Starting from the .bat File,

1. From `<confluence-install>/bin` (Stand-alone) or `<Tomcat-home>/bin` (EAR-WAR installation), open **setenv.bat**.
2. Find the section **set JAVA_OPTS=%JAVA_OPTS%**
3. Refer to the list of parameters below.

Add all parameters in a space-separated list. Make sure to keep the string %JAVA_OPTS% in place.

Windows Service

There are two ways to configure system properties when you Start Confluence Automatically on Windows as a Service, either via command line or in the Windows Registry

Setting Properties for Windows Services via Command Line

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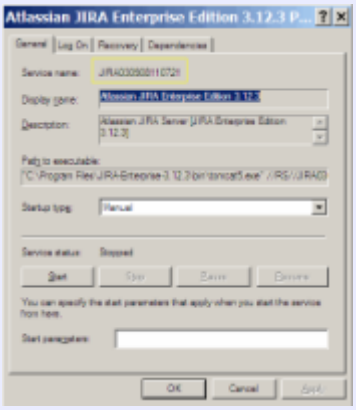
Setting Properties for Windows Services via Command Line

1. Identify the name of the service that Confluence is installed as in Windows (`Control Panel > Administrative Tools > Services`):



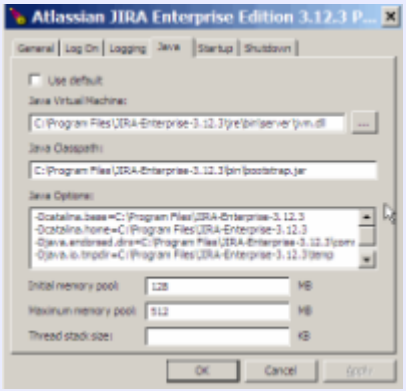
   In the above example, the **SERVICENAME** is: `JIRA030908110721`. Find the Confluence equivalent.
2. Open the command window from `Start >> Run >> type in 'cmd' >> Enter`
3. `cd` to the `bin` directory of your Confluence instance, or the `bin` directory of your Tomcat installation if your are running Confluence EAR/WAR.
4. Run:

```
tomcat6w //ES//%SERVICENAME%
```

   .

   In the above example, it would be `tomcat6w //ES//JIRA030908110721`

5. Click on the `Java` tab to see the list of current start-up options:



6. Append any new option on its own new line by adding to the end of the existing Java Options. Refer to the list of parameters below.

Setting Properties for Windows Services via the Windows Registry

In some versions of Windows, there is no option to add Java variables to the service. In these cases, you must add the properties by viewing the option list in the registry.

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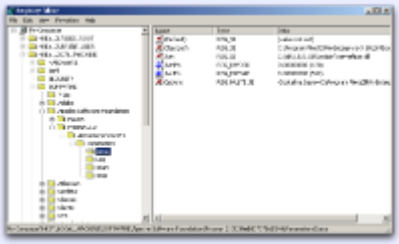
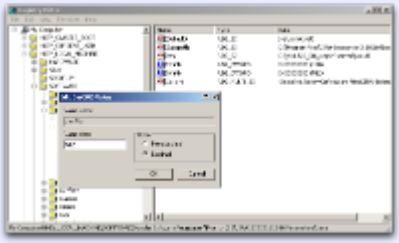
To Set Properties for Windows Services via the Windows Registry,

1. Go to {{Start >> Run, and run "regedit32.exe".

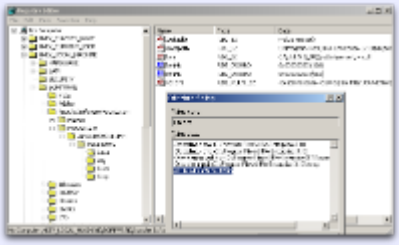
2. Find the Services entry:
   32-bit: `HKEY_LOCAL_MACHINE >> SOFTWARE >> Apache Software Foundation >> Procrun 2.0 >> Confluence`
   64-bit: `HKEY_LOCAL_MACHINE >> SOFTWARE >> Wow6432Node >> Apache Software Foundation >> Procrun 2.0 >> Confluence`



3. To change existing properties, especially increasing Xmx memory, double-click the appropriate value.



4. To change additional properties, double-click options.



5. Refer to the list of parameters below. Enter each on a separate line.

Verifying Your Settings

To see what Confluence is using, check Viewing System Properties.

Recognised System Properties

Property	Since	Default Value	Module...	Effect

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`atlassian.forceSchemaUpdate`	1.0	`false`	atlassian-config	By default, Confluence will only run its database schema update when it detects that it has been upgraded. This flag will force Confluence to perform the schema update on system startup.
`confluence.home`	1.0	Any filesystem path	Confluence and atlassian-config	If this system property is set, Confluence will ignore the contents of the `confluence-init.properties` file, and use this property as the setting for the Confluence Home directory.
`confluence.devmode`	1.0	`false`	Confluence	Enables additional debugging options that may be of use to Confluence developers (additionally it changes spring bean creation to use lazy initialization by default to decrease startup time). Do not enable this flag on a production system.
`confluence.disable.mailpolling`	2.4	`false`	Confluence	If set to "true", will prevent Confluence from retrieving mail for archiving within spaces. Manually triggering "check for new mail" via the web UI will still work. This property has no effect on outgoing mail

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`confluence.i18n.reloadbundles`	1.0	`true`	Confluence	Setting this property will cause Confluence to reload its i18n resource bundles every time an internationalised string is looked up. This can be useful when testing translations, but will make Confluence run *insanely slowly*.
`confluence.ignore.debug.logging`	1.0	`true`	Confluence	Confluence will normally log a severe error message if it detects that DEBUG level logging is enabled (as DEBUG logging generally causes a significant degradation in system performance). Setting this property will suppress the error message.
`confluence.jmx.disabled`	3.0	`false`	Confluence	If set to "true", will disable Confluence's JMX monitoring. This has the same effect as setting the "enabled" property to false in `WEB-INF/classes/jmxContext.xml`
`confluence.optimize.index.modulo`	2.2	`20`	Confluence	Number of index queue flushes before the index is optimised.

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`confluence.plugins.bundled.disable`	2.9	`false`	Confluence	Starts confluence without bundled plugins. May be useful in a development environment to make Confluence start quicker, but since bundled plugins are necessary for some of Confluence's core functionality, this property should not be set on a production system.
`atlassian.mail.fetchdisabled`	3.5	`false`	Confluence	Disables mail fetching services for IMAP and POP
`atlassian.mail.senddisabled`	3.5	`false`	Confluence and atlassian-mail	Disables sending of mail
`atlassian.disable.caches`	2.4	`true`	atlassian-plugins, atlassian-cache-servlet	Setting this property will disable conditional get and expires: headers on some web resources. This will significantly slow down the user experience, but is useful in devlopment if you are frequently changing static resources and don't want to continually flush your browser cache.
`confluence.html.encode.automatic`	2.9		Confluence	Setting this property forces the antixss encoding on or off, overriding the behaviour dictated by settings. The default behaviour differs between Confluence versions.

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`org.osgi.framework.bootdelegation`	2.10	empty	atlassian-plugins	Comma-separated list of package names to provide from application for OSGi plugins. Typically required when profiling Confluence. For example: "com.jprofiler.**,com.yourkit.**".
`confluence.diff.pool.size`	3.1	`20`	Confluence	Maximum number of concurrent diffs. When that number is exceeded, additional attempts by RSS feeds to create diffs are ignored and logged. (The RSS requests succeed, they are just missing diffs).
`confluence.diff.timeout`	3.1	`1000`	Confluence	Number of milliseconds to wait for a diff operation (comparing two page versions) to complete before aborting with an error message.
`confluence.html.diff.timeout`	4.0	`10000`	Confluence	Number of milliseconds to wait for a diff operation (comparing two page versions) to complete before aborting with an error message.

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`atlassian.user.experimentalMapping`	2.10	`false`	Confluence	Setting this property changes the relationship between local users and local groups to reduce performance degradation when adding a local user to a local group with a large number of users. Please note, setting this property can slow down other user management functions. We recommend that you set it only if you are experiencing performance problems when adding local users to large local groups. Please refer to CONF-12319, fixed in Confluence 3.1.1.
`confluence.import.use-experimental-importer`	3.2	`false`	Confluence	Setting this property changes Confluence to use the Experimental XML Importer. It is designed to be a more stable implementation but, at the time of the release of 3.2, the importer is largely untested and thus not supported.
`atlassian.webresource.disable.minification`	3.3	`false`	atlassian-plugins	Disables automatic minification of JavaScript and CSS resources served by Confluence.

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`index.queue.thread.count`	3.3	*See "Effect"*	Confluence	Sets the number of threads to be used for the reindex job. The value has to be in the range of 1 to 10 (inclusive), i.e. at least one thread but no more than 10 threads will be used. There is no default value, i.e. • If you don't set `index.queue.thread.count`, the number of threads to be used are calculated based on the number of objects that need to be reindexed and the number of processors available (a maximum of 10 threads will be used). • If you set `index.queue.thread.count=2`, then two threads will be used to reindex the content (regardless of the number of objects to be reindexed or the number of processors available) • If you set `index.queue.thread.count=200`, then ten threads (the maximum allowed) will be used to reindex the content.

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`index.queue.batch.size`	3.3	1500	Confluence	Size of batches used by the indexer. Reducing this value will reduce the load that the indexer puts on the system, but indexing takes longer. Increasing this value will cause indexing to be completed faster, but puts a higher load on the system. Normally this setting does not need tuning.
`password.confirmation.disabled`	3.4	`false`	Confluence	This property disables the password confirmation functionality that Confluence uses as an additional security measure. With this property set, Confluence will *not* require password confirmation for the following actions: administrative actions, change of email address and Captcha for failed logins. Disabling password confirmations is useful if you are using a custom authenticator.

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`confluence.browser.language.enabled`	3.5	`true`	Confluence	Setting this property to "false" disables the detection of browser language headers, effectively restoring Confluence behaviour to that of earlier releases. Setting this property to "true" enables the detection of the language headers sent by the browser. Confluenc will change the UI language based on the browser headers. See documentation on how users can choose a language preference.
`upm.pac.disable`	Universal Plugin Manager 1.5	`false`	Universal Plugin Manager (UPM)	When this property is set to true, then UPM will not try to access the Atlassian Plugin Exchange. This is useful for application servers that do not have access to the Internet. See the UPM documentation.
`confluence.reindex.documents.to.pop`	3.5.9	`20`	Confluence	Indicates how many objects each indexing thread should process at a time during a full re-index. Please note that this number does not include attachments
`confluence.reindex.attachments.to.pop`	3.5.9	`10`	Confluence	Indicates how many attachments each indexing thread should process at a time during a full re-index.

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`confluence.upgrade.active.directory`	3.5.11	`false`	Confluence	Forces Confluence to treat any LDAP directories it migrates as Active Directory, rather than relying on looking for sAMAccountName in the username attribute. This is necessary if you are upgrading from before Confluence 3.5, and need to use an attribute other than sAMAccountName to identify your users and are seeing `LDAP: error code 4 - Sizelimit Exceeded` exceptions in your logs. For more details, see Unable to Log In with Confluence 3.5 or Later Due to 'LDAP error code 4 - Sizelimit Exceeded'
`com.atlassian.logout.disable.session.invalidation`	4.0	`false`	Confluence	Disables the session invalidation on log out. As of 4.0 the default behaviour is to invalidate the JSession assigned to a client when they log out. If this is set to true the session is kept active (but the user logged out). This may be valuable when using external authentication systems, but should generally not be needed.

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`officeconnector.spreadsheet.xlsxmaxsize`	4.0.5	2^{21}	Office Connector	Indicates the maximum size in bytes of an Excel file that can be viewed using the `viewxls` macro. If empty, the maximum size defaults to 2Mb. See CONF-21043 for more details.
`com.atlassian.confluence.extra.calendar3.display.events.calendar.maxpercalendar`		200	Team Calendars	Specifies the maximum number of events per calendar. This property is effective only if the Team Calendars plugin is installed on your Confluence site.

RELATED TOPICS

Recognised System Properties
How to Fix Out of Memory Errors by Increasing Available Memory

Recognised System Properties

Confluence supports some configuration and debugging settings that can be enabled through Java system properties. System properties are usually set by passing the `-D` flag to the Java virtual machine in which Confluence is running. See the full instructions: Configuring System Properties.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Property	Since	Default Value	Module...	Effect
`atlassian.forceSchemaUpdate`	1.0	`false`	atlassian-config	By default, Confluence will only run its database schema update when it detects that it has been upgraded. This flag will force Confluence to perform the schema update on system startup.

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`confluence.home`	1.0	Any filesystem path	Confluence and atlassian-config	If this system property is set, Confluence will ignore the contents of the `confluence-init.properties` file, and use this property as the setting for the Confluence Home directory.
`confluence.devmode`	1.0	`false`	Confluence	Enables additional debugging options that may be of use to Confluence developers (additionally it changes spring bean creation to use lazy initialization by default to decrease startup time). Do not enable this flag on a production system.
`confluence.disable.mailpolling`	2.4	`false`	Confluence	If set to "true", will prevent Confluence from retrieving mail for archiving within spaces. Manually triggering "check for new mail" via the web UI will still work. This property has no effect on outgoing mail
`confluence.i18n.reloadbundles`	1.0	`true`	Confluence	Setting this property will cause Confluence to reload its i18n resource bundles every time an internationalised string is looked up. This can be useful when testing translations, but will make Confluence run *insanely slowly*.

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`confluence.ignore.debug.logging`	1.0	`true`	Confluence	Confluence will normally log a severe error message if it detects that DEBUG level logging is enabled (as DEBUG logging generally causes a significant degradation in system performance). Setting this property will suppress the error message.
`confluence.jmx.disabled`	3.0	`false`	Confluence	If set to "true", will disable Confluence's JMX monitoring. This has the same effect as setting the "enabled" property to false in `WEB-INF/classes/jmxContext.xml`
`confluence.optimize.index.modulo`	2.2	`20`	Confluence	Number of index queue flushes before the index is optimised.
`confluence.plugins.bundled.disable`	2.9	`false`	Confluence	Starts confluence without bundled plugins. May be useful in a development environment to make Confluence start quicker, but since bundled plugins are necessary for some of Confluence's core functionality, this property should not be set on a production system.
`atlassian.mail.fetchdisabled`	3.5	`false`	Confluence	Disables mail fetching services for IMAP and POP

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`atlassian.mail.senddisabled`	3.5	`false`	Confluence and atlassian-mail	Disables sending of mail
`atlassian.disable.caches`	2.4	`true`	atlassian-plugins, atlassian-cache-servlet	Setting this property will disable conditional get and expires: headers on some web resources. This will significantly slow down the user experience, but is useful in devlopment if you are frequently changing static resources and don't want to continually flush your browser cache.
`confluence.html.encode.automatic`	2.9		Confluence	Setting this property forces the antixss encoding on or off, overriding the behaviour dictated by settings. The default behaviour differs between Confluence versions.
`org.osgi.framework.bootdelegation`	2.10	empty	atlassian-plugins	Comma-separated list of package names to provide from application for OSGi plugins. Typically required when profiling Confluence. For example: "com.jprofiler.**,com.yourkit.**".

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`confluence.diff.pool.size`	3.1	`20`	Confluence	Maximum number of concurrent diffs. When that number is exceeded, additional attempts by RSS feeds to create diffs are ignored and logged. (The RSS requests succeed, they are just missing diffs).
`confluence.diff.timeout`	3.1	`1000`	Confluence	Number of milliseconds to wait for a diff operation (comparing two page versions) to complete before aborting with an error message.
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`confluence.import.use-experimental-importer`	3.2	`false`	Confluence	Setting this property changes Confluence to use the Experimental XML Importer. It is designed to be a more stable implementation but, at the time of the release of 3.2, the importer is largely untested and thus not supported.
`atlassian.webresource.disable.minification`	3.3	`false`	atlassian-plugins	Disables automatic minification of JavaScript and CSS resources served by Confluence.

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`index.queue.thread.count`	3.3	*See "Effect"*	Confluence	Sets the number of threads to be used for the reindex job. The value has to be in the range of 1 to 10 (inclusive), i.e. at least one thread but no more than 10 threads will be used. There is no default value, i.e. • If you don't set `index.queue.thread.count`, the number of threads to be used are calculated based on the number of objects that need to be reindexed and the number of processors available (a maximum of 10 threads will be used). • If you set `index.queue.thread.count=2`, then two threads will be used to reindex the content (regardless of the number of objects to be reindexed or the number of processors available) • If you set `index.queue.thread.count=200`, then ten threads (the maximum allowed) will be used to reindex the content.

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`index.queue.batch.size`	3.3	1500	Confluence	Size of batches used by the indexer. Reducing this value will reduce the load that the indexer puts on the system, but indexing takes longer. Increasing this value will cause indexing to be completed faster, but puts a higher load on the system. Normally this setting does not need tuning.
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`confluence.browser.language.enabled`	3.5	`true`	Confluence	Setting this property to "false" disables the detection of browser language headers, effectively restoring Confluence behaviour to that of earlier releases. Setting this property to "true" enables the detection of the language headers sent by the browser. Confluenc will change the UI language based on the browser headers. See documentation on how users can choose a language preference.
`upm.pac.disable`	Universal Plugin Manager 1.5	`false`	Universal Plugin Manager (UPM)	When this property is set to true, then UPM will not try to access the Atlassian Plugin Exchange. This is useful for application servers that do not have access to the Internet. See the UPM documentation.
`confluence.reindex.documents.to.pop`	3.5.9	`20`	Confluence	Indicates how many objects each indexing thread should process at a time during a full re-index. Please note that this number does not include attachments
`confluence.reindex.attachments.to.pop`	3.5.9	`10`	Confluence	Indicates how many attachments each indexing thread should process at a time during a full re-index.

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`confluence.upgrade.active.directory`	3.5.11	`false`	Confluence	Forces Confluence to treat any LDAP directories it migrates as Active Directory, rather than relying on looking for sAMAccountName in the username attribute. This is necessary if you are upgrading from before Confluence 3.5, and need to use an attribute other than sAMAccountName to identify your users and are seeing `LDAP: error code 4 - Sizelimit Exceeded` exceptions in your logs. For more details, see Unable to Log In with Confluence 3.5 or Later Due to 'LDAP error code 4 - Sizelimit Exceeded'
`com.atlassian.logout.disable.session.invalidation`	4.0	`false`	Confluence	Disables the session invalidation on log out. As of 4.0 the default behaviour is to invalidate the JSession assigned to a client when they log out. If this is set to true the session is kept active (but the user logged out). This may be valuable when using external authentication systems, but should generally not be needed.

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`officeconnector.spreadsheet.xlsxmaxsize`	4.0.5	2^{21}	Office Connector	Indicates the maximum size in bytes of an Excel file that can be viewed using the `viewxls` macro. If empty, the maximum size defaults to 2Mb. See CONF-21043 for more details.
`com.atlassian.confluence.extra.calendar3.display.events.calendar.maxpercalendar`		200	Team Calendars	Specifies the maximum number of events per calendar. This property is effective only if the Team Calendars plugin is installed on your Confluence site.

RELATED TOPICS

Configuring System Properties

Application Server Configuration

The following pages contain information about configuring your application server for Confluence:

- Application Server URL encoding
- Managing Application Server Memory Settings
- Switching to Apache Tomcat

Application Server URL encoding

Application servers may have different settings for character encodings. We strongly suggest setting this to **UTF-8** where possible.

Information on setting the character encoding is available at:

- Configuring Tomcat's URI Encoding

Configuring Tomcat's URI encoding

By default, Tomcat uses ISO-8859-1 character encoding when decoding URLs received from a browser. This can cause problems when Confluence's encoding is UTF-8, and you are using international characters in attachment or page names.

1. Edit `conf/server.xml` and find the line where the `Coyote HTTP Connector` is defined. It will look something like this, possibly with more parameters:

```
<Connector port="8090"/>
```

2. Add a `URIEncoding="UTF-8"` property to the connector:

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```
<Connector port="8090" URIEncoding="UTF-8"/>
```

3. Restart Tomcat

If you are using mod_jk

You should apply the same URIEncoding parameter as above to the AJP connector if you are using mod_jk, and add the following option to your Apache mod_jk configuration:

```
<Connector port="8009" protocol="AJP/1.3" URIEncoding="UTF-8"/>
```

```
JkOptions +ForwardURICompatUnparsed
```

More information using Apache with Tomcat

For comprehensive examples of how to use Tomcat and Apache with Confluence, see Running Confluence behind Apache.

Managing Application Server Memory Settings

The minimum and maximum JVM heap space allocated to the application server affects performance. Confluence administrators may wish to modify this value from the defaults depending on their server load. This document only provides guidelines rather than rules, so administrators optimising for performance should use this document as a starting point only.

> For a comprehensive overview of memory management, and memory tuning in Confluence under Sun JRE, please read Garbage Collector Performance Issues

Testing For Optimum Memory Settings

In the general case, both JIRA & Confluence users will benefit from setting the minimum and maximum values identical. In larger installations, there is benefit to memory tuning, if there is a perceived performance issue. If you are experiencing Out of Memory Heap errors, try doubling the -Xmx and -Xms values for your installation to see if this resolves or helps resolve your issue. If not, please lodge a support ticket as there may be other factors contributing.

Memory usage is most likely to be maximised under peak load, and when creating a site XML backup. In many cases, the backup can be the cause of the OOM, so increase -Xmx values and verify if a backup was occurring at the time of OOM. A quick rule of thumb for gauging the success of a memory adjustment is using simple anecdotal evidence from users. Is it snappier? The same? How does it handle while a backup is occurring?

> Atlassian recommends in normal use, to disable the XML backup and use a Production Backup Strategy.

- If you normally perform manual XML site backups on your server, test your maximum memory requirements by performing a site XML backup while the server is under maximum load
- If you do not create manual XML site backups, simply monitor the server while under maximum load

Applying Memory Settings

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See How to Fix Out of Memory Errors by Increasing Available Memory.

Related Topics

- Garbage Collector Performance Issues
- How to Fix Out of Memory Errors by Increasing Available Memory
- Server Hardware Requirements Guide
- Performance Tuning
- Troubleshooting Slow Performance Using Page Request Profiling
- Tomcat JVM options and Modify the Default JVM Settings

Switching to Apache Tomcat

Apache Tomcat is the only application server supported for Confluence. To move Confluence from an application server (e.g. WebSphere) to Tomcat using the same database, follow the instructions below.

Please note, you cannot simply copy the WAR file or expanded WAR directory from an old Confluence EAR/WAR version in the old application server to Tomcat. **This will not work.**

Follow these instructions:

- 1. Before You Start
- 2. Backing Up
- 3. Switching Application Servers
- 4. Applying Customisations
  - Confluence Server
  - Plugins
  - Look and Feel
  - Performance
  - Advanced Customisations
- 5. Testing Confluence

1. Before You Start

1. The following instructions will only work if you are running the same major version of Confluence on both application servers. If you are running different major versions of Confluence, you will need to upgrade Confluence before you can switch to Tomcat.
2. Note that you need current software maintenance, as the process for changing application servers involves installing Confluence or Confluence EAR-WAR.
3. If the environment (e.g. the database system, the operating system and so on) that you are running Confluence in has changed, please ensure it still complies with the Confluence System Requirements.
4. If you are using an external database, familiarise yourself with all known issues for your specific database. Also make sure the Confluence database connector principal (the database user login) has sufficient permissions to modify the database schema.
5. Note any customisations that you have made to Confluence, e.g. enabled/installed plugins, modified layouts, custom themes, etc. You will need to reapply these after you have switched to Tomcat. You can view the list of customisations in the Reapplying Customisations section below.
6. We recommend that you **do not** run any other applications in your Tomcat application server that is running Confluence, to prevent performance issues.

2. Backing Up

Before you switching to Tomcat, you must back up the following:

1. **Back up your Confluence Home directory.** The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using

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the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored i this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'. The location of the Home directory is stored in a configuration file called `confluence-init.properties`, which is located inside the `conf uence/WEB-INF/classes` directory in your Confluence Installation directory.

2. **Back up your database.** Perform a manual backup of your external database before proceeding with th upgrade and check that the backup was created properly. If you are not a database expert or unfamiliar with the backup-restore facilities of your database, you should try to restore the backup to a different system to ensure that the backup worked before proceeding. This recommendation is not specific to Confluence usage, but it is good practice to ensure that your database backup is not broken.
ℹ️ The 'embedded database' is the HSQLDB database supplied with Confluence for evaluation purpose you don't need to back it up since it is stored in the home directory. But you should not use this databas for production systems anyway, so if you happen to accidentally still use HSQLDB in a production syste please migrate to a proper database **before** the upgrade.
3. **Back up your Confluence Installation directory** (if you are using Confluence) **or your Confluence webapp** (if you are using Confluence EAR-WAR edition). The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory i also sometimes called the 'Confluence Install directory'.

3. Switching Application Servers

1. Install Confluence on your new application server. We recommend that you install Confluence (from the zip file) as it is preconfigured with Tomcat. If you want more control over the installation process, you ca nstall Confluence EAR-WAR on Tomcat however this requires more manual configuration.
Regardless of which method you choose, as part of the installation process:
   - If you are connecting to your database via a standard JDBC connection, enter the URL, usernam and password for your existing database.
   - If you are connecting to your database via datasource, use the settings for your existing database when you configure the JDBC datasource in your new server. Refer to the appropriate guide below:
     - Configuring a MySQL Datasource in Apache Tomcat
     - Configuring a SQL Server Datasource in Apache Tomcat
     - Configuring a PostgreSQL Datasource in Apache Tomcat
2. Copy the following files from your old Confluence installation to your new one:
   - `{CONFLUENCE_INSTALL}\confluence\WEB-INF\classes\confluence-init.properti s`
   - `{CONFLUENCE_INSTALL}\confluence\WEB-INF\classes\atlassian-user.xml`
   - `{CONFLUENCE_INSTALL}\confluence\WEB-INF\classes\osuser.xml` *(copy this over if you are using JIRA user management)*
   - `{CONFLUENCE_INSTALL}\confluence\WEB-INF\classes\seraph-config.xml` *(copy thi over if you using custom SSO)*
   - `{CONFLUENCE_INSTALL}\confluence\WEB-INF\web.xml` *(copy this over if you have previously modified it, e.g. to configure a datasource)*
3. Make sure you shutdown the old server before you startup the new one.
4. If you are running the new application server on a different machine to the old one, carry out the followin actions as soon as you start the new server:
   - Re-index your data.
   - Make sure that the attachments location is valid for the new server.
5. If you have applied special settings to their Confluence server and/or Confluence look and feel, you will need to reapply these customisations as described in below.

4. Applying Customisations

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After switching to Tomcat, you need to review any customisations and other special configurations you previously used for your Confluence instance, and re-apply if necessary. This section also contains some Tomcat-specific customisations that you may wish to considering applying, if you haven't used Confluence with Tomcat before.

> **Before you apply customisations**
>
> Please ensure that your Confluence installation works correctly on Tomcat without any customisations before you apply any of customisations listed below. This will make it easier to identify problems, if you run into trouble during the switch to Tomcat.

Confluence Server

- For long-term use, we recommend that you configure Confluence to start automatically when the operating system restarts. For Windows servers, this means configuring Confluence to run as a Window service.
- If you are using the Confluence edition and you have previously defined a **CATALINA_HOME environment variable**, please check that it points to the correct path for the new Confluence Tomcat server.
- If you were previously running **Confluence on a non-standard port**, edit your new `<Installation-D rectory>\conf\server.xml` file as described in Change listen port for Confluence.

Plugins

- If you were previously using any **plugins**, install the latest compatible version and disable any plugins th are incompatible with your new instance of Confluence. The easiest way to do this is to use the Plugin Repository in the Confluence Administration Console.

Look and Feel

- If you are using any **customised themes**, please check that they are displaying as expected. Some further customisation may be required to ensure compatibility with your new version of Confluence.
- If you had previously customised the **default site or space layouts**, you will need to reapply your changes to the new defaults as described here. Please do not just copy your VM (velocity) files across. Ensure that Confluence works without your custom layouts then apply the layout via the Confluence Administration console.

Performance

- If the load on your Confluence instance is high, you may need more simultaneous connections to the database. Read more about this in the Performance Tuning guide.
- If you had previously modified the **memory flags** (`Xms` and `Xmx`) in either the `<Installation-Direc ory>\bin\setenv.sh` or the `<Installation-Directory>\bin\setenv.bat` file, you may want make the modifications in your new installation. The parameters are specified in the `JAVA_OPTS` variabl See How to Fix Out of Memory Errors by Increasing Available Memory for more information.

Advanced Customisations

- If you were previously running **Confluence over SSL**, you will need to reapply your configuration as described in Running Confluence Over SSL or HTTPS.
- If you were using a custom SSO authenticator, change seraph-config.xml to the correct authenticator.
- If you had changed the Confluence interface text, you will need to copy over the ConfluenceActionSupport.properties file.
- If you had previously modified the Confluence **source code**, you will need to reapply your changes to th new version.

5. Testing Confluence

Make sure you **test Confluence on the new server** before deploying it in production.

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The Working with Confluence Logs document contains the locations for the application logs, if you need to refe to them.

Database Configuration

This document provides information on configuring an external database.

The embedded HSQL database for evaluation purposes

The Confluence installation includes an embedded HSQLDB database, supplied for the purpose of **evaluating Confluence**.

If you are using the embedded database, the database files are stored in the `\database` folder under your Conf luence Home directory. See also Important Directories and Files.

> **Embedded Database is Not Suitable for Production Instances of Confluence**
>
> Production instances of Confluence should use an external database. When using the default HSQLDB database, you run the risk of unrecoverable data loss due to not being transaction safe.
>
> - Corruption is occasionally encountered after sudden power loss and can usually be corrected using this data recovery procedure.
> - HSQLDB is still suitable for evaluation purposes, but the risk can only be eliminated by switching databases. External databases may also provide superior speed and scalability.

Selecting an external database

Note: Take time to choose your database wisely. The XML backup built into Confluence is not suited for migration or backup of large data sets. If you need to migrate later, you will need to use a third party database migration tool.

Below is more information on selecting and migrating to an external database:

- Migrating to a Different Database
- List Of Supported Databases
- Known Issues For Supported Databases

Database setup

Setup instructions are shown below.

- Database JDBC drivers
- Database Setup for Oracle
- Database Setup for SQL Server
- Database Setup For Any External Database
- Database Setup for PostgreSQL
- Database Setup For MySQL

Optimising database performance

To improve database responsiveness:

- Improving Database Performance
- Known Issues For Supported Databases

Database troubleshooting

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For solving database-related problems:

- Troubleshooting External Database Connections
- Troubleshooting the Embedded Database (HSQL DB)
- Interpreting DB2 error codes
- Known Issues For Supported Databases

Obtain technical support from Troubleshooting Problems and Requesting Technical Support.

Notes

- Issue CONF-12599 requests a more robust strategy for migrating large Confluence sites.

Known Issues For Supported Databases

Supported Databases

Please refer to the Supported Platforms topic.

Troubleshooting

Known Issues For PostgreSQL
Known Issues For Oracle
Known Issues For MySQL
Known Issues For SQL Server
Known Issues For Db2
Configuring Database Character Encoding

Configuring Database Character Encoding

The database used with Confluence should be configured to use the same character encoding as Confluence. **The recommended encoding is Unicode UTF-8 (the equivalent for Oracle databases is AL32UTF8).**

There are two places where character encoding may need to be configured:

- when creating the database
- when connecting to the database (JDBC connection URL or properties).

The configuration details for each type of database are different. Some examples are below.

On this page:

- JDBC connection settings
- Creating a UTF-8 database
- Updating existing database to UTF-8

⚠ *The information on this page does not apply to Confluence OnDemand.*

JDBC connection settings

MySQL

Append "useUnicode=true to your JDBC URL:

```
jdbc:mysql://hostname:port/database?useUnicode=true&characterEncoding=utf8
```

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If you are modifying `confluence.cfg.xml` directly rather than via the Confluence Installation GUI, you'll need to escape out the & in the URL string as this is a reserved XML token and will break the syntax when the XML is parsed. An effective URL could be similar to:

```
<property
name="hibernate.connection.url">jdbc:mysql://hostname:port
/database?useUnicode=true&amp;characterEncoding=utf8</prop
erty>
```

Creating a UTF-8 database

MySQL

1. Create a UTF-8 database with binary UTF-8 collation.
   Binary UTF-8 provides case-sensitive collation.

   ```
   CREATE DATABASE confluence CHARACTER SET utf8 COLLATE utf8_bin;
   ```

2. You will also need to set the `Server Characterset` to `utf8`. This can be done by adding the following in `my.ini` for Windows or `my.cnf` for other OS. It has to be declared in the Server section, which is the section after `[mysqld]`:

   ```
   [mysqld]
   default-character-set=utf8
   ```

   If the above option does not work, try using *character_set_server=utf8* in lieu of *default-character-set=utf8*

3. Use the **`status`** command to verify database character encoding information.

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Screenshot: Using the Status Command to Verify Database Character Encoding

```
mysql> CREATE DATABASE confluence CHARACTER SET utf8 COLLATE utf8_bin;
Query OK, 1 row affected (0.02 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| confluence         |
| confluencedb       |
| mysql              |
| test               |
+--------------------+
5 rows in set (0.02 sec)

mysql> use confluence;
Database changed
mysql> status;
--------------
C:\Program Files\MySQL\MySQL Server 5.0\bin\mysql.exe  Ver 14.12 Distrib 5.0.83,
 for Win32 (ia32)

Connection id:          1800
Current database:       confluence
Current user:           root@localhost
SSL:                    Not in use
Using delimiter:        ;
Server version:         5.0.83-community-nt MySQL Community Edition (GPL)
Protocol version:       10
Connection:             localhost via TCP/IP
Server characterset:    utf8
Db     characterset:    utf8
Client characterset:    utf8
Conn.  characterset:    utf8
TCP port:               3306
Uptime:                 20 hours 56 min 23 sec
```

4. In some cases, the individual tables collation and character encoding may differ from the one that the database as a whole has been configured to use. Please use the command below to ensure all tables within your Confluence database are correctly configured to use UTF-8 character encoding and binary UTF-8 collation:

```
use confluence;
show table status;
```

Check for the value listed under the **Collation** column, to ensure it has been set to `utf8_bin` (that is, case-sensitive) collation for all tables.
If not, then this can be changed by the following command, executed for each table in the Confluence database:

```
ALTER TABLE tablename CONVERT TO CHARACTER SET utf8 COLLATE utf8_bin;
```

Please substitute the <tablename> above, with each table within the confluence database.

Relevant MySQL manual for more detailed explanation:

- Specifying Character Sets and Collations documentation.
- Connection Character Sets and Collations.
- SHOW TABLE STATUS Syntax.
- ALTER TABLE Syntax.

PostgreSQL

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```
CREATE DATABASE confluence WITH ENCODING 'UNICODE';
```

Or from the command-line:

```
$ createdb -E UNICODE confluence
```

For more information see the PostgreSQL documentation.

For PostgreSQL running under Windows

Please note that international characters sets are only fully supported and functional when using PostgreSQL 8.1 and above under Microsoft Windows.

For PostgreSQL running under Linux

> Please make sure you check the following to ensure proper handling of international characters in your database

When PostgreSQL creates an initial database cluster, it sets certain important configuration options based on the host enviroment. The command responsible for creating the PostgreSQL environment `initdb` will check environment variables such as `LC_CTYPE` and `LC_COLLATE` (or the more general `LC_ALL`) for settings to use as database defaults related to international string handling. As such it is important to make sure that your PostgreSQL environment is configured correctly **before you install Confluence**.

To do this, connect to your PostgreSQL instance using `pgsql` and issue the following command:

```
SHOW LC_CTYPE;
```

If LC_CTYPE is set to either "C" or "POSIX" then certain string functions such as converting to and from upper and lower case will not work correctly with international characters. Correct settings for this value take the form `<LOCALE>.<ENCODING>` (`en_AU.UTF8` for example).

If your LC_CTYPE is incorrect please check the PostgreSQL documentation for information on configuring database localisation. It is not easy to change these settings with a database that already contains data.

Updating existing database to UTF-8

MySQL database with existing data

> **For an existing database**
>
> If you're using a existing database, confirm the Character Encoding by executing the query: *SHOW VARIABLES LIKE 'character%';* and *SHOW VARIABLES LIKE 'collation%';*.
> The results should be UTF-8.

> Before proceeding with the following changes, please **backup your database**.

This example shows how to change your database from latin1 to utf8.

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1. Dump the database to a text file using mysqldump tool from the command-line :
   `mysqldump -p --default_character-set=latin1 -u <username> --skip-set-charset confluence > confluence_database.sql`
2. copy `confluence_database.sql` to `confluence_utf8.sql`
3. Open `confluence_utf8.sql` in a text editor and change all character sets from 'latin1' to 'utf8'
4. Encode all the latin1 characters as UTF-8:
   `recode latin1..utf8 confluence_utf8.sql` (the recode utility is described at http://directory.fsf.org/recode.html; it can actually be downloaded from http://recode.progiciels-bpi.ca/, and is available for Ubuntu via `apt-get`)

In MySQL:

1. `DROP DATABASE confluence;`
2. `CREATE DATABASE confluence CHARACTER SET utf8 COLLATE utf8_bin;`

Finally, reimport the UTF-8 text file:

1. `mysql -u <username> -p --default-character-set=utf8 --max_allowed_packet=64M confluence < /home/confluence/confluence_utf8.sql`

To support large imports, the parameter '--max_allowed_packet=64M' used above sets the maximum size of an SQL statement to be very large. In some circumstances, you may need to increase it further, especially if attachments are stored in the database.

Testing database encoding

See Troubleshooting Character Encodings for a number of tests you can run to ensure your database encoding is correct.

RELATED TOPICS:

Character encodings in Confluence
Known Issues for MySQL

Database Setup Guides

- Database JDBC drivers
- Database Setup for Oracle
- Database Setup for SQL Server
- Database Setup For Any External Database
- Database Setup for PostgreSQL
- Database Setup For MySQL

Database JDBC drivers

The JDBC drivers for all databases currently supported for Confluence are linked below. You will need to make the driver available to your application server, as described in the appropriate setup guide.

Please note, we bundle a number of JDBC drivers with Confluence, as shown below. You do not have to download or install the drivers for the relevant databases, **if you are using a direct JDBC connection**. If you are connecting via a datasource, you will still need to download and install the drivers manually.

JDBC Driver Download Links

Database	JDBC Drivers Bundled with Confluence?	JDBC Drivers

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PostgreSQL	✅	8.4-701.jdbc3 (note, the JDBC 3 driver will work under the 1.6 JVM. If you want to use the JDBC 4 driver, you can download it from the PostgreSQL website. However, we recommend that you use the bundled JDBC 3 driver.)
MySQL	✅	5.1.11
Microsoft SQL Server	✅	jTDS 1.2.2
Oracle	❌	JDBC driver downloads (see Database Setup for Oracle for required JDBC driver versions)
DB2	❌	JDBC drivers should be included with DB2, otherwise they can be downloaded from the IBM website

Database Setup for Oracle

This guide covers deploying the Confluence or Confluence WAR distributions with an Oracle database.

> ⚠ **This database can only be set up by an Oracle database administrator (DBA)**
>
> If you are not a DBA, you should not attempt to set up this database.

Oracle has a history of being extremely difficult to set up. If you do not have access to an experienced Oracle DBA in your organisation, you are recommended to select any free, scalable and easy-to-install alternative rather than proceeding with Oracle. Users evaluating Confluence are recommended to start with an alternative database and only consider migrating to Oracle after approval from their DBA. Atlassian's technical support for Oracle setup difficulties will also reflect the high minimum skill requirements for attempting an Oracle setup.

Database Setup Information

This setup guide must be used in conjunction with the list of Known Issues For Oracle. Please review that page before continuing.

Schema Requirements

Confluence can be deployed to a schema in any Oracle instance.

Database Compatibility

Please refer to Supported Platforms for information about supported database versions. If your version of Oracle is not supported, please upgrade to a supported version before installing Confluence.

Check your database drivers, to see if you need an update.

- For Oracle 11.1, use the 10.2.0.4 or 11.1.0.7.0 driver (Java 6 ojdbc6.jar).
- For Oracle 11.2, use the 11.2.0.1.0 driver (Java 6 ojdbc6.jar).

Tip: search for the jar filename on the download site.

Check that your version of Oracle does not have any known issues:

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Oracle Version	Oracle Driver	Issue	Solution
Any	Pre 10g	Driver incompatibilities	Upgrade to latest 10g drivers if compatible

You may be also interested in the relevant JIRA documentation to check the compatibility of your Oracle server and driver.

Deploying Confluence with Oracle

Complete the instructions for installing Confluence, then **return to this document instead of proceeding** to the Confluence Setup Guide.

Database Preparation

Tailor these instructions to your particular database version:

1. Perform any necessary database or driver upgrades. Download the latest compatible database drivers. See the Oracle JDBC driver FAQ.
2. Create a Confluence user and grant the connect and resource permissions only to the user:

```
create user <user> identified by <password>;
grant connect, resource to <user>;
```

3. Add a local "all_objects" view to the user's schema, so that there is no possibility that a table with the same name as one of the Confluence tables in another schema will cause any conflicts. This is a workaround for the bug CONF-3613:

```
create view <user>.all_objects as
select *
from sys.all_objects
where owner = upper('<user>');
```

> Do not grant the database user the `select any table` permission, or it can cause problems with other schemas, as per the same bug CONF-3613.

Determining Your JDBC URL

The JDBC thin driver for Oracle use three different styles of URL:

New Style
`jdbc:oracle:thin:@//[HOST][:PORT]/SERVICE`

Old Style
`jdbc:oracle:thin:@[HOST][:PORT]:SID`

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tnsnames

```
jdbc:oracle:thin:@(DESCRIPTION=
                     (SDU=32768)
                     (enable=broken)
                     (LOAD_BALANCE=yes)
                     (FAILOVER=yes)
                     (ADDRESS=
                       (PROTOCOL=TCP)
                       (HOST=dbserver1.example.com)
                       (PORT=1525))
                     (ADDRESS=
                       (PROTOCOL=TCP)
                       (HOST=dbserver2.example.com)
                       (PORT=1525))
                     (CONNECT_DATA=
                       (SERVICE_NAME=CONFDB)))
```

The tnsnames style is required for connecting to an Oracle RAC cluster. This example has been broken up over multiple lines for clarity, but it should be compacted into a single line. These may need more analysis than documented below, so you should seek the assistance of an experienced DBA.

If you use the new style URL, then SERVICE can be either an SID or Service Name, but if you use the old style URL, it can only be the SID.

You should be able to determine the host, port, service name, and/or SID by getting a DBA to run the following command as the user running oracle (by default "oracle"):

```
lsnrctl status
```

For reference, here is a sample output:

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```
SNRCTL for Linux: Version 11.2.0.2.0 - Beta on 29-JUN-2012 15:20:59
Copyright (c) 1991, 2010, Oracle.  All rights reserved.
Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=IPC)(KEY=EXTPROC_FOR_XE)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.2.0 - Beta
Start Date                06-JUN-2012 08:36:34
Uptime                    23 days 6 hr. 44 min. 25 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Default Service           XE
Listener Parameter File
/u01/app/oracle/product/11.2.0/xe/network/admin/listener.ora
Listener Log File
/u01/app/oracle/diag/tnslsnr/<HOSTNAME>/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC_FOR_XE)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=<HOSTNAME>)(PORT=1521)))

(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=<HOSTNAME>)(PORT=8080))(Presentation=HT
TP)(Session=RAW))
Services Summary...
Service "PLSExtProc" has 1 instance(s).
  Instance "PLSExtProc", status UNKNOWN, has 1 handler(s) for this service...
Service "XE" has 1 instance(s).
  Instance "XE", status READY, has 1 handler(s) for this service...
Service "XEXDB" has 1 instance(s).
  Instance "XE", status READY, has 1 handler(s) for this service...
The command completed successfully
```

1. The host and port is determined by the line containing `PROTOCOL=tcp`, **without** `Presentation=HTTP`.
2. Under services summary, each service which has an instance with READY status is a connectable service. The name following `Service` is a service name for connecting to the database name following `Instance` on the next line.
3. The SID is the name of the database instance, as defined by the `$ORACLE_SID` variable when you have sourced the Oracle environment to your shell.

For example, assuming that you are running Confluence on the same server as the Oracle database, with the above lsnrctl status output, you would use one of the following URLs:

```
jdbc:oracle:thin:@//localhost:1521/XE
jdbc:oracle:thin:@localhost:1521:XE
```

The URL can be used in either a direct JDBC connection or using a Tomcat datasource. If you want to use a datasource, please follow the instructions of the next two sections Adding a Datasource to Tomcat and Configuring Confluence Datasource Access, or if you'd prefer to just use a direct JDBC URL, skip to Running the Confluence Setup Wizard.

For further information on Oracle JDBC URLs, see this page.

Adding a Datasource to Tomcat

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1. Open `<INSTALL>/conf/server.xml` for editing.
2. Locate the section `Host -> Context`

```
<Host name="localhost" debug="0" appBase="webapps" unpackWARs="true"
autoDeploy="false">
    <Context path="" docBase="../confluence" debug="0" reloadable="true">
         <!-- Logger is deprecated in Tomcat 5.5. Logging configuration for
Confluence is specified in confluence/WEB-INF/classes/log4j.properties -->
         <Manager pathname="" />
    </Context>
</Host>
```

3. Paste in the `Resource` section provided, before `Manager` as shown:

```
<Host name="localhost" debug="0" appBase="webapps" unpackWARs="true"
autoDeploy="false">
    <Context path="" docBase="../confluence" debug="0" reloadable="true">
         <!-- Logger is deprecated in Tomcat 5.5. Logging configuration for
Confluence is specified in confluence/WEB-INF/classes/log4j.properties -->

         <Resource
         name="jdbc/confluence"
         auth="Container"
         type="javax.sql.DataSource"
         driverClassName="oracle.jdbc.OracleDriver"
         url="jdbc:oracle:thin:@hostname:port:sid"
         username="<username>"
         password="<password>"
         connectionProperties="SetBigStringTryClob=true"
         maxActive="25"
         maxIdle="5"
         maxWait="10000"
         />

         <Manager pathname="" />
    </Context>
</Host>
```

4. Change the `username` and `password` to match the Oracle login.
5. Change `url` to match what you determined in Determining the JDBC URL. For example:

```
jdbc:oracle:thin:@example.atlassian.com:1521:confluencedb
```

6. If required, choose different maxActive and maxIdle values. These set how many total database connections will be allowed at one time, and how many will be kept open even when there is no database activity.

Configuring Confluence Datasource Access

Configure Confluence to use this datasource:

1. Edit the file `<INSTALL>/confluence/WEB-INF/web.xml`
2. Go to the end of the file and just before `</web-app>`, insert the following:

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```
<resource-ref>
<description>Connection Pool</description>
<res-ref-name>jdbc/confluence</res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>
```

Running the Confluence Setup Wizard

Now Confluence is ready to attempt to connect to Oracle:

1. Download the Oracle JDBC database drivers for your JDK version via the Database JDBC drivers page. We recommend using the thin drivers only. Copy the JAR file into **`<confluence install>/WEB-INF/lib`**. This directory path is potentially `<INSTALL>/lib` if Confluence is running off Apache Tomcat version 6 or above.
2. Startup Confluence using `<INSTALL>/bin/startup.bat` or `<INSTALL>/bin/startup.sh`
3. Insert your licence and select **External Database**.
4. If you are using a Datasource:
    a. Select **Datasource Connection** using your Oracle version.
    b. Enter `java:comp/env/jdbc/confluence` for the name of the datasource.
5. If you are using a Direct JDBC URL:
    a. Select **Direct JDBC URL** using your Oracle version.
    b. Enter your JDBC URL to match what you determined in Determining the JDBC URL

Confluence should now deploy using the Oracle database specified. Please read this comment on Oracle database optimisation.

Oracle Configuration Tips

24-hour time format with Oracle 8i

We have received a report from a user that when an Oracle 8i database is configured to use 24-hour time as the default format, an exception like this may occur:

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```
005-12-06 13:23:20 Loading root WebApplicationContext

2005-12-06 13:24:34 StandardContext[]: Exception sending context initialized
event to listener instance
of class com.atlassian.confluence.util.ConfluenceContextLoaderListener

org.springframework.beans.factory.BeanCreationException: Error creating bean with
name 'userAccessor' defined in class path resource [applicationContext.xml]:
Can't resolve reference to bean 'userAccessorTarget' while setting property
'target';
nested exception is org.springframework.beans.factory.BeanCreationException:
Error creating bean with name 'userAccessorTarget' defined in class path
resource [applicationContext.xml]: Can't resolve reference to bean
'spacePermissionManager' while setting property 'spacePermissionManager';
nested exception is org.springframework.beans.factory.BeanCreationException:
Error creating bean with name 'spacePermissionManager' defined in class path
resource [securityContext.xml]:
Can't resolve reference to bean 'spacePermissionManagerTarget' while setting
property 'target';
nested exception is org.springframework.beans.factory.BeanCreationException:
Error creating bean with name 'spacePermissionManagerTarget' defined in class
path resource [securityContext.xml]: Initialization of bean failed;
nested exception is org.springframework.jdbc.UncategorizedSQLException:
(Hibernate operation): encountered SQLException [Cannot create
PoolableConnectionFactory];
nested exception is org.apache.commons.dbcp.SQLNestedException: Cannot create
PoolableConnectionFactory

...

org.apache.commons.dbcp.SQLNestedException: Cannot create
PoolableConnectionFactory, cause:


java.sql.SQLException: ORA-00604: error occurred at recursive SQL level 1


ORA-12705: invalid or unknown NLS parameter value specified
```

One symptom of this problem is that Confluence may refuse to start after midday.

The workaround is to go to 'General Configuration' and set the default time format to "HH:mm".

RELATED TOPICS

Known Issues For Oracle

Database Setup for SQL Server

Use this guide in conjunction with the more general Database Setup Guide for Any Database. These instructions add some reference notes specific to SQL Server.

1. Review the known issues for SQL Server.
2. Identify which character encoding to use. To do this, check the encoding currently used by your application server and Confluence. All three must use compatible encoding. For example, the default SQL Server encoding of USC-2 is compatible with UTF-8.
3. Create a new database (as an SQL administrator). If you set your application server and Confluence to use an encoding incompatible with USC-2, specify that character encoding for the database.

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4. Set the default collation for the database to be 'SQL_Latin1_General_CP1_CS_AS' (**case sensitive**). You can do this by issuing the following SQL query:

```
ALTER DATABASE <database_name> COLLATE SQL_Latin1_General_CP1_CS_AS
```

NB: if you receive an error at this point stating "The database could not be exclusively locked to perform the operation", you may need to prevent other connections by setting the mode to single user for the transaction:

```
ALTER DATABASE <database_name> SET SINGLE_USER WITH ROLLBACK IMMEDIATE;
<your ALTER DATABASE query>
ALTER DATABASE <database_name> SET MULTI_USER;
```

5. Configure the database to use the isolation level, Read Committed with Row Versioning. You can do this by issuing the following SQL query:

Determine if READ_COMMITTED_SNAPSHOT is enabled

```
SELECT is_read_committed_snapshot_on FROM
sys.databases WHERE name= 'YourDatabase'
```

Return value:
1 = READ_COMMITTED_SNAPSHOT option is ON. Read operations under the read-committed isolation level are based on snapshot scans and do not acquire locks.

0 = READ_COMMITTED_SNAPSHOT option is OFF (default). Read operations under the read-committed isolation level use share locks.

```
ALTER DATABASE <database_name>
   SET READ_COMMITTED_SNAPSHOT ON
   WITH ROLLBACK IMMEDIATE;
```

6. Create a new SQL user account for Confluence (as an SQL administrator). Provide full create, read and write permissions for the database tables. Please note, Confluence must be able to create its own schema.
7. Install the database drivers, if needed:

SQL Server JDBC Drivers bundled with Confluence
The JDBC drivers for this database are bundled with Confluence. You do not have to download or install any JDBC drivers to use this database with Confluence, **if you are using a direct JDBC connection**. If you are connecting via a datasource, you will still need to download and install the drivers manually. See Database JDBC drivers for more information on the bundled JDBC drivers.

- If you're not sure which connection you're using, it's most likely JDBC. A JNDI resource must be configured manually, as described in Configuring a MySQL Datasource in Apache Tomcat.

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- If you are configuring a datasource to connect to your MS SQL server database, you will need to place the jar file in **`<confluence install>/WEB-INF/lib`** (for Confluence 2.10 onwards) or **`<confluence install>/common/lib`** (for earlier versions). Information and links to the appropriate database drivers are available on Database JDBC drivers. You may also find this page helpful: http://jtds.sourceforge.net/faq.html

8. Start Confluence and visit the home URL (e.g. http://localhost:8090) to start the Confluence Setup Wizard and select a Custom Install, insert the relevant connection information.
   - When prompted for a **driver class name**in the database setup step enter:

```
net.sourceforge.jtds.jdbc.Driver
```

   - When prompted for the **jdbc url**, the format to use is:

```
jdbc:jtds:sqlserver://<server>:<port>/<database>
```

Configuring a SQL Server Datasource in Apache Tomcat

This page contains instructions on how to set up an SQL Server datasource connection for Confluence or Confluence EAR/WAR.

On this page:

- 1. Install the Driver
- 2. Shut down Tomcat
- 3. Configure Tomcat
- 4. Configure the Confluence web application
- 5. Configure Confluence

1. Install the Driver

1. Download the latest SQLServer JTDS drivers from http://sourceforge.net/projects/jtds/files/.
2. After unpacking the file you have downloaded, you'll find a file called something like `jtds-1.2.5.jar` (whatever is the latest version).
3. Copy this file into the `common/lib` directory of your Tomcat installation. Be aware that this directory may be just `lib` for Tomcat version 6 and beyond (i.e. `<tomcat-install>/lib` rather than `<tomcat-install>/common/lib`).

> ✅ Alternatively you can get the driver from `/confluence/WEB-INF/lib/jtds-1.2.2.jar` and move it into the `common/lib` directory of your Tomcat installation.

2. Shut down Tomcat

1. Run `bin/shutdown.sh` or `bin/shutdown.bat` to bring Tomcat down while you are making these changes.

> ✅ Make a backup of your `<CONFLUENCE_HOME>/confluence.cfg.xml` file and your `<CONFLUENCE_INSTALL>/conf/server.xml` file so you can easily revert should their be a problem.

3. Configure Tomcat

1. Firstly, you need to edit **<confluence install>/conf/server.xml**and find the following lines:

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```
<Context path="" docBase="../confluence" debug="0" reloadable="true">
      <!-- Logger is deprecated in Tomcat 5.5. Logging configuration for
Confluence is specified in confluence/WEB-INF/classes/log4j.properties -->
```

2. Within the Context tags, directly after the opening <Context.../> line, insert the DataSource Resource tag:

```
<Resource name="jdbc/confluence" auth="Container"
type="javax.sql.DataSource"
    username="yourDatabaseUser"
    password="yourDatabasePassword"
    driverClassName="net.sourceforge.jtds.jdbc.Driver"
    url="jdbc:jtds:sqlserver://localhost:1433/yourDatabaseName"
    maxActive="20"
    maxIdle="10"
    validationQuery="select 1" />
```

- Replace the username and password parameters with the correct values for your database
- In the url parameter, replace the word 'yourDatabaseName' with the name of the database your confluence data will be stored in.

Why is the validationQuery element needed?

When a database server reboots, or there is a network failure, all the connections in the connection pool are broken and this normally requires a Application Server reboot.

However, the Commons DBCP (Database Connection Pool) which is used by the Tomcat application server can validate connections before issuing them by running a simple SQL query, and if a broken connection is detected, a new one is created to replace it. To do this, you will need to set the "validationQuery" option on the database connection pool.

If switching from a direct JDBC connection to datasource, you can find the above details in your `<CONFLUENCE_HOME>/confluence.cfg.xml` file.

The configuration properties for Tomcat's standard data source resource factory (org.apache.tomcat.dbcp.dbcp.BasicDataSourceFactory) are as follows:

- driverClassName — Fully qualified Java class name of the JDBC driver to be used.
- maxActive — The maximum number of active instances that can be allocated from this pool at the same time.
- maxIdle — The maximum number of connections that can sit idle in this pool at the same time.
- maxWait — The maximum number of milliseconds that the pool will wait (when there are no available connections) for a connection to be returned before throwing an exception.
- password — Database password to be passed to our JDBC driver.
- url — Connection URL to be passed to our JDBC driver. (For backwards compatibility, the property driverName is also recognized.)
- user — Database username to be passed to our JDBC driver.
- validationQuery — SQL query that can be used by the pool to validate connections before they are returned to the application. If specified, this query MUST be an SQL SELECT statement that returns at least one row.

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4. Configure the Confluence web application

1. Edit `/confluence/WEB-INF/web.xml` in your confluence installation
2. Go to the end of the file and just before </web-app>, insert the following:

```
<resource-ref>
    <description>Connection Pool</description>
    <res-ref-name>jdbc/confluence</res-ref-name>
    <res-type>javax.sql.DataSource</res-type>
    <res-auth>Container</res-auth>
</resource-ref>
```

5. Configure Confluence

- **If you have not yet set up Confluence**
  1. Follow the steps in the Confluence Setup Guide
  2. In the Database Setup section, choose the "Datasource Connection" option.
  3. Set the JNDI name to `java:comp/env/jdbc/confluence`
  4. Set the Database dialect to SQL Server.
- **If you are changing an existing Confluence installation over to using a Tomcat datasource**
  1. Edit the `<confluence home>/confluence.cfg.xml` file
  2. Delete any line that contains a property that begins with hibernate.
  3. Insert the following at the start of the <properties> section.

```
<property name="hibernate.setup">true</property>
<property
name="hibernate.dialect">net.sf.hibernate.dialect.SQLServerIntlDialec
t</property>
<property
name="hibernate.connection.datasource">java:comp/env/jdbc/confluence<
/property>
```

  4. Restart Confluence.

RELATED TOPICS

Configuring a MySQL Datasource in Apache Tomcat

Database Setup For Any External Database

If you are using Confluence in a production environment, data should be stored in an external database. The embedded database is bundled for evaluation purposes and does not offer full transactional integrity in the event of sudden power loss.

This document provides instructions for setting up Confluence for use with a production-ready database. It covers both migration from an evaluation installation of Confluence and installation of an empty database during initial setup. The following specific database guides have additional information:

- PostgreSQL Guide
- MySQL Guide
- Oracle Guide
- SQL Server

Preparation

Install the following on the Confluence server:

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- Database administration tool, for example DBVisualizer
- JDBC database drivers
- The database server (unless accessed remotely)

The instructions refer to two particular directories:

- The *<Confluence Installation Directory>* is the directory where you unpacked the Confluence download.
- The *<Confluence Home Directory>* is the directory where Confluence stores its data, which you set by editing the `confluence-init.properties` file in *`Confluence Installation Directory`*`/confluence/WEB-INF/classes`.

Database Setup

Create the schema and setup permissions:

1. Visit the Database Configuration page to review any known issues and database setup for your database.
2. Create a new schema using the correct database encoding.
3. Create a user with full read/write access to the Confluence schema, including the ability to create tables.
4. If the database only permits users to log in from approved hosts (e.g. `localhost`), grant database access permission for the Confluence server.
5. If the database is hosted remotely to the Confluence server, set up any firewall permissions.
6. Test the connection by using the database administration tool installed on the Confluence server to log in to the database.

Migration From an Evaluation Instance of Confluence
Continue here if you are migrating from an evaluation instance with the built-in database. If you are installing Confluence for the first time, continue below.

Create Backups

To keep any existing Confluence content:

1. If you are already using an external database, use your database administration tool to create a full database backup.
2. Manually create an XML backup of Confluence under '**Administration**' -> '**Backup & Restore**'. If you have less than 100MB of attachments, check '**Backup attachments**' when creating the backup. If you have over 100MB of attachments, you should not check the 'Backup attachments' and instead you should manually copy the `/attachments` directory in your Confluence home to a backup location. This attachments directory will later be copied into the new home directory.
3. Download the backup file to a backup location.

Database Connection Setup

Set up Confluence's database connection:

1. Stop Confluence if it is already running.
2. The JDBC database drivers for your database must be available to the application server. You can skip this step if the drivers are already loaded.
    a. Copy the database driver JAR file into the `lib` directory. In Confluence this directory is `/confluence/WEB-INF/lib`. Other application servers will use a different path.
    b. If the application server does not support dynamic library loading, stop your application server.
3. Create a new Confluence home directory.
4. Open the `WEB-INF/classes/confluence-init.properties` file in your Confluence installation and change the `confluence.home` property to point to this new Confluence home directory.
5. Start up Confluence. Refer to the platform-specific installation instructions to learn how. You should be presented with the **Confluence setup wizard**. Enter your license information.
6. Select '**Custom install**'.

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7. Select a database from the drop down list.
8. Select `Direct JDBC` and then enter the username, password and database driver of the new database.
9. If you created a Confluence backup earlier and wish to restore it, import it into Confluence now.
10. Once the wizard is complete, if you did not check the 'Backup attachments', copy the backed up `/attachments` directory into the new Confluence home.

RELATED TOPICS

Troubleshooting External Database Connections

Database Setup for PostgreSQL

This document provides instructions for setting up Confluence for use with a PostgreSQL database. Please check the Known Issues for PostgreSQL before you start.

On this page:

- 1. Install PostgreSQL
- 2. Create a User and a Database
- 3. Configure Confluence to use the PostgreSQL Database
- Troubleshooting

1. Install PostgreSQL

To install PostgreSQL,

1. Download the database software and installer from the PostgreSQLdownload site and save it to your desktop. Choose the package that matches your operating system. Where available, choose the **One Click Installer**. These instructions assume you will use the One Click Installer. For example:
   - PostgreSQL One Click Installer for Windows.
   - PostgreSQL One Click Installer for Linux.
   - PostgreSQL One Click Installer for Mac OS X.
2. Run the installer. Please note the following information when installing PostgreSQL:
   - The **password** that you are prompted to provide during the installation process is for the 'postgres' account, which is the db root level account.
   - The **default port** for PostgreSQL is 5432. If you decide to change the default port, please ensure that your new port number does not conflict with any services running on that port. You will also need to remember to update all further mentions of db port.
   - Choose the **locale** that best fits your geographic location, when prompted to enter a locale.
   - Do not launch **Stack Builder** at the completion of the installer.
3. PostgreSQL is now installed on your machine.

2. Create a User and a Database

All screenshots below are taken from a PostgreSQL configuration on a Windows machine.

To create a PostgreSQL user and database,

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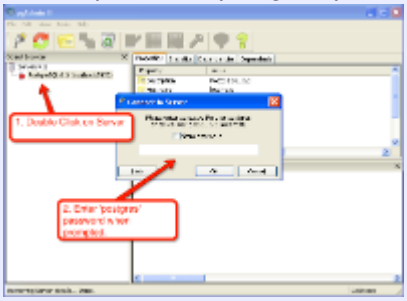
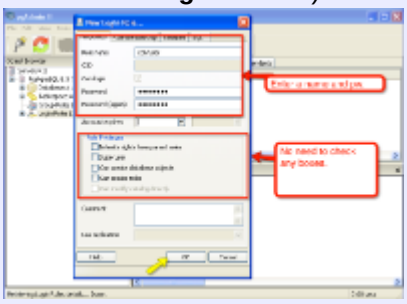
1. Start the '**pgAdmin III**' administration tool on your machine. The pgAdmin III administration console will display. The database user and database that will be used by Confluence are created via the 'pgAdmin III' tool.

2. Connect to the PostgreSQL server (e.g. double-click on the server name in the object browser). Enter a 'postgres' password when prompted.

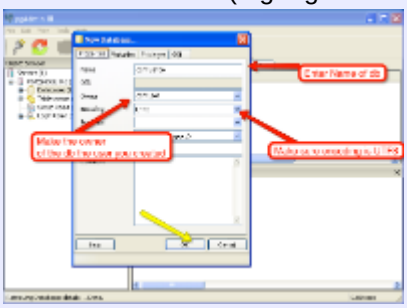


3. Create a new user, i.e. login role (e.g. right-click click '**Login Roles**' in the object browser and select '**New Login Role...**'):



   - Enter a name and password for the new user.
   - Do not select any role privileges.

4. Create a database (e.g. right-click '**Databases**' and select '**New Database...**'):



   - Enter a name for the new database.
   - Set the owner of the database to the user you created in the previous step.
   - Select '**UTF8**' for '**Encoding**'.

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Creating a User and Database via Linux command-line

If you are on Linux and do not have the above pgAdmin III administration tool, you can use the command line interface instead. Assuming that you are using the default installation directory of `/opt/PostgreSQL/8.3/bin/`, enter the following commands:

```
sudo -s -H -u postgres
# Create the Confluence user:
/opt/PostgreSQL/8.3/bin/createuser -S -d -r -P -E confuser
# Create the Confluence database:
/opt/PostgreSQL/8.3/bin/createdb -O confuser confluence
exit
```

3. Configure Confluence to use the PostgreSQL Database

Once you have installed and set up PostgreSQL, you will need to configure Confluence to use the PostgreSQL database.

To configure Confluence to use PostgreSQL,

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1. Install Confluence, if you haven't done so already. Ensure that you download the Confluence distribution, not the evaluation installer.
2. Ensure that Confluence is stopped (for example, by ensuring that the application server or service which is running Confluence has been stopped or terminated).
3. Install the database drivers, if needed:

> **PostgreSQL JDBC Drivers bundled with Confluence**
> The JDBC drivers for this database are bundled with Confluence. You do not have to download or install any JDBC drivers to use this database with Confluence, **if you are using a direct JDBC connection**. If you are connecting via a datasource, you will still need to download and install the drivers manually. See Database JDBC drivers for more information on the bundled JDBC drivers.
> - If you're not sure which connection you're using, it's most likely JDBC. A JNDI resource must be configured manually, as described in Configuring a MySQL Datasource in Apache Tomcat.
>
> *Note: Confluence only bundles the JDBC 3 driver which will work under the 1.6 JVM. However, if you are using Java 6 and want to use the JDBC 4 driver, you can download it via Database JDBC drivers and install it as described below. You will need to remove the existing PostgreSQL JDBC 3 driver (e.g. postgresql-8.4-701.jdbc3), if you do want to use the JDBC 4 driver.*

   - If you are configuring a datasource to connect to your PostgreSQL database, you will need to place the jar file in **`<confluence install>/WEB-INF/lib`** (for Confluence 2.10 onwards) or **`<confluence install>/common/lib`** (for earlier versions). Information and links to the appropriate database drivers are available on Database JDBC drivers.
     Windows renames .jar extensions to .zip! Just rename it back to .jar. You'll have to set your folder options to view hidden file extensions if you can't rename it without changing the file type (Tools >> Folder Options >> View >> Uncheck "Hide Extensions for known file types."
4. Start Confluence and after entering your license code on the **'Confluence Setup Wizard'** page, click **'Custom Installation'**. The **'Choose a Database Configuration'** page will display.
5. Select '**PostgreSQL**' and click **'External Database'**. The '**Configure Database**' page will display.
6. Choose your desired database connection method (please note that if you choose to connect via datasource, you will need to install the appropriate database drivers as described in the previous step).
7. Enter your PostgreSQL database setup details (as defined in the previous step above):

> **Connecting to an SSL Database**
>
> Simply add `ssl=true` parameter in the Database URL, for example:
>
> ```
> jdbc:postgresql://localhost:5432/confluence?ssl=true
> ```

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If the server that is hosting the PostgreSQL database is not the same server as Confluence, then please ensure that the confluence server can contact the database server and also refer to the PostgreSQL documentation on how to set up pg_hba.conf If the pg_hba.conf file is not set properly, remote communication to the PostgresSQL server will fail.

Running SQL Queries

For ongoing maintenance of your server, you can continue to use PGAdmin as your SQL browser.

Troubleshooting

- Known Issues for PostgreSQL contains common issues encountered when setting up your PostgreSQL database to work with Confluence.
- If you are unable to connect to the database from Confluence and they are on different machines, most likely you have a firewall in between the two machines or your pg_hba.conf file is misconfigured. Verify that your firewall is set to allow connections through 5432 or double check your hba configuration
- If Confluence is complaining that it's missing a class file, you might have forgotten to place the jdbc drive in the WEB-INF/lib folder or possibly have placed it in the wrong folder.
- If none of the above describes your issue, please create a support ticket at http://support.atlassian.com nd be sure to include your logs (found in confluence-install/logs and confluence-data/logs).

Configuring a PostgreSQL Datasource in Apache Tomcat

This page contains instructions on how to set up an PostgreSQL datasource connection for Confluence or Confluence EAR/WAR.

On this page:

- 1. Install the Driver
- 2. Shut down Tomcat
- 3. Configure Tomcat
- 4. Configure the Confluence web application
- 5. Configure Confluence

1. Install the Driver

1. Download the PostgreSQL driver from http://jdbc.postgresql.org/download.html.
2. Copy this file into the `common/lib` directory of your Tomcat installation. Be aware that this directory may be just `lib` for Tomcat version 6 and beyond (i.e. `<tomcat-install>/lib` rather than `<tomcat-install>/common/lib`).

If you are using Confluence 3.2.0 or later you can get the driver from `/confluence/WEB-INF/lib/postgresql-8.4-701.jdbc3.jar` and move it into the `common/lib` directory of your Tomcat installation.

2. Shut down Tomcat

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1. Run `bin/shutdown.sh` or `bin/shutdown.bat` to bring Tomcat down while you are making these changes.

> ✅ Make a backup of your `<CONFLUENCE_HOME>/confluence.cfg.xml` file and your `<CONFLUENCE_INSTALL>/conf/server.xml` file so you can easily revert should their be a problem.

3. Configure Tomcat

1. Firstly, you need to edit **<confluence install>/conf/server.xml** and find the following lines:

```
<Context path="" docBase="../confluence" debug="0" reloadable="true">
      <!-- Logger is deprecated in Tomcat 5.5. Logging configuration for
Confluence is specified in confluence/WEB-INF/classes/log4j.properties -->
```

2. Within the Context tags, directly after the opening <Context.../> line, insert the DataSource Resource tag:

```
<Resource name="jdbc/confluence" auth="Container"
type="javax.sql.DataSource"
          username="postgres"
          password="postgres"
          driverClassName="org.postgresql.Driver"
          url="jdbc:postgresql://localhost:5432/yourDatabaseName"
          maxActive="20"
          maxIdle="10"
          validationQuery="select 1" />
```

- Replace the username and password parameters with the correct values for your database
- In the url parameter, replace the word 'yourDatabaseName' with the name of the database your confluence data will be stored in.

> ✅ **Why is the validationQuery element needed?**
>
> When a database server reboots, or there is a network failure, all the connections in the connection pool are broken and this normally requires a Application Server reboot.
>
> However, the Commons DBCP (Database Connection Pool) which is used by the Tomcat application server can validate connections before issuing them by running a simple SQL query, and if a broken connection is detected, a new one is created to replace it. To do this, you will need to set the "validationQuery" option on the database connection pool.

> ✅ If switching from a direct JDBC connection to datasource, you can find the above details in your `<CONFLUENCE_HOME>/confluence.cfg.xml` file.

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The configuration properties for Tomcat's standard data source resource factory (org.apache.tomcat.dbcp.dbcp.BasicDataSourceFactory) are as follows:

- driverClassName — Fully qualified Java class name of the JDBC driver to be used.
- maxActive — The maximum number of active instances that can be allocated from this pool at the same time.
- maxIdle — The maximum number of connections that can sit idle in this pool at the same time.
- maxWait — The maximum number of milliseconds that the pool will wait (when there are no available connections) for a connection to be returned before throwing an exception.
- password — Database password to be passed to our JDBC driver.
- url — Connection URL to be passed to our JDBC driver. (For backwards compatibility, the property driverName is also recognized.)
- user — Database username to be passed to our JDBC driver.
- validationQuery — SQL query that can be used by the pool to validate connections before they are returned to the application. If specified, this query MUST be an SQL SELECT statement that returns at least one row.

4. Configure the Confluence web application

1. Edit `/confluence/WEB-INF/web.xml` in your confluence installation
2. Go to the end of the file and just before </web-app>, insert the following:

```
<resource-ref>
    <description>Connection Pool</description>
    <res-ref-name>jdbc/confluence</res-ref-name>
    <res-type>javax.sql.Datasource</res-type>
    <res-auth>Container</res-auth>
</resource-ref>
```

5. Configure Confluence

- **If you have not yet set up Confluence**
  1. Follow the steps in the Confluence Setup Guide
  2. In the Database Setup section, choose the "Datasource Connection" option.
  3. Set the JNDI name to `java:comp/env/jdbc/confluence`
  4. Set the Database dialect to Postgres.
- **If you are changing an existing Confluence installation over to using a Tomcat datasource**
  1. Edit the `<confluence home>/confluence.cfg.xml` file
  2. Delete any line that contains a property that begins with hibernate.
  3. Insert the following at the start of the <properties> section.

```
<property name="hibernate.setup"><![CDATA[true]]></property>
<property
name="hibernate.dialect"><![CDATA[net.sf.hibernate.dialect.PostgreSQL
Dialect]]></property>
<property
name="hibernate.connection.datasource"><![CDATA[java:comp/env/jdbc/co
nfluence]]></property>
```

  4. Restart Confluence.

RELATED TOPICS

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Configuring a MySQL Datasource in Apache Tomcat

Database Setup For MySQL

This page provides instructions for installing Confluence and the open-source MySQL database on Microsoft Windows, as well as how to set up and configure MySQL to work with Confluence. Additional instructions are also provided for migrating across any existing Confluence database content. Use this guide in conjunction with the more general Database Setup Guide for Any Database. These instructions add some important reference notes specific to MySQL.

Please note the following points:

- Throughout the instructions below, the `Confluence Installation Directory` refers to the directory where you extracted the Confluence zipped installer.
- The **MySQL Database Setup** procedure below will make modifications to your default MySQL Server settings. These modifications result in:
  1. The default collation (localisation) option being changed to `utf8_bin` (that is, case-sensitive binary UTF8), such that by default, all new database tables will be created with this type of case-sensitive collation.
  2. The default MySQL database storage engine being changed to 'InnoDB'.

On this page:

- 1. Install Confluence
- 2. Install MySQL Server
- 3. Set up your MySQL Database and User
- (Optional) 4. Back Up Confluence Data
- 5. Set Up your Database Connection
- Troubleshooting
- Related Documents

1. Install Confluence

Install Confluence if you have not done so already. Ensure that you download Confluence, not the evaluation installer.

2. Install MySQL Server

To install MySQL Server,

1. If you do not have an operational MySQL database server instance available, install 'MySQL Community Server' database server (version 5.0).
   The installation package can be downloaded from the MySQL download page or from the version 5.0 download page. Instructions for installing the MySQL 5.0 database server on Windows can found on the 'Installing MySQL on Windows' page of the MySQL web site.

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2. Run the 'MySQL Server Instance Config Wizard':
   *If you intend to connect Confluence to an existing, operational MySQL database server instance, we strongly recommend that you reconfigure this database server instance by running through the Config Wizard and initially choosing the **Reconfigure Instance** option.*
   a. At the start of the Config Wizard (or after having chosen **Reconfigure Instance**), choose **Detailed Configuration**.
   b. Choose the type of MySQL Server that best suits your hardware requirements. This will affect the MySQL Server's usage of memory, disk and CPU resources. Refer to the relevant MySQL documentation for further information.
   c. Choose **'Transactional Database Only'** for the database usage step. This ensures that your MySQL database will use InnoDB as its default storage engine.
      *It is **highly recommended** that you only use the InnoDB storage engine with Confluence. Avoid using the MyISAM storage engine as this can lead to data corruption.*
   d. Set the InnoDB Tablespace settings to your requirements.(The default settings are acceptable).
   e. Set the approximate number of concurrent connections permitted that best suits your Confluence usage requirements. You can use one of the presets if desired or enter a number manually. Refer to the relevant MySQL documentation for further information.
   f. For the networking options, ensure the **'Enable TCP/IP Networking'** and **'Enable Strict Mode'** options are selected (default). Refer to the MySQL documentation on setting the networking and server SQL modes for further information.
   g. For the MySQL server instance's default character set option, choose **'Best Support For Multilingualism'** (i.e. UTF-8).
   h. For the Windows configuration option, choose whether or not to install the MySQL Server as a Windows Service. If your hardware is going to be used as a dedicated MySQL Server, you may wish to choose the **'Install As Windows Service'** (and **Launch the MySQL Server automatically**) options. Refer to the relevant MySQL documentation for further information.
      If you choose not to install the MySQL Server as a Windows Service, you will need to ensure that the database service has been started before running Confluence.
   i. Finally, select the '**Modify Security Settings**' option to enter and set your MySQL Server (root) access password.
3. Install the database drivers, if needed:

> **MySQL JDBC Drivers bundled with Confluence**
> The JDBC drivers for this database are bundled with Confluence. You do not have to download or install any JDBC drivers to use this database with Confluence, **if you are using a direct JDBC connection**. If you are connecting via a datasource, you will still need to download and install the drivers manually. See Database JDBC drivers for more information on the bundled JDBC drivers.
> - If you're not sure which connection you're using, it's most likely JDBC. A JNDI resource must be configured manually, as described in Configuring a MySQL Datasource in Apache Tomcat.

- If you are configuring a datasource to connect to your MySQL database, you will need to place the jar file (i.e. `mysql-connector-java-5.x.y-bin.jar` where `x.y` depends on the driver version) in **`<confluence install>/WEB-INF/lib`** (for Confluence 2.10 onwards) or **`<confluence install>/common/lib`** (for earlier versions). Information and links to the appropriate database drivers are available on Database JDBC drivers.

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4. Configure your MySQL server's settings by editing MySQL's `my.cnf` file (often named `my.ini` on Windows operating systems). Locate the `[mysqld]`section in the file add/modify the following parameters:
   - Specify the default character set to be UTF-8:

MySQL 4.1.3 and above	MySQL 4.1.2 and below

`[mysqld]`
`...`
`character-set-server=utf8`
`collation-server=utf8_bin`
`...`
	`[mysqld]`
	`...`
	`default-character-set=utf8`
	`default-collation=utf8_bin`
	`...`

   - Set the default storage engine to InnoDB:

```
[mysqld]
...
default-storage-engine=INNODB
...
```

   - Specify/increase the value of **`max_allowed_packet`**to be at least 32M:

```
[mysqld]
...
max_allowed_packet=32M
...
```

   (Refer to MySQL Option Files for detailed instructions on editing `my.cnf` and `my.ini`.)

5. Restart your MySQL server for the changes to take effect:
   - On Windows, use the Service Manager to restart the service
   - On Linux, depending on your setup you will need to run either "/etc/init.d/mysqld stop", "/etc/init.d/mysql stop" or "service mysqld stop" followed by the same command with "stop" replaced with "start"
   - On Mac OS X, run "sudo /Library/StartupItems/MySQLCOM/MySQLCOM restart"

3. Set up your MySQL Database and User

To create the database and user privileges,

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1. Run the "mysql" command as a MySQL super user. The default is "root" with a blank password.
2. Create an empty Confluence database schema by running

```
CREATE DATABASE confluence;
```

3. Create the Confluence database user by running

```
GRANT ALL PRIVILEGES ON confluence.* TO
'confluenceuser'@'localhost' IDENTIFIED BY 'confluencepass';
```

Replace "confluenceuser" and "confluencepass" with a username and password of your choice. If Confluence is not running on the same server as your MySQL database server, replace "localhost" with the hostname or IP address of the Confluence server.

To support international languages in Confluence, you should verify that the newly created database is using UTF-8 encoding and re-examine the JDBC URL settings (configured in Stage 3).

For an existing database

If you're using a existing database, confirm the Character Encoding by executing the query: *SHOW VARIABLES LIKE 'character%';* and *SHOW VARIABLES LIKE 'collation%';*.
The results should be UTF-8.

(Optional) 4. Back Up Confluence Data

This stage is only required if you have existing Confluence content you wish to transfer.

To back up your Confluence data,

1. Manually create an XML backup of Confluence under Administration -> Backup & Restore. If you have less than 100MB of attachments, check 'Backup attachments' when creating the backup. If you have over 100MB of attachments, you should not check the 'Backup attachments' and instead you should manually copy the /attachments directory in your Confluence home to another location. This attachments directory can then be copied into the new home directory as described later.
2. Download the backup file to a backups folder.

5. Set Up your Database Connection

To set up your Confluence MySQL database connection or to switch to using this external database,

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1. Ensure that Confluence is stopped (for example, by ensuring that the application server or service which is running Confluence has been stopped or terminated).
2. If you haven't started Confluence yet, you can skip this step. If you have set up Confluence with the built-in (HSQLDB) database, edit `Confluence Installation Directory_/confluence/WEB-INF/classes/confluence-init.properties` and change the `confluence.home`property to point to a new directory. e.g. if you had

   ```
   confluence.home=c:/confluencedata
   ```

   You could change it to:

   ```
   confluence.home=c:/confluencedata_mysql
   ```

   This is your new `Confluence Home Directory`. (The name doesn't have to end in _mysql – that's just an example)

3. Start Confluence and set up the new configuration.
   a. Enter your license key and click the '**Custom Installation**' button.
   b. Under the 'External Database' heading, select '**MySQL**' from the dropdown list and click '**External Database**'.
   c. On the next page, click '**Direct JDBC**'.
   d. Enter `confluenceuser` in the User Name field, and the password you chose earlier in the Password field
   e. Click the Next button. If you get the error message `Could not successfully test your database: : Server connection failure during transaction. Due to underlying exception: 'java.sql.SQLException: Access denied for user 'confluenceuser'@'localhost' (using password: YES)'` verify that you have properly given the confluenceuser user all the right permissions when connecting from localhost.
   f. *(optional)* If you previously backed up your Confluence data, you can choose to restore it at the 'Load Content' page. Choose 'Restore From Backup', browse for the backup you created and restore it. Otherwise choose either the example or empty site as you wish.

Troubleshooting

- Known Issues for MySQL contains common issues encountered when setting up your MySQL database to work with Confluence.
- If Confluence is complaining that it's missing a class file, you might have forgotten to place the jdbc driver in the `WEB-INF/lib` folder or possibly have placed it in the wrong folder.
- If none of the above describes your issue, please create a support ticket at http://support.atlassian.com a nd be sure to include your logs (found in confluence-install/logs and confluence-data/logs).

Related Documents

- Configuring Database Character Encoding
- Known Issues for MySQL

Configuring a MySQL Datasource in Apache Tomcat

This page tells you how to set up a MySQL datasource connection for Confluence or Confluence EAR/WAR.

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On this page:

- 1. Shut down Tomcat
- 2. Install the Drivers
- 3. Configure Tomcat
- 4. Configure the Confluence Web Application
- 5. Configure Confluence
- 6. Restart Confluence

1. Shut down Tomcat

1. Run `bin/shutdown.sh` or `bin/shutdown.bat` to bring Tomcat down while you are making these changes.
2. Make a backup of your `<CONFLUENCE_HOME>/confluence.cfg.xml` file and your `<CONFLUENCE_INSTALL>/conf/server.xml` file so that you can easily revert if you have a problem.

2. Install the Drivers

1. Download the MySQL JDBC drivers from http://www.mysql.com/downloads/api-jdbc-stable.html.
2. After unpacking the file you have downloaded, you will find a file called something like `mysql-connector-java-3.0.10-stable-bin.jar`.
3. Copy this file into the `common/lib` directory of your Tomcat installation. Be aware that this directory may be just `lib` for Tomcat version 6 and beyond (i.e. `<tomcat-install>/lib` rather than `<tomcat-install>/common/lib`).

3. Configure Tomcat

1. If you are using the Confluence distribution, edit the `conf/server.xml` file in your Tomcat installation. If you are running your own Tomcat instance, edit the XML file where you declared the Confluence Context descriptor.
2. If editing `conf/server.xml`, find the following lines:

```
<Context path="" docBase="../confluence" debug="0" reloadable="true">
                    <!-- Logger is deprecated in Tomcat 5.5. Logging
configuration for Confluence is specified in
confluence/WEB-INF/classes/log4j.properties -->
```

3. Within the `Context` tags, directly after the opening <Context.../> line, insert the DataSource `Resource` tag:

```
<Resource name="jdbc/confluence" auth="Container"
type="javax.sql.DataSource"
         username="yourusername"
         password="yourpassword"
         driverClassName="com.mysql.jdbc.Driver"

url="jdbc:mysql://localhost:3306/confluence?useUnicode=true&amp;characterEn
coding=utf8"
         maxActive="15"
         maxIdle="7"
         defaultTransactionIsolation="READ_COMMITTED"
         validationQuery="Select 1" />
```

   - Replace the username and password parameters with the correct values for your database.
   - In the url parameter, replace the word 'confluence' with the name of the database your Confluence data will be stored in.

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- If you plan to use non-Latin characters, you will also need to add "`&useUnicode=true&characterEncoding=utf8`" on the end of the above URL. These options are not required for any database other than MySQL.

Notes

- If switching from a direct JDBC connection to datasource, you can find the above details in your `<CONFLUENCE_HOME>/confluence.cfg.xml` file.
- Why is the validationQuery element needed? When a database server reboots, or there is a network failure, all the connections in the connection pool are broken and this normally requires an application server reboot.

  However, the Commons DBCP (Database Connection Pool) which is used by the Tomcat application server can validate connections before issuing them by running a simple SQL query, and if a broken connection is detected, a new one is created to replace it. To do this, you will need to set the "validationQuery" option on the database connection pool.
- The configuration properties for Tomcat's standard data source resource factory (org.apache.tomcat.dbcp.dbcp.BasicDataSourceFactory) are as follows:
  - driverClassName – Fully qualified Java class name of the JDBC driver to be used.
  - maxActive – The maximum number of active instances that can be allocated from this pool at the same time.
  - maxIdle – The maximum number of connections that can sit idle in this pool at the same time.
  - maxWait – The maximum number of milliseconds that the pool will wait (when there are no available connections) for a connection to be returned before throwing an exception.
  - password – Database password to be passed to our JDBC driver.
  - url – Connection URL to be passed to our JDBC driver. (For backwards compatibility, the property driverName is also recognized.)
  - user – Database username to be passed to our JDBC driver.
  - validationQuery – SQL query that can be used by the pool to validate connections before they are returned to the application. If specified, this query MUST be an SQL SELECT statement that returns at least one row.

4. Configure the Confluence Web Application

1. Edit `confluence/WEB-INF/web.xml` in your Confluence installation.
2. Go to the end of the file and insert the following element just before `</web-app>`:

```
<resource-ref>
        <description>Connection Pool</description>
        <res-ref-name>jdbc/confluence</res-ref-name>
        <res-type>javax.sql.DataSource</res-type>
        <res-auth>Container</res-auth>
    </resource-ref>
```

5. Configure Confluence

If you have not yet set up Confluence:

1. Follow the steps in the Confluence Setup Guide
2. In the Database Setup section, choose the "Datasource Connection" option.
3. Set the JNDI name to `java:comp/env/jdbc/confluence`
4. Set the Database dialect to MySQL.

If you are changing an existing Confluence installation over to using a Tomcat datasource:

1. Find your ConfluenceHome directory (see: Confluence Home Directory if you don't know where it is).
2. Edit the confluence.cfg.xml file

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3. Delete any line that contains a property that begins with `hibernate.`
4. Insert the following at the start of the `<properties>`section.

```
<property name="hibernate.setup"><![CDATA[true]]></property>
    <property
name="hibernate.dialect"><![CDATA[net.sf.hibernate.dialect.MySQLDialect]]><
/property>
    <property
name="hibernate.connection.datasource"><![CDATA[java:comp/env/jdbc/confluen
ce]]></property>
```

6. Restart Confluence

Run `bin/startup.sh` or `bin/startup.bat` to start Tomcat with the new settings.

RELATED TOPICS

Database Setup For MySQL

Creating Database Schema Manually

Database Schema Creation

This document provides information on how to find the SQL for database table creation.

Often, DBAs will require that table creation be done manually. To find the required SQL statements, you can use the script generated from our evaluation version's HSQLDB database.

- Install Confluence with no external database.
- Shut down Confluence.
- Find the file located in `<confluence-home>/database/confluencedb.script`.

The `confluence-home` directory is not your installation directory, its the directory specified in `confluence-init.properties`. For more information, see Confluence Home Directory and Confluence Installation Directory .

To see some example SQL statements, click 'Tools' and select 'Attachments' on this wiki page.

To get Confluence to run against this established schema, configure the database with the normal procedure, then modify the hibernate.connection.url, username and password from `confluence-home/confluence.cfg.xml` or `server.xml`, depending on whether it's a direct jdbc or resoruce connection. This is described in Migrating Confluence Between Servers.

RELATED TOPICS

Database Configuration

Migrate to Another Database

This document outlines how to migrate your data from your existing database to another database. It is designed for migrating from an evaluation to a production database. Large data sets will require third party database migration tools. You should use this method when moving from the embedded database to an external database. Provided your dataset is not large, you may use this method to move from one type of external database to another – for example, from Oracle to PostgreSQL.

Note: If you are simply moving your database from one server to another you can just change the JDBC URL in `<confluence.home>/confluence.cfg.xml` (if you are using a direct JDBC connection) or in the definition

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of your datasource (if you are connecting via a datasource).

Limitations of database migration

Note: The XML export built into Confluence is not suited for the backup or migration of large data sets. There are a number of third party tools that may be able to assist you with the data migration. If you would like help in selecting the right tool, or help with the migration itself, we can put you in touch with one of the Atlassian Experts .

Database migration

There are two ways you can perform the migration:

1. Method one is the standard procedure.
2. For large installations of Confluence: If the total size of attachments on your installation exceeds 500MB, use method two.

On this page:

- Method one – standard procedure
  - Step One: Backing up your data
  - Step Two: Configuring the Confluence Home Directory
  - Step Three: Setting up the new database
  - Step Four: Setting up Confluence with the new database
- Method two – for large installations
  - Step One: Backing up your data
  - Step Two: Configuring the Confluence Home Directory
  - Step Three: Moving your attachments
  - Step Four: Setting up new database
  - Step Five: Setting up Confluence with the new database
- A note about case sensitivity in your database
- Troubleshooting

Method one – standard procedure

Step One: Backing up your data

1. Note which plugins are currently installed/enabled, so that you can reinstate them later.
2. Create a backup of your existing data. This is done from the **Administration Console**. Instructions on how to create a backup can be found here.
3. Shut down and backup the Confluence Home Directory.
4. If you are already using an external database, please make a backup of it using the utilities that were installed with it.

Step Two: Configuring the Confluence Home Directory

1. Create a new Confluence Home Directory. You can place this directory anywhere you like and give it a name of your choice.
2. Open WEB-INF/classes/confluence-init.properties file in your Confluence installation and change the confluence.home property to point to this new Confluence Home Directory.

Step Three: Setting up the new database

Perform the database setup instructions for your database.

Step Four: Setting up Confluence with the new database

If your databases are not already configured for Confluence, refer to Database Configuration to setup your database access.

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1. Make sure that the JDBC drivers for your database are available to the application server. If you don't already have the JDBC driver, please download one from here.
2. Make sure that your database is using a **case-sensitive** collation. Please refer to the section on case sensitivity below and see this issue for more details: CONF-7917.
3. If you are running the Confluence distribution, copy your JDBC database driver (a .jar file), into the `<confluence-install>/lib` folder.
4. Start up Confluence. You will see the Confluence Setup Wizard.
5. Select '**Custom Install**'.
6. Select your database from the drop down list.
7. Select '**Direct JDBC**' and then enter the details of the new database you want to migrate to.
   Read the documentation on the Setup Wizard for more detailed explanation.
8. When prompted, restore the contents of the backup you made in Step One into the new Confluence site

Your old Confluence data will now be imported to your new database.

Method two – for large installations

Step One: Backing up your data

1. Before proceeding with these instructions please check that:
   - you are upgrading from at least Confluence version 2.2 *and*
   - your attachments are stored in the file system, and *not in your database.* (To migrate between attachment storage systems, please see Attachment Storage Configuration)
     These instructions will not work if either of the above is not true.
2. From Confluence, go to `Administration -> Backup & Restore` and create a manual backup that **excludes** attachments.
3. Shut down and back up the Confluence Home Directory.
4. If you are already using an external database, please make a backup of it using the utilities that were installed with it.

Step Two: Configuring the Confluence Home Directory

1. Create a new Confluence Home Directory. You can place this directory anywhere you like and give it a name of your choice.
2. Open WEB-INF/classes/confluence-init.properties file in your Confluence installation and change the confluence.home property to point to this new Confluence Home Directory.

Step Three: Moving your attachments

Move the contents of your attachments directory from your old Confluence Home to your new Confluence Home.

Step Four: Setting up new database

Perform the database setup instructions for your database.

Step Five: Setting up Confluence with the new database

If your databases are not already configured for Confluence, refer to Database Configuration to setup your database access.

1. Make sure that the JDBC drivers for your database are available to the application server. If you don't already have the JDBC driver, please download one from here.
2. Make sure that your database is using a **case-sensitive** collation. Please refer to the section on case sensitivity below and see this issue for more details: CONF-7917.
3. If you are running the Confluence distribution, copy your JDBC database driver (a .jar file), into the `<confluence-install>/lib` folder.
4. Start up Confluence. You will see the Confluence Setup Wizard.
5. Select '**Custom Install**'.
6. Select your database from the drop down list.
7. Select '**Direct JDBC**' and then enter the details of the new database you want to migrate to.

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Read the documentation on the Confluence Setup Wizard for more detailed explanation.

8. When prompted, restore the contents of the backup you made in Step One into the new Confluence site.

A note about case sensitivity in your database

'Collation' refers to a set of rules that determine how data is sorted and compared. Case sensitivity is one aspect of collation. Other aspects include sensitivity to kana (Japanese script) and to width (single versus double byte characters).

Case sensitive or case insensitive collation – how should you create your Confluence database? What about when you are migrating your existing Confluence instance from one database to another?

Setting up a New Confluence Instance

For new Confluence instances, we recommend using case sensitive collation for your Confluence database. This is the default collation type used by many database systems.

Note: Even if the database is configured for case sensitive collation, Confluence reduces all usernames to lower case characters before storing them in the database. For example, this means that 'joebloggs', 'joeBloggs' and 'JoeBloggs' will be treated as the same username.

Migrating an Existing Confluence Instance to a Different Database

The default Confluence configuration uses case sensitive database collation. This is typical of databases created under default conditions. If you are migrating from this type of configuration to a new database, we recommend that the new database uses case sensitive collation. If you use case insensitive collation, you may encounter data integrity problems after migration (for example, via an XML import) if data stored within your original Confluence site required case sensitive distinctions.

Troubleshooting

If you are unable to restore your XML backup, consult our Troubleshooting Guide.

The Embedded HSQLDB Database

The Confluence installation includes an embedded HSQLDB database, supplied for the purpose of **evaluating Confluence**.

If you are using the embedded database, the database files are stored in the `\database` folder under your Confluence Home directory. See also Important Directories and Files.

> **Embedded Database is Not Suitable for Production Instances of Confluence**
>
> Production instances of Confluence should use an external database. When using the default HSQLDB database, you run the risk of unrecoverable data loss due to not being transaction safe.
>
> - Corruption is occasionally encountered after sudden power loss and can usually be corrected using this data recovery procedure.
> - HSQLDB is still suitable for evaluation purposes, but the risk can only be eliminated by switching databases. External databases may also provide superior speed and scalability.

RELATED TOPICS

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Important Directories and Files
Database Configuration

Troubleshooting the Embedded Database (HSQL DB)

java.sql.SQLException: User not found: SA

Also see http://hsqldb.sourceforge.net/doc/guide/ch01.html#N101C2 .

HSQLDB periodically must update its files to represent changes made in the database. In doing so, it must delete the current confluencedb.data file on the filesystem (beneath conf.home/database) and replace it with a new one.

If an administrator issues a shutdown on Confluence in this period, data can be lost, and is typically noticed by the error message, when starting Confluence up again, of 'User not found: SA' .

Users encountering this problem should seek to restore backups, contained in the backup directory beneath confluence.home. If daily backups have been turned off, and no other copy of data remains, the data is lost.

> HSQLDB should not be used as a production database. It is included for evaluation purposes only.

Hibernate logging

It can be useful to enable detailed Hibernate logging when debugging problems with HSQL.

Connecting to the Embedded Database

Connecting to the Embedded HSQL Database can be quite difficult. You may need to connect to the database to retrieve information, or for troubleshooting purposes.

Please follow the instructions on how to you can connect to the embedded HSQL Database using the free Database Administration Tool DBVisualizer.

Connecting to HSQLDB using DBVisualizer

The purpose of this guide is to walk you through connecting to Confluence's embedded Hypersonic SQL Database using the Database Administration tool DBVisualizer.

Below are step by step instructions on how to Configure DBVisualizer and connect it to HSQLDB.

Prerequisites

1. Download and install the latest copy of DBVisualizer.
2. You will also need to download a copy (preferably the latest version) of HSQLDB
3. Extract the contents of the HSQLDB archive
4. Ensure that Confluence is not running.

Connection Procedure

Please ensure that you read and follow the instructions below carefully.

> **Remember to backup your `<confluence-home>/database` folder before attempting any modifications**

1. Enter Connection Name

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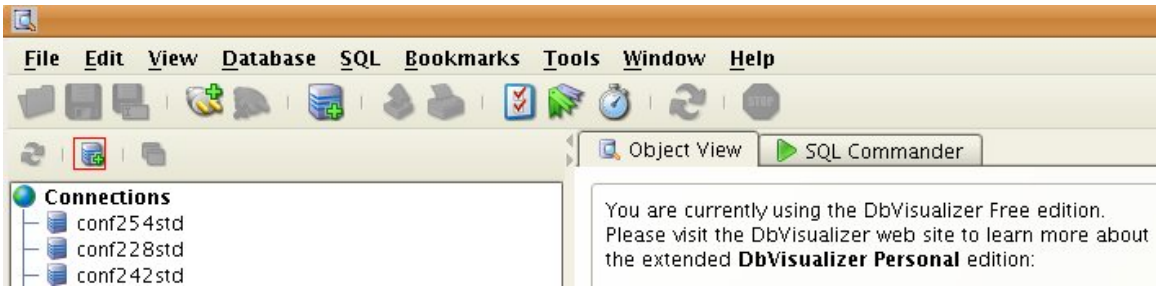

1. Click on the icon highlighted in Red
2. Enter an identifiable name for the connection. e.g. conf2.5.4-std

2. Select JDBC Driver

1. From the drop down list select **HSQLDB Embedded**
2. Click on Load Driver Files
3. Browse to directory where the `HSQLDB.jar` file is located. Confluence bundles this and it can be found at `<confluence-installation>/confluence/WEB-INF/lib/hsqldb-*.jar`.

3. Select Database Path

1. Browse to your `<Confluence-Home>` directory
2. Open the **Database** folder
3. Select the `confluencedb.properties` file

4. Enter Connection Details

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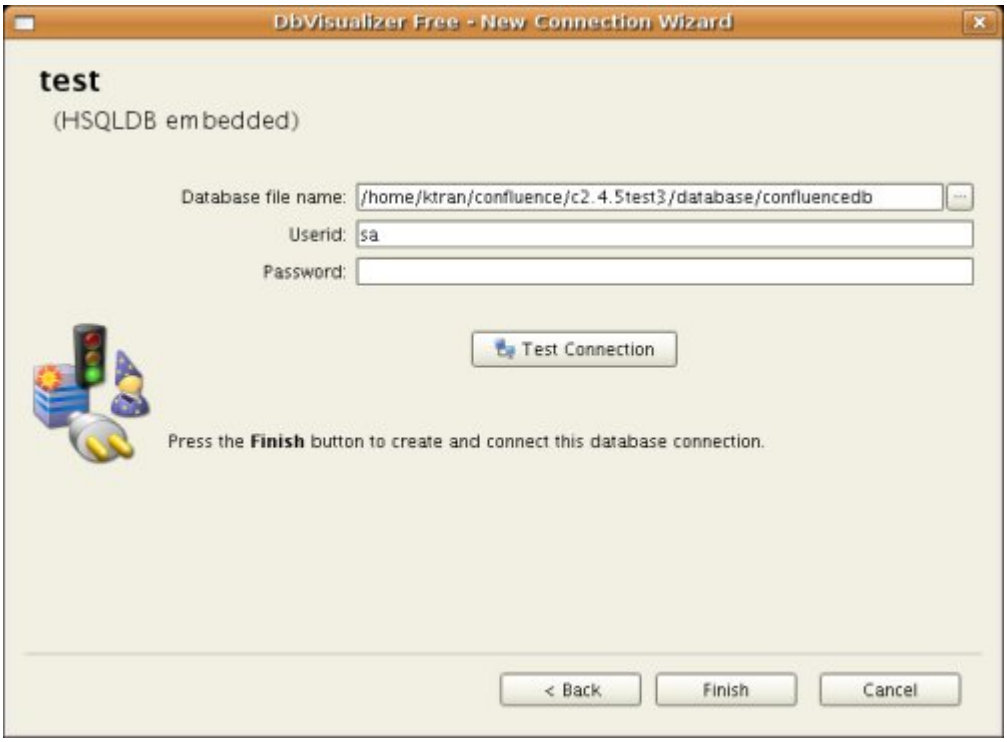
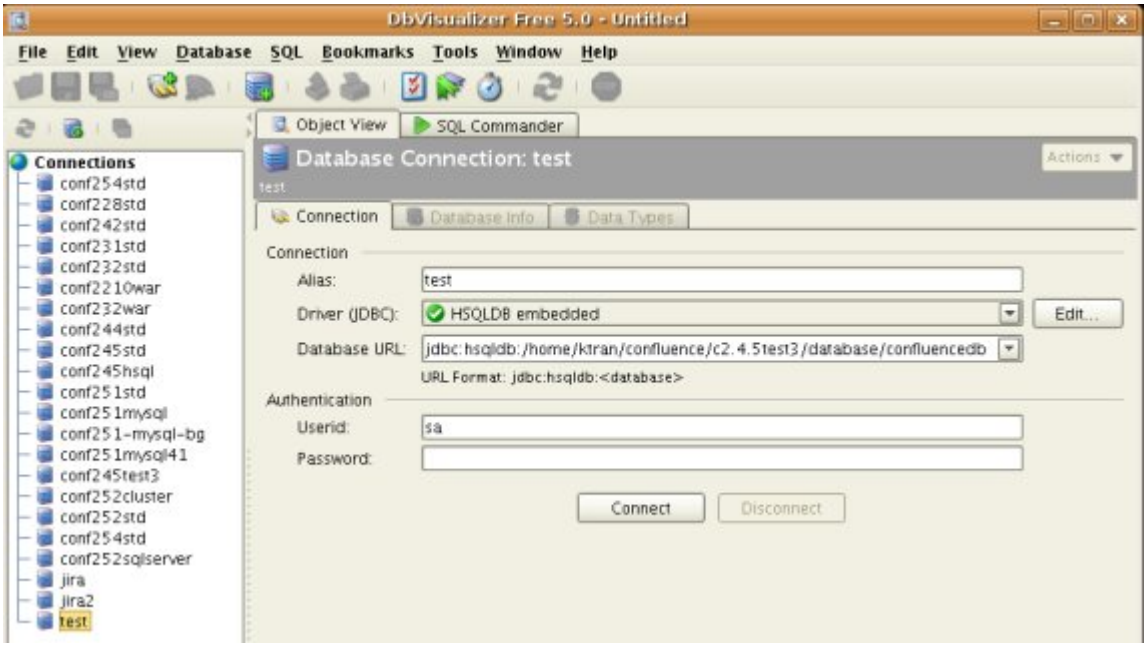


1. Remove the "**.properties**" from the end of `confluencedb`
2. Type in sa for the username
3. Leave the password field blank

refer to the example screenshot above if you are unsure

5. Connect to embedded Database



1. Click on Test Connection to verify that the details are correct.
2. Click on "**Finish**" to complete the setup
3. Select the connection from the list on the left hand side.
4. You can now click on "**Connect**" to connect to the embedded database.

HSQL database manager

Alternatively, you can use HSQLDB's database manager. Just copy the value of `hibernate.connection.ur`

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`l` in **confluence.cfg.xml** as the URL and you're good to go.

Related Topics

Universal SQL client Squirrel
HSQL
Enable Hibernate Logging
Database Tables Reference
Confluence data model

Database Tables Reference

Below is a diagram of the Table References in Confluence (2.5.4).

This may be useful for Database Administrators that need to manually create the Database tables.

Right Click and Select *Save Link As* here to download this image.

Troubleshooting External Database Connections

A common administration issue when configuring Confluence is identifying database connectivity problems. This page tells you about a helper utility, in the form of a JSP page, that can help you to isolate database connectivity issues. It checks whether you can connect to a database with your application server. If your application server cannot connect to the database, Confluence will not be able to connect to the database either.

Introduction to the Atlassian Database Check Utility

You can use this utility to:

- Check that your application server can successfully query your database, either via immediate JDBC connectivity or a datasource in the context of your application server.
- Pinpoint problems in your configuration which may occur if the above is failing.

This is what the utility does:

- Check that a JDBC driver can be loaded into memory and view what is already loaded.
- Connect to a JDBC URL and do a 'select 1' from the database.
- Find a DataSource in the JNDI environment and do the above.
- View the System classpath (to ensure that the JDBC JAR file is there).

Using the Utility

If you have already set up Confluence completely

1. Download the attached testdatabase.jsp to your `<confluence-install>\confluence` directory.

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2. Restart Confluence
3. Go to http://MY-CONF-SERVER:MY-CONF-PORT/testdatabase.jsp.
4. Check that your database driver is loaded into memory. If not, check the system classpath for the JDBC driver file, and that the driver is in the `<confluence-install>\lib` directory (for Confluence version 2.10 onwards) or `<confluence-install>\common\lib` (for earlier versions). Here are some instructions.
5. Enter the DB settings Confleunce is using and test the database. If an error appears, check that the db service is running, the location matches, and that any users specified actually exist with the right login and permissions. You may be able to find a workaround by Googling the error.

If you cannot set up Confluence because of an error in 'Configuring Database'

1. Record the DB settings you are using for your direct JDBC or datasource connection in the 'Configure Database' step of your setup.
2. Download the attached testdatabase.jsp to your `<confluence-install>\confluence` directory.
3. Rename your `<confluence-install>\confluence\WEB-INF\web.xml` file to `backup web.xml`. This disables redirection.
4. Restart Confluence.
5. Go to http://MY-CONF-SERVER:MY-CONF-PORT/testdatabase.jsp.
6. Check that your database driver is loaded into memory. If not, check the system classpath for the JDBC driver file, and that the driver is in the `<confluence-install>\common\lib` directory as described in these instructions.
7. Enter the DB settings you recorded and test the database. If an error appears, check that the db service is running, the location matches, and that any users specified actually exist with the right login and permissions. You may be able to find a workaround by Googling the error.
8. After correcting the error, rename `<confluence-install>\confluence\WEB-INF\backup web.xml` back to `web.xml`.

Notes

If you use this utility, please let us know ways in which we could improve it or leave helpful hints for others here.
For a comprehensive set of database instructions that might be helpful for troubleshooting, please refer to the following links:

- PostgreSQL
- MySQL

Requesting Technical Support

If you are still stuck after attempting the suggestions above, lodge a free technical support request with information on your database setup.

Configuring database query timeout

If database queries are taking too long to perform, and your application is becoming unresponsive, you can configure a timeout for database queries. There is no default timeout in Confluence.

To configure a database query timeout, do the following on your test server:

1. Shut down Confluence.

2. Extract `databaseSubsystemContext.xml` from the `confluence-x.x.x.jar` that is in `confluence/WEB-INF/lib/`, and put a copy in `confluence/WEB-INF/classes/`.

3. Edit `confluence/WEB-INF/classes/databaseSubsystemContext.xml` to add the defaultTimeout property to the "transactionManager" bean:

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```
<bean id="transactionManager"
class="org.springframework.orm.hibernate.HibernateTransactionManager">
    <property name="sessionFactory">
        <ref bean="sessionFactory"/>
    </property>
    <property name="defaultTimeout" value="120"/>
</bean>
```

The timeout is measured in seconds and will forcibly abort queries that take longer than this. In some cases, these errors are not handled gracefully by Confluence and will result in the user seeing the Confluence error page.

4. Start Confluence.

Once the timeout is working properly in your test environment, migration the configuration change to Confluence.

⚠️ You will need to reapply these changes when upgrading Confluence, as the original `databaseSubsystemContext.xml` file changes from version to version.

Improving Database Performance

Diagnosis

Use native database tools to assess the impact of your database. If you'd like to check what Confluence is doing from it's side, you can enable sql loggin. If you analyze thread dumps, as this is done in general Troubleshooting Confluence Hanging or Crashing guide, you may find the kinds of threads like this:

```
"http-8080-Processor150" daemon prio=1 tid=0x08543368 nid=0x11aa in
Object.wait() [0x665a4000..0x665a51b0]
at java.lang.Object.wait(Native Method)
- waiting on <0x83140488> (a
com.mchange.v2.resourcepool.BasicResourcePool)
at
com.mchange.v2.resourcepool.BasicResourcePool.awaitAcquire(BasicResource
Pool.java:968)
at
com.mchange.v2.resourcepool.BasicResourcePool.checkoutResource(BasicReso
urcePool.java:208)
- locked <0x83140488> (a com.mchange.v2.resourcepool.BasicResourcePool)
```

These threads are waiting for a database connection. It could be that the database is not performing optimally, or it may just need tuning for allowing more connection threads. Both are discussed below.

Upgrade your Database and Drivers

SQL Server 2000, Oracle 9i, and MySQL with 3.1 drivers are among some of the issues with database performance. Ensure you are using updated versions of databases and their drivers.

Upgrade your hardware

Atlassian does not offer specific recommendations on hardware for database performance. Use good judgment and native OS and database tools for your assessment.

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Ensure you have the Latest Database Indices

Confluence has improved database performance over time. You'll want to make sure you have all the latest, if you're getting hung threads waiting for db connections.

Confluence 2.10 or Manual .ddl Indices

With 2.10 and later, Confluence includes database indices bundled. Confluence 2.10 automatically creates the necessary database indexes when you upgrade. If you are not on 2.10, you may have run the ddl manually during the upgrade process. To check, you can look against these.

Additional Indices not Included in 2.10

- One import db index is the **lower case page title index**. Prior to Confluence 3.0, querying for a page by title and space key can take a long time due to table scans necessary on a lowercase *where* clause. On most databases it is possible to add a lowercase index on these columns that helps with performance. See Creating a Lowercase Page Title Index for instructions on how to do this. Prior to 2.10, apply lowercase title indexes (all Confluence versions).
- The compound database index for the ATTACHMENTDATA table is described in CONF-13819.
- A composite index on some of the columns in SpacePermissions table is described in CONF-14488.

Tuning the Database Connection Pool

This is described in the knowledge base article Confluence Slows and Times out During Periods of High Load due to DB Connection Pool.

Configure a Database Query Timeout

If a database is getting overloaded, you can prevent it from crashing Confluence by Configuring a Database Query Timeout.

Related Articles

Troubleshooting Database Issues.

Creating a Lowercase Page Title Index

Diagnosis

Confluence sometimes has performance problems retrieving pages by title because the query uses the lower() function. For example, the query looks something like this:

```
select * from CONTENT where lower(TITLE) = :title and SPACEID = :spaceid
```

Database profiling might show a query like the following taking a long time to execute (emphasis added):

> *select ... from CONTENT page0_, SPACES space1_*
> *where page0_.CONTENTTYPE='PAGE'*
> *and ((**lower(space1_.SPACEKEY)= @P0** and page0_.SPACEID=space1_.SPACEID)*
> *and(**lower(page0_.TITLE)= @P1**)*
> *and(page0_.PREVVER is null)and(page0_.CONTENT_STATUS='current'))*

Typically, databases don't use indexes when you use a function in a where clause; they do a table scan instead. This makes the performance of this query not ideal (CONF-11577).

Generic solution

On many databases (e.g. Oracle, PostgreSQL, DB2 for z/OS), it is possible to create the index using the normal "create index" syntax, just using the function instead of the column name.

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```
create index CONFTITLE_LOWER on CONTENT(lower(TITLE));
```

Sources:

- http://www.postgresql.org/docs/current/static/sql-createindex.html
- http://asktom.oracle.com/tkyte/article1/

SQL Server

On SQL Server, you can add a computed column to the database table and then add an index on this column.

```
alter table CONTENT add TITLE_LOWER as lower(TITLE);
create index CONFTITLE_LOWER on CONTENT(TITLE_LOWER);
```

Sources:

- http://msdn.microsoft.com/en-us/library/aa258260(SQL.80).aspx
- http://blogs.msdn.com/psssql/archive/2009/03/09/how-to-use-computed-columns-to-improve-query-performance.aspx

MySQL

It is not currently possible to create a lowercase index on MySQL. Confluence 3.0 includes some caching improvements which should alleviate this performance problem on this database.

Source:

- http://dev.mysql.com/doc/refman/5.1/en/create-index.html

Workaround for MySQL databases, using a case-insensitive collation:

Please check whether your MySQL database has been set to use case-sensitive or case-insensitive collation. The queries to check whether your database is set to case-insensitive collation are:

> *show full columns from content where field = 'title';*
> *show full columns from spaces where field = 'spacekey';*

If the **collation_name** is returned as **<encoding>_ci**, the **ci** indicates case-insensitive collation.

If the database has been set to use case-insensitive collation, you can try removing **lower** from the following queries, in your `ContentEntityObject.hbm.xml` file residing in your `<Confluence-Install>/confluence/WEB-INF/lib/confluence-2.x.x.jar/com/atlassian/confluence/core/`:

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```
<query name="confluence.page_findLatestBySpaceKeyTitle"><![CDATA[
 from Page page
 where lower(page.space.key) = :spaceKey and
  lower(page.title) = :pageTitle and
  page.originalVersion is null and
  page.contentStatus = 'current'
]]></query>

<query
name="confluence.page_findLatestBySpaceKeyTitleOptimisedForComments"><![CDATA[
 from Page page
 left join fetch page.comments as theComments
 left join fetch theComments.children
 where lower(page.space.key) = :spaceKey and
  lower(page.title) = :pageTitle and
  page.originalVersion is null and
  page.contentStatus = 'current'
]]></query>
```

DB2 for Linux or Windows

DB2 supports indexes on generated columns which are used for queries with a matching predicate. You can implement it like this:

```
ALTER TABLE CONTENT ADD COLUMN TITLE_LOWER GENERATED ALWAYS AS (LOWER(TITLE));
CREATE INDEX CONFTITLE_LOWER ON CONTENT(TITLE_LOWER)
```

Related pages

- Improving Database Performance
- CONF-10030: Queries that use 'lower' do not use index because of case sensitivity

Surviving Database Connection Closures

When a database server reboots or a network failure has occurred, all connections in the database connection pool are broken. To overcome this issue, Confluence would normally need restarting (or for Confluence WAR distributions, the application server running Confluence would need restarting).

However, database connections in the database connection pool can be validated by running a simple SQL query. If a broken database connection is detected in the pool, a new one is created to replace it.

To do this, you can specify an optional validation query for your database connection. Depending on whether you are using a direct JDBC URL, or a data source, this is configured differently.

Determining the validation query SQL for your database type

Different database types have slightly different SQL syntax requirements for their validation query. The validation query should be as simple as possible, as this is run every time a connection is retrieved from the pool.

The following validation queries are recommended for the following types of databases:

Database Type	Validation Query
MySQL	`select 1`

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Microsoft SQL Server	`select 1`
Oracle	`select 1 from dual`
PostgreSQL	`select 1`

Enabling validation query using direct JDBC

To ensure Confluence validates database connections in the database connection pool:

1. Shut down Confluence
2. Edit the `confluence.cfg.xml` file at the root of your Confluence Home Directory
3. Add the property "hibernate.c3p0.validate" and set it to "true", and add the property "hibernate.c3p0.preferredTestQuery" and set it to the value of the query you determined above for your database type. See this excerpt of the file with the two added properties for details:

confluence.cfg.xml (excerpt)

```
...
<property name="hibernate.c3p0.acquire_increment">1</property>
<property name="hibernate.c3p0.idle_test_period">100</property>
<property name="hibernate.c3p0.max_size">30</property>
<property name="hibernate.c3p0.max_statements">0</property>
<property name="hibernate.c3p0.min_size">0</property>
<property name="hibernate.c3p0.timeout">30</property>
<property name="hibernate.c3p0.validate">true</property>
<property name="hibernate.c3p0.preferredTestQuery">select 1</property>
...
```

4. Save `confluence.cfg.xml`
5. Restart Confluence

Ensuring validation query using a data source

To ensure Confluence validates database connections in the database connection pool:

1. Shut down Confluence (or the Tomcat installation running Confluence).
2. Edit the `conf/server.xml` file in your Confluence Install Directory, or in the Tomcat installation's CATALINA_HOME directory.
3. Find the Resource element for your data source, and add the "validationQuery" field, with the value of the query you determined above for your database type. See this excerpt of the file with this added for details:

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server.xml (excerpt)

```
...
<Resource name="jdbc/confluence" auth="Container"
type="javax.sql.DataSource"
          username="postgres"
          password="postgres"
          driverClassName="org.postgresql.Driver"
          url="jdbc:postgresql://localhost:5432/yourDatabaseName"
          maxActive="20"
          maxIdle="10"
          validationQuery="select 1" />
...
```

4. Save `conf/server.xml`
5. Restart Confluence (or the Tomcat installation running Confluence).

Results and Considerations

You should now be able to recover from a complete loss of all connections in the database connection pool without the need to restart Confluence or the application server running Confluence.

⚠️ **Performance Considerations:**

- Setting this option has a performance impact. The overall decrease in performance should be minimal, as the query itself is quick to run. In addition, the query will only execute when you make a connection. Thus, if the connection is kept for the duration of a request, the query will only occur once per request.
- If you are running a large Confluence installation, you may wish to assess the performance impact of this change before implementing it.

Webserver Configuration

- Configuring Web Proxy Support for Confluence
- Running Confluence behind Apache
  - General Apache Configuration Notes
  - Using Apache with mod_proxy
  - Using Apache with virtual hosts and mod_proxy
  - Using Apache with mod_jk
  - Using mod_rewrite to Modify Confluence URLs
  - Configuring Apache to Cache Static Content via mod_disk_cache

Configuring Web Proxy Support for Confluence

Some of Confluence's macros, such as {rss} and {jiraissues} need to make web requests to remote servers in order to retrieve data. If Confluence is deployed within a data centre or DMZ, it may not be able to access the Internet directly to make these requests. If you find that the {rss} macro does not work, ask your network administrator if Confluence needs to access the Internet through a web proxy.

Configuring an outbound HTTP proxy in Confluence

Proxy support is configured by passing certain system properties to the Java Virtual Machine on startup. These properties follow the conventions defined by Oracle:

- http.proxyHost
- http.proxyPort (default: 80)
- http.nonProxyHosts (default: <none>)

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At a minimum, you need to define `http.proxyHost` to configure an HTTP proxy. System property configuration is described in the Configuring System Properties.

Properties `http.proxyHost` and `http.proxyPort` indicate the proxy server and port that the http protocol handler will use.

```
-Dhttp.proxyHost=proxy.example.org -Dhttp.proxyPort=8080
```

Property `http.nonProxyHosts` indicates the hosts which should be connected to directly and not through the proxy server. The value can be a list of hosts, each separated by a pipe character | . In addition, a wildcard character (asterisk) * can be used for matching. For example:

```
-Dhttp.nonProxyHosts=*.foo.com|localhost
```

Note: You may need to escape the pipe character | in some command-line environments.

If the `http.nonProxyHosts` property is not configured, all web requests will be sent to the proxy.

Please note that any command line parameters set are visible from the process list, and thus anyone who has the approriate access to view the process list will see the proxy information in the clear. To avoid this, you can set these properties in the catalina.properties file, located in `confluence-install/conf/`. Add this to the end of the file:

```
http.proxyHost=yourProxyURL
http.proxyPort=yourProxyPort
http.proxyUser=yourUserName
http.proxyPassword=yourPassword
```

Configuring HTTP proxy authentication

Proxy authentication is also configured by providing system properties to Java in your application server's configuration file. Specifically, the following two properties:

- http.proxyUser – username
- http.proxyPassword – secret

HTTP proxy (Microsoft ISA) NTLM authentication

Confluence supports NTLM authentication for outbound HTTP proxies when Confluence is running on a Windows server.

This means that the {rss} and {jiraissues} macro will be able to contact external websites if requests have to go through a proxy that requires Windows authentication. This support is not related to logging in Confluence users automatically with NTLM, for which there is a user-contributed authenticator available.

To configure NTLM authentication for your HTTP proxy, you need to define a domain system property, `http.auth.ntlm.domain`, in addition to the properties for host, port and username mentioned above:

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```
-Dhttp.auth.ntlm.domain=MYDOMAIN
```

Configuring authentication order

Sometimes multiple authentication mechanisms are provided by an HTTP proxy. If you have proxy authentication failure messages, you should first check your username and password, then you can check for this problem by examining the HTTP headers in the proxy failure with a packet sniffer on the Confluence server. (Describing this is outside the scope of this document.)

To set the order for multiple authentication methods, you can set the system property `http.proxyAuth` to a comma-separated list of authentication methods. The available methods are: ntlm, digest and basic; this is also the default order for these methods.

For example, to attempt Basic authentication before NTLM authentication, and avoid Digest authentication entirely, you can set the `http.proxyAuth` property to this value:

```
-Dhttp.proxyAuth=basic,ntlm
```

Troubleshooting

1. There's a diagnostic jsp file in CONF-9719 for assessing the connection parameters.
2. '**Status Code [407]**' errors are described in APR-160.
3. Autoproxies are not supported. See CONF-16941.

Running Confluence behind Apache

> This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

Introduction

For improved performance in high-load environments, you should run Confluence behind a web server. In general, web server caching and thread management is far superior to that provided by your application server's HTTP interface.

To run Confluence behind the Apache httpd web server, there are two main configuration options: **mod_jk** or **mod_proxy**.

Connection type	Features
mod_proxy (also known as reverse proxy)	• **recommended connection method** • simple HTTP proxy to application server • works with all application servers • if application paths are consistent, there is minimal load on the web server

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mod_jk (also known as AJP)	• uses the AJP binary protocol • provides failover (and load balancing, which Confluence supports only with a clustered license) • only works with some application servers (typically Tomcat) • if application paths are consistent, there is some load on the web server to translate requests to AJP

Features common to both mod_proxy and mod_jk
• application paths must be consistent to avoid complex and slow URL rewriting • works with name-based virtual hosting, both on web server and app server • web server keeps a pool of connections to application server

Using mod_proxy

- Using Apache with mod_proxy is the main documentation for this configuration.
- If you want to set up the common configuration of JIRA and Confluence virtual hosts, you can use Apache's virtual hosts with separate application servers.

Using mod_jk

- Using Apache with mod_jk is the main documentation for this configuration.
- You can follow a similar method to the mod_proxy documentation above for setting up virtual hosts in Apache and Tomcat, if required.

Mod_jk2 not supported

The misleadingly-named mod_jk2 is an older method of connecting to Tomcat from Apache. Since mod_jk2 is no longer supported by the Apache Foundation, we do not support this configuration, and are not updating our mod_jk2 documentation. Mod_jk2 also has unresolved problems with Unicode URLs; you need to use either mod_proxy or mod_jk for international characters to work correctly in Confluence.

Caching static content via mod_disk_cache

To improve performance of a large Confluence site, we recommend that you move the caching of static content from the JVM into Apache. This will prevent the JVM from having a number of long running threads serving up static content. See Configuring Apache to Cache Static Content via mod_disk_cache.

Other related documentation

- Configuring Tomcat's URI encoding
- Running Confluence Over SSL or HTTPS

General Apache Configuration Notes

On this page:

- Prefer Apache mod_deflate to Confluence's built-in gzip implementation
- Ensure keepalive is enabled
- Enable keepalive for recent MSIE user agents

Prefer Apache mod_deflate to Confluence's built-in gzip implementation

1. Disable gzip in confluence. See Compressing an HTTP Response within Confluence.
2. Enable gzip compression in Apache. For RedHat distributions this can be achieved by adding the following lines:

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```
AddOutputFilterByType DEFLATE text/html text/plain text/xml text/css
application/x-javascript

# ensure sensible defaults
DeflateBufferSize 8192
DeflateCompressionLevel 4
DeflateMemLevel 9
DeflateWindowSize 15
```

Ensure keepalive is enabled

```
KeepAlive On
```

Enable keepalive for recent MSIE user agents

The standard Apache SSL configuration is very conservative when it comes to MSIE and SSL. By default all keepalives are disabled when using HTTPS with MSIE. While MSIE will always be *special*, the issues with SSL and MSIE have been solved since Service Pack 2 for Windows XP, released over 4 years go. For anyone using an XP machine SP2 or above, it is safe to allow keepalive for MSIE 6 and above.

Remove the following lines:

```
SetEnvIf User-Agent ".*MSIE.*" \
   nokeepalive ssl-unclean-shutdown \
   downgrade-1.0 force-response-1.0
```

Add these in their place:

```
BrowserMatch "MSIE [1-5]" nokeepalive ssl-unclean-shutdown downgrade-1.0
force-response-1.0
BrowserMatch "MSIE [6-9]" ssl-unclean-shutdown
```

RELATED TOPICS

Running Confluence behind Apache
Configuring Tomcat's URI encoding
Running Confluence Over SSL or HTTPS

Using Apache with mod_proxy

This page describes how to integrate Confluence into an Apache website using mod_proxy.

There are some common situations where you might use the configuration:

- You have an existing Apache-based website, and want to add Confluence to the mix (for example, **http://**

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www.example.com/confluence).
- You have two or more Java applications, each running in their own application server on different ports, for example, **http://example:8090/confluence** and **http://example:8080/jira**. By setting up Apache with mod_proxy, you can have both available on the regular HTTP port (80) – for example, at **http://www.example.com/confluence** and **http://www.example.com/jira**. This allows each application to be restarted, managed and debugged separately.

Note: This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

We describe two options:

- If you want a URL like **http://www.example.com/confluence**, go to the simple configuration.
- If you want a URL like **http://confluence.example.com**, go to the complex configuration.

Simple configuration

> In these examples, we use the following:
>
> **http://www.example.com/confluence** - your intended URL
>
> **http://example:8090** - the hostname and port Confluence is currently installed to
>
> **/confluence** - the intended context path (the part after hostname and port)
>
> Please substitute the examples below with your intended URL's in your own server. Copy/pasting these suggestions will not work on your server.

Set the context path

Set your Confluence application path (the part after hostname and port). To do this in Tomcat (bundled with Confluence), edit `conf/server.xml`, locate the "Context" definition:

```
<Context path="" docBase="../confluence" debug="0" reloadable="true">
```

and change it to:

```
<Context path="/confluence" docBase="../confluence" debug="0" reloadable="true">
```

Then restart Confluence, and ensure you can access it at **http://example:8090/confluence**

Set the URL for redirection

Set the URL for redirection. In the same `conf/server.xml` file, locate this code segment:

```
<Connector port="8090" maxHttpHeaderSize="8192"
               maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
               enableLookups="false" redirectPort="8443" acceptCount="100"
               connectionTimeout="20000" disableUploadTimeout="true" />
```

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And append the last line:

```
<Connector port="8090" maxHttpHeaderSize="8192"
               maxThreads="150" minSpareThreads="25" maxSpareThreads="75"
               enableLookups="false" redirectPort="8443" acceptCount="100"
               connectionTimeout="20000" disableUploadTimeout="true"
               proxyName="www.example.com" proxyPort="80" />
```

If this isn't working for you, try adding a scheme attribute to your Connector tag: **scheme="https"**.

Configure mod_proxy

Now enable mod_proxy in Apache, and proxy requests to the application server by adding the example below to your Apache httpd.conf (note: the files may be different on your system; the JIRA docs describe the process for Ubuntu/Debian layout):

```
# Put this after the other LoadModule directives
LoadModule proxy_module /usr/lib/apache2/modules/mod_proxy.so
LoadModule proxy_http_module /usr/lib/apache2/modules/mod_proxy_http.so

# Put this in the main section of your configuration (or desired virtual host, if
using Apache virtual hosts)
ProxyRequests Off
ProxyPreserveHost On

<Proxy *>
    Order deny,allow
    Allow from all
</Proxy>

ProxyPass /confluence http://www.example.com/confluence
ProxyPassReverse /confluence http://www.example.com/confluence
<Location /confluence>
    Order allow,deny
    Allow from all
</Location>
```

Note to Windows Users

It is recommended that you specify the absolute path to the `mod_proxy.so` and `mod_proxy_http.so` files.

Restart your Apache server

This is needed to pick up on the new configuration. This can be done by running the following on your command line/terminal/shell:

```
sudo apachectl graceful
```

Set the Confluence Base URL

The last stage is to set the Base URL to the address you're using within the proxy. In this example, it would be **http://www.example.com/confluence**

Complex configuration

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Complex configuration involves using the mod_proxy_html filter to modify the proxied content en-route. This is required if the Confluence path differs between Apache and the application server. For example:

Externally accessible (Apache) URL	http://confluence.example.com/
Application server URL	http://app-server.internal.example.com:8090/confluence/

Notice that the application path in the URL is different in each. On Apache, the path is /, and on the application server the path is /confluence.

> For this configuration, you need to install the mod_proxy_html module, which is not included in the standard Apache distribution.
>
> Alternative solutions are discussed below.

```
# Put this after the other LoadModule directives
LoadModule proxy_module modules/mod_proxy.so
LoadModule proxy_http_module modules/mod_proxy_http.so
LoadModule proxy_html_module modules/mod_proxy_html.so

<VirtualHost *>
    ServerName confluence.example.com

    # Put this in the main section of your configuration (or desired virtual
host, if using Apache virtual hosts)
    ProxyRequests Off
    ProxyPreserveHost On

    <Proxy *>
        Order deny,allow
        Allow from all
    </Proxy>

    ProxyPass / http://app-server.internal.example.com:8090/confluence
    ProxyPassReverse / http://app-server.internal.example.com:8090/confluence

    ProxyHTMLURLMap / /confluence/

    <Location />
        Order allow,deny
        Allow from all
    </Location>
</VirtualHost>
```

The ProxyHTMLURLMap configuration can become more complex if you have multiple applications running under this configuration. The mapping should also be placed in a Location block if the web server URL is a subdirectory and not on a virtual host. The Apache Week tutorial has more information how to do this.

Adding SSL

If you're running Apache in front of Tomcat, it's a good idea to terminate your SSL configuration at Apache, then forward the requests to Tomcat over HTTP. You can set up Apache to terminate the SSL connection and use the ProxyPass and ProxyPassReverse directives to pass the connection through to Tomcat (or the appropriate application server) which is running Confluence.

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1. Create a new SSL host by creating a virtual host on 443
2. The standard http connection on apache could be used to redirect to https if you want or it could just be firewalled.
3. Within the VirtualHost definition:
    a. define the SSL options (SSLEngin and SSLCertificateFile)
    b. define the ProxyPass and ProxyPassReverse directives to pass through to Tomcat.

Most of the relevant Apache Config:

```
Listen 443

NameVirtualHost *:443
<VirtualHost *:443>
    SSLEngine On
    SSLCertificateFile /etc/apache2/ssl/apache.pem
    ProxyPass / http://localhost:8090/
    ProxyPassReverse / http://localhost:8090/
</VirtualHost>
```

Apart from the Apache configuration there is a couple of things you will need to do before you get your server working:

1. You will have to change your base URL to point to https addresses. See the documentation on configuring the server base URL.
2. We need to set up the connector to use https. In your installation directory, edit the file server.xml and add this attributes to your connector:

```
proxyName="proxy.example.com" proxyPort="443" scheme="https"
```

More information

- The mod_proxy_html site has documentation and examples on the use of this module in the complex configuration.
- Apache Week has a tutorial that deals with a complex situation involving two applications and ProxyHTMLURLMap.
- Using Apache with virtual hosts and mod_proxy shows how to configure the special case where you want JIRA and Confluence running on separate application servers on virtual host subdomains.

Alternatives

If Tomcat is your application server, you have two options:

- use mod_jk to send the requests to Tomcat
- use Tomcat's virtual hosts to make your Confluence application directory the same on the app server and the web server, removing the need for the URL mapping.

If your application server has an AJP connector, you can:

- use mod_jk to send the requests to your application server.

Using Apache with virtual hosts and mod_proxy

Note: This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

Introduction

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The Apache web server is often used in front of an application server to improve performance in high-load environments. Mod_proxy simply redirects requests for certain URLs to another web server, so it typically requires no additional configuration on the application server.

This page documents a very common configuration request: configuring JIRA and Confluence on two Apache virtual hosts, running on different application servers. This is just a special case of mod_proxy configuration.

You can use virtual hosts in your application server if you want to run JIRA and Confluence on the same application server. There is a sample configuration for Tomcat you can use after configuring Apache.

Apache configuration

For this configuration to work properly, the application paths must be the same on both the application servers and the web server. For both JIRA and Confluence below, this is /.

JIRA external URL	http://jira.example.com/
JIRA application server URL	http://jira-app-server.internal.example.com:8080/
Confluence external URL	http://confluence.example.com/
Confluence application server URL	http://confluence-app-server.internal.example.com:8090/

Add the following to your Apache httpd.conf:

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```
# Put this after the other LoadModule directives
LoadModule proxy_module /usr/lib/apache2/modules/mod_proxy.so
LoadModule proxy_http_module /usr/lib/apache2/modules/mod_proxy_http.so

# Put this with your other VirtualHosts, or at the bottom of the file
NameVirtualHost *
<VirtualHost *>
    ServerName confluence.example.com

    ProxyRequests Off
    <Proxy *>
        Order deny,allow
        Allow from all
    </Proxy>

    ProxyPass / http://confluence-app-server.internal.example.com:8090/
    ProxyPassReverse / http://confluence-app-server.internal.example.com:8090/
    <Location />
        Order allow,deny
        Allow from all
    </Location>
</VirtualHost>
<VirtualHost *>
    ServerName jira.example.com

    ProxyRequests Off
    <Proxy *>
        Order deny,allow
        Allow from all
    </Proxy>

    ProxyPass / http://jira-app-server.internal.example.com:8080/
    ProxyPassReverse / http://jira-app-server.internal.example.com:8080/
    <Location />
        Order allow,deny
        Allow from all
    </Location>
</VirtualHost>
```

Points to note:

- ProxyPass and ProxyPassReverse directives send traffic from the web server to your application server.
- The application path is the same on the application server and on the web server (both are /).
- Because the above configuration uses name-based virtual hosting, you must configure your DNS server to point both names (jira.example.com, confluence.example.com) to your web server.

More information

For different ways to configure mod_proxy, see Using Apache with mod_proxy.

If you use Tomcat, mod_jk provides a different way of connecting Apache via AJP. You can also use the above configuration with just one application server if you use Tomcat's virtual hosts.

Using Apache with mod_jk

Note:

- The preferred configuration is Using Apache with mod_proxy. This works with any application server, and together with `mod_proxy_html` allows complex URL rewriting to deal with different application paths on

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the web server and the application server.
- This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

Introduction

The Apache web server is often used in front of an application server to improve performance in high-load environments. Mod_jk allows request forwarding to an application via a protocol called AJP. Configuration of this involves enabling mod_jk in Apache, configuring a AJP connector in your application server, and directing Apache to forward certain paths to the application server via mod_jk.

Mod_jk is sometimes preferred to mod_proxy because AJP is a binary protocol, and because some site administrators are more familiar with it than with mod_proxy..

The scope of this documentation is limited to configuring the AJP connector in Tomcat 5.x. Other application servers may support AJP connectors; please consult your application server documentation for instructions on how to configure it.

The configuration below assumes your Confluence instance is accessible on the same path on the application server and the web server. For example:

Externally accessible (web server) URL	http://www.example.com/confluence/
Application server URL (HTTP)	http://app-server.internal.example.com:8090/confluence/

The AJP connection of the application server is set to: app-server.internal.example.com:8009.

Configuring mod_jk in Apache

The standard distribution of Apache does not include mod_jk. You need to download it from the JK homepage and put the mod_jk.so file in your Apache modules directory.

Next, add the following in **httpd.conf** directly or included from another file:

```
# Put this after the other LoadModule directives
LoadModule jk_module modules/mod_jk.so

# Put this in the main section of your configuration (or desired virtual host, if
using Apache virtual hosts)
JkWorkersFile conf/workers.properties
JkLogFile logs/mod_jk.log
JkLogLevel info

JkMount /confluence worker1
JkMount /confluence/* worker1
```

Configuring workers.properties

Create a new file called 'workers.properties', and put it in your Apache conf directory. (The path for workers.properties was one of the configuration settings above.)

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```
worker.list=worker1

worker.worker1.host=app-server.internal.example.com
worker.worker1.port=8009
worker.worker1.type=ajp13
```

Tomcat 5.x configuration

In Tomcat 5, the AJP connector is enabled by default on port 8009. An absolutely minimal Tomcat server.xml is below for comparison. The relevant line is the Connector with port 8009 – make sure this is uncommented in your server.xml.

```
<Server port="8000" shutdown="SHUTDOWN">
  <Service name="Catalina">

    <!-- Define a HTTP/1.1 Connector on port 8090 -->
    <Connector port="8090" />

    <!-- Define an AJP 1.3 Connector on port 8009 -->
    <Connector port="8009" protocol="AJP/1.3" />

    <Engine name="Catalina" defaultHost="localhost">
      <Host name="localhost" appBase="webapps">
 <Context path="/confluence" docBase="/opt/webapps/confluence-2.2/confluence"/>
        <Logger className="org.apache.catalina.logger.FileLogger"/>
      </Host>
    </Engine>
  </Service>
</Server>
```

Points to note:

- the Connector on port 8009 has protocol of "AJP/1.3". This is critical.
- the Context path of the Confluence application is "/confluence". This must match the path used to access Confluence on the web server.
- we recommend keeping your application Contexts outside the server.xml in Tomcat 5.x. The above example includes them for demonstration only.

Improving the performance of the mod_jk connector

The most important setting in high-load environments is the number of processor threads used by the Tomcat AJP connector. By default, this is 200, but you should increase it to match Apache's maxThreads setting (256 by default):

```
<Connector port="8009" minSpareThreads="5" maxThreads="256" protocol="AJP/1.3" />
```

All the configuration parameters for the AJP connector are covered in the Tomcat documentation.

Ensuring UTF-8 compatibility

If you have problems downloading attachments with non-ASCII characters in the filename, add the following to your Apache configuration:

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```
JkOptions +ForwardURICompatUnparsed
```

And specify UTF-8 as the URIEncoding in the AJP connector configuration:

```
<Connector port="8009" protocol="AJP/1.3" URIEncoding="UTF-8" />
```

These settings are discussed further on Configuring Tomcat's URI encoding.

More information

The Tomcat JK website has complete documentation on workers.properties and Apache configuration. You can also find information there on how to use mod_jk with IIS.

Using mod_rewrite to Modify Confluence URLs

Note: This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

Confluence requires URL rewriting for proper functionality, if Confluence is accessible via different domain names. If Confluence is configured for multiple domains *without* URL rewriting, you will experience an array of problems. See Various Issues Caused when Server Base URL Does Not Match the URL Used to Access Confluence.

An example of why you may want to access Confluence from different domains:

- From an internal network:

  http://wiki
- The externally visible domain:

  http://wiki.domain.com

Using URL rewriting to access Confluence over multiple domains

To configure Confluence over multiple domains:

1. Add a DNS entry mapping http://wiki to the externally visible IP address of the Confluence server.
2. Set Confluence's server base URL to http://wiki.domain.com.
3. Add Apache HTTP proxy, using the instructions from Running Confluence behind Apache.
4. Add the mod_rewrite module to change the URL.

Further information

You may be interested in the UrlRewriteFilter that is Java web filter that works in a similar way of the **Apache's mod_rewrite**.

Configuring Apache to Cache Static Content via mod_disk_cache

To improve performance of a large Confluence site, we recommend that you move the caching of static content from the JVM into Apache. This will prevent the JVM from having a number of long running threads serving up static content.

Static content in Confluence includes most JavaScript, CSS and image files which are included with the application or an installed plugin. This content will be cached by Apache in this configuration. User-provided content like space logos, attachments or embedded images are not considered static content and will not be

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cached.

Note: This page documents a configuration of Apache, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with Apache. Please be aware that this material is provided for your information only, and that you use it at your own risk.

Configuring Apache mod_disk_cache

To configure Apache to cache static Confluence content:

1. Add a `mod_disk_cache` stanza to the virtual host configuration:

```
<IfModule mod_disk_cache.c>
  # "/s" is where Confluence serves "static" stuff. Instruct Apache
to cache it:
  CacheEnable disk /s
  CacheIgnoreHeaders Set-Cookie
  CacheRoot "/var/cache/mod_proxy"
</IfModule>
```

2. Configure Apache to load `mod_disk_cache`. For example, in our server configuration this is done in `/etc/httpd/conf/httpd.conf`:

```
LoadModule disk_cache_module modules/mod_disk_cache.so
```

3. Restart Apache after both modifications are complete.

Notes

- Please refer to the Apache documentation for mod_disk_cache.
- If you encounter problems where users are served stale content, you may need to purge the Apache cache directory (`/var/cache/mod_proxy` in the above configuration) after a Confluence or plugin upgrade. This is a simple 3 step process:
  - Shut down Apache.
  - Clear the cache directory. For example: `sudo rm -r /var/cache/mod_proxy/*`
  - Restart Apache.
- Ensure that you are running the `htcacheclean` daemon in order to prevent excessive use of disk space. In our situation we ran it like this:

```
sudo htcacheclean -d30 -n -t -p /var/cache/mod_proxy -l 512M
```

  This will purge content once the cache reaches 512M every 30 minutes. See the Apache documentation for htcacheclean for details of the options.

Starting Confluence Automatically on System Startup

You can configure Confluence to start automatically on system startup, allowing it to recover automatically after a reboot.

No content found for label(s) auto-startup.

Start Confluence Automatically on Linux

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On Linux/Solaris, the best practice is to install, configure and run each service (including Confluence) as a dedicated user with only the permissions they require.

To install, configure and run Confluence automatically on Linux/Solaris:

1. Create a `confluence` user for instance, using the following command:

```
sudo useradd --create-home -c "Confluence role account" confluence
```

2. Create a directory to install Confluence into:

```
sudo mkdir /usr/local/confluence
sudo chown confluence: /usr/local/confluence
```

3. Log in as the `confluence` user to install Confluence:

```
sudo su - confluence
cd /usr/local/confluence/
tar zxvf /tmp/confluence-3.0.1-std.tar.gz
ln -s confluence-3.0.1-std/ current
```

4. Edit <<CONFLUENCE_INSTALL_DIRECTORY>>/confluence/WEB-INF/classes/confluence-init.properties file, and set confluence.home=/usr/local/confluence/<Confluence_Data_Home> (ensure you have removed the comment '#')
5. Then back as root, create the file `/etc/init.d/confluence` (code shown below), which will be responsible for starting up Confluence after a reboot (or when manually invoked).
   ⚠️ If you are running Ubuntu Jaunty (or later) do not perform this step. Please use the instructions further down this page.

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```
#!/bin/sh -e
# Confluence startup script
#chkconfig: 2345 80 05
#description: Confluence

# Define some variables
# Name of app ( JIRA, Confluence, etc )
APP=confluence
# Name of the user to run as
USER=confluence
# Location of application's bin directory
CATALINA_HOME=/usr/local/confluence/current
# Location of Java JDK
export JAVA_HOME=/usr/lib/jvm/java-6-sun

case "$1" in
  # Start command
  start)
    echo "Starting $APP"
    /bin/su -m $USER -c "$CATALINA_HOME/bin/startup.sh &> /dev/null"
    ;;
  # Stop command
  stop)
    echo "Stopping $APP"
    /bin/su -m $USER -c "$CATALINA_HOME/bin/shutdown.sh &> /dev/null"
    echo "$APP stopped successfully"
    ;;
   # Restart command
   restart)
        $0 stop
        sleep 5
        $0 start
        ;;
  *)
    echo "Usage: /etc/init.d/$APP {start|restart|stop}"
    exit 1
    ;;
esac

exit 0
```

6. Make this file executable:

```
sudo chmod +x /etc/init.d/confluence
```

7. Set this file to run at the appropriate runleve. For example, use `sudo chkconfig --add confluence` on Redhat-based systems, `sudo update-rc.d confluence defaults` or `rcconf` on Debian-based systems.
8. You should now be able to start Confluence with the init script. A successful startup output typically looks like this:

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```
$ sudo /etc/init.d/confluence start
Starting Confluence:
If you encounter issues starting up Confluence, please see the
Installation guide at
http://confluence.atlassian.com/display/DOC/Confluence+Installation
+Guide
Using CATALINA_BASE:   /usr/local/confluence/current
Using CATALINA_HOME:   /usr/local/confluence/current
Using CATALINA_TMPDIR: /usr/local/confluence/current/temp
Using JRE_HOME:       /usr/lib/jvm/java-1.5.0-sun
done.
```

You should then see this running at http://<server>:8090/
The port for this will be whatever is defined in your Confluence `server.xml` file.

Adding Confluence as a service for Ubuntu Jaunty (or later)

To continue configuring Confluence to start automatically as a service on Ubuntu Jaunty (or later):

1. After logging in as the `confluence` user to install Confluence, create `start` and `stop` scripts in `/usr/local/confluence`:

   Example `start`script:

   ```
   #!/bin/bash
   export JAVA_HOME=/usr/lib/jvm/java-6-sun-1.6.0.16/
   export JDK_HOME=/usr/lib/jvm/java-6-sun-1.6.0.16/
   cd /usr/local/confluence/current/bin
   ./startup.sh
   ```

   Example `stop`script:

   ```
   #!/bin/bash
   export JAVA_HOME=/usr/lib/jvm/java-6-sun-1.6.0.16/
   export JDK_HOME=/usr/lib/jvm/java-6-sun-1.6.0.16/
   cd /usr/local/confluence/current/bin
   ./shutdown.sh
   ```

2. Make both of these scripts executable. For example, by issuing the command: `sudo chmod a+x /usr/local/confluence/start /usr/local/confluence/stop`.
3. Karmic and later: Create two text files in `/etc/init/` called `confluence-up.conf` and `confluence-down.conf`:

   `confluence-up`:

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```
start on runlevel [2345]

script

 date >> /tmp/confluence-startup.out
 exec sudo -u confluence /usr/local/confluence/start >>
/tmp/confluence-startup.out 2>&1

end script
```

`confluence-down`:

```
start on runlevel [16]

expect fork
respawn

exec sudo -u confluence /usr/local/confluence/stop >>
/tmp/confluence-shutdown.out 2>&1
```

... and make them readable to all users:
`sudo chmod a+r /etc/init/confluence-up.conf /etc/init/confluence-down.conf`

1. Jaunty, Intrepid: Create two text files in `/etc/event.d/` called `confluence-up` and `confluence-down`:

   `confluence-up`:

```
start on runlevel 2
start on runlevel 3
start on runlevel 4
start on runlevel 5

exec sudo -u confluence /usr/local/confluence/start >>
/tmp/confluence-startup.out 2>&1
```

   `confluence-down`:

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```
start on runlevel 1
start on runlevel 6

exec sudo -u confluence /usr/local/confluence/stop >>
/tmp/confluence-shutdown.out 2>&1
```

... and make them readable to all users:
`sudo chmod a+r /etc/event.d/confluence-up /etc/event.d/confluence-down`

RELATED TOPICS

Starting Confluence Automatically on System Startup

Start Confluence Automatically on Windows as a Service

For long-term use, we recommend that you configure Confluence to start automatically when the operating system restarts. For Windows servers, this means configuring Confluence to run as a Windows service.

There are two ways to install the Confluence distribution as a service: using the Confluence installer or manually as described below.

On this page:

- Reasons for Starting Confluence as a Service
- Changing the User Running the Service
- Manually Installing the Confluence Distribution as a Service
- Managing Confluence as a Service
- Upgrading Confluence
- Troubleshooting Confluence while Running as a Windows Service
- Requesting Support

> **Problem with 64-bit Windows**
>
> If you are running 64-bit Windows, please note that Apache Tomcat cannot run as a Windows service if you are using a 64-bit JDK. **Please ensure that you are using a 32-bit JDK**. Refer to our knowledge base article for more information.

Reasons for Starting Confluence as a Service

Installation as a Windows service offers these advantages:

- Reduced risk of shutting down Confluence by accident (If you start Confluence manually, a console window opens and there is a risk of someone accidentally shutting down Confluence by closing the window).
- Automated Confluence recovery after server restart.
- Improved troubleshooting through logging server output to file.

You can read more about Windows services in the Microsoft Developer Network.

Changing the User Running the Service

If you wish to run the service as a non-administrator user for security, or if you are using network drives for backups, attachments or indexes, you can run the service as another user. To change users, open the Apache

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Tomcat Confluence properties, go to the 'Log On' tab and enter the required username and password. Go to your Windows Control Panel -> User Accounts and confirm that the user has write permissions for the `%CATALINA_HOME%`, index and database directories. Note that any network drives must be specified by UNC and not letter mappings (eg. `\\backupserver\confluence` not `z:\confluence`).

For more detail, see Creating a Dedicated User Account on the Operating System to Run Confluence.

Manually Installing the Confluence Distribution as a Service

From your Windows-based server:

1. Open a command prompt in the `<CONFLUENCE-INSTALL>/bin` directory.
2. Confirm that the JAVA_HOME variable is set to the JDK base directory with the command:

   ```
   echo %JAVA_HOME%
   ```

   Note that any directory in the path with spaces (eg. `C:\Program Files` must be converted to its eight-character equivalent (e.g. `C:\Progra~1`).

3. If you are installing Confluence on a Windows 2008 server, be sure to run the command prompt using 'run as administrator'. (Otherwise running 'service.bat', as described in the next step, will fail.)
4. Use the following command to install the service with default settings:

   ```
   service.bat install Confluence
   ```

5. Now, to have the service start automatically when the server starts, run:

   ```
   tomcat6 //US//Confluence --Startup auto
   ```

6. If you have a less than a 512 megabytes of memory, skip this step. For users with large Confluence installations, you can increase the maximum memory Confluence can use. (The default is 256MB). For example, you can set the maximum memory to 512 megs using:

   ```
   tomcat6 //US//Confluence --JvmMx 512
   ```

7. If you do not have any JVM parameters that you pass to your distribution of Confluence, you can skip this step. If you do, add them to the service using:

   ```
   tomcat6 //US//Confluence ++JvmOptions="-Djust.an.example=True"
   ```

8. For further configuration options, please refer to the Tomcat Windows Service How-To guide
9. Go to your Windows Control Panel -> Administrative Tools -> Services -> Apache Tomcat Confluence and right-click on Properties to verify the settings are correct.

   Confluence is now installed as a service, but will not automatically start up until the next server reboot
10. Start the Confluence service with the command:

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```
net start Confluence
```

Managing Confluence as a Service

You can manage the Confluence service from the command prompt.

- Stop Confluence with:

```
net stop Confluence
```

- Uninstall the Confluence service with:

```
service.bat remove Confluence
```

Upgrading Confluence

After upgrading Confluence, you can either uninstall and reinstall the Windows service or change the StartPath parameter to your new folder. Refer to the Tomcat documentation for help.

Troubleshooting Confluence while Running as a Windows Service

- Check the Knowledge Base articles:
  No content found for label(s) windows_service.
- If none of the above solves your problem, please refer to the complete list of known issues in our Knowledge Base.
- When investigating memory issues or bugs, it may be useful to view information from Confluence's garbage collection. To turn on the verbose garbage collection, use the command:

```
tomcat6 //US//Confluence
++JvmOptions="-Xloggc:<CONFLUENCE-INSTALL>\logs\atlassian-gc.log"
```

- The Confluence 2.9 installer does not work when installed as service, due to a missing semi-colon in `service.bat`. Please refer to reported issue CONF-12785.
- You can use a Sysinternals tool called **`Procmon.exe`** from the The Microsoft Windows Sysinternals Team, to check that the error occurred at the specific time when the Confluence service started. You need to match the time when Tomcat failed, as captured by this tool, against the time in the Windows Event Viewer.

> **Note**
>
> We do not recommend that you run this tool for too long as it may disrupt other Atlassian applications. Once you have captured the required information you will need to press `Ctrl + E` to stop capturing.

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Requesting Support

If, after following the troubleshooting guide above, you still cannot make Confluence run as a Windows Service or if there is an error when setting the JVM configuration for the service, you can create a support request.

Please provide the following information when creating your support request, because we will need it to assist you:

- Are you running a 32 bit or 64 bit Windows?
- Give us the result of running `java -version` from Windows command line console.
- A screen shot of your Windows Registry setting for Tomcat.
- If you have modified **service.bat**, please give us a copy of this file for review.
- What application server are you using? eg. Are you using the Confluence distribution?
- Your atlassian-confluence.log file.

RELATED TOPICS

Starting Confluence Automatically on System Startup
How to Fix Out of Memory Errors by Increasing Available Memory

Configuring a Large Confluence Installation

Deploying *any* application to several thousand users requires care and planning, especially if those users are going to be relying on the application to get their work done.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

General Advice

Staged Rollout

Do not try to deploy Confluence immediately to your whole organisation. Instead, roll it out department by department, or project by project.

How Confluence will scale given a particular software and hardware configuration depends very much on how Confluence is likely to be used in your organisation. Launching Confluence to everybody at once may seem like a neat idea, but it also means that any problems you might experience scaling the system up to your entire organisation will hit you *all at once*, annoy everyone and possibly hurt adoption.

Rolling Confluence out gradually will give you the chance to tune it as you go, resulting in a much more painless experience. There will also be organisational advantages: you can identify those teams or projects who are most likely to be successful 'early adopters', and those teams can experiment with how best a wiki might suit your organisation, and pass on their 'best wiki practices' as usage of Confluence expands.

Plugin Governance

Confluence plugins can add tremendous value. Before adding one, visit the plugin's page and explore its issues (available from the issue management link). Try the plugin in a test environment and make sure to note any adverse effects after adding it to a production environment. Test plugins independently when upgrading.

Backup strategy

Disable the XML backup and use the Production Backup Strategy.

New Spaces Governance

For both performance and good practice, put some modest governance in place around the creation of new

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spaces, such as a simple request that includes a check for duplicates and some strategy around how to best use a space. Duplicates and unused spaces should be purged by a wiki gardener. Try to keep it to one space per group.

Choosing User Management and Single Sign-On

We recommend that you choose and configure your user management solution as soon as possible, rather than adding it to your Confluence installation at a later date.

It is possible to integrate with an LDAP repository, such as Microsoft Active Directory, or add a single sign-on solution later (especially with the addition of Crowd). But if possible it is best to configure your user management system up front. You can configure access for only a specific group or set of groups, thereby keeping the gradual rollout.

Please refer to our detailed guide to Configuring User Directories and examine the User Management Limitations and Recommendations.

Configuring your Application Server, Web Server and Database

Because Confluence can be deployed in so many server combinations, we do not currently have guides on the best tuning parameters for each individual server. We will be happy to provide support, however. If you have any tuning parameters that you find particularly useful for Confluence instances, feel free to share them with other Confluence users in the Confluence Community space.

Best Practices

Troubleshooting possible memory leaks

The Troubleshooting Confluence Hanging or Crashing guide is a good place to start. Some of the known causes listed there could result in performance issues short of a crash or hang. Many of the issues reported there are exacerbated with a large installation.

Memory Usage

The Java virtual machine is configured with a "maximum heap size" that limits the amount of memory it will consume. If Confluence fills up this maximum heap size it will run out of memory, and start behaving unpredictably. You can keep track of Confluence's memory usage from the System Information screen of the administration console:

Java VM Memory Statistics	
Total Memory	313 MB
Free Memory	140 MB
Used Memory	173 MB
Memory Graph	**45 % Free**

This example shows that, at the time of writing, confluence.atlassian.com is using 173MB of an allocated 313MB of heap. (The JVM was configured with a maximum heap size of 450MB, but this information is not available in the graph. The 313MB figure shows that the full 450MB of heap has not yet been needed)

Database Connection Pool

Confluence will need a database connection for each simultaneous user connection to the server. It is also a good idea to have 5-10 connections spare for Confluence internal processes such as backups, re-indexing or daily notification jobs.

Running out of pooled connections will cause the server to slow down as more users are waiting for a

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connection to be freed before starting their own request, and will eventually cause visible system errors as Confluence times out waiting for a database connection.

If you are using Confluence's internal connection pool, you can increase the number of available connections by modifying the `hibernate.c3p0.max_size` property in `{confluence_home}/confluence-cfg.xml`, and restarting Confluence. **Make sure** you have also configured your database to be able to support that many simultaneous connections.

Cache Sizes

The Performance Tuning page includes some useful rules of thumb for configuring the sizes of Confluence's internal caches.

To improve performance of a large Confluence site, we recommend that you move the caching of static content from the JVM into Apache. This will prevent the JVM from having a number of long running threads serving up static content. See Configuring Apache to Cache Static Content via mod_disk_cache.

RELATED TOPICS

Operating Large or Mission-Critical Confluence Installations
Performance Tuning
Confluence Clustering Overview
Requesting Performance Support
Managing Confluence Users
Confluence Administrator's Guide
Configuring Confluence

Configuring Logging

We recommend that you configure Confluence's logging to your own requirements. You can change the log settings in two ways:

- Configure logging in Confluence Administration – Your changes will be in effect only until you next restart Confluence.
- Edit the properties file – Your changes will take effect next time you start Confluence, and for all subsequent sessions.

Both methods are described below. In some rare circumstances you may *also* need to configure Configuring Logging.

Terminology: In log4j, a 'logger' is a named entity. Logger names are case-sensitive and they follow a hierarchical naming standard. For example, the logger named `com.foo` is a parent of the logger named `com.foo.Bar`.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Configure logging in Confluence Administration

You can change some of Confluence's logging behaviour via the **Administration Console** while Confluence is running. Any changes made in this way will apply only to the currently-running Confluence lifetime. The changes are not written to the `log4j.properties` file and are therefore discarded when you next stop Confluence.

Not all logging behaviour can be changed via the Administration Console. For logging configuration not mentioned below, you will need to stop Confluence and then edit the logging properties file instead.

The '**Logging and Profiling**' screen shows a list of all currently defined loggers. On this screen you can:

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- Turn page profiling on or off.
- Turn detailed SQL logging on or off.
- Add a new logger for a class/package name.
- Remove a logger for a class/package name.
- Set the logging level (INFO, WARN, FATAL, ERROR or DEBUG) for each class or package name.
- Reset all logging levels to a predefined profile.

Changing the logging configuration

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Logging and Profiling**' in the '**Administration**' section of the left-hand panel.
   You need to have System Administrator permissions in order to perform this function.
3. The '**Logging and Profiling**' screen appears, as shown below. Use the following guidelines to change the logging behaviour while Confluence is running:
   - '**Performance Profiling**' — See Page Request Profiling.
   - '**SQL Logging**' — Click the '**Enable SQL Logging**' button to log the details of SQL requests made to the database.
     If you need to enable logging of SQL parameter values, you will need to change the setting in the properties file. This option is not available via the Administration Console.
   - '**Log4j Logging**' — Click one of the profile buttons to reset all your loggers to the predefined profiles:
     - The '**Production**' profile is a fairly standard profile, recommended for normal production conditions.
     - The '**Diagnostic**' profile gives more information, useful for troubleshooting and debugging. It results in slower performance and fills the log files more quickly.
   - '**Add New Entry**' — Type a class or package name into the text box and click the '**Add Entry**' button. The new logger will appear in the list of '**Existing Levels**' in the lower part of the screen.
   - '**Existing Levels**' - These are the loggers currently in action for your Confluence instance.
     - You can change the logging level by selecting a value from the '**New Level**' dropdown list. Read the Apache documentation for a definition of each level.
     - Click the '**Remove**' link to stop logging for the selected class/package name.
4. Click the '**Save**' button to save any changes you have made in the '**Existing Levels**' section.

Screenshot: Changing Log Levels and Profiling

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Performance Profiling

Profiling is currently OFF.

Enable Profiling

SQL Logging

Enable SQL Logging

Log4j Logging

Choose from one of the predefined logging options or configure logging below.

Production Diagnostic

OR:

Customise specific logging settings

Add New Entry

Class/Package Name	New Level	
	INFO	Add entry

Existing Levels

Class/Package Name	Current Level	New Level	
com.atlassian.confluence.cluster	INFO	INFO	Remove
com.atlassian.confluence.cluster.safety	INFO	INFO	Remove
com.atlassian.confluence.importexport.impl.PdfExporter	ERROR	ERROR	Remove
com.atlassian.confluence.lifecycle	INFO	INFO	Remove
com.atlassian.confluence.upgrade	INFO	INFO	Remove
com.atlassian.core.util.FileUtils	ERROR	ERROR	Remove
com.atlassian.upgrade	INFO	INFO	Remove
net.sf.hibernate.cache.ReadWriteCache	ERROR	ERROR	Remove
net.sf.hibernate.impl.SessionImpl	ERROR	ERROR	Remove
net.sf.hibernate.type.CustomType	ERROR	ERROR	Remove
net.sf.hibernate.util.JDBCExceptionReporter	ERROR	ERROR	Remove
org.apache.fop	ERROR	ERROR	Remove
root	WARN	WARN	Remove

Save

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Editing the Properties File

To configure the logging levels and other settings on a permanent basis, you need to stop Confluence and then change the settings in the `log4j.properties` file, described above.

The properties file contains a number of entries for different loggers that can be uncommented if you are interested in logging from particular components. Read more in the Apache log4j documentation.

See Working with Confluence Logs for some guidelines on specific configuration options you may find useful.

Configuring Levels for java.util.logging in logging.properties

A few libraries used by Confluence use java.util.logging rather than log4j or slf4j. These libraries include:

- com.sun.jersey
- org.apache.shindig
- net.sf.ehcache

Confluence's `logging.properties` file is set to redirect java.util.logging at specific levels to log4j via slf4j.

To increase logging levels for these libraries you must first configure the `logging.properties` file in `<CONFLUENCE-INSTALL>/confluence/WEB-INF/classes/`. The logging levels are different from log4j and are listed here.
For example, to increase logging for shindig change the following line in the `logging.properties` file:

```
org.apache.shindig.level = INFO
```

to

```
org.apache.shindig.level = FINE
```

And then use one of the methods above **as well** to configure the log4j level.

Troubleshooting SQL Exceptions

If you get an exception similar to those shown below, it is a good idea to increase the logging levels of your Confluence instance. If you request Atlassian support, this additional logging will help us work out the cause of the error.

Increased logging levels will enable us to diagnose errors like these:

```
org.springframework.dao.DataIntegrityViolationException: (HibernateTemplate):
data integrity violated by SQL ''; nested exception is
java.sql.BatchUpdateException: Duplicate entry '1234' for key 1
 at
org.springframework.jdbc.support.SQLStateSQLExceptionTranslator.translate(SQLStat
eSQLExceptionTranslator.java:88)
caused by: java.sql.BatchUpdateException: Duplicate entry '1234' for key 1
 at
com.mysql.jdbc.ServerPreparedStatement.executeBatch(ServerPreparedStatement.java:
647)
```

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or

```
(HibernateTemplate): data integrity violated by SQL ''; nested exception is
java.sql.BatchUpdateException: ORA-00001: unique constraint
(CONFLUENCE.SYS_C0012345) violated
```

This document outlines the steps to take to increasing logging on your system.

> **Changing the logging levels via the Administration Console**
>
> With Confluence 2.7 and later, you can adjust logging levels at runtime via the Administration Console — read the instructions. Below we tell you how to edit the log4j files directly.

1. Open `confluence/WEB-INF/classes/log4j.properties` and uncomment the following lines. The double ## lines are comments, leave them intact.

```
## log hibernate prepared statements/SQL queries (equivalent to setting
'hibernate.show_sql' to 'true')
#log4j.logger.net.sf.hibernate.SQL=DEBUG

## log hibernate prepared statement parameter values
#log4j.logger.net.sf.hibernate.type=DEBUG
```

   If you can not locate these lines in your `log4j.properties` file, please add them to the end of it.
2. Restart Confluence.
3. Redo the steps that led to the error.
4. Zip up your logs directory and attach it your support ticket.
5. If you are using Oracle and received a **constraint error**, please ask your database administrator which *table* and *column* the constraint (that is, `CONFLUENCE.SYS_C0012345`) refers to and add that information to your support ticket.
6. Open `confluence/WEB-INF/classes/log4j.properties` again and remove the 4 lines you added in step 1. (The additional logging will impact performance and should be disabled once you have completed this procedure.)

RELATED TOPICS

Enabling Detailed SQL Logging
Working with Confluence Logs
Troubleshooting failed XML site backups

Registering External Gadgets

You can register gadgets from external web sites (such as JIRA, iGoogle or Gmail) with your Confluence installation, so that the gadgets appear in the macro browser and people can add them to Confluence pages via a gadget macro.

Choose one of the following ways to register the external gadgets on Confluence:

- **Subscribe to all of the external application's gadgets:** You can add all the gadgets from your JIRA, Bamboo, FishEye or Crucible site – or from another Confluence site – to your Confluence gadget directory. People can then pick and choose the gadgets to add to their Confluence pages.
- **Register the external gadgets one by one:** If you cannot subscribe to an application's gadgets, you will need to add the gadgets one by one. This is necessary for applications and websites that do not support gadget subscription, and for applications where you cannot establish a trusted relationship via Application Links.

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Both methods are described below. First, consider whether you need to set up a trust relationship between Confluence and the other application.

Setting up a trust relationship with the other application

In addition to registering the external gadgets, we recommend that you set up an OAuth or Trusted Application relationship between the application that serves the gadget (the service provider) and Confluence (the consumer). The trust relationship is required for gadgets that access restricted data from the external web application.

See how to configure OAuth or Trusted Applications Authentication, using Application Links.

If the external web application provides anonymous access to all the data you need in the gadgets, then you do not need a trust relationship.

For example, if your gadgets will retrieve data from JIRA and your JIRA server includes projects and issues that are restricted to logged-in users, then you will need a trust relationship between Confluence and JIRA. If you do not set up the trust relationship, then the gadgets will show only the information that JIRA makes visible to anonymous users.

Subscribing to all of the application's gadgets

You can add all the gadgets from your JIRA, Bamboo, FishEye or Crucible site – or from another Confluence site – to your Confluence gadget directory. People can then pick and choose the gadgets to add to their Confluence pages.

To subscribe to another site's gadgets:

1. Choose **Browse** > **Confluence Admin**.
2. Click **External Gadgets** in the left-hand panel.
3. Click the **Gadget Feeds** tab.
4. Enter the base URL of the application you want to subscribe to, in the text box labelled **Gadget Feed URL**. For example, `http://example.com/jira` or `http://example.com/confluence`.
5. Click **Add**. Confluence will convert the URL to a gadget feed and place it in the list of 'Added Gadget Feeds'.

On this page:

- Setting up a trust relationship with the other application
- Subscribing to all of the application's gadgets
- Registering individual gadgets
- Removing access to external gadgets

Related pages:

- Configuring a URL Whitelist for Gadgets
- The big list of Atlassian gadgets
- Adding JIRA Gadgets to a Confluence Page
- Configuring Application Links

⚠ *The information on this page does not apply to Confluence OnDemand.*

Screenshot 1: Subscribing to a gadget feed

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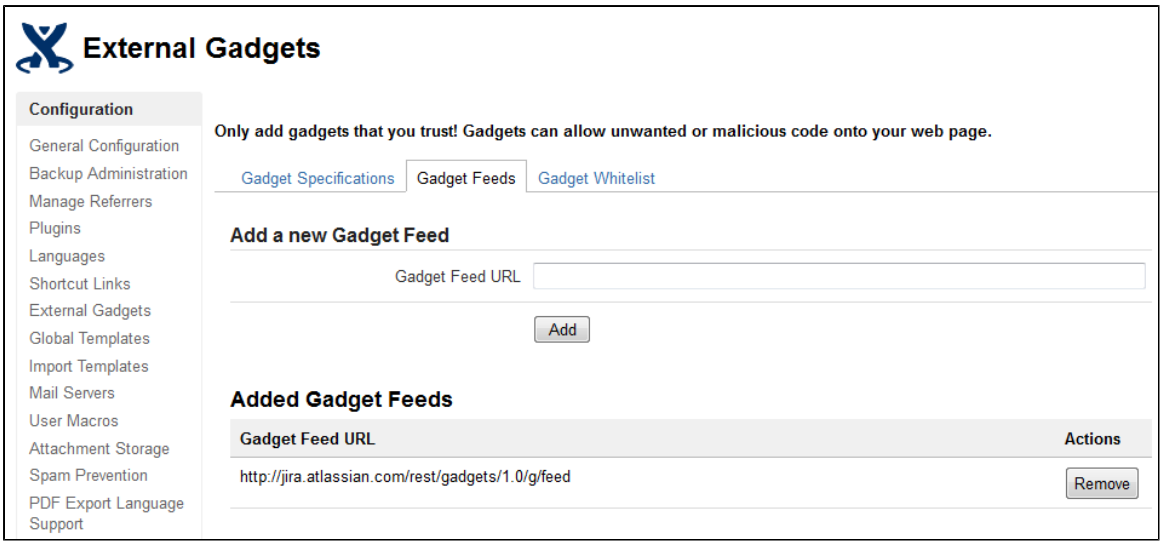

Registering individual gadgets

If you cannot subscribe to an application's gadgets, you will need to register the gadgets one by one. This is necessary for applications and websites that do not support gadget subscription, and for applications where you cannot establish a trusted relationship via Application Links.

First you will need to obtain that gadget's URL and copy it to your clipboard.

Getting a gadget's URL from an Atlassian application

If your web application is another Atlassian application such as Confluence or JIRA:

A gadget's URL points to the gadget's XML specification file. In general, a gadget's URL looks something like this:

```
http://example.com/my-gadget-location/my-gadget.xml
```

If the gadget is supplied by a plugin, the URL will have this format:
`http://my-app.my-server.com:port/rest/gadgets/1.0/g/my-plugin.key:my-gadget/my-path/my-gadget.xml`
For example:
`http://mycompany.com/jira/rest/gadgets/1.0/g/com.atlassian.streams.streams-jira-plugin:activitystream-gadget/gadgets/activitystream-gadget.xml`

To find a gadget's URL in JIRA:

- Go to your dashboard by clicking the **Dashboards** link at the top left of the screen.
- Click **Add Gadget** to see the list of gadgets in the directory.
- Find the gadget you want, using one or more of the following tools:
  - Use the scroll bar on the right to move up and down the list of gadgets.
  - Select a category in the left-hand panel to display only gadgets in that category.
  - Start typing a key word for your gadget in the **Search** textbox. The list of gadgets will change as you type, showing only gadgets that match your search term.
- Right-click the **Gadget URL** link for that gadget and copy the gadget's URL into your clipboard.

To find a gadget's URL in Confluence:

- Choose **Browse** > **Confluence Gadgets** to see the list of available Confluence gadgets.
- Find the gadget you want.
- Right-click the **Gadget URL** link for that gadget and copy the gadget's URL into your clipboard.

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Getting a gadget's URL from another application

If the gadget comes from a non-Atlassian web application or web site, please consult the relevant documentation for that application to obtain the gadget's URL.

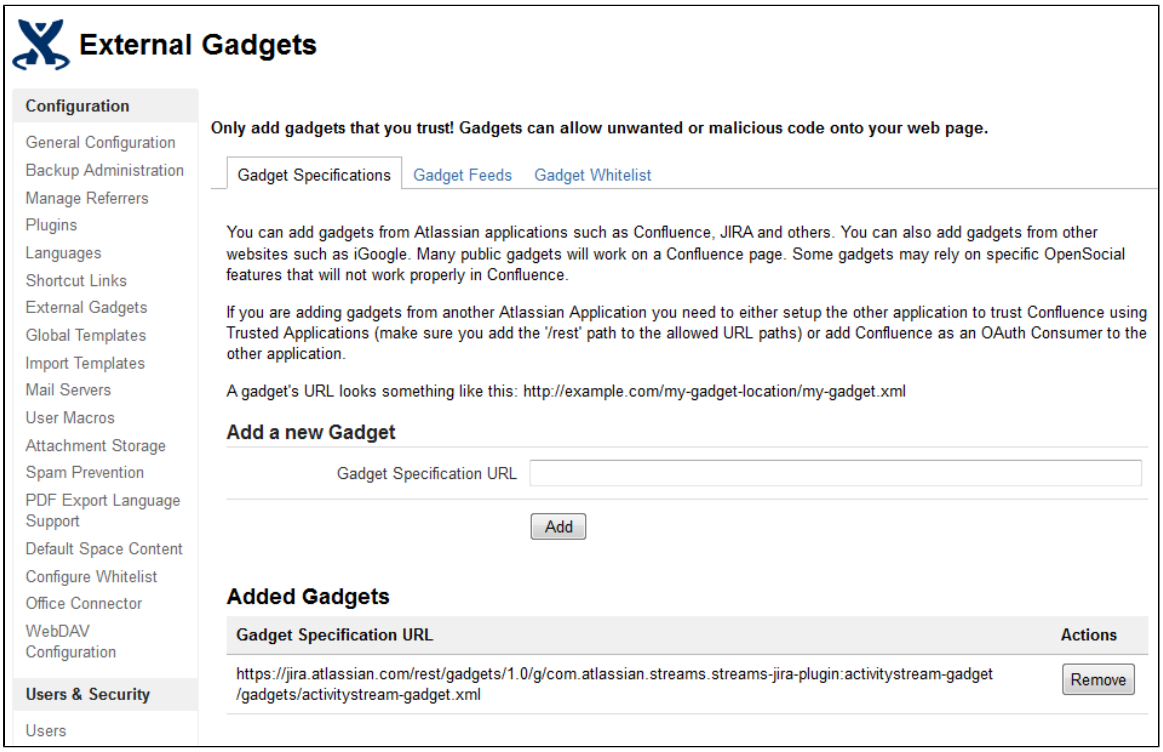
Registering the gadget for use in Confluence

Now that you have the gadget's URL, you can register it in Confluence, so that people can add it to their pages.

To register the gadget in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Click **External Gadgets** under 'Configuration' in the left panel. The 'External Gadgets' page is displayed.
3. In the 'Add a new Gadget' section, paste your gadget's URL into the **Gadget Specification URL** field.
4. Click **Add**. Your gadget will be shown in the list of registered gadgets below and it will also become available in the macro browser.

Screenshot 2: Registering external gadgets one by one



Removing access to external gadgets

To remove a single gadget from Confluence, click the **Remove** button next to the gadget URL.

If you have subscribed to an application's gadgets, you will need to remove the entire subscription. You cannot unregister a single gadget. Click the **Remove** button next to the gadget feed URL.

The gadget(s) will no longer be available in the macro browser, and people will not be able to add them using the Gadget macro. Any pages that already use the gadget will show a broken gadget link.

Configuring a URL Whitelist for Gadgets

For security reasons, you may wish to limit the URLs from which users can get content that is displayed on your Confluence site, such as the content displayed in a gadget. A whitelist is a list of URLs whose content you wish to make available to users of your site.

Adding whitelist URLs for external gadgets

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By default, Confluence will block a gadget's access to third-party data sources. When you are using a gadget that draws content from a third-party data source, you will need to add the URL of that data source to the gadget whitelist.

To add a URL to the whitelist for gadgets:

1. Choose **Browse** > **Confluence Admin**.
2. Click **External Gadgets** in the left-hand panel.
3. Click the **Gadget Whitelist** tab.
4. Enter a URL for the **Host to Whitelist**. For example, `http://jira.atlassian.com`. You can also enter a URL pattern, as described below.
5. Click **Add**.

On this page:

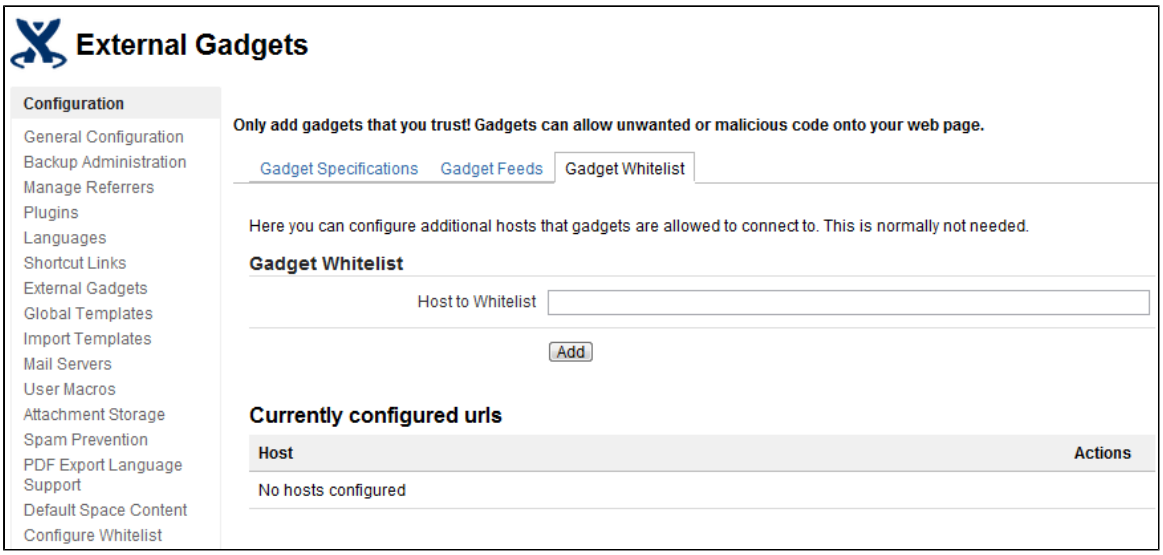
- Adding whitelist URLs for external gadgets
- Rules for URL pattern-matching
- Notes

Related pages:

- Registering External Gadgets
- Configuring a URL Whitelist for Macros
- Confluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Screenshot: Configuring a URL whitelist for external gadgets



Rules for URL pattern-matching

Enter one URL or URL pattern per line. You can enter a full URL or use pattern-matching as described below:

- If the rule starts with an equals sign (=), only the exact URL following the '=' will be allowed.
- If the rule starts with a slash (/) then the whole rule will be treated as a regular expression.
- Otherwise, any asterisk (*) will be treated as a wildcard to match one or more characters.

Notes

- URLs for which Application Links are configured are automatically whitelisted, so you do not need to add

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them to this list.
- When a gadget or subscription is removed from your site, the whitelist entry is **not** automatically removed.

Confluence Data Model

On this page:

- General Database Diagram
- Authentication
  - Atlassian-user
  - OpenSymphony
- Content
- Clustering
  - System information
  - Spaces
- Appearance
- Miscellaneous

> The Hibernate mapping files are the authoritative reference. These are the *.hbm.xml files which have been bundled into the main Confluence .jar file in recent releases.

This document is little more than the Confluence schema with added comments, but the priority was placed on making the information available.

General Database Diagram

Authentication

Atlassian-user

This is the "new" authentication system, which is more flexible and extensible than `OpenSymphony`.

```
Table "groups"
  Column   |          Type          | Modifiers
-----------+------------------------+-----------
 id        | bigint                 | not null
 groupname | character varying(255) | not null
Indexes:
    "groups_pkey" PRIMARY KEY, btree (id)
```

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```
Table "users"
  Column  |            Type             | Modifiers
----------+-----------------------------+-----------
 id       | bigint                      | not null
 name     | character varying(255)      | not null
 password | character varying(255)      |
 email    | character varying(255)      |
 created  | timestamp without time zone |
 fullname | character varying(255)      |
Indexes:
    "users_pkey" PRIMARY KEY, btree (id)
    "users_name_key" UNIQUE, btree (name)
```

`local_members`: establishes many-to-many association between users and groups.

```
Table "local_members"
 Column  |  Type  | Modifiers
---------+--------+-----------
 userid  | bigint | not null
 groupid | bigint | not null
Indexes:
    "local_members_pkey" PRIMARY KEY, btree (groupid, userid)
Foreign-key constraints:
    "fk6b8fb445117d5fda" FOREIGN KEY (groupid) REFERENCES groups(id)
    "fk6b8fb445ce2b3226" FOREIGN KEY (userid) REFERENCES users(id)
```

`external_entities`: Maps users from LDAP (or any other external authentication system) to IDs in Confluence DB

```
Table "external_entities"
 Column |          Type          | Modifiers
--------+------------------------+-----------
 id     | bigint                 | not null
 name   | character varying(255) |
 type   | character varying(255) | not null
Indexes:
    "external_entities_pkey" PRIMARY KEY, btree (id)
```

`external_members`: associates LDAP (or other external) users with local groups.

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```
Table "external_members"
   Column    |  Type  | Modifiers
-------------+--------+-----------
 extentityid | bigint | not null
 groupid     | bigint | not null
Indexes:
    "external_members_pkey" PRIMARY KEY, btree (groupid, extentityid)
Foreign-key constraints:
    "fkd8c8d8a5117d5fda" FOREIGN KEY (groupid) REFERENCES groups(id)
    "fkd8c8d8a5f25e5d5f" FOREIGN KEY (extentityid) REFERENCES
external_entities(id)
```

OpenSymphony

The "old" authentication system, which was the default prior to 2.7.

```
Table "os_group"
  Column   |          Type          | Modifiers
-----------+------------------------+-----------
 id        | bigint                 | not null
 groupname | character varying(255) | not null
Indexes:
    "os_group_pkey" PRIMARY KEY, btree (id)
    "os_group_groupname_key" UNIQUE, btree (groupname)
```

```
Table "os_user"
  Column  |          Type          | Modifiers
----------+------------------------+-----------
 id       | bigint                 | not null
 username | character varying(255) | not null
 passwd   | character varying(255) |
Indexes:
    "os_user_pkey" PRIMARY KEY, btree (id)
    "os_user_username_key" UNIQUE, btree (username)
```

```
Table "os_user_group"
  Column  |  Type  | Modifiers
----------+--------+-----------
 group_id | bigint | not null
 user_id  | bigint | not null
Indexes:
    "os_user_group_pkey" PRIMARY KEY, btree (user_id, group_id)
Foreign-key constraints:
    "fk932472461e2e76db" FOREIGN KEY (group_id) REFERENCES os_group(id)
    "fk93247246f73aee0f" FOREIGN KEY (user_id) REFERENCES os_user(id)
```

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Content

The actual information that users are storing and sharing.

`attachmentdata`: stores the binary data for attached files.
Only used when Confluence is configured to store attachments in the database; otherwise, attachments are stored in the local filesystem.

```
Table "attachmentdata"
      Column      |  Type   | Modifiers
------------------+---------+-----------
 attachmentdataid | bigint  | not null
 attversion       | integer | not null
 data             | bytea   |
 attachmentid     | bigint  |
Indexes:
    "attachmentdata_pkey" PRIMARY KEY, btree (attachmentdataid)
    "attch_data_idx" btree (attachmentid)
Foreign-key constraints:
    "fk9dc3e34d34a4917e" FOREIGN KEY (attachmentid) REFERENCES
attachments(attachmentid)
```

`attachments`: metadata for attachments.

```
Table "attachments"
       Column       |            Type             | Modifiers
--------------------+-----------------------------+-----------
 attachmentid       | bigint                      | not null
 title              | character varying(255)      | not null
 contenttype        | character varying(255)      | not null
 pageid             | bigint                      | not null
 creator            | character varying(255)      |
 creationdate       | timestamp without time zone |
 lastmodifier       | character varying(255)      |
 lastmoddate        | timestamp without time zone |
 filesize           | bigint                      |
 attachment_comment | character varying(255)      |
 attversion         | integer                     |
 prevver            | bigint                      |
Indexes:
    "attachments_pkey" PRIMARY KEY, btree (attachmentid)
    "att_pageid_idx" btree (pageid)
    "att_prevver_idx" btree (prevver)
Foreign-key constraints:
    "fk54475f9017d4a070" FOREIGN KEY (prevver) REFERENCES
attachments(attachmentid)
    "fk54475f908c38fbea" FOREIGN KEY (pageid) REFERENCES
content(contentid)
```

`bodycontent`: stores the actual content of Confluence pages. No versioning information or other metadata is stored here, though; that's all in the `content` table.

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```
Table "bodycontent"
    Column     |  Type  | Modifiers
---------------+--------+-----------
 bodycontentid | bigint | not null
 body          | text   |
 contentid     | bigint |
Indexes:
    "bodycontent_pkey" PRIMARY KEY, btree (bodycontentid)
    "body_content_idx" btree (contentid)
Foreign-key constraints:
    "fka898d4778dd41734" FOREIGN KEY (contentid) REFERENCES
content(contentid)
```

`content`: a persistence table for the ContentEntityObject class of objects. The subclass is indicated by the `contenttype` column.

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```
Table "content"
      Column      |            Type             | Modifiers
------------------+-----------------------------+-----------
 contentid        | bigint                      | not null
 contenttype      | character varying(255)      | not null
 title            | character varying(255)      |
 version          | integer                     |
 creator          | character varying(255)      |
 creationdate     | timestamp without time zone |
 lastmodifier     | character varying(255)      |
 lastmoddate      | timestamp without time zone |
 versioncomment   | text                        |
 prevver          | bigint                      |
 content_status   | character varying(255)      |
 spaceid          | bigint                      |
 parentid         | bigint                      |
 messageid        | character varying(255)      |
 draftpageid      | character varying(255)      |
 draftspacekey    | character varying(255)      |
 drafttype        | character varying(255)      |
 draftpageversion | integer                     |
 pageid           | bigint                      |
 parentcommentid  | bigint                      |
 username         | character varying(255)      |
Indexes:
    "content_pkey" PRIMARY KEY, btree (contentid)
    "c_draftpageid_idx" btree (draftpageid)
    "c_draftspacekey_idx" btree (draftspacekey)
    "c_drafttype_idx" btree (drafttype)
    "c_messageid_idx" btree (messageid)
    "c_parentcommid_idx" btree (parentcommentid)
    "c_parentid_idx" btree (parentid)
    "c_prevver_idx" btree (prevver)
    "c_spaceid_idx" btree (spaceid)
    "c_title_idx" btree (title)
    "c_username_idx" btree (username)
Foreign-key constraints:
    "fk6382c05917d4a070" FOREIGN KEY (prevver) REFERENCES
content(contentid)
    "fk6382c05974b18345" FOREIGN KEY (parentid) REFERENCES
content(contentid)
    "fk6382c0598c38fbea" FOREIGN KEY (pageid) REFERENCES
content(contentid)
    "fk6382c059b2dc6081" FOREIGN KEY (spaceid) REFERENCES
spaces(spaceid)
    "fk6382c059b97e9230" FOREIGN KEY (parentcommentid) REFERENCES
content(contentid)
```

`content_label`: Arbitrary text labels for content.

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```
Table "content_label"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 id           | bigint                      | not null
 labelid      | bigint                      | not null
 contentid    | bigint                      | not null
 spacekey     | character varying(255)      |
 owner        | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmoddate  | timestamp without time zone |
Indexes:
    "content_label_pkey" PRIMARY KEY, btree (id)
    "cl_contentid_idx" btree (contentid)
    "cl_labelid_idx" btree (labelid)
    "cl_lastmoddate_idx" btree (lastmoddate)
    "cl_spacekey_idx" btree (spacekey)
Foreign-key constraints:
    "fkf0e7436e27072aef" FOREIGN KEY (labelid) REFERENCES label(labelid)
    "fkf0e7436e8dd41734" FOREIGN KEY (contentid) REFERENCES
content(contentid)
```

`label`: the other half of the `content_label` system.

```
Table "label"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 labelid      | bigint                      | not null
 name         | character varying(255)      |
 owner        | character varying(255)      |
 namespace    | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmoddate  | timestamp without time zone |
Indexes:
    "label_pkey" PRIMARY KEY, btree (labelid)
    "l_name_idx" btree (name)
    "l_namespace_idx" btree (namespace)
    "l_owner_idx" btree ("owner")
```

`content_perm`: content-level permissions objects.

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```
Table "content_perm"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 id           | bigint                      | not null
 cp_type      | character varying(10)       | not null
 username     | character varying(255)      |
 groupname    | character varying(255)      |
 cps_id       | bigint                      |
 creator      | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmodifier | character varying(255)      |
 lastmoddate  | timestamp without time zone |
Indexes:
    "content_perm_pkey" PRIMARY KEY, btree (id)
    "cp_gn_idx" btree (groupname)
    "cp_os_idx" btree (cps_id)
    "cp_un_idx" btree (username)
Foreign-key constraints:
    "fkbd74b31676e33274" FOREIGN KEY (cps_id) REFERENCES
content_perm_set(id)
```

`content_perm_set`: one-to-many mapping for content items and their permissions, with added metadata.

```
Table "content_perm_set"
     Column     |            Type             | Modifiers
----------------+-----------------------------+-----------
 id             | bigint                      | not null
 cont_perm_type | character varying(10)       | not null
 content_id     | bigint                      |
 creationdate   | timestamp without time zone |
 lastmoddate    | timestamp without time zone |
Indexes:
    "content_perm_set_pkey" PRIMARY KEY, btree (id)
    "cps_content_idx" btree (content_id)
Foreign-key constraints:
    "fkbf45a7992caf22c1" FOREIGN KEY (content_id) REFERENCES
content(contentid)
```

Clustering

`clustersafety`: normally, this table only contains one row. The value of the `safetynumber` is what Confluence uses to find out whether another instance is sharing its database without being part of the cluster.

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```
Table "clustersafety"
     Column      |  Type   | Modifiers
-----------------+---------+-----------
 clustersafetyid | bigint  | not null
 safetynumber    | integer |
Indexes:
    "clustersafety_pkey" PRIMARY KEY, btree (clustersafetyid)
```

System information

`confversion` used by the upgrade system to determine what to expect from the database, so as to negotiate upgrades.

```
Table "confversion"
    Column     |            Type             | Modifiers
---------------+-----------------------------+-----------
 confversionid | bigint                      | not null
 buildnumber   | integer                     | not null
 installdate   | timestamp without time zone |
 versiontag    | character varying(255)      |
 creationdate  | timestamp without time zone |
 lastmoddate   | timestamp without time zone |
Indexes:
    "confversion_pkey" PRIMARY KEY, btree (confversionid)
    "confversion_buildnumber_key" UNIQUE, btree (buildnumber)
```

`plugindata`: records which plugins have been installed, and when.
`data` is a blob of the actual plugin .jar file. This is principally cluster-related.

```
Table "plugindata"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 plugindataid | bigint                      | not null
 pluginkey    | character varying(255)      | not null
 filename     | character varying(255)      | not null
 lastmoddate  | timestamp without time zone |
 data         | bytea                       |
Indexes:
    "plugindata_pkey" PRIMARY KEY, btree (plugindataid)
    "plugindata_filename_key" UNIQUE, btree (filename)
    "plugindata_pluginkey_key" UNIQUE, btree (pluginkey)
```

Spaces

`spacegroups`: this table is only used by the hosted environment.

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```
Table "spacegroups"
     Column     |            Type             | Modifiers
----------------+-----------------------------+-----------
 spacegroupid   | bigint                      | not null
 spacegroupname | character varying(255)      |
 spacegroupkey  | character varying(255)      | not null
 licensekey     | text                        |
 creator        | character varying(255)      |
 creationdate   | timestamp without time zone |
 lastmodifier   | character varying(255)      |
 lastmoddate    | timestamp without time zone |
Indexes:
    "spacegroups_pkey" PRIMARY KEY, btree (spacegroupid)
    "spacegroups_spacegroupkey_key" UNIQUE, btree (spacegroupkey)
```

```
Table "spacepermissions"
    Column     |            Type             | Modifiers
---------------+-----------------------------+-----------
 permid        | bigint                      | not null
 spaceid       | bigint                      |
 permtype      | character varying(255)      | not null
 permgroupname | character varying(255)      |
 permusername  | character varying(255)      |
 creator       | character varying(255)      |
 creationdate  | timestamp without time zone |
 lastmodifier  | character varying(255)      |
 lastmoddate   | timestamp without time zone |
Indexes:
    "spacepermissions_pkey" PRIMARY KEY, btree (permid)
    "sp_permtype_idx" btree (permtype)
    "sp_pgname_idx" btree (permgroupname)
    "sp_puname_idx" btree (permusername)
    "sp_spaceid_idx" btree (spaceid)
Foreign-key constraints:
    "fkd33f23beb2dc6081" FOREIGN KEY (spaceid) REFERENCES
spaces(spaceid)
```

`spaces`: information about the spaces themselves: key, human-friendly name and numeric ID.

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```
Table "spaces"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 spaceid      | bigint                      | not null
 spacename    | character varying(255)      |
 spacekey     | character varying(255)      | not null
 spacedescid  | bigint                      |
 homepage     | bigint                      |
 creator      | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmodifier | character varying(255)      |
 lastmoddate  | timestamp without time zone |
 spacetype    | character varying(255)      |
 spacegroupid | bigint                      |
Indexes:
    "spaces_pkey" PRIMARY KEY, btree (spaceid)
    "spaces_spacekey_key" UNIQUE, btree (spacekey)
    "s_homepage_idx" btree (homepage)
    "s_spacedescid_idx" btree (spacedescid)
    "s_spacegroupid_idx" btree (spacegroupid)
Foreign-key constraints:
    "fk9228242d11b7bfee" FOREIGN KEY (homepage) REFERENCES
content(contentid)
    "fk9228242d16994414" FOREIGN KEY (spacegroupid) REFERENCES
spacegroups(spacegroupid)
    "fk9228242d2c72d3d2" FOREIGN KEY (spacedescid) REFERENCES
content(contentid)
```

Appearance

`decorator`: storage of custom display templates, for customising layouts.

```
Table "decorator"
    Column     |            Type             | Modifiers
---------------+-----------------------------+-----------
 decoratorid   | bigint                      | not null
 spacekey      | character varying(255)      |
 decoratorname | character varying(255)      |
 body          | text                        |
 lastmoddate   | timestamp without time zone |
Indexes:
    "decorator_pkey" PRIMARY KEY, btree (decoratorid)
    "dec_key_idx" btree (spacekey)
    "dec_name_idx" btree (decoratorname)
```

Miscellaneous

`os_propertyentry`: for arbitrary association of entities and properties.

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```
Table "os_propertyentry"
   Column    |            Type             | Modifiers
-------------+-----------------------------+-----------
 entity_name | character varying(125)      | not null
 entity_id   | bigint                      | not null
 entity_key  | character varying(200)      | not null
 key_type    | integer                     |
 boolean_val | boolean                     |
 double_val  | double precision            |
 string_val  | character varying(255)      |
 text_val    | text                        |
 long_val    | bigint                      |
 int_val     | integer                     |
 date_val    | timestamp without time zone |
Indexes:
    "os_propertyentry_pkey" PRIMARY KEY, btree (entity_name, entity_id,
entity_key)
```

`bandana`: a catch-all persistence layer. It contains things like user settings and space- and global-level configuration data, and is used as storage by plugins such as the Dynamic Task List plugin. Essentially, for storing arbitrary data that doesn't fit anywhere else.

```
Table "bandana"
     Column     |          Type          | Modifiers
----------------+------------------------+-----------
 bandanaid      | bigint                 | not null
 bandanacontext | character varying(255) |
 bandanakey     | character varying(100) |
 bandanavalue   | text                   |
Indexes:
    "bandana_pkey" PRIMARY KEY, btree (bandanaid)
    "band_context_idx" btree (bandanacontext)
    "band_key_idx" btree (bandanakey)
```

`extrnlnks`: storage of referral links.

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```
Table "extrnlnks"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 linkid       | bigint                      | not null
 contenttype  | character varying(255)      | not null
 viewcount    | integer                     | not null
 url          | character varying(255)      | not null
 contentid    | bigint                      | not null
 creator      | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmodifier | character varying(255)      |
 lastmoddate  | timestamp without time zone |
Indexes:
    "extrnlnks_pkey" PRIMARY KEY, btree (linkid)
    "el_contentid_idx" btree (contentid)
Foreign-key constraints:
    "fk97c10fe78dd41734" FOREIGN KEY (contentid) REFERENCES
content(contentid)
```

`hibernate_unique_key`: used by the high/low ID generator - the subsystem which generates our primary keys.
Mess with this at the cost of being able to create objects.

```
Table "hibernate_unique_key"
 Column  |  Type   | Modifiers
---------+---------+-----------
 next_hi | integer |
```

`indexqueueentries`: arbitrates full-content indexing across the system.
This table generally contains the last 12 hours or so of updates, to allow re-syncing of cluster nodes after restarts.

```
Table "indexqueueentries"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 entryid      | bigint                      | not null
 creationdate | timestamp without time zone |
 type         | integer                     |
 handle       | character varying(255)      |
Indexes:
    "indexqueueentries_pkey" PRIMARY KEY, btree (entryid)
```

`keystore`: used by the trusted apps framework to store the server's private key, and other servers' public keys.

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```
Table "keystore"
  Column   |          Type          | Modifiers
-----------+------------------------+-----------
 keyid     | bigint                 | not null
 alias     | character varying(255) | not null
 type      | character varying(32)  | not null
 algorithm | character varying(32)  | not null
 keyspec   | text                   | not null
Indexes:
    "keystore_pkey" PRIMARY KEY, btree (keyid)
```

`links`: tracks links within the server (i.e. across and within spaces).

```
Table "links"
    Column     |            Type             | Modifiers
---------------+-----------------------------+-----------
 linkid        | bigint                      | not null
 destpagetitle | character varying(255)      |
 destspacekey  | character varying(255)      | not null
 contentid     | bigint                      | not null
 creator       | character varying(255)      |
 creationdate  | timestamp without time zone |
 lastmodifier  | character varying(255)      |
 lastmoddate   | timestamp without time zone |
Indexes:
    "links_pkey" PRIMARY KEY, btree (linkid)
    "l_contentid_idx" btree (contentid)
    "l_destspacekey_idx" btree (destspacekey)
Foreign-key constraints:
    "fk45157998dd41734" FOREIGN KEY (contentid) REFERENCES
content(contentid)
```

`notifications`: storage of page- and space-level watches.

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```
Table "notifications"
     Column     |            Type             | Modifiers
----------------+-----------------------------+-----------
 notificationid | bigint                      | not null
 pageid         | bigint                      |
 spaceid        | bigint                      |
 username       | character varying(255)      | not null
 creator        | character varying(255)      |
 creationdate   | timestamp without time zone |
 lastmodifier   | character varying(255)      |
 lastmoddate    | timestamp without time zone |
Indexes:
    "notifications_pkey" PRIMARY KEY, btree (notificationid)
    "n_pageid_idx" btree (pageid)
    "n_spaceid_idx" btree (spaceid)
Foreign-key constraints:
    "fk594acc88c38fbea" FOREIGN KEY (pageid) REFERENCES
content(contentid)
    "fk594acc8b2dc6081" FOREIGN KEY (spaceid) REFERENCES spaces(spaceid)
```

`pagetemplates`: acts as the back-end of the templates feature.

```
Table "pagetemplates"
    Column    |            Type             | Modifiers
--------------+-----------------------------+-----------
 templateid   | bigint                      | not null
 templatename | character varying(255)      | not null
 templatedesc | character varying(255)      |
 labels       | character varying(255)      |
 content      | text                        |
 spaceid      | bigint                      |
 prevver      | bigint                      |
 version      | integer                     | not null
 creator      | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmodifier | character varying(255)      |
 lastmoddate  | timestamp without time zone |
Indexes:
    "pagetemplates_pkey" PRIMARY KEY, btree (templateid)
    "pt_prevver_idx" btree (prevver)
    "pt_spaceid_idx" btree (spaceid)
Foreign-key constraints:
    "fkbc7ce96a17d4a070" FOREIGN KEY (prevver) REFERENCES
pagetemplates(templateid)
    "fkbc7ce96ab2dc6081" FOREIGN KEY (spaceid) REFERENCES
spaces(spaceid)
```

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```
Table "trackbacklinks"
    Column     |            Type             | Modifiers
--------------+-----------------------------+-----------
 linkid       | bigint                      | not null
 contenttype  | character varying(255)      | not null
 viewcount    | integer                     | not null
 url          | character varying(255)      | not null
 title        | character varying(255)      |
 blogname     | character varying(255)      |
 excerpt      | character varying(255)      |
 contentid    | bigint                      | not null
 creator      | character varying(255)      |
 creationdate | timestamp without time zone |
 lastmodifier | character varying(255)      |
 lastmoddate  | timestamp without time zone |
Indexes:
    "trackbacklinks_pkey" PRIMARY KEY, btree (linkid)
    "tbl_contentid_idx" btree (contentid)
Foreign-key constraints:
    "fkf6977a478dd41734" FOREIGN KEY (contentid) REFERENCES
content(contentid)
```

`confancestors`: used to speed up permissions checks, by allowing quick lookup of all a page's ancestors.

```
Table "confancestors"
      Column      |  Type   | Modifiers
------------------+---------+-----------
 descendentid     | bigint  | not null
 ancestorid       | bigint  | not null
 ancestorposition | integer | not null
Indexes:
    "confancestors_pkey" PRIMARY KEY, btree (descendentid,
ancestorposition)
Foreign-key constraints:
    "fk9494e23c37e35a2e" FOREIGN KEY (ancestorid) REFERENCES
content(contentid)
    "fk9494e23cc45e94dc" FOREIGN KEY (descendentid) REFERENCES
content(contentid)
```

Confluence Clustering Overview

It is possible to run Confluence in a clustered environment instead of on a single server. This means that you can run multiple copies of Confluence in a cluster, so that clients (such as a browser) can connect to any copy and see the same information.

Consider your options carefully before deciding on a clustered installation

While we have tried to make clustering Confluence as easy and administrator-friendly as possible, it is a major architectural change and requires extra planning for deployment and upgrades. Please consider the information on the Cluster Checklist and then consult Atlassian support before making your final decision.

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This page gives an overview and links to further pages with information on installing, configuring and administering a Confluence cluster.

> *The information on this page does not apply to Confluence OnDemand.*

Before Deciding to Run a Confluence Cluster

1. Read and consider the details on the Cluster Checklist.
2. Consider the difference between clustering for scalability and clustering for high availability (HA).
3. Contact Atlassian support for further information and advice.

Technical Overview

> **Confluence on Virtualised Environments**
>
> Atlassian officially supports non-clustered installations of Confluence 3.0 and later on VMware. Although possible, we do not recommend (nor support) running versions of Confluence prior to 3.0 on VMware, since Confluence 3.0 resolved many performance issues that were present in earlier versions. Be aware that we also do not support clustered installations of Confluence on VMware. Please comment or vote on the feature request at CONF-19559.

Read a technical overview of clustering in Confluence.

Server and Network Requirements

- Server hardware requirements
- Technical overview of Confluence clustering
- Diagram of recommended network topology

Installation and Upgrading

There are two methods of installing Confluence in a cluster, depending on whether you have existing data:

- Fresh installation
- Existing data

If you are upgrading an existing Confluence cluster to a new version of Confluence, refer to the cluster upgrade guide.

Configuration and Administration

- Cluster Administration page in the **Administration Console**
- Changing datasources in clusters

Troubleshooting

- Cluster troubleshooting

RELATED TOPICS

Operating Large or Mission-Critical Confluence Installations
Performance Tuning
Requesting Performance Support
Confluence Administrator's Guide
Configuring Confluence

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Technical Overview of Clustering in Confluence

Overview of clustering documentation

Refer to the overview of Confluence clustering in the *Administrators' Guide*.

The information on this page does not apply to Confluence OnDemand.

Introduction

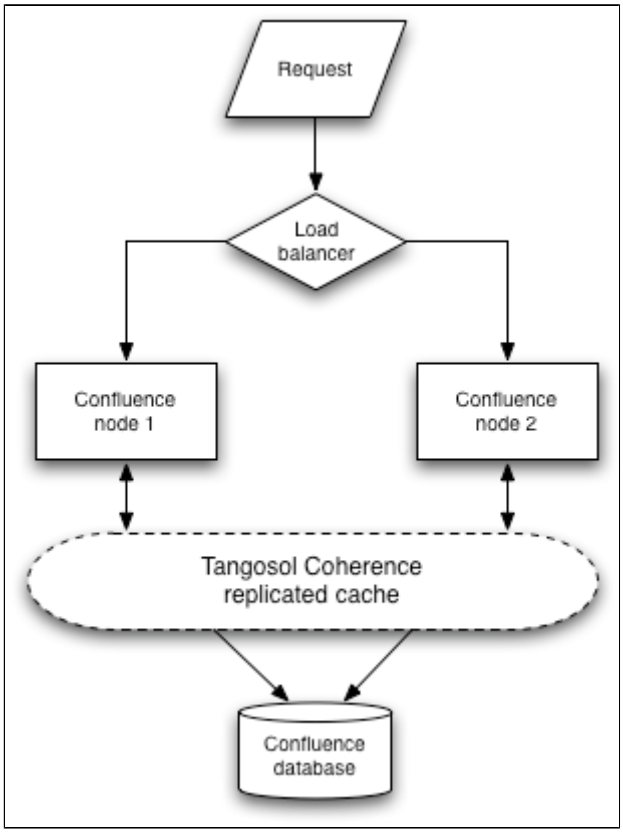
From version 2.3, Confluence has had the ability to configure and run multiple copies of itself in a cluster, so that clients can connect to any copy and see the same information. In effect, a Confluence cluster behaves as a single, powerful Confluence installation. While we have tried to make clustering Confluence as easy and administrator-friendly as possible, it is a major architectural change from earlier versions (or non-clustered installations) and consequently, requires extra planning for deployment and upgrades.

This document will give a technical overview of clustering in Confluence, primarily for those users and developers who will be installing and configuring Confluence in a cluster. A separate overview is available for Confluence plugin developers.

Cluster topology

A simple description of the cluster topology for Confluence would be **multiple applications, shared data source**. A cluster of Confluence consists of:

- multiple homogeneous installations of Confluence (called *nodes*below)
  - a Confluence home directory for each installation.
- a distributed Oracle Coherence cache (formerly known as Tangosol Coherence), which all nodes use via a multicast group - see networking summary below
- a single database, which all nodes connect to



Confluence cluster topology (simplified)

The user is responsible for configuring an appropriate HTTP load balancer in front of the clustered installations. Typically this means using mod_jk or another application server load-balancing technology. The load balancer must be configured to support **session affinity**.

Communication between clustered nodes is minimised by using a distributed cache which propagates updates to all other nodes automatically. Where necessary, Coherence provides a locking mechanism for synchronising jobs and a RMI interface for more complex communication.

LAN Clustering Only

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Atlassian **only supports clustering over a local area network**. While it is theoretically possible to configure Confluence to cluster across a WAN, the latency involved is likely to kill performance of the cluster. We can't stop you trying, of course, but you're going to have to work out how to configure Coherence yourself, and we're not going to support the resulting mess.

Homogeneous Confluence installations

All the Confluence installations must be running exactly the same application, down to the lowest level. Items that must be the same include:

- Confluence version
- Application server version
- JDK version
- Libraries and plugins in the Confluence classpath, WEB-INF/lib
- Libraries in the application server classpath

The installation section has more information how to ensure homogeneous node installations.

Creating a Confluence cluster

When installing Confluence in a clustered setup, you will be responsible for configuring your web server and load balancer to distribute traffic between each node. No additional software is required as Coherence is bundled with Confluence.

Here is an overview of the process:

1. Obtain a clustered licence key from Atlassian for each node
2. Upgrade a single node to the clustered licence
3. Start the cluster from that node's administration menu, specifying a name and optionally a preferred network interface
4. Restart the single node and test it
5. Copy the Confluence application and Confluence home directory to the second node
6. Bring up the second node and it will automatically join the cluster.

Copying the Confluence application and home directory helps ensure that the installations are homogeneous.

An alternative to this method is to copy the Confluence web application, but not the Confluence home directory. In this case, the installation wizard will require your cluster name to connect to the other nodes, and it will automatically configure itself. You will need to rebuild the index manually after this installation, however.

There is now full documentation for a Confluence Cluster Installation.

Upgrade process

Another consequence of the homogeneous requirement is that upgrades must be done by following a strict process.

1. All cluster nodes are brought down
2. Upgrade a single node to the latest Confluence version
3. Start the single node so it can upgrade the database
4. Upgrade subsequent nodes and start them one-by-one.

This is the only safe method of upgrading a Confluence cluster.

Single database

The Confluence database in a cluster is shared by all nodes. This means that the database must be able to scale to service *all* the Confluence nodes, which will probably mean implementing some kind of database cluster and JDBC-level load balancing. We can not offer support with scaling or tuning your database, you will need to

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talk to your DBA or database vendor.

For obvious reasons, you must have an external database to run Massive - you can not cluster Confluence when using the embedded HSQL database.

The most important requirement for the cluster database is that it have sufficient connections available to support the expected number of application nodes. For example, if each Confluence instance has a connection pool of 20 connections and you expect to run a cluster with four nodes, your database server must allow at least 80 connections to the Confluence database. In practice, you may require more than the minimum for debugging or administrative purposes.

In a cluster, attachments must be stored in the database. Configuring a cluster in an existing installation will automatically migrate your attachments to the database. Non-clustered installations still have the option of using the Confluence home directory for storing attachments.

While attachments are stored in the database, they are temporarily written to the cluster node's local filesystem, designated `<confluence-home>/temp` folder, when being streamed to users (so Confluence doesn't have to hold open database connections unnecessarily). For this reason, Confluence will still need enough temporary disk space to hold any attachments currently in transit.

Distributed cache

In a normal configuration, Confluence uses many caches to reduce the number of database queries required for common operations. Viewing a page might require dozens of permissions checks, and it would be very slow if Confluence queried the database for this information with every page view. However, caches must be carefully maintained so they are consistent with the application data. If the page permissions change, the old invalid data needs to be removed from the cache so it can be replaced with a fresh correct copy.

To preserve consistent caches across a cluster, Confluence uses a distributed cache called Oracle Coherence, which manages replicating cache updates transparently across all nodes. The network requirements of the distributed cache are quite simple, but must be preserved if the cluster is to work properly.

To discover other nodes in the cluster, Confluence broadcasts a join request on a multicast network address. Confluence must be able to open a UDP port on this multicast address, or it will not be able to find the other cluster nodes.

Once the nodes are discovered, each responds with a unicast (normal) IP address and port where it can be contacted for cache updates. Confluence must be able to open a UDP port for regular communication with the other nodes.

Because the Coherence network requirements are different to those required by the Confluence database connection, the situation can arise where Confluence can use the database but not talk to the other nodes in the cluster via Coherence. When Confluence detects this, it will shut itself down in a cluster panic.

For more details on the network configuration of the distributed cache, see the networking summary

Home directory

Confluence's home directory has a much-reduced role in a cluster. Because the application data must be shared between all nodes for consistency, the only information stored in the Confluence home directory is either node-specific, or needed to start Confluence. This includes information related to:

- database connection
- license
- cluster connection

The only application data stored in the Confluence home directory is the **Lucene search index**. Confluence synchronises this data itself by keeping track of indexing tasks in the database.

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This is also why we recommend copying the Confluence home directory from the first node when setting up subsequent nodes. If you did not copy the Confluence home directory, you would need to rebuild the search index from scratch on the subsequent nodes after installation.

Event handling

Broadcasting events to all nodes in a cluster is supported in Confluence, but not recommended. The cluster topology uses a shared data store so that application state does not need to be synchronised by events.

The event broadcasting is done only for certain events, like installing a plugin. When a plugin is installed in one node, Confluence puts the plugin data in the database, and notifies the other nodes that they need to load the plugin into memory.

Indexing

Confluence maintains a copy of its Lucene search index on each node of the cluster. This index is used for many things beside full-text searches, including RSS feeds and lists of recently updated content. Indexing in a cluster works like this:

1. Node 1 gets a request to save some page update
2. After saving the page in the database, Node 1 adds a "page-updated" index entry to the queue, which is in the database
3. Periodically, each node picks up the "latest entries" from the queue, where what is latest is determined from a timestamp on a file in the Confluence home directory which indicates when the queue was last inspected. This process is called "flushing the index queue".
4. Each node independently updates its local Lucene index. The "page-updated" index entry is internally changed into a delete-document task and an add-document task to apply the changes to Lucene.
5. Each node updates the timestamp on its index-queue-timestamp file to reflect the most recent processing or "flushing" of the index queue.

Because of step #3, if the timing of the nodes is not synchronised or changes sporadically (due to a virtualisation environment, typically), index changes will not be correctly synchronised in the cluster. This is the most common cause of index sync problems in clusters.

If a node is disconnected from the cluster for a short amount of time (less than three hours), it will be able to bring its copy of the index up-to-date when it rejoins the cluster. If a node is down for a long amount of time and its lucene index has become stale as a result, you may want to avoid the expensive operation of rebuilding the index. To do that, you must copy a "live" version of the Lucene index from an active node. Simply replace the contents of the `Confluence Home]/index` directory with those from an active node before bringing the stale node back up.

Job synchronisation

For tasks such as sending the daily report emails, it is important that only one node in the cluster does this. Otherwise you would get multiple emails from Confluence every day.

Confluence uses locks in the Coherence distributed cache to ensure only one node can be running certain jobs at a time. This ensures email notifications will only be sent once.

Activity tracking

Activity tracking does not work in a cluster, and will be disabled for clustered deployments. We're working on making the activity tracker clusterable in a future release. You can follow this issue. You can try some other options for tracking usage.

Cluster panic

In some situations, there can be a network issue or firewall that prevents the distributed cache from

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communicating but still allows Confluence to update the database. This is a dangerous situation because when the caches on the detached nodes become inconsistent, users on different nodes will see different information and updates can be lost.

Confluence can detect this problem by checking a database value against a cached value, and if they differ, all the clustered nodes will be shut down with a 'Cluster panic' message. This is considered a fatal error because the consequences can cause damage to your data. For those administrators that like to live on the edge, there is a system property to prevent cluster panic and allow data corruption. For more information, see Cluster safety mechanism.

If a cluster panic does occur, you need to ensure proper network connectivity between the clustered nodes. Most likely multicast traffic is being blocked or not routed correctly. See the networking summary below.

Summary of network requirements

In addition to normal connectivity with its database, all clustered Confluence instances require access to a multicast group and the ability to open a UDP unicast port.

By default, the multicast address is automatically generated from the cluster name you provide when starting the cluster and the multicast port is fixed. During cluster setup, Confluence will prompt for the unicast IP address to use if the server has multiple network interfaces, and by default the unicast port is fixed. The cluster multicast group will be joined on the same network interface as the bound unicast IP address.

For any settings which are not configurable through the Confluence web interface, they can be configured via an XML file in the Confluence home directory for more exotic networking requirements.

Scaling Confluence On A Single Server

Since the maximum addressable memory on a 32 bit JVM is 4GB, some large servers may scale Java applications by running JVM instances concurrently. This would be implemented as separate, clustered Confluence nodes running on a single server and communicating internally. Because each JVM replicates the cache entirely, it may be useful to test a single, massive instance running a 64 bit JVM as an alternative. This configuration may result in superior performance than an internal cluster.

Geographically Distributed Clusters

Collocating nodes is strongly recommended as high latency will almost certainly degrade performance due to the overhead of cache replication. Cluster nodes will provide the best performance if servers are physically adjacent. However, as long as all nodes share a LAN, users may wish to test alternative configurations to see how performance is affected.

RELATED TOPICS

Server Hardware Requirements Guide
Overview of Confluence Clusters
Developers' Guide to Clustering

Cluster safety mechanism

Introduction

A mechanism was added in Confluence 2.3 and above to ensure database consistency when running multiple cluster nodes against the same database. This is called the *cluster safety mechanism*, and is designed to ensure that your wiki cannot become inconsistent because updates by one user are not visible to another. A failure of this mechanism is a fatal error in Confluence and is called *cluster panic*.

Because the cluster safety mechanism helps prevents data inconsistency whenever any two copies of Confluence running against the same database, it is enabled in *all* instances of Confluence, not just clusters.

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> ⚠ *The information on this page does not apply to Confluence OnDemand.*

How cluster safety works

A scheduled task, ClusterSafetyJob, runs every 30 seconds in Confluence. In a cluster, this job is run only on one of the nodes. The scheduled task operates on a *safety number* – a randomly generated number that is stored both in the database and in the distributed cache used across a cluster. It does the following:

1. **Generate** a new random number
2. **Compare the existing safety numbers**, if there is already a safety number in both the database and the cache.
3. **If the numbers differ, publish a ClusterPanicEvent**. Currently in Confluence, this causes the following to happen:
    - disable all access to the application
    - disable all scheduled tasks
    - update the database safety number to a new value, which will cause all nodes accessing the database to fail.
4. If the numbers are the same or aren't set yet, **update the safety numbers**:
    - set the safety number in the database to the new random number
    - set the safety number in the cache to the new random number.

How to fix it

See 'Database is being updated by an instance which is not part of the current cluster' Error Message

Technical details

The cluster safety number in the database is stored in the `CLUSTERSAFETY` table. This table has just one row: the current safety number.

Changing Datasources Manually in a Cluster

> ⚠ The recommended way of changing database connections is to shut down the whole cluster, install Confluence into new and empty directories and use the Setup Wizard to configure all new database connection settings.

However, if you wish to manually change your settings, you may proceed as described below.

⚠ It is **strongly recommended** that you test all of the following in a staging or test instance of Confluence before performing these steps in your production environment.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Step 1: Prepare

- Locate the `confluence-cfg.xml` file in the Confluence home directory.
- Make a backup copy of that file.
- Prepare the necessary changes to that file.

Step 2: Shut Down Confluence

You need to shut down all the nodes in the cluster, not just one.

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Step 3: Apply your Changes

Apply your configuration changes to the required node.

Step 4: Restart the Changed Node

It is crucial that you bring up the node on which you applied the changes **first**. Otherwise you will get an error message, and have to shut down all instances again.

Step 5: Restart all Other Nodes

Done.

RELATED PAGES

Overview of Confluence Clusters

Cluster Troubleshooting

Confluence on Virtualised Environments

Atlassian officially supports non-clustered installations of Confluence 3.0 and later on VMware. Although possible, we do not recommend (nor support) running versions of Confluence prior to 3.0 on VMware, since Confluence 3.0 resolved many performance issues that were present in earlier versions. Be aware that we also do not support clustered installations of Confluence on VMware. Please comment or vote on the feature request at CONF-19559.

Overview of clustering documentation

Refer to the overview of Confluence clustering.

This page covers troubleshooting for the Clustered Edition. If you're experiencing Cluster Panic messages in a Standard Edition, visit the Knowledge Base article 'Database is being updated by an instance which is not part of the current cluster' Error Message.

On this page:

- Symptoms
- Confluence cluster debugging tools
- Didn't find a solution?
- Related

The information on this page does not apply to Confluence OnDemand.

Symptoms

Below is a list of potential problems with a Confluence cluster, and their likely solutions. The solutions are listed below.

Problem	Likely solutions

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`Database is being updated by an instance which is not part of the current cluster` errors on a stand-alone	'Database is being updated by an instance which is not part of the current cluster' Error Message
`Database is being updated by an instance which is not part of the current cluster` errors on a cluster	Add multicast route, Check firewall
`Cannot assign requested address` on startup, featuring an IPv6 address	Prefer IPv4
Error in log: `The interface is not suitable for multicast communication`	Change multicast interface, Add multicast route
Multicast being sent, but not received (detectable with Multicast Test)	Check firewall, Check intermediate routers, Increase multicast TTL
Any issue not covered here	Contact support

Confluence cluster debugging tools

There is an umbrella issue opened for all cluster debugging tools here

It includes the tools listed below.

Multicast

- Which multicast address?

The multicast address and port used by Confluence can be found on the Cluster Administration page, or in `confluence.cfg.xml` in the Confluence home directory.

- Multicast address generation.

Confluence uses a hashing algorithm to take the inputted name during setup and it is then turned into a multicast address stored in the config file. Thus, once the initial setup is completed, Confluence will use the address this is the reason why user can change the address if needed, without actually changing the name. Consequently the additional nodes using the same multicast address specified in the config file are able to join the cluster.

Each node has a multicast address configured in the `confluence-cfg.xml` file

```
name="confluence.cluster.address">xxx.xx.xxx.xxx</property>
```

A warning message is displayed when an user changes the address from the one that Confluence has generated by the hashing of the name. There is no way of eliminating the message any other way other than by returning the address to the one that matches the cluster name. Purpose of the warning message is to remind the user that the address has been changed - as it is not the hashed version any longer - consequently the node can not join the cluster just by using the name. It is also necessary to provide the correct address as well.

Mapping interface to IP address.

To ensure that the interface name is mapped correctly, the following tool can be used. It shows the mapping of the interface name to the IP address.

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```
C:\>java -jar list-interfaces.jar
interfaces.size() = 4
networkInterface[0] = name:lo (MS TCP Loopback interface) index: 1
addresses:
/127.0.0.1;

networkInterface[1] = name:eth0 (VMware Virtual Ethernet Adapter for
VMnet8) index: 2 addresses:
/192.168.133.1;

networkInterface[2] = name:eth1 (VMware Virtual Ethernet Adapter for
VMnet1) index: 3 addresses:
/192.168.68.1;

networkInterface[3] = name:eth2 (Broadcom NetXtreme 57xx Gigabit
Controller - Packet Scheduler Miniport) index: 4 addresses:
/192.168.0.101;
```

Debugging tools

Listed below are some debugging tools that help determine what the status of the multicast traffic is:

Tool	Information provided
`netstat -gn`	Lists multicast groups. Does not work on Mac OS X.
`netstat -rn`	Lists system routing table.
Multicast Test	Coherence tool for testing multicast traffic from one node to another.
`tcpdump -i` *`interface`*	Captures network traffic on the given interface. Most useful on an interface that only receives cluster traffic.

Add multicast route

Multicast networking requirements vary across operating systems. Some operating systems require little configuration, while some require the multicast address to be explicitly added to a network interface before Confluence can use it.

If the Multicast Test tool shows that multicast traffic can't be sent or received correctly, adding a route for multicast traffic on the correct interface will often fix the problem. The example below is for a Ubuntu Linux system:

```
route add -net 224.0.0.0 netmask 240.0.0.0 dev eth0
```

To support multiple applications using multicast on different interfaces, you may need to specify a route specific to the Confluence multicast address.

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Check firewall

Ensure your firewall allows UDP traffic on the multicast address and port used by Confluence.

Prefer IPv4

> There's a known issue with IPv6, especially on Linux.

The fix is to add `-Djava.net.preferIPv4Stack=true` to `JAVA_OPTS`. This tells the JVM to try binding an IPv4 address first, and resort to IPv6 only if that fails.
Note: *A more radical approach is to add NETWORKING_IPV6=no to /etc/sysconfig/network, yet probably should be left for a later consideration on a production machine.*

Change multicast interface

Confluence might have selected the incorrect interface for multicast traffic, which means it cannot connect to other nodes in the cluster. To override the interface used for multicast traffic after initial setup, edit `confluence.cfg.xml` in the Confluence home directory and add a property (or change the existing one) to select your desired network interface. For example to tell Confluence to use `eth1`:

```
<property name="confluence.cluster.interface">eth1</property>
```

Increase multicast TTL

The multicast time-to-live (TTL) specifies how many *hops* a multicast packet should be allowed to travel before it is discarded by a router. It should be set to the number of routers in between your clustered nodes: 0 if both are on the same machine, 1 if on two different machines linked by a switch or cable, 2 if on two different machines with one intermediate router, and so on.

Create a file in the Confluence home directory called `tangosol-coherence-override.xml`. Add the following to it, setting the TTL value appropriately (1 is the default):

```
<?xml version='1.0'?>
<coherence>
<cluster-config>
  <multicast-listener>
    <time-to-live system-property='tangosol.coherence.ttl'>1</time-to-live>
  </multicast-listener>
</cluster-config>
</coherence>
```

Alternatively, simply start Confluence with the system property: `-Dtangosol.coherence.ttl=1`. Again, 1 is the default value, and you should change it to something appropriate to your network topology.

Check intermediate routers

Advanced switches and routers have the ability to understand multicast traffic, and route it appropriately. Unfortunately sometimes this functionality doesn't work correctly with the multicast management information (IGMP) published by the operating system running Confluence.

If multicast traffic is problematic, try disabling advanced multicast features on switches and routers in between the clustered nodes. These features can prevent multicast traffic being transmitted by certain operating systems.

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For best results, use the simplest network topology possible for the cluster traffic between the nodes. For two nodes, that means a single network cable. For larger numbers, try using a single high-quality switch.

Advanced Tangosol configuration

If the solution to your problem involves changes to the Tangosol configuration, these changes should **not** be made to the Confluence configuration in `confluence/WEB-INF/classes/`. Instead, to ensure your configuration survives upgrades, make your changes via:

- Tangosol system properties
- creating a `tangosol-coherence-override.xml` file in the Confluence home directory.

Examples of making these changes are shown in the increasing the TTL section.

Didn't find a solution?

Check Related Articles from the Confluence Knowledge Base

No content found for label(s) cluster.

Open JIRA Features and Bug Reports

JIRA Issues (50 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due
	CONF-21670	Confluence should explicitly check for other confluence instances using the same home directory	Unassigned	Don Willis [Atlassian]		Open	Unresolved	Jan 20, 2011	Jan 25, 2011	
	CONF-23223	Remove the option to store attachments on filesystem when using a cluster	Unassigned	Carlos Alberto Feijo Schedler [Atlassian]		Open	Unresolved	Sep 14, 2011	Sep 15, 2011	
	CONF-16794	Document new cluster distributions	Giles Gaskell [Atlassian]	Jeremy Largman [Atlassian]		Open	Unresolved	Sep 04, 2009	May 12, 2010	
	CONF-1	Coheren	Unassig	Matt			Unresol	Jul 01,	Apr 05,	

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	2287	ce cache fails while retrieving profile picture metadata (dashboard or view page shows UnexpectedRollbackException)	ned	Ryall [Atlassian]		Open	ved	2008	2011	
	CONF-14120	Hibernates UpdateTimestampsCache doesn't handle concurrent writes	Unassigned	Chris Kiehl [Atlassian]		Open	Unresolved	Jan 05, 2009	May 05, 2009	
	CONF-9297	Confluence should be able to automatically recover from cluster panics	Unassigned	Gary Weaver		Open	Unresolved	Aug 27, 2007	Apr 12, 2012	
	CONF-8959	Attachment migration does not happen when upgrading to a clustered license	Unassigned	Nicholas Ilacqua [Atlassian]		Open	Unresolved	Jul 19, 2007	Feb 29, 2012	
	CONF-12689	Support Confluence	Unassigned	Igor Minar		Open	Unresolved	Aug 06, 2008	Jun 24, 2012	

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		cluster upgrades without an outage								
	CONF-23033	Viewfile macro does not work in Confluence Clustered when Office Connector is configured to use Cache in Memory for temporary storage	Unassigned	Roy Hartono [Atlassian]		Open	Unresolved	Aug 09, 2011	Feb 29, 2012	
	CONF-14948	Support failover NICs for cluster configuration...	Unassigned	Tony Atkins [Atlassian]		Open	Unresolved	Mar 19, 2009	Mar 19, 2009	
	CONF-16419	Installing a font for PDF export in a cluster will not carry to cluster nodes that are down or unavailable.	Unassigned	Charles Miller [Atlassian]		Open	Unresolved	Jul 20, 2009	Aug 05, 2009	
	CONF-17089	Reindexing in cluster only runs on one node if	Unassigned	Anatoli Kazatchkov [Atlassian]		Open	Unresolved	Oct 01, 2009	May 12, 2010	

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		triggered from web UI								
	CONF-15523	Run cluster performance build on two machines	Unassigned	Matt Ryall [Atlassian]		Open	Unresolved	May 05, 2009	May 12, 2010	
	CONF-9324	Lots of ObjectDeletedException's during cluster builds	Unassigned	Matthew Jensen [Atlassian]		Open	Unresolved	Aug 28, 2007	May 12, 2010	
	CONF-25211	Plugin installation breakes clustered cache	Unassigned	Thomas Krug		Open	Unresolved	Apr 14, 2012	Apr 16, 2012	
	CONF-12345	Park issue :)	Unassigned	Dave Loeng [Atlassian]		Open	Unresolved	Jul 07, 2008	Jan 21, 2009	
	CONF-9813	Disable attachments migration to Filesystem in Cluster	Unassigned	Gurleen Anand [Atlassian]		Open	Unresolved	Oct 24, 2007	Sep 04, 2011	
	CONF-12614	Intermittent ConcurrentModificationException in cluster	Unassigned	Anatoli Kazatchkov [Atlassian]		Open	Unresolved	Jul 29, 2008	Mar 31, 2009	
	CONF-10325	Viewing the members of a group in a clustered environment	Unassigned	Partha Kamal [Atlassian]		Open	Unresolved	Dec 27, 2007	Jul 02, 2009	

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		works only on one node and not the other.								
	CONF-9594	ConditionalPropertySet's cannot be cached breaking cluster installations that delegate user management to JIRA	Unassigned	Dave Loeng [Atlassian]		Open	Unresolved	Sep 28, 2007	Jul 02, 2009	
	CONF-10868	Node that can not join cluster due to license restriction causes cluster panic	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Feb 29, 2008	Sep 03, 2008	
	CONF-9040	Authenticator (subclass of DefaultAuthenticator) can be called twice at almost exactly same time by 2 or more clustered servers	Unassigned	Gary Weaver		Open	Unresolved	Jul 30, 2007	Nov 04, 2007	
	CONF-14657	Retrieving the global	Unassigned	Chris Kiehl [Atlassia		Open	Unresolved	Feb 21, 2009	Nov 08, 2009	

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		settings in a clustered environment causes a lot of contention		n]						
	CONF-22352	Share page plugin doesn't work for Clustered instances	Unassigned	Anna Katrina Dominguez [Atlassian]		Open	Unresolved	Apr 19, 2011	Apr 27, 2012	
	CONF-9335	In cluster, allow attachments to be stored on file system in network-shared directory	Unassigned	Jeremy Largman [Atlassian]		Open	Unresolved	Aug 29, 2007	Apr 18, 2012	
	CONF-10980	Cluster debugging/troubleshooting tools	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 06, 2008	Apr 12, 2012	
	CONF-12486	ClassNotFoundException logged on cluster node startup	Unassigned	Anatoli Kazatchkov [Atlassian]		Open	Unresolved	Jul 17, 2008	Aug 25, 2009	
	CONF-20500	A cluster panic should not bring down other nodes	Unassigned	Partha Kamal [Atlassian]		Open	Unresolved	Jul 30, 2010	Apr 12, 2012	

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	CONF-13421	Layout customisations are not propagated to other cluster nodes	Unassigned	Matt Ryall [Atlassian]		Open	Unresolved	Oct 16, 2008	Dec 09, 2008	
	CONF-10323	Coherence Lock being held when it appears no thread should have the lock. Causes ConcurrentModificationException	Unassigned	Paul Curren [Atlassian]		Open	Unresolved	Dec 26, 2007	Oct 25, 2010	
	CONF-22979	Migrating to a cluster with existing data does not add cluster attributes to the confluence.cfg.xml	Unassigned	Adam Laskowski [Atlassian]		Open	Unresolved	Jul 27, 2011	Jul 28, 2011	
	CONF-10977	Generate new Multicast address from a "new" cluster name	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 06, 2008	Sep 11, 2008	
	CONF-13870	After a site Import into a cluster, admin console	Unassigned	Agnes Ro [Atlassian]		Open	Unresolved	Nov 27, 2008	Sep 04, 2011	

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		displays attachment storage as filesystem								
	CONF-9749	Coherence does not allow the disabling of all JDK shutdown hooks	Unassigned	Christopher Owen [Atlassian]		Open	Unresolved	Oct 17, 2007	Jan 29, 2008	
	CONF-11206	Confluence Clustered and JIRA trust delegation	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 25, 2008	May 12, 2010	
	CONF-17577	Cluster build passed but didn't close down Confluence	Unassigned	Brian Nguyen [Atlassian]		Open	Unresolved	Nov 10, 2009	May 12, 2010	
	CONF-17040	Cannot build milestones outside Atlassian due to coherence	Unassigned	Jonathan Gilbert [Atlassian]		Open	Unresolved	Sep 25, 2009	Dec 08, 2009	
	CONF-14338	Specify an arbitrary multicast port for a cluster	Unassigned	James Fleming [Atlassian]		Open	Unresolved	Jan 30, 2009	Jan 30, 2009	
	CONF-10979	List confluence cluster interface	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 06, 2008	Mar 06, 2008	

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	CONF-10635	Database logging of clusters afety access	Unassigned	James Fleming [Atlassian]		Open	Unresolved	Feb 03, 2008	Feb 03, 2008	
	CONF-20501	Consider upgrading coherence	Unassigned	Partha Kamal [Atlassian]		Open	Unresolved	Jul 30, 2010	Jul 30, 2010	
	CONF-10981	Check how many nodes/processes running in a cluster and their identity	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 06, 2008	Mar 06, 2008	
	CONF-13698	Changing custom html on one node of a cluster is not imideatly reflected on the other node.	Unassigned	Anatoli Kazatchkov [Atlassian]		Open	Unresolved	Nov 12, 2008	Nov 13, 2008	
	CONF-10953	Support unicast addressing in cluster when well-known-addresses WKA are defined	Unassigned	Ivan Benko [Atlassian]		Open	Unresolved	Mar 06, 2008	Aug 25, 2009	
	CONF-22466	Content Permission changes	Unassigned	Richard Atkins [Atlassian]		Open	Unresolved	May 09, 2011	May 10, 2011	

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		are propagated between nodes one at a time, should be in bulk								
	CONF-7368	Confluence Cluster setup dies horribly when DNS fails	Unassigned	Don Willis [Atlassian]		Open	Unresolved	Nov 23, 2006	Jan 19, 2009	
	CONF-9281	Plugin's I18n properties not loaded in other cluster nodes unless restarted	Unassigned	Roberto Dominguez		Open	Unresolved	Aug 26, 2007	Apr 16, 2011	
	CONF-19559	Provide support for Confluence clustered in a virtualized environment...	Unassigned	Tony Atkins [Atlassian]		Open	Unresolved	May 06, 2010	May 10, 2012	
	CONF-14088	Locking on cache keys needs to check if the lock was actually aquired	Unassigned	Chris Kiehl [Atlassian]		Open	Unresolved	Dec 30, 2008	Nov 22, 2009	
	CONF-8300	Cannot override TTL configur	Unassigned	Matthew Jensen [Atlassian]		Needs Verification	Unresolved	Apr 20, 2007	Nov 10, 2009	

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		ation through tangosol coherence properties								

Contact Atlassian support

We have dedicated staff on hand to support your installation of Confluence. Please follow the instructions for raising a support request and mention that you're having trouble setting up your Confluence cluster.

Related

Cluster Safety Mechanism

Multicast Test

This page describes the **Multicast Test**, a Coherence tool for testing multicast traffic from one node to another. You may find this useful when troubleshooting a clustered installation of Confluence.

In order to run the Multicast test, you need to the Coherence file from Oracle. You will need to sign up for a free Oracle account and sign the license agreement, before downloading the file.

The Multicast Test comes as a script called `multicast-test`, which you will find located in the `bin` folder in the above zip file.

Instructions on how to run this script file can be found in the Coherence documentation. You may like to go straight to the subheading called '**Example**' in the guide, where there is an example on how to use the `multicast-test` script.

> The Multicast Test will use the multicast address of 237.0.0.1:9000 by default. Confluence creates a unique address based on the cluster name that you enter during setup. As such, you should include the -group flag in your multicast testing to ensure your tests are broadcasting across the same address as your Confluence nodes.

> *The information on this page does not apply to Confluence OnDemand.*

RELATED TOPICS

Cluster Troubleshooting
Confluence Clustering Overview

Clustering for Scalability vs Clustering for High Availability (HA)

People occasionally enquire about setting up High-Availability (HA) Confluence clusters. Confluence's clustering is designed to solve a different problem, that of scaling under high load. This page explains the difference.

What is High Availability (HA)?

HA means that your application *will be* available, without interruption. It's a very difficult thing to achieve, and is typically what people are talking about when they refer to five-nines availability.

In the context of application clustering, it means that any given node (or combination of nodes) can be shut down, blown up, or simply disconnected from the network unexpectedly, and the rest of the cluster will continue

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operating cleanly as long as at least one node remains. It requires that nodes can be upgraded individually while the rest of the cluster operates, and that no disruption will result when a node rejoins the cluster. It typically also requires that nodes be installed in geographically separate locations.

What does Confluence's clustering do, then?

Confluence's clustering system allows a single installation to serve a much greater number of concurrent requests than a single server. This is what we refer to as 'scaling under load'.

It does provide a certain amount of resilience, as the death of one node won't bring the other(s) down. However, it requires very low network latency, which rules out geographic separation of the servers, and upgrading can only be performed while the entire cluster is shut down. This doesn't mean that Confluence's clustering is buggy or broken. It simply reflects the difference between the two design aims.

On this page:

- What is High Availability (HA)?
- What does Confluence's clustering do, then?
- So what kind of resilience can I build into a Confluence installation?
- What's the difference between load balancing and failover?
- What do you mean by 'session affinity'?
  - RELATED TOPICS

The information on this page does not apply to Confluence OnDemand.

So what kind of resilience can I build into a Confluence installation?

It's still entirely possible to build a resilient Confluence installation, using a 'cold-failover' approach in which two (or more) servers share a database and (normally) a network-mounted file system, where no more than one server is actually running at any given time.

Several different approaches are feasible, but the common elements are:

- a well-configured load balancer (session affinity is irrelevant in this case)
- a reliable monitoring system which can detect and shut down a misbehaving Confluence instance before starting the spare server
- startup scripts with added smarts to check for the presence of another running node before deciding whether to start up a server
- servers with the same view of both the database and the home directory.

It's vital to ensure that only one server is running at any one time, in this kind of setup. If a server starts while another is already running against the same database, the result will be a cluster panic that shuts down both servers.

A single database becomes the single point of failure in such a system. This can be alleviated by database clustering, or by replication from the 'active' database server to the standby server(s) if you wish to separate the failover systems while keeping database latency to a minimum.

In the same vein, the home directory can be hosted on a shared network system — SAN or NAS, preferably with its own replication/rapid recovery system — though there's a known issue to consider. Alternatively, to avoid the use of networked file systems, a utility such as `rsync` can be used to periodically bring the spare servers' home directories up to date, so long as you keep the period sufficiently short — probably between one and five minutes, depending on the rate of activity. This can be avoided altogether by keeping attachments in the database; it increases the demands on the bandwidth between the application and database servers, but guarantees that the system is in a consistent state at switchover. If the data is at all sensitive or confidential, it's

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advisable to run `rsync` over `ssh`, to minimise the opportunity for the data to be captured on its way across the network.

What's the difference between load balancing and failover?

Load balancing means that all servers are active, and new requests are distributed among them. Several strategies are available, but the most common are:

- round-robin — the first request goes to the first server, the second request goes to the second server, and so on. When you run out of servers, the next request goes to the first server, and around it goes again.
- percentage-based — if (for example) you have two servers, and one can handle twice the load of the other, you can tell the load balancer to send two requests to the stronger server for every request that goes to the weaker one.
- availability — the load balancer sends a test query to each of the servers every second or so, and directs each new request to the server that's currently responding the fastest.

Failover means that only one server is active at any given time, and normally involves two servers (any number of servers may be involved, depending on the system). If the active one stops responding, requests are directed to the other server — the system 'fails over' to the second one.

'Cold failover' means that the second server is only started up after the first one has been shut down. This is the case for non-clustered Confluence.

'Hot failover' or 'hot standby' means that all servers are running at all times, and that the load is directed entirely toward one server at any one time.

A load balancer can be used in both scenarios, especially if it's smart enough to keep track of which servers are currently running.

Failover can also be managed via DNS, in a sufficiently well-controlled environment.

What do you mean by 'session affinity'?

Sessions consist of several transmissions in each direction between the client (browser) and the server. Session affinity means that the load balancer keeps track of which server received the initial transmission from a given browser, and that it will then send any subsequent requests from that browser to the same server.

This is necessary with Confluence clustering, in particular, because sessions are not shared across cluster nodes. If you log into one node and then send a request to another, the other node will send you the login screen because it doesn't recognise your session cookie.

RELATED TOPICS

Confluence Clustering Overview

Recommended network topology

Atlassian recommends a network topology similar to the one shown below, to get the best results from a Confluence Clustered deployment.

The number of Confluence nodes in the deployment is adjustable — select the number which suits your own requirements.

The most important aspect is that cluster, database and HTTP (client) traffic are all carried on separate subnets. It is possible, on a sufficiently fast network, to carry cluster and database traffic on the same subnet but we do strongly recommend that HTTP traffic be always confined to a separate subnet on production deployments.

Confluence Clustered does not support clustered communication over WAN, VLAN or VPN. All Confluence Clustered nodes must be on the same local subnet, ideally networked via an ethernet hub or simple switch. The cluster communication network must also support multicast IP networking.

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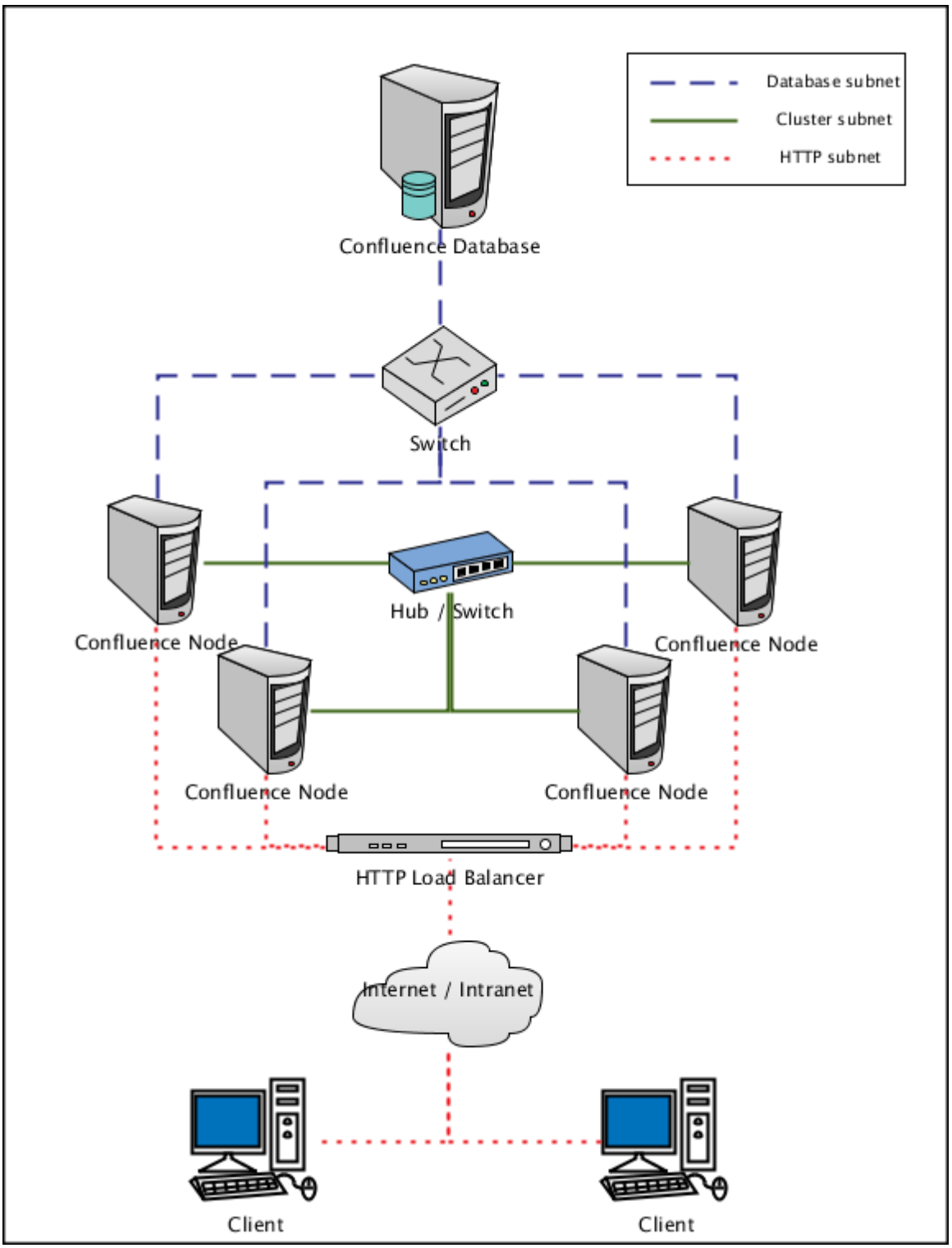
The information on this page does not apply to Confluence OnDemand.

Use this example as a basis for your own network diagram

When you are considering a Confluence Clustered deployment, you should prepare a network diagram like the one on this page. This will facilitate discussion with Atlassian Support and help with your own planning. Please refer to the cluster checklist for more guidance on planning your clustered deployment.



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Cluster Administration page

Overview

Any instance of Confluence which uses a clustered license has a Cluster Configuration page which includes information about the active cluster.

To open the Cluster Administration page,

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Cluster Configuration**' in the left-hand menu, in the section called 'Clustering'.

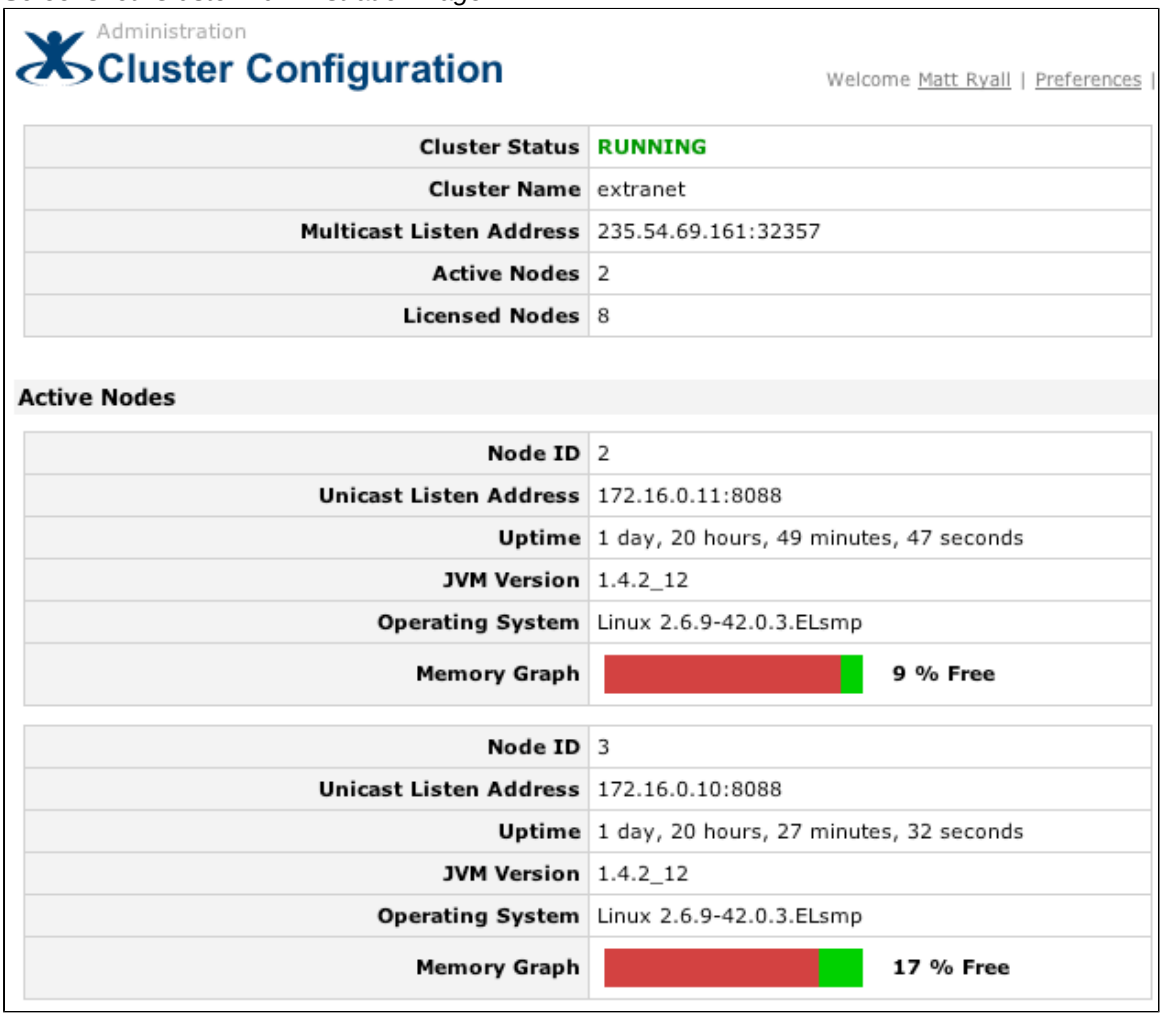
The information on this page does not apply to Confluence OnDemand.

Availability

To access this functionality, you must:

- Be a System Administrator (i.e. have global System Administrator permissions), and
- be using Confluence 2.3 or later, and
- be using a clustered Confluence license.

Screenshot: Cluster Administration Page



This page shows your cluster configuration, and allows you to start a new Confluence cluster using data from

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this instance.

Cluster Status indicates whether your cluster is currently running.

Licensed nodes is the maximum number of instances of Confluence your license allows in a cluster.

Active nodes lists the instances of Confluence currently participating in the cluster.

Starting a new cluster will perform the following changes:

- enable a clustered cache
- migrate attachments from file system to the database
- publish database connection information so other nodes can join the cluster.

All access to Confluence will be locked while this takes place, and you will be forced to restart Confluence afterwards.

Cluster name is a short name for identifying your cluster. Other Confluence instances can join the cluster using this name.

To join an existing cluster, start a clean copy of Confluence on this node and select 'Join Cluster' during the setup wizard.

Related documents

Overview of Confluence Clusters
Confluence Cluster Installation
Cluster Troubleshooting

Cluster Checklist

It is possible to run Confluence in a **clustered** environment instead of on a single server. This means that you can run multiple copies of Confluence in a cluster, so that clients (such as a browser) can connect to any copy and see the same information.

Refer to the clustering overview for more information and a list of related pages about clustering Confluence.

Consider your options carefully before deciding on a clustered installation

While we have tried to make clustering Confluence as easy and administrator-friendly as possible, it is a major architectural change and requires extra planning for deployment and upgrades. Please consider the information below and then consult Atlassian Sales before making your final decision.

On this page:

- Purpose of this Document
- Assumed Knowledge
- General Considerations
- Server Setup
- Database Setup
- Network Setup
- Staging Environment

The information on this page does not apply to Confluence OnDemand.

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Purpose of this Document

The purpose of this cluster checklist is to help you:

- Decide whether Confluence Clustered is the right solution for you.
- Create a plan for your clustered deployment.

If you need to raise a support request with Atlassian during or after cluster deployment, we will need to ask you questions about your configuration. It will save crucial time if you can provide us with your deployment plan.

For more information about clustering Confluence, refer to the clustering overview.

Assumed Knowledge

In writing this document, we have assumed that our readers have an in-depth knowledge of the following technical areas:

- Database
- Networking
- Application servers
- Load balancers

Before starting a clustered deployment please read the information on this page carefully, as well as the linked documentation, to assess if you have the assumed knowledge.

General Considerations

> **What will Confluence Clustered do for you?**
>
> The points in this section of the page will help you evaluate your reasons for considering a clustered deployment, and then decide whether Confluence Clustered is the right solution for your environment.

Confluence Clustered is designed to scale the number of simultaneously connected users at a much better performance than what a single node can achieve

Confluence Clustered will not improve performance in systems with few users.

Clustering Confluence means that user requests can be served by independent machines. The performance gains are substantial, and have improved a lot further since Confluence 3.0. Clustering is especially great in dealing with spikes to the load, e.g. during certain hours of business. Just note that if rendering a complicated page (e.g. containing many macros or rendering many graphs) takes five seconds on an otherwise idle server, will not be faster in a clustered environment. Also, the first step when you encounter performance issues is to tune your existing system, make sure you are using the right hardware and have looked at your database.

Confluence Clustered is not a high availability solution.

Confluence Clustered is not designed specifically to provide a high availability solution.

General availability is higher in a Confluence cluster than on a single installation, you can for example take one node down for minor maintenance tasks e.g. when adding a new CPU or adding RAM. But you still have to brir down all nodes at the same time for software upgrades. Also there are certain conditions, like loss of network connectivity between nodes ('split brain'), that will result in the cluster shutting itself down. Confluence Clustere offers higher reliability, but not high availability.

Confluence Clustered is not for disaster recovery nor for transparent failover.

If one node crashes, there is no transparent failover for the connected client. Also, our network requirements (see below) make Confluence unsuitable for deployment to different cities or even to different buildings.

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Server Setup

The number of supported cluster nodes is limited to four.

⚠️ **Not supported.** In theory, you can connect more than four nodes — but that is not covered by Atlassian Support.

All cluster nodes must have the same version of OS, application server, etc.

Confluence requires a homogeneous environment. All Confluence cluster nodes must have the same version c the following:

- Operating system
- CPU
- Installed memory
- Java
- Application server

ℹ️ Note that 'same version' means '**same to the last digit**'. For example, Java v1.4.2_16 is not the same as v1.4.2_15
✅ We strongly recommend user to have the same memory configuration (both the JVM and the physical memory) because a cluster uses a replicated cache. A replicated cache requires the same amount of memory on each node in the operating cluster. The memory allocations must be equal.

Use good and up-to-date hardware.

While the details are up to you, we strongly suggest that your servers have at least 4GB of physical RAM. A hig number of concurrent users means that a lot of RAM will be consumed. You usually don't need to assign more than 4GB per JVM process, and most of the time even just 1GB or 2GB will be fine, you should just be prepare to fine tune the settings.

Confluence Clustered is not supported when run in VMware or other virtualisations.

⚠️ **Not supported.** We strongly discourage you to deploy a production environment of Confluence to virtual servers, and we will not be able to support you when problems arise.

When running a Confluence cluster your goal is high capacity and performance, so you should not risk lower performance by virtualising it and sharing a computer with other processes.

Many customers who are running Confluence on VMware, or similar virtualisation solutions, experience major performance problems that are extremely hard to pinpoint. Since the problems are not related to Confluence itself, we will not be able to help you.

Confluence should be the only application on the cluster servers.

No additional applications (other than core operating system services) should be running on the same servers Confluence.

Since your goal should be increased capacity and performance, you should not risk this by running any other process on the machine with a Confluence Clustered node. While it may be fine to run JIRA, Confluence and Bamboo on a dedicated Atlassian software server for small installations, it is strongly discouraged for clustering Confluence.

Do not upgrade and switch to Confluence Clustered at the same time

If you plan to migrate to a clustered solution, make sure you are migrating within the same version of Confluence. If you plan to upgrade to a higher version of Confluence, do this **before** the migration to the clustered version.
For example, if you are currently running Confluence 2.9.2, and want to roll out the clustered version of Confluence 3.0, you must first upgrade to Confluence 3.0 and check that everything works fine (e.g. by running and monitoring your production system for a week). Then you are in a good position to migrate to the clustered version.

Database Setup

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Run the database on its own physical server.

You are optimising for performance, so you don't want the database to slow down your application servers, or vice versa. In high load scenarios, the database may need to have better hardware than the application servers to be able to handle all requests. You should find out by performing loadtesting.

Attachments must be stored in a database and not the local file system

Storing attachments in the database is the only supported attachment storage configuration for clustering Confluence.

Make sure that you use a supported version of a database server to store Confluence's data.

Please check that your intended database is officially supported by Atlassian Confluence. The load on an average cluster solution is higher than on a single box installation, and it is therefore even more crucial to use the right database vendor and version.

Your database must be provisioned to store a large volume of binary data.

Note that Confluence clustered stores file attachments in the database, and you need an experienced DBA wh can monitor and manage the data growth.

You need an experienced DBA available to troubleshoot database performance issues.

Not having an experienced full-time DBA at hand at short notice when entering the realm of high load is dangerous. While small installations of Confluence basically work 'out of the box', anything that involves high load and a lot of database space requires continual monitoring, optimising and fine tuning of the Confluence database. When we ramp up the load on our loadtesting environment, we see that database usage goes up as well. Having powerful hardware in place helps, but if there are queries that become inefficient with you particula load pattern, you need an expert to tune it. As an example, we have seen PostgresSQL switch its internal caching mechanism when a particular table reached a certain size, which resulted in a drop of performance by about 200ms per request. This happened from one second to the other. Being able to troubleshoot and then fix issues like these is important in any enterprise system, but it is even more in a high load scenario.

Network Setup

We recommend hardware load balancers or putting a software loadbalancer onto its on server.

If you use a software load balancer (which is fine except for really extreme installations), it must be deployed o a machine of its own. Running a software load balancer on a cluster node is not supported. If a node unexpectedly got overwhelmed by a spike in load, a load balancer on that node would turn unresponsive. As a result, your whole cluster would be inaccessible even though the other nodes would be available. So using a different server is common practice and common sense.

Use separate network adapters for communication between servers.

The Confluence cluster nodes should have a separate physical network (i.e. separate NICs) for inter-server communication.

This is the best way of getting the cluster to run fast and reliably. Performance problems are likely to occur if yo connect cluster nodes via a network that has lots of other data streaming through it.

The switch connecting the Confluence cluster nodes must not be a 'smart switch'.

⚠️ **Not supported.** Smart switches are not covered by Atlassian Support for Confluence Clustered.

Do not use smart switches between cluster nodes. Many problems have been reported and attributed to smart switches. They have a tendency to interrupt broadcast or multicast traffic, thus reliably killing a cluster after a certain amount of time has passed. This makes troubleshooting especially complex and tedious.

Cisco switches need additional configuration.

If the switch connecting the Confluence cluster nodes is a Cisco switch then it might need additional configuration to support Confluence clustering.

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Please make sure you find out all the details about your switches before you start the deployment.

It is recommended that the database is on a different physical network from the Confluence server nodes.

Since you want to increase your capacity and performance for high loads, it is recommended to have your database on a different network. Please refer to the recommended topology diagram for more information.

Minimize the latency between the Confluence cluster nodes and the database.

Even though having the nodes and the database on the same physical network usually suffices, you should tak the time to explicitly measure network latency, and make sure it is as close to zero as possible.

Prepare a network diagram.

To facilitate discussion and to ease planning, you should prepare a network diagram like this example of recommended network topology.

If you request support with Confluence Clustered, we may ask for your network diagram. We recommend that you create one similar to our example before you proceed with the installation.

You need network support staff available to troubleshoot cluster communication issues.

Setting up a cluster is not trivial. Even small problems in network design will be expanded in a clustered installation. (This is true of any kind of software.)

It is absolutely vital that you have dedicated network staff available to track down problems when they arise. A cluster will usually be used by thousands of users, and you don't want to keep them waiting because a network card breaks, or because someone made an undocumented change to the network and you don't have an expe around who can figure it out.

Staging Environment

You need a staging environment that is exactly the same as your production system.

You must be able to test drive any change to the cluster (installing upgrades, installing plugins) and to perform other tests (checking connectivity, debugging problems) on a staging cluster.

The staging environment must be:

- On the same OS, database, and Java version as your production environment.
- Clustered.

If you require support, we may for example ask you to turn off certain third-party plugins. If you can't do this in your production environment and you don't have a staging environment for troubleshooting, we may not be abl to help you.

> **Getting a license for your staging environment**
> The page Getting a License for a Staging Environment does not exist.

Related Topics

No content found for label(s) cluster.

Confluence Security

This document is for system administrators looking to evaluate the security of the Confluence web application. The page addresses overall application security and lists the security advisories issued for Confluence. As a public-facing web application, Confluence's application-level security is important. This document answers a number of questions that commonly arise when customers ask us about the security of our product.

Other topics:

- For information about user management, groups and permissions, please refer to the internal security overview.

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- For guidelines on configuring the security of your Confluence site, see the administrator's guide to configuring Confluence security.

On this page:

- Application Security Overview
- Finding and Reporting a Security Vulnerability
- Publication of Confluence Security Advisories
- Severity Levels
- Our Patch Policy
- Published Security Advisories
- Other Security Resources

The information on this page does not apply to Confluence OnDemand.

Application Security Overview

Password Storage

When Confluence's internal user management is used, passwords are hashed through SHA1 before being stored in the database. There is no mechanism within Confluence to retrieve a user's password – when password recovery is performed, a reset password link is generated and mailed to the user's registered address.

When external user management is enabled, password storage is delegated to the external system.

Buffer Overflows

Confluence is a 100% pure Java application with no native components. As such it is highly resistant to buffer overflow vulnerabilities – possible buffer overruns are limited to those that are bugs in the Java Runtime Environment itself.

SQL Injection

Confluence interacts with the database through the Hibernate Object-Relational mapper. Database queries are generated using standard APIs for parameter replacement rather than string concatenation. As such, Confluence is highly resistant to SQL injection attacks.

Script Injection

Confluence is a self-contained Java application and does not launch external processes. As such, it is highly resistant to script injection attacks.

Cross-Site Scripting

As a content-management system that allows user-generated content to be posted on the web, precautions have been taken within the application to prevent cross-site scripting attacks:

- The wiki markup language in Confluence does not support dangerous HTML markup
- Macros allowing the insertion of raw HTML are disabled by default
- HTML uploaded as a file attachment is served with a content-type requesting the file be downloaded, rather than being displayed inline
- Only system administrators can make HTML-level customisations of the application

When cross-site scripting vulnerabilities are found in the Confluence web application, we endeavour to fix them

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as quickly as possible.

Transport Layer Security

Confluence does not directly support SSL/TLS. Administrators who are concerned about transport-layer security should set up SSL/TLS at the level of the Java web application server, or the HTTP proxy in front of the Confluence application.

For more information on configuring Confluence for SSL, see: Running Confluence Over SSL or HTTPS

Session Management

Confluence delegates session management to the Java application server in which it is deployed. We are not aware of any viable session-hijacking attacks against the Tomcat application server shipped with Confluence. If you are deploying Confluence in some other application server, you should ensure that it is not vulnerable to session hijacking.

Plugin Security

Administrators install third party plugins **at their own risk**. Plugins run in the same virtual machine as the Confluence server, and have access to the Java runtime environment, and the Confluence server API.

Administrators should always be aware of the source of the plugins they are installing, and whether they trust those plugins.

Administrator Trust Model

Confluence is written under the assumption that anyone given System Administrator privileges is trusted. System administrators are able, either directly or by installing plugins, to perform any operation that the Confluence application is capable of.

As with any application, you should not run Confluence as the root/Administrator user. If you want Confluence to listen on a privileged network port, you should set up port forwarding or proxying rather than run Confluence with additional privileges. The extra-careful may consider running Confluence inside a `chroot` jail.

Stack Traces

To help debug support cases and provide legendary support, Confluence provides stack traces through the web interface when an error occurs. These stack traces include information about what Confluence was doing at the time, and some information about your deployment server.

Only non-personal information is supplied such as operating system and version and Java version. With proper network security, this is not enough information to be considered dangerous. No usernames or passwords are included.

Finding and Reporting a Security Vulnerability

Atlassian's approach to reporting security vulnerabilities is detailed in How to Report a Security Issue.

Publication of Confluence Security Advisories

Atlassian's approach to releasing security advisories is detailed in Security Advisory Publishing Policy.

Severity Levels

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Atlassian's approach to ranking security issues is detailed in Severity Levels for Security Issues.

Our Patch Policy

Atlassian's approach to releasing patches for security issues is detailed in Security Patch Policy.

Published Security Advisories

- Confluence Security Advisory 2012-05-17
- Confluence Security Advisory 2011-05-31
- Confluence Security Advisory 2011-03-24
- Confluence Security Advisory 2011-01-18
- Confluence Security Advisory 2010-11-15
- Confluence Security Advisory 2010-10-12
- Confluence Security Advisory 2010-09-21
- Confluence Security Advisory 2010-08-17
- Confluence Security Advisory 2010-07-06
- Confluence Security Advisory 2010-06-02
- Confluence Security Advisory 2010-05-04
- Confluence Security Advisory 2009-12-08
- Confluence Security Advisory 2009-10-06
- Confluence Security Advisory 2009-08-20
- Confluence Security Advisory 2009-06-16
- Confluence Security Advisory 2009-06-01
- Confluence Security Advisory 2009-04-15
- Confluence Security Advisory 2009-02-18
- Confluence Security Advisory 2009-01-07
- Confluence Security Advisory 2008-12-03
- Confluence Security Advisory 2008-10-14
- Confluence Security Advisory 2008-09-08
- Confluence Security Advisory 2008-07-03
- Confluence Security Advisory 2008-05-21
- Confluence Security Advisory 2008-03-19
- Confluence Security Advisory 2008-03-06
- Confluence Security Advisory 2008-01-24
- Confluence Security Advisory 2007-12-14
- Confluence Security Advisory 2007-11-27
- Confluence Security Advisory 2007-11-19
- Confluence Security Advisory 2007-08-08
- Confluence Security Advisory 2007-07-26
- Confluence Security Advisory 2006-06-14
- Confluence Security Advisory 2006-01-23
- Confluence Security Advisory 2006-01-20
- Confluence Security Advisory 2005-12-05
- Confluence Security Advisory 2005-02-09
- Confluence Community Security Advisory 2006-01-19

Other Security Resources

No content found for label(s) security-resources.

Confluence Community Security Advisory 2006-01-19

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This security advisory is not endorsed by Atlassian - this is a public service advisory from a member of the confluence community. **Please** remember to backup any modified files, and use these instructions at your own risk. While this information is based on Confluence v2.1.2, it may have uses with older affected versions of Confluence.

The official security advisory is located at Confluence Security Advisory 2006-01-20

Problem

There is a possibility of XSS exploitation of the Full Name user profile field when displayed.

Solution

The problem was unescaped outputting of the fullname - wrapping the output in $generalUtil.htmlEncode() resolve it. The vast majority of the problem can be resolved by changing `/confluence/template/includes/macros.vm` in the distribution on the following lines:

- 180
- 186
- 200
- 340
- 893

I have attached the modified macros.vm file here which you can copy into your distribution.

Scope

There are other places which are still affected which Atlassian have been made aware of, a complete resolution should be provided by Atlassian in their own offical advisory.

I hope this helps some of you!

Confluence Security Advisory 2005-02-09

A flaw has been found in Confluence by which attackers can bypass Confluence security and change content on the site. Atlassian STRONGLY recommends that all Confluence customers apply the fix described below immediately, or upgrade to Confluence 1.3.3

Vulnerability

By crafting custom URLs, any person with the ability to browse Confluence can modify content on the site, bypassing security settings. This vulnerability does not allow users to view content they would not normally be able to view, or escalate their privileges in other ways.

This flaw affects all versions of Confluence prior to 1.3.3, including the 1.4-DR development releases.

Fix

This vulnerability is fixed in Confluence 1.3.3 and later. Customers who do not wish to migrate to 1.3.3 can fix this bug using the procedure below:

1. Edit the file confluence/WEB-INF/classes/xwork.xml
2. Find the following section near the top of the file (around line 34):

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```
<interceptor-stack name="defaultStack">
    <interceptor-ref name="profiling">
        <param name="location">Before defaultStack</param>
    </interceptor-ref>
    <interceptor-ref name="transaction"/>
    <interceptor-ref name="authentication"/>
    <interceptor-ref name="requestParameterHack"/>
    <interceptor-ref name="eventnotifier"/>
    <interceptor-ref name="autowire"/>
    <interceptor-ref name="params"/>
    <interceptor-ref name="servlet"/>
    <interceptor-ref name="pageAware"/>
    <interceptor-ref name="permissions"/>
    <interceptor-ref name="profiling">
        <param name="location">After defaultStack</param>
    </interceptor-ref>
</interceptor-stack>
```

3. Locate the "autowire" and "params" entries:

```
<interceptor-ref name="eventnotifier"/>
-->           <interceptor-ref name="autowire"/>      <--
-->           <interceptor-ref name="params"/>        <--
              <interceptor-ref name="servlet"/>
```

4. Swap the two lines around. The whole stack should now look like this:

```
<interceptor-stack name="defaultStack">
    <interceptor-ref name="profiling">
        <param name="location">Before defaultStack</param>
    </interceptor-ref>
    <interceptor-ref name="transaction"/>
    <interceptor-ref name="authentication"/>
    <interceptor-ref name="requestParameterHack"/>
    <interceptor-ref name="eventnotifier"/>
    <interceptor-ref name="params"/>
    <interceptor-ref name="autowire"/>
    <interceptor-ref name="servlet"/>
    <interceptor-ref name="pageAware"/>
    <interceptor-ref name="permissions"/>
    <interceptor-ref name="profiling">
        <param name="location">After defaultStack</param>
    </interceptor-ref>
</interceptor-stack>
```

5. Restart Confluence.

Confluence Security Advisory 2005-12-05

A flaw has been found in Confluence by which attackers to inject malicious HTML code into Confluence. Atlassian STRONGLY recommends that all Confluence customers apply the fix described below immediately, or upgrade to Confluence 2.0.2

Vulnerability

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By entering HTML code into the Confluence search input fields, attackers can cause arbitrary scripting code to be executed by the user's browser in the security context of the Confluence instance.

This flaw affects all versions of Confluence between 1.4-DR releases and 2.0.1.

(Atlassian was not informed of the problem before it was published by third-party security researchers. You can read the third-party security advisory here: http://secunia.com/advisories/17833/. The vulnerability was originally reported here.)

Fix

This vulnerability is fixed in Confluence 2.0.2 and later. Customers who do not wish to migrate to 2.0.2 can fix this bug using the procedure below:

1. Edit the confluence/decorators/components/searchresults.vmd
2. Replace the following reference (around line 48):

```
$action.getText("search.result", [$start, $end, $total, $queryString])
```

   with

```
$action.getText("search.result", [$start, $end, $total,
$generalUtil.escapeXml($queryString)]).
```

3. Edit the confluence/search/searchsite-results.vm.
4. Replace the following reference (around line 11):

```
Searched for <b>$action.searchQuery.queryString</b>
```

   with

```
Searched for <b>$generalUtil.escapeXml($action.searchQuery.queryString)</b>
```

5. Restart Confluence.

Alternatively, you can download the patched source files from CONF-4825. If you are patching a 2.0.x installation, then use the files with the .2.0 suffix. If you are patching a 1.4.x installation, then use the files with the .1.4 suffix.

Confluence Security Advisory 2006-01-20

A flaw has been found in Confluence by which attackers to inject malicious HTML code into Confluence. Atlassian STRONGLY recommends that all Confluence customers apply the fix described below immediately, or upgrade to Confluence 2.1.3.

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Vulnerability

By entering HTML/JavaScript code into the full name of a user's profile, attackers can cause arbitrary scripting code to be executed by the user's browser in the security context of the Confluence instance.

This flaw affects all versions of Confluence between 1.4-DR releases and 2.1.2.

This issue was initally reported by Ricardo Sueiras and a fix was quickly documented by Dan Hardiker at the Confluence Community Security Advisory 2006-01-19 page. Our thanks to them for bringing this to our attention.

There is an issue in JIRA at CONF-5233.

Fix

This vulnerability is fixed in Confluence 2.1.3 and later. Customers who do not wish to migrate to 2.1.3 can fix this bug using the procedure below:

Steps to fix:

1. Copy macros.vm to your confluence/template/includes folder
2. Restart Confluence

Note: If you are using version 1.4.4, please download and copy this file instead. You will need to rename it back to `macros.vm`.

If you are not using any of the above versions, you will need to replace wrap calls to display full names of users in $generalUtil.htmlEncode(). Alternatively, send us an email. We do however encourage you to use the latest stable point release regardless of the version you are using.

Confluence Security Advisory 2006-01-23

A flaw has been found in Confluence by which the unrestricted content of a space can be revealed in search results.

Vulnerability

By entering in a space key and blank query string into the Search macro, pages from the specified space will be displayed, without filtering on page and space permissions. This can allow unpermitted users to view the excerpts of pages they don't have access to.

This flaw is confirmed to affect all releases from 1.4 to 2.1.2.

More information is available at CONF-5189.

Fix

This vulnerability is fixed in Confluence 2.1.3 and later. We strongly suggest that customers upgrade to this release to fix the vulnerability.

Customers who are using 1.4.x and do not wish to upgrade can download a patched class from CONF-5198.

Confluence Security Advisory 2006-06-14

Vulnerability

By crafting a custom HTTP request, an attacker can delete or modify global permissions settings on a Confluence site.

This flaw affects all Confluence versions between 1.4 and 2.2.2. 2.2.3 and later are not vulnerable.

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Fix

This issue has been fixed in Confluence 2.2.3. Patches are also available for all versions of Confluence betwen 1.4 and 2.2.2. For more information, please see this issue report.

Atlassian STRONGLY recommends that all customers either upgrade to Confluence 2.2.3, or apply the patch.

Confluence Security Advisory 2007-07-26

In this advisory:

- Users with view permission in a space can copy and save a page
  - Vulnerability
  - Fix
- Space name and key are not validated nor escaped
  - Vulnerability
  - Fix

Users with view permission in a space can copy and save a page

Vulnerability

A user who has only view permissions in a space can copy a page and then save it in the space. In this way, users can create a page in a space where they have only view permission.

This flaw affects only Confluence version 2.5.4.

Fix

This issue has been fixed in Confluence 2.5.5. A patch is also available for Confluence 2.5.4. For more information, including instructions on applying the patch, please see this issue report.

If you are using Confluence 2.5.4, Atlassian **strongly** recommends that you upgrade to Confluence 2.5.5 or apply the patch.

Space name and key are not validated nor escaped

Vulnerability

The input for space name and key is not validated properly - any characters are allowed. This makes a Confluence instance vulnerable to an XSS attack.

Fix

This issue has been fixed in Confluence 2.5.5. For more information, please see this issue report.

Atlassian recommends that you upgrade to Confluence 2.5.5.

Confluence Security Advisory 2007-08-08

In this advisory:

- Input in the RSS Feed Builder is not validated
  - Vulnerability
  - Fix
- Input when editing Space Permissions is not validated
  - Vulnerability
  - Fix

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- Number of labels that can be added to a page is not restricted
  - Vulnerability
  - Fix
- Input when editing navigation themes is not validated
  - Vulnerability
  - Fix
- Viewing of space content alphabetically is not validated
  - Vulnerability
  - Fix
- Input when editing Space Name is not validated
  - Vulnerability
  - Fix
- Input when viewing attachments by file-type is not validated
  - Vulnerability
  - Fix

Input in the RSS Feed Builder is not validated

Vulnerability

The input for the RSS Feed Builder is not required to be escaped. This can make a Confluence instance vulnerable to an XSS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8993.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Input when editing Space Permissions is not validated

Vulnerability

The 'Grant permission to' field on the 'Edit Space Permissions' screen is not validated. This can make a Confluence instance vulnerable to an XSS or DoS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8980 and CONF-8979.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Number of labels that can be added to a page is not restricted

Vulnerability

There is no restriction on the number of labels that can be added to a page at a time. This can make a Confluence instance vulnerable to a DoS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8978.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Input when editing navigation themes is not validated

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Vulnerability

The 'Navigation Page' specified in the 'Left Navigation Theme' configuration is not validated. This can make a Confluence instance vulnerable to a XSS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8956.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Viewing of space content alphabetically is not validated

Vulnerability

When viewing space content by alphabetic character, the input is not validated as being alphabetic. This can make a Confluence instance vulnerable to an XSS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8952.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Input when editing Space Name is not validated

Vulnerability

The 'Name' field on the 'Edit Space Details' screen is not validated. This can make a Confluence instance vulnerable to an XSS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8951.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Input when viewing attachments by file-type is not validated

Vulnerability

The 'Filter By Extension' field on the 'List Space Attachments' screen is not validated. This can make a Confluence instance vulnerable to an XSS attack.

Fix

This issue has been fixed in Confluence 2.5.6. For more information, please see CONF-8950.

Atlassian recommends that you upgrade to Confluence 2.5.6.

Confluence Security Advisory 2007-11-19

In this advisory:

- DWR debug mode enabled
  - Vulnerability
  - Fix
- XSS vulnerability in exception error page

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    - Vulnerability
    - Fix
- XSS vulnerability in the URL destination for the print icon
    - Vulnerability
    - Fix
- XSS vulnerability in wiki markup for images
    - Vulnerability
    - Fix

Atlassian recommends that you upgrade to Confluence 2.6.1 to fix the vulnerabilities described below.

DWR debug mode enabled

Vulnerability

Debug mode was enabled by default on Direct Web Remoting (DWR). This made it easy for a potential attacker to find information about available AJAX request handlers in Confluence.

Fix

This issue has been fixed in Confluence 2.6.1. If you do not wish to upgrade at this time, you can fix the problem by editing your `<confluence install>/confluence/WEB-INF/web.xml` file. For more information, please see CONF-9718.

XSS vulnerability in exception error page

Vulnerability

The attributes and parameters were not escaped on the Confluence exception error page. This is a potential vulnerability to a cross-site scripting attack.

Fix

This issue has been fixed in Confluence 2.6.1. For more information, please see CONF-9704 and CONF-9560.

XSS vulnerability in the URL destination for the print icon

Vulnerability

The print icon on the HTTP 404 error page uses the path of the requested URL, which potentially contains malicious JavaScript. The 404 page did not correctly escape it. This is a potential vulnerability to a cross-site scripting attack.

Fix

This issue has been fixed in Confluence 2.6.1. A patch is supplied for customers with **Confluence version 2.6** w ho do not wish to upgrade at this time. For more information, please see CONF-9456.

XSS vulnerability in wiki markup for images

Vulnerability

When using image URLs in wiki markup, quotes were not correctly escaped. This is a potential vulnerability to a cross-site scripting attack.

Fix

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This issue has been fixed in Confluence 2.6.1. For customers with **Confluence 2.6** who do not with to upgrade at this time, the new `atlassian-renderer` JAR should resolve this issue. For more information, please see CONF-9209.

Confluence Security Advisory 2007-11-27

In this advisory:

- XSS Type 2 Vulnerabilities in Macros and Wiki Markup
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Type 2 Vulnerabilities in Macros and Wiki Markup

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed some security flaws which may affect Confluence instances in a public environment. These flaws are XSS (cross-site scripting) vulnerabilities in some of Confluence's macros and Wiki Markup, which potentially allow a malicious user (hacker) to insert their own HTML tags or script into a Confluence page.

- The hacker might take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

Atlassian recommends that you upgrade to Confluence 2.6.2 to fix the vulnerabilities described below.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signon) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

The following macros are affected:

- {color}
- {panel}
- {section}
- {column}
- {code}

The Wiki Markup for inserting images (e.g. `!myImage.png!`) is also vulnerable to XSS exploitation.

Fix

The fix is to escape all user input, so that no user input is interpreted as HTML or CSS. In some cases we also perform stricter validation on the range of values a user can supply in an attribute.

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These issues have been fixed in Confluence 2.6.2. For more information, please see CONF-9350.

> Our thanks to **Igor Minar**, who reported this issue to Atlassian. We fully support the reporting of vulnerabilities and we appreciate his working with us towards identifying and solving the problem.

Please let us know what you think of the format of this security advisory and the information we have provided.

Confluence Security Advisory 2007-12-14

In this advisory:

- XSS Vulnerability in Configure RSS Feed Action
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Configure RSS Feed Action

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which may affect Confluence instances in a public environment. This flaw is an XSS (cross-site scripting) vulnerability in a Confluence action, which potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

To fix the vulnerabilities described below, Atlassian recommends that you take one of the following steps:

- Upgrade to Confluence 2.7, or
- Download and install the patch for Confluence 2.5.8 or Confluence 2.6.2 from our JIRA site – see issue CONF-10164.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signon) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

A hacker can inject their own JavaScript into the following Confluence action:

```
http://www.anyhost.com/confluence/dashboard/configurerssfeed.action
```

The above Confluence action is used to build an RSS feed based on your Confluence pages and news items.

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The action is invoked when a selects '**Feed Builder**' from your Confluence Dashboard. It can also be invoked by simply entering the URL into the browser address bar.

Fix

These issues have been fixed in **Confluence 2.7**, which you can download from the download centre.

A patch is available for **Confluence 2.5.8** and **Confluence 2.6.2**. For more information, please see CONF-10164.

> Our thanks to **jeff peichel**, who reported this issue to Atlassian. We fully support the reporting of vulnerabilities and we appreciate his working with us towards identifying and solving the problem.

Please let us know what you think of the format of this security advisory and the information we have provided.

Confluence Security Advisory 2008-01-24

In this advisory:

- XSS Vulnerability in Dashboard Action
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Dashboard Action

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which may affect Confluence instances in a public environment. This flaw is an XSS (cross-site scripting) vulnerability in a Confluence action, which potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

To fix the vulnerabilities described below, Atlassian recommends that you take one of the following steps:

- Upgrade to Confluence 2.7.1, or
- Download and install the patch for Confluence 2.6.2 or Confluence 2.7.0 from our JIRA site – see issue CONF-10289.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signon) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

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A hacker can inject their own JavaScript into the following Confluence action:

```
http://confluence-location/dashboard.action?spacesSelectedTab
```

The above Confluence action is used to determine which spaces are listed on a user's Dashboard. For example, the following URL requests a list of team spaces only:

```
http://confluence-location/dashboard.action?spacesSelectedTab=team
```

The action is invoked when a user selects one of the 'Spaces' tabs on the Dashboard, such as the '**Team**' tab. It can also be invoked by simply entering the URL into the browser address bar.

Fix

These issues have been fixed in **Confluence 2.7.1** (see the release notes), which you can download from the download centre.

A patch is available for **Confluence 2.6.2** and **Confluence 2.7.0**. For more information, please see CONF-10289.

> Our thanks to **Mary Johnson**, who reported this issue to Atlassian. We fully support the reporting of vulnerabilities and we appreciate her working with us towards identifying and solving the problem.

Please let us know what you think of the format of this security advisory and the information we have provided.

Confluence Security Advisory 2008-03-06

In this advisory:

- Users with View-Only Permission can Delete (Purge) Pages
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

Users with View-Only Permission can Delete (Purge) Pages

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

More explanation of the ranking we chose:

- You might rank this vulnerability as **critical**, because in most installations the vulnerability will allow anonymous users to delete information.
- We have chosen a ranking of **high**, because the vulnerability does not allow privilege escalation i.e. it doesn't allow users to gain administration privileges.

Risk Assessment

We have identified and fixed a security flaw which allowed users who have 'View' permission (or higher) on a space to purge (delete) any page in that space.

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The following Confluence versions are vulnerable: All versions from **1.3 to 2.7.1** inclusive.

To fix the vulnerabilities described below, Atlassian recommends that you take one of the following steps:

- Upgrade to Confluence 2.7.2, or
- Download and install the patch for Confluence 2.6.x or Confluence 2.7.x from our JIRA site – see issue CONF-10807.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

If it is not immediately feasible to upgrade to Confluence 2.7.2 or apply a patch, we recommend an alternative strategy:

- As a temporary measure, you can block the URL which allows someone to purge (delete) a page. Please ask your website administrator to block the URL described below.
- The impact is that Space Administrators will not be able to purge individual pages or news items. However, Space Administrators can still use the 'Purge All' link to clear the entire contents of Trash.

Vulnerability

Description:
A user can use the following Confluence action to permanently delete (purge) any Confluence page, provided that the user has 'View' permission (or higher) in the space to which the page belongs:

```
http://confluence-location/pages/purgetrashitem.action?key=XXX&contentId=XXX
```

The above action is invoked when a space administrator clicks the 'Purge' link on the space's 'Trash' page next to a wiki page which has already been deleted.

The action can also be invoked by simply entering the URL into the browser address bar. In this way, it is possible for a user with 'View' permission (or higher) to remove a page via the 'Purge' action, even if the page has not been deleted.

Fix

These issues have been fixed in **Confluence 2.7.2** (see the release notes), which you can download from the download centre.

A patch is available for **Confluence 2.6.x**, **Confluence 2.7.0** and **Confluence 2.7.1**. For more information, please see CONF-10807.

> Our thanks to **Neeraj Jhanji**, who reported this issue to Atlassian. We fully support the reporting of vulnerabilities and we appreciate his working with us towards identifying and solving the problem.

Confluence Security Advisory 2008-03-19

In this advisory:

- XSS Vulnerabilities in Various Confluence Actions
  - Severity
  - Risk Assessment
  - Risk Mitigation

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- Vulnerability
- Fix

XSS Vulnerabilities in Various Confluence Actions

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security flaws which may affect Confluence instances in a public environment. The flaws are all XSS (cross-site scripting) vulnerabilities in various Confluence actions. Each vulnerability potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

To fix the vulnerabilities described below, Atlassian recommends that you take one of the following steps:

- Upgrade to Confluence 2.7.3, or
- Download and install the patches for Confluence **2.6.x** from our JIRA site — refer to the list of issues below.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

A hacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar.

For more details please refer to the related JIRA issue, also shown in the table below.

Confluence Actions	Affected Confluence Versions	More Details	Reporter (If Not Atlassian)
Create, edit or copy a page or news item	From **2.2 to 2.7.2** inclusive	CONF-11027	
Add a comment	From **2.2 to 2.7.2** inclusive	CONF-11027	
Create a space	From **2.2 to 2.7.2** inclusive	CONF-11042	Wyatt Crossin

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Sign up for an account	From **2.2 to 2.7.2** inclusive	CONF-11005	
Choose a page (page picker)	From **2.2 to 2.7.2** inclusive	CONF-11137	
View a user	From **2.2 to 2.7.2** inclusive	CONF-11002	
Insert an image or link	From **2.2 to 2.7.2** inclusive	CONF-11141	
Choose a user or group (user picker and group picker)	From **2.2 to 2.7.2** inclusive	CONF-11040	Jean Marois
Add a user to favourites	From **2.0 to 2.7.2** inclusive	CONF-11026	
HTTP 500 error page	From **1.3 to 2.7.2** inclusive	CONF-11019	
Add bookmark	All Confluence instances that have the Social Bookmarking plugin. Note that the plugin is bundled with Confluence since version **2.6**, so Confluence 2.6.x and 2.7.x are vulnerable even if you don't use social bookmarking. Patches are supplied for Confluence 2.6.x and 2.7.x.	CONF-11153	

Fix

These issues have been fixed in **Confluence 2.7.3** (see the release notes), which you can download from the download centre.

Patches are available for **Confluence 2.6.x**. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

> Our thanks to the people who reported some of the vulnerabilities listed above. We fully support the reporting of vulnerabilities and we appreciate their working with us towards identifying and solving the problem.

Confluence Security Advisory 2008-05-21

In this advisory:

- Users can Move Attachments to Any Page Regardless of Permissions
  - Severity

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    - Risk Assessment
    - Risk Mitigation
    - Vulnerability
    - Fix
- XSS Vulnerability in Page Information View
    - Severity
    - Risk Assessment
    - Risk Mitigation
    - Vulnerability
    - Fix

Users can Move Attachments to Any Page Regardless of Permissions

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allows users who have 'Create Page' permission in a space to move an attachment from a page in that space to any other page in the Confluence site, regardless of the user's permissions in the destination space.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.8.0**.

Risk Mitigation

This security flaw grants extra powers only to users who already have 'Create Page' permissions in one of the spaces on the Confluence site. In most installations, this will be a trusted group of users.

If your Confluence instance allows a less trusted group of users to create and edit pages in one space, while restricting access to other spaces, you may judge it necessary to disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

Any user who has 'Create Page' permission in a Confluence space can move an attachment from a page in that space to any other page in the Confluence site, regardless of the user's permissions in the destination space.

Note: If a user has permission to create a space, they will also have 'Create Page' permission in any space they create, including a personal space. Such users could upload an attachment onto the space they have created and then move the attachment to any page in the Confluence site.

Fix

This issue has been fixed in Confluence 2.8.1 (see the release notes), which you can download from the download centre.

Alternatively, you can download and install the patch for Confluence 2.7.x or Confluence 2.8.0 from our JIRA site – see issue CONF-11452.

> Our thanks to **Stafford Vaughan** from CustomWare, who reported this issue to Atlassian. We fully support the reporting of vulnerabilities and we appreciate it when people work with us towards identifying and solving a problem.

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XSS Vulnerability in Page Information View

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which may affect Confluence instances in a public environment. This flaw is an XSS (cross-site scripting) vulnerability in a Confluence action, which potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

The following Confluence versions are vulnerable: All versions from **1.3 to 2.8.0** inclusive.

Risk Mitigation

If you judge it necessary, you can hide referrers on page information views by disabling this functionality.

Vulnerability

A hacker can inject their own JavaScript into the referrer URLs which are displayed on the 'Info' view of a wiki page. The rogue JavaScript will be executed when a user opens the 'Info' view.

Fix

This issue has been fixed in Confluence 2.8.1 (see the release notes), which you can download from the download centre.

Alternatively, you can download and install the patch for Confluence 2.7.x or Confluence 2.8.0 from our JIRA site – see issue CONF-11524.

Confluence Security Advisory 2008-07-03

In this advisory:

- XSS Vulnerability in Various Confluence Actions
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Various Confluence Actions

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security flaws which may affect Confluence instances in a public

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environment. The flaws are all XSS (cross-site scripting) vulnerabilities in various Confluence actions. Each vulnerability potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups only.

Vulnerability

A hacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar. The rogue JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Confluence Actions	Affected Confluence Versions	More Details	Reporter (If Not Atlassian)
Create, edit or copy a page or news item	2.8.0 and 2.8.1	CONF-11985	James Rinker
Page picker and space picker	2.2.0 to 2.8.1 inclusive	CONF-11137	

Fix

These issues have been fixed in Confluence 2.8.2 (see the release notes), which you can download from the download centre.

Alternatively, you can download and install the patches provided on our JIRA site. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

> Our thanks to **James Rinker** who reported some of the vulnerabilities listed above. We fully support the reporting of vulnerabilities and we appreciate his working with us towards identifying and solving the problem.

Confluence Security Advisory 2008-09-08

In this advisory:

- XSS Bug: Usernames Not HTML-Encoded in All Places
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

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- Inherited Page Restrictions Are Not Applied After 2.9 Upgrade
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Access Vulnerability in View Wiki Markup Function
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Access Vulnerability in Copy Page Function
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Access Vulnerability in Diff Page Function
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Bug: Usernames Not HTML-Encoded in All Places

Severity

Atlassian rates this vulnerability as **HIGH**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allowed certain users to circumvent Confluence's security measures, by including HTML markup in their own username. This could allow a malicious user to execute Javascript on another user's authenticated session.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.9**.

Risk Mitigation

If the user specified a username that included HTML markup (which could include Javascript), in some places Confluence would not correctly escape this source before displaying it. This could result in Javascript being executed in another user's authenticated session. To address the issue, you should update your Confluence instance as soon as possible (or follow the patch instructions on the issue).

Vulnerability

This is a classic Cross-Site Scripting issue where usernames could include malicious Javascript.

Fix

This issue has been fixed in Confluence 2.9.1 (see the release notes), which you can download from the download centre.

For more information, see issue CONF-7615 which has instructions on how to patch the affected velocity

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template.

Inherited Page Restrictions Are Not Applied After 2.9 Upgrade

Severity

Atlassian rates this vulnerability as **HIGH**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw that caused any content permission inherited by a page to be lost during the upgrade process to Confluence 2.9.

The following Confluence versions are vulnerable: Version **2.9**; specifically instances of Confluence that were *up graded to version 2.9* (from an earlier version) only.

Risk Mitigation

This issue can be resolved by following the steps under **Fix**, or upgrading to Confluence 2.9.1. If this cannot be done immediately, it may be prudent to manually apply restrictions to each page that is normally protected by inherited restrictions (that is, all child pages residing under a restricted page). Enacting the fix is trivial and should take around ten minutes for a typical Confluence instance.

Vulnerability

If you had given a parent page restrictions prior to the 2.9 upgrade, then any child pages that should be inheriting these restrictions are no longer restricted. This potentially renders these child pages viewable and editable by Confluence users who should not have these rights. However you should note that any space level restrictions are still respected so these affected pages are only opened as far as the space level security allows for your site. Note for individual pages where you have manually set the permissions, those pages are not at risk — just the pages underneath them using inherited permissions.

Fix

This issue has been fixed in Confluence 2.9.1 (see the release notes), which you can download from the downlo ad centre.

Alternatively, you can apply the manual fix, which involves a simple series of actions in the Confluence administration screens.

For more information see issue CONF-12911.

Access Vulnerability in View Wiki Markup Function

Severity

Atlassian rates this vulnerability as **HIGH**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allows users who don't have the correct '**View Page**' permission in a space to view the Wiki Markup source of the page content.

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The following Confluence versions are vulnerable: Version **2.9** only.

Risk Mitigation

If a user knows the URL to view the source of a page they will be able to bypass Confluence's security checks. This will allow the user to view the contents of a page they aren't meant to see.
To prevent unauthorised access, you may want to use your web server to reject all requests to URLs containing this string: `/pages/viewpagesrc.action`. You may judge it necessary to disable public access.

Vulnerability

If a user knows the ID of a page that they do not have **'View Page**' permission for they can use the view source URL to view the Wiki Markup of a page. This will allow them to copy and paste the contents of the page to another location, or simply read the markup and deduce its final content.

Note: the user will need to know the page ID of a page. Confluence will not provide any links to the restricted page through a search or other navigation.

Fix

This issue has been fixed in Confluence 2.9.1 (see the release notes), which you can download from the download centre.

For more information see issue CONF-12845.

Access Vulnerability in Copy Page Function

Severity

Atlassian rates this vulnerability as **HIGH**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allows users who don't have the correct 'View Page' permission in a space to copy a page and therefore see its content.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.9**.

Risk Mitigation

If a user knows the URL to copy a page they will be able to bypass Confluence's security checks. This will allow the user to view the contents of a page they aren't meant to see.
To prevent unauthorised access, you may want to use your web server to reject all requests to URLs containing this string: `/pages/copypage.action`. You may judge it necessary to disable public access.

Vulnerability

If a user knows the ID of a page they do not have permissions for, they can use the copy page URL to copy the page to a space where they do have permission. This will allow them to create a new page based on the content of a page they aren't meant to see.

Fix

This issue has been fixed in Confluence 2.9.1 (see the release notes), which you can download from the download centre.

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Alternatively, you can download and install the patch for Confluence 2.7.3 or 2.8.2 from our JIRA site – see issue CONF-12859.

Instruction on installing the patch can be found here.

Access Vulnerability in Diff Page Function

Severity

Atlassian rates this vulnerability as **HIGH**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allows users who don't have the correct '**View Page**' permission in a space to create a diff of a page (a comparison of its contents with another page) and therefore see its content.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.9**.

Risk Mitigation

If a user knows the URL to perform a diff of a page they will be able to bypass Confluence's security checks. This will allow the user to view the contents of a page they aren't meant to see.
To prevent unauthorised access, you may want to use your web server to reject all requests to URLs containing this string: `/pages/diffpages.action`. You may judge it necessary to disable public access.

Vulnerability

If a user knows the ID of a page they do not have permissions for, they can use the 'Diff Page' URL to compare the contents of that page with one where they do. This will allow them to deduce the contents of a page they don't have access to.

Fix

This issue has been fixed in Confluence 2.9.1 (see the release notes), which you can download from the download centre.

Alternatively, you can download and install the patch for Confluence 2.7.3 or 2.8.2 from our JIRA site – see issue CONF-12860.

Instruction on installing the patch can be found here.

> Our thanks to **Neeraj Jhanji** from Atlassian Partner ImaHima, who reported the copy and diff page issues to Atlassian. We fully support the reporting of vulnerabilities and we appreciate it when people work with us towards identifying and solving a problem.

Confluence Security Advisory 2008-10-14

In this advisory:

- Parameter Injection Vulnerability in Confluence
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

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- XSS Vulnerability in Various Confluence Actions and Plugins
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Privilege Escalation Vulnerability in Confluence Watches
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Privilege Escalation Vulnerability in Confluence Favourites
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

Parameter Injection Vulnerability in Confluence

Severity

Atlassian rates this vulnerability as **critical**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a flaw which would allow a malicious user (hacker) to inject their own values into a Confluence request by adding parameters to the URL string. This would allow a hacker to bypass Confluence's security checks and perform actions that they are not authorised to perform.

Risk Mitigation

To address the issue, you should upgrade Confluence as soon as possible or follow the patch instructions below. If you judge it necessary, you can block all untrusted IP addresses from accessing Confluence.

Vulnerability

A hacker can design a URL string containing parameters which perform specific actions on the Confluence server, bypassing Confluence's security checks. This is because Confluence does not adequately sanitise user input before applying it as an action on the server.

Exploiting this issue could allow an attacker to access or modify data and compromise the Confluence application.

The following Confluence versions are vulnerable: All versions from **1.3 to 2.9.1**.

Fix

This issue has been fixed in Confluence 2.9.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.9.2, a patch is available that will work with any affected version of Confluence. You can download and install the patch from on our JIRA site. For more information, please refer to CONF-13092.

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XSS Vulnerability in Various Confluence Actions and Plugins

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security flaws which may affect Confluence instances in a public environment. The flaws are all XSS (cross-site scripting) vulnerabilities in various Confluence actions. Each vulnerability potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

A hacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar. The rogue JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Confluence Actions	Affected Confluence Versions	More Details	Reporter (If Not Atlassian)
View children via the Pagetree plugin (bundled with Confluence)	2.8.0 to 2.9.1 inclusive	CONF-13043	Thomas Jaehnel
Update bookmark via the Social Bookmarking plugin (bundled with Confluence)	2.6.0 to 2.9.1 inclusive	CONF-13041	Thomas Jaehnel
Build RSS feed	2.0 to 2.9.1 inclusive	CONF-13042	Thomas Jaehnel
Search via Search macro	All versions from 1.0 to 2.9.1 inclusive	CONF-13040	Thomas Jaehnel
Search	All versions from 1.0 to 2.9.1 inclusive	CONF-12944	

Fix

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These issues have been fixed in Confluence 2.9.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.9.2, you can download and install the patches provided on our JIRA site. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

> Our thanks to **Thomas Jaehnel** of **OPTIMAbit**, who reported most of the XSS vulnerabilities listed above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Privilege Escalation Vulnerability in Confluence Watches

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a flaw which would allow an unauthorised user to add a Confluence page to the list of pages they are watching, even if the user does not have permission to view that page. Under some circumstances, the unauthorised user may thus have access to information they are not authorised to see.

Risk Mitigation

This flaw does not allow the unauthorised user to update the page, but it may give the user access to information that they do not have permission to see.

Vulnerability

An unauthorised user can manipulate the HTTP request, so that it adds a watch to a page which the user does not have permission to view. The page then appears in the user's list of watched pages, displaying the page title and the corresponding space name. In this way, the user can bypass Confluence's permission checks and gain access to information they are not authorised to see.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.9.1**.

Fix

This issue has been fixed in Confluence 2.9.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.9.2, you can download and install the patches provided on our JIRA site. For more information, please refer to CONF-13039.

> Our thanks to **Thomas Jaehnel** of **OPTIMAbit**, who reported the vulnerability listed above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Privilege Escalation Vulnerability in Confluence Favourites

Severity

Atlassian rates this vulnerability as **moderate**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

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We have identified and fixed a flaw which would allow an unauthorised user to add a Confluence page to their list of favourites, even if the user does not have permission to view that page. Under some circumstances, the unauthorised user may thus have access to information they are not authorised to see.

Risk Mitigation

This flaw does not allow the unauthorised user to update the page, and it gives the user only very limited access to the information they do not have permission to see.

Vulnerability

An unauthorised user can manipulate the HTTP request, so that it marks as 'favourite' a page which the user does not have permission to view. The page is then added to the number of favourites for the user. The user cannot see the page title or content, but can see that the favourite count has been incremented.

The following Confluence versions are vulnerable: All versions from **1.0 to 2.9.1**.

Fix

This issue has been fixed in Confluence 2.9.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.9.2, you can download and install the patches provided on our JIRA site. For more information, please refer to CONF-13044.

> Our thanks to **Thomas Jaehnel** of **OPTIMAbit**, who reported the vulnerability listed above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Confluence Security Advisory 2008-12-03

In this advisory:

- XSS Vulnerability in Various Confluence Actions
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- Users can View a List of All Attachments by Supplying an Edited URL
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Various Confluence Actions

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security flaws which may affect Confluence instances in a public environment. The flaws are all XSS (cross-site scripting) vulnerabilities in various Confluence actions. Each

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vulnerability potentially allows a malicious user (hacker) to embed their own JavaScript into a Confluence page.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

A hacker can inject their own JavaScript into various Confluence URLs — see the table below for the affected functional areas. A URL may be invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The URL can also be invoked by simply entering it into the browser address bar. If rogue JavaScript is injected into such a URL, the JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Affected Confluence Functionality	Affected Confluence Versions	Fix Availability	More Details	Reporter (If Not Atlassian)
Handling of error messages. (Vulnerability in the DWR code library used by Confluence.)	2.7.3 to 2.9.2 inclusive	2.9.2 and 2.10	CONF-11808	Bjoern Froebe
Attachments macro.	2.8 to 2.9.2 inclusive	2.8.2, 2.9.2 and 2.10**	CONF-13713	
Uploading of attachments.	2.6 to 2.9.2 inclusive	2.8.2, 2.9.2 and 2.10	CONF-13717	
Inserting images as thumbnails.	2.8 to 2.9.2 inclusive	2.8.2, 2.9.2 and 2.10	CONF-13625	
Log events listed in the Confluence 500 error page.	2.9 to 2.9.2 inclusive	2.10 only	CONF-13584	
Wiki Markup link rendering.	2.7 to 2.9.2 inclusive	2.7.x, 2.8.x, 2.9.x, 2.10	CONF-13451	

** The patch for CONF-13717 also addresses the bug in CONF-13736.*
*** To fix this issue, please upgrade your Attachments plugin to the latest version. This plugin is available for Confluence 2.8.2, 2.9.2 and 2.10, via the Confluence Plugin Repository.*

Fix

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These issues have been fixed in Confluence 2.10 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.10, you can download and install the patches provided on our JIRA site. You will need to upgrade to the latest point release for the major version of Confluence that you are running (e.g. if you are running Confluence 2.8, you will need to upgrade to version 2.8.2) and then apply the patches. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

Please note that one of the issues can **only be fixed by upgrading to Confluence 2.10**. Please see the table above for details.

> Our thanks to **Bjoern Froebe**, who reported one of the XSS vulnerabilities listed above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Users can View a List of All Attachments by Supplying an Edited URL

Severity

Atlassian rates this vulnerability as **medium**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw which allows a user to view the list of all attachments for all pages in a Confluence instance, regardless of space-level or page-level permissions.

While the user cannot open the files, a range of metadata is available for viewing, including file name, the page that the file is attached to, the creator, and the creation and last-modified date of the attachment.

Risk Mitigation

If you judge it necessary, you can disable anonymous access to your wiki until you have applied the necessary patch or upgrade.

Vulnerability

If a user removes the space key from the URL while viewing attachments for a space, Confluence will display the full list of all attachments for all spaces. For more details, please refer to CONF-13874.

Fix

These issues have been fixed in Confluence 2.10 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 2.10, you can download and install the patches provided in the JIRA issue, CONF-13874. You will need to upgrade to the latest point release for the major version of Confluence that you are running (e.g. if you are running Confluence 2.8, you will need to upgrade to version 2.8.2) and then apply the patch.

> Our thanks to **Matthew Goonan**, who reported this vulnerability. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Confluence Security Advisory 2009-01-07

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In this advisory:

- Content Overwrite Vulnerability in the Office Connector Plugin
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

Content Overwrite Vulnerability in the Office Connector Plugin

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified a risk that makes it possible for users with read-only access to a Confluence wiki space to modify its contents via the document import feature of the Office Connector plugin. This issue, however, does not expose restricted content on a Confluence wiki space to unauthorised users.

Risk Mitigation

Please see the 'Fix' section below. If you cannot apply the fix immediately, you can consider taking one or more of the following steps:

- Disable the whole Office Connector plugin, as explained here.
- If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade.
- For even tighter control, you could restrict access to trusted groups.

Vulnerability

The Office Connector plugin was first bundled in Confluence version 2.10.0. Hence, this vulnerability affects Confluence **2.10.0** where the Office Connector Plugin is enabled. Additionally, this plugin is compatible with all versions of Confluence **from 2.3.0** onwards. Hence, if you have installed the plugin, this vulnerability will affect your Confluence instance.

Fix

Please download and install the latest version of the Office Connector plugin via the Confluence Plugin Repository (instructions here). If you wish to install this plugin manually, you can download it from here.

Alternatively, install or upgrade to Confluence version 2.10.1. (See the release notes.) The Confluence 2.10.1 installation files can be downloaded from the download centre.

For more information, please refer to CONF-14014.

> Our thanks to **Justin Wong**, who reported this vulnerability. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Confluence Security Advisory 2009-02-18

In this advisory:

- HTTP Header Injection Flaw
  - Severity

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- Risk Assessment
- Risk Mitigation
- Vulnerability
- Fix

HTTP Header Injection Flaw

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.
An Advanced Warning of this Security Advisory published last week stated the severity of this vulnerability as **critical**. After further assessing the likelihood of attack, however, we have amended this to **high**.

Risk Assessment

We have identified and fixed a security flaw which may affect Confluence instances in a public environment. This flaw is an HTTP header injection vulnerability in the Seraph web framework that is used by Confluence. This potentially allows a malicious user (attacker) to modify the HTTP response to insert malicious code. An attacker could present a modified URL to users (e.g. disguised in an email message). If any user clicks the URL, the malicious code would be executed in the user's session.

- The attacker may take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker could also gain control over the underlying system, based on the privileges of the user whose session cookie has been stolen.
- The attacker could redirect the user to undesirable web sites. This is potentially damaging to your company's reputation.

Atlassian recommends that you upgrade to Confluence 2.10.2 to fix the vulnerabilities described below.

Risk Mitigation

We strongly recommend either patching or upgrading your Confluence installation to fix this vulnerability. Please see the 'Fix' section below.

Alternatively, you may consider taking the following step, although the time required to fix this vulnerability and the extent of its effectiveness will depend on your application server running Confluence and its configuration:

- Consult the vendor of your application server to see whether your application server is immune to header injection vulnerabilities or has configuration options to prevent such attacks. For example, the Coyote (HTTP) connector in Tomcat version 5.5 and later is immune to header injection attacks, as acknowledged in this reference.
  Technical note: In your application server, header injection vulnerabilities can be mitigated if the setHeader(), addHeader(), and sendRedirect() methods in the HttpServletResponse class have their parameters properly checked for header termination characters.
  You may wish to forward this technical note to the vendor of your application server to help them assess the vulnerability of your application server to header injection attacks.

Vulnerability

All versions of Confluence prior to 2.10.2 are vulnerable to this security flaw.

Fix

The fix updates the Seraph framework to a version which correctly encodes and validates redirect URLs before sending them back to the user.

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To patch your existing installation of Confluence, please refer to CONF-14275. This JIRA issue contains the downloadable patch file and instructions on how to patch your existing Confluence installation.

Alternatively, install or upgrade to Confluence version 2.10.2. (See the release notes.) The Confluence 2.10.2 installation files can be downloaded from the download centre.

For more information, please refer to CONF-14275.

Confluence Security Advisory 2009-04-15

In this advisory:

- XSS Vulnerability in Various Confluence Macros
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- HTTP Header Injection Flaw with Attachment Filenames
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Various Confluence Macros

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed two security flaws which may affect Confluence instances in a public environment. These flaws are all cross-site scripting (XSS) vulnerabilities in Confluence's Index and Widget Macros. Each vulnerability potentially allows a malicious user (attacker) to embed their own JavaScript into a Confluence page, which will be executed when the page is rendered.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix this vulnerability. Please see the 'Fix' section below.

Alternatively if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

You could also temporarily disable the **Widget Connector** plugin and the **Index Macro module of the Confluence Advanced Macros** plugin until you have applied the necessary patch or upgrade. Be aware, however, that this will cause any occurrence of these macros on existing pages or blogs in your Confluence site

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to render with 'Unknown Macro' indications.

Vulnerability

All versions of Confluence prior to 2.10.3 are vulnerable to this security flaw.

Fix

The fixes include an update to the Index Macro, such that it correctly renders content on the page and an update to the Widget Macro, such that it correctly encodes all parameters passed to it.

To patch your existing installation of Confluence, please refer to CONF-14753 for the Index Macro and CONF-14337 for the Widget Macro. These JIRA issues contain the downloadable patch files and instructions on how to patch your existing Confluence installation.

Alternatively, install or upgrade to Confluence version 2.10.3. (See the release notes.) The Confluence 2.10.3 installation files can be downloaded from the download centre.

For more information, please refer to CONF-14753 and CONF-14337.

> Our thanks to **Igor Minar**, who reported one of the XSS vulnerabilities listed above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

HTTP Header Injection Flaw with Attachment Filenames

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security flaw with attachment filenames. This vulnerability could lead to an HTTP Header Injection attack through the upload of attachments with modified filenames designed to exploit this flaw. An attacker could insert malicious code into the HTTP response, which would be executed in the user's session.

- The attacker may take advantage of this flaw to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker could also gain control over the underlying system, based on the privileges of the user whose session cookie has been stolen.
- The attacker could redirect the user to undesirable web sites. This is potentially damaging to your company's reputation.

Risk Mitigation

We strongly recommend either patching or upgrading your Confluence installation to fix this vulnerability. Please see the 'Fix' section below.

If you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Alternatively, you may consider taking the following step, although the time required to fix this vulnerability and the extent of its effectiveness will depend on your application server running Confluence and its configuration:

- Consult the vendor of your application server to see whether your application server is immune to header injection vulnerabilities or has configuration options to prevent such attacks. For example, the Coyote (HTTP) connector in Tomcat version 5.5 and later is immune to header injection attacks, as

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acknowledged in this reference.
Technical note: In your application server, header injection vulnerabilities can be mitigated if the setHeader(), addHeader(), and sendRedirect() methods in the HttpServletResponse class have their parameters properly checked for header termination characters.
You may wish to forward this technical note to the vendor of your application server to help them assess the vulnerability of your application server to header injection attacks.

Vulnerability

All versions of Confluence prior to 2.10.3 are vulnerable to this security flaw.

Fix

The fix includes a new header-injection prevention filter in Confluence, which ensures attachment filenames or any other user-provided data is correctly encoded before being included in HTTP headers.

To patch your existing installation of Confluence, please refer to CONF-14704. This JIRA issue contains the downloadable patch files and instructions on how to patch your existing Confluence installation.

Alternatively, install or upgrade to Confluence version 2.10.3. (See the release notes.) The Confluence 2.10.3 installation files can be downloaded from the download centre.

For more information, please refer to CONF-14704.

Confluence Security Advisory 2009-06-01

In this advisory:

- XSS Vulnerability in Various Confluence Actions and Macros
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Various Confluence Actions and Macros

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security flaws which may affect Confluence instances in a public environment. These are cross-site scripting (XSS) that affect various Confluence page/blog features and functions.

- The hacker might take advantage of the flaw to steal other users' session cookies or other credentials, by sending the credentials back to the hacker's own web server.
- The hacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

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Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

A hacker can inject their own JavaScript into various Confluence URLs — see the table below for the affected functional areas. A URL may be invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The URL can also be invoked by simply entering it into the browser address bar. If rogue JavaScript is injected into such a URL, the JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Affected Confluence Functionality	Affected Confluence Versions	Fix Availability	More Details
Concurrent page edit message	All versions (1.0 to 2.10.3 inclusive)	2.9.2 and 2.10.3	CONF-15883
Gallery Macro (Confluence Advanced Macros Plugin)	All versions (1.0 to 2.10.3 inclusive)	2.10.3	CONF-15376
View File Macro (Office Connector Plugin)	2.10.0 to 2.10.3 inclusive *	2.10.3	CONF-15402
Instant Messenger Macro	All versions (1.0 to 2.10.3 inclusive)	2.8.2, 2.9.2 and 2.10.3	CONF-15397
Contributors Macro	2.3 to 2.10.3 inclusive	2.9.2 and 2.10.3	CONF-15399
JIRA Issues Macro	All versions (1.0 to 2.10.3 inclusive)	2.10.3	CONF-15754

* This vulnerability may be present in earlier Confluence versions with the Office Connector plugin installed.

Fix

These issues have been fixed in Confluence 3.0 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0, you can download and install the patches provided on our JIRA site. You will need to upgrade to the latest point release for the major version of Confluence that you are running (e.g. if you are running Confluence 2.9, you will need to upgrade to version 2.9.2) and then apply the patches. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

Confluence Security Advisory 2009-06-16

In this advisory:

- Page Content Vulnerabilities
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability

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- Fix

Page Content Vulnerabilities

> If you have already upgraded to Confluence 3.0, then you are not affected by the vulnerabilities described on this page and there is no need to take any further action.

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed two security vulnerabilities which may affect Confluence instances in a public environment. Both of these fixes are associated with a tightening of user access restrictions when either viewing specific page content or adding new page content.

The first of these vulnerabilities allows a user without permission to view a given page, to view the contents of any files attached to that page using the view file macro. This assumes that the user has permission to edit or create another page within the Confluence site and knows the name of the file attached to the page they cannot view. For more information, please refer to the JIRA issue CONF-15809.

The second of these vulnerabilities allows users with space administrator permissions to import pages to a Confluence space. The security level of this function has been tightened to permit only users with the system administration permission to access it. For more information, please refer to CONF-15267.

Risk Mitigation

If you have not already upgraded to Confluence 3.0, then we recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

All versions of Confluence up to and including version 2.10.3 with the Office Connector plugin installed are affected by the first view file macro vulnerability.

All versions of Confluence 2.10.x are affected by the second page imports vulnerability.

Fix

These issues have been fixed in Confluence 3.0 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0, you can download and install the patches provided on our JIRA site. You will need to upgrade to the latest point release for the major version of Confluence that you are running (e.g. if you are running Confluence 2.10.0, you will need to upgrade to version 2.10.3) and then apply the patches. For more information, please refer to the specific JIRA issues shown below.

To download the patch to fix the first view file macro vulnerability, please refer to CONF-15809.

To download the patch to fix the second page import vulnerability, please refer to CONF-15267.

Confluence Security Advisory 2009-08-20

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In this advisory:

- Privilege Escalation Vulnerability in Profile Picture Handling
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- XSS Vulnerability in Various Page and Blog Post Features and Functions
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

Privilege Escalation Vulnerability in Profile Picture Handling

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified a privilege escalation vulnerability, which could provide an attacker with access to administrative areas and functions of Confluence when specifying a profile picture. Under some circumstances, the attacker could gain access to Confluence administrative functions that they are not authorised to use.

Risk Mitigation

To address the issue, you should upgrade to Confluence 3.0.1 as soon as possible or follow the patch instructions in the Fix section below. If you judge it necessary, you can disable public signup to your wiki until you have applied the necessary patch or have performed the upgrade. For even tighter control, you could also restrict access to trusted groups or additionally, disable anonymous access until your system is patched or upgraded.

Vulnerability

The profile picture handling feature in all versions of Confluence up to 3.0.0 are affected by this issue. However, the Form Token Handling mechanism available in Confluence 3.0.0 and later means that the administrative areas in these versions of Confluence cannot be compromised by this vulnerability.

Fix

This issue has been fixed in Confluence 3.0.1 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0.1 and you are running Confluence 2.10.x, you can download and install the patches provided on our JIRA site. We strongly recommend that you upgrade to the latest point release (2.10.3) before applying the patch. For more information, please refer to CONF-16141.

> Our thanks to **Elliot Kendall** of **Emory University**, who reported this vulnerability. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

XSS Vulnerability in Various Page and Blog Post Features and Functions

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Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of XSS vulnerabilities in various Confluence page/blog features and functions, which may affect Confluence instances in a public environment.

XSS vulnerabilities potentially allow a malicious user (attacker) to embed their own JavaScript into a Confluence page.

- The attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

An attacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar. The rogue JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Confluence action	Affected Confluence Versions	Fix Availability	More Details
Clicking a username link	3.0.0	3.0.0 and 3.0.1	CONF-15970
Moving pages between spaces	2.8 to 2.10.3 inclusive	2.10.x and 3.0.1	CONF-16019* CONF-16135*
Entering content into the WebDAV Configuration page	3.0.0 2.10.x with version 2.0 of the WebDAV plugin	2.10.x, 3.0.0 and 3.0.1	CONF-16136
Entering content into the PDF Export Stylesheet	3.0.0	3.0.0 and 3.0.1	CONF-16209

* Applying the patch for one of these issues fixes the other.

Fix

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These issues have been fixed in Confluence 3.0.1 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0.1, you can patch your existing installation by downloading and installing the patched files provided on our JIRA site. For the WebDAV plugin vulnerability, this would involve upgrading the version of the plugin. We strongly recommend that you upgrade to the latest point release of the major version of Confluence that you are running before applying the patches. For example, if you are running Confluence 2.10.1, you should upgrade to version 2.10.3 and then apply the patches. For more information, please refer to the specific JIRA issues shown in the table of vulnerabilities above.

Confluence Security Advisory 2009-10-06

In this advisory:

- Session Fixation Vulnerability
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix
- XSS Vulnerability in Various Confluence Macros
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

Session Fixation Vulnerability

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security vulnerability which may affect Confluence instances in a public environment. This vulnerability could lead to a session fixation attack, in which the malicious user (attacker) can gain access to a victim's Confluence resources whilst the victim is logged in to their Confluence user account.

The attacker does this by fixating (or setting) their session ID onto the victim's computer. While the victim is logged in, all the victim's privileges are associated with the attacker's session ID, effectively granting the attacker access to all of the Confluence data and resources accessible to the victim.

For more information about session fixation attacks, please refer to the following sources:

- Chris Shiflett's Security Corner article
- The Web Application Security Consortium's overview

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

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Vulnerability

All versions of Confluence prior to 3.0.2 are vulnerable to this security issue.

Fix

These issues have been fixed in Confluence 3.0.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0.2 and you are currently running Confluence version 2.10.x or 3.0.x, you can patch your existing installation by downloading the appropriate patch file attached to JIRA issue CONF-15108 and installing the patch file using the instructions provided in this JIRA issue.

> Our thanks to **Ben L Broussard** who reported this vulnerability. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

XSS Vulnerability in Various Confluence Macros

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Confluence Security. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security vulnerabilities which may affect Confluence instances in a public environment. These flaws are cross-site scripting (XSS) vulnerabilities in Confluence's pagetree, userlister and content by label macros. These XSS vulnerabilities potentially allow an attacker to embed their own JavaScript into a Confluence page.

- The attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

An attacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar. The rogue JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

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Confluence action	Affected Confluence Versions	Fix Availability	More Details
Pagetree Macro	2.8.0 – 3.0.1	2.10.0 – 3.0.2 inclusive	CONF-16651
Userlister Macro	2.6.0 – 3.0.1	2.10.0 – 3.0.2 inclusive	CONF-16644
Content by Label Macro	2.10.0 – 3.0.1	2.10.0 – 3.0.2 inclusive	CONF-15440

Fix

These issues have been fixed in Confluence 3.0.2 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.0.2, you can patch your existing installation by upgrading the plugins for these macros via the Confluence Plugin Repository to the version indicated in the JIRA issues listed in the vulnerability section (above).

Confluence Security Advisory 2009-12-08

In this advisory:

- XSS Vulnerability in Various Confluence Actions and Macros
  - Severity
  - Risk Assessment
  - Risk Mitigation
  - Vulnerability
  - Fix

XSS Vulnerability in Various Confluence Actions and Macros

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security vulnerabilities which may affect Confluence instances in a public environment. These flaws are cross-site scripting (XSS) vulnerabilities that could occur when creating a page or blog post in a personal space, using the `indexbrowser.jsp` form and when using the gallery macro.

- The attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the

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necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Vulnerability

An attacker can inject their own JavaScript into the Confluence actions listed in the table below. Each of the actions is invoked when a user performs a specific function in Confluence, such as clicking a link or a button. The actions can also be invoked by simply entering the URL into the browser address bar. The rogue JavaScript will be executed when a user invokes the URL.

For more details please refer to the related JIRA issue, also shown in the table below.

Confluence action	Affected Confluence Versions	Fix Availability	More Details
Page or blog post creation in a personal space	2.10 – 3.0.2	3.0.0 – 3.1 inclusive	CONF-17031
Using the `indexbrowser.jsp` form	All versions prior to and including 3.0.2	3.0.0 – 3.1 inclusive	CONF-17165
Gallery macro	2.9 – 3.0.2	3.0.0 – 3.1 inclusive	CONF-17361
Page tree and page tree search macros	2.9 – 3.0.2	2.8 – 3.1 inclusive	CONF-17967
Status updates tab of the user profile area	3.0.0 – 3.0.2	3.0.0 – 3.1 inclusive	CONF-17933

Fix

These issues have been fixed in Confluence 3.1 (see the release notes), which you can download from the download centre.

If you do not wish to upgrade to Confluence 3.1, you can patch your existing installation by upgrading the plugins for these macros via the Confluence Plugin Repository to the version indicated in the JIRA issues listed in the vulnerability section (above).

Confluence Security Advisory 2010-05-04

This advisory announces a number of security vulnerabilities in earlier versions of Confluence that we have found and fixed in Confluence 3.2.1. In addition to releasing Confluence 3.2.1, we also provide patches for the most important vulnerabilities mentioned. You will be able to apply these patches to older versions of Confluence. There will, however, be a number of security improvements in Confluence 3.2.1 that cannot be patched or backported. We recommend upgrading to Confluence 3.2.1 rather than applying the patches.

In this advisory:

- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
    - Changed behaviour in Confluence

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- XSS Vulnerability in Database Check Utility (Not Bundled with Confluence)
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- Unnecessary Exposure of and Access to Information
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
    - Changed Behaviour in Confluence
- General Tightening of the Confluence Security Model
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
    - Changed Behaviour in Confluence
- Available Patches and Plugin Upgrades
  - Step 1 of the Patch Procedure: Install the Patches
    - Applying the patch
  - Step 2 of the Patch Procedure: Upgrade your Plugins
  - Step 3 of the Patch Procedure: Remove the Database Check Utility if Previously Installed

XSS Vulnerabilities

Severity

Atlassian rates these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of security vulnerabilities which may affect Confluence instances in a public environment. These flaws are cross-site scripting (XSS) vulnerabilities exposed in the Confluence functions described in the table below.

- An attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to such an attacker's own web server.
- An attacker's text and script might be displayed to other people viewing the Confluence page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Vulnerability

We identified and fixed vulnerabilities in the Confluence features described in the table below.

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Confluence Feature	Affected Confluence Versions	Fix Availability	More Details	Severity
Index browser JSP (JavaServer Page)	2.7.0 – 3.2.0	3.2.1 and patch	CONF-19404	High
A JSP that provides an administrator with the location on the file system where the attachments for a given space are stored	2.8.3 – 3.2.0	3.2.1 and patch	CONF-19404	High
A JSP that allows and administrator to reset null emails addresses to dummyvalue@nowhere.org	2.8.3 – 3.2.0	3.2.1 and patch	CONF-19404	High
Colour scheme settings	3.1.2 – 3.2.0	3.2.1 and patch	CONF-19384	High
Error messages	2.7.0 – 3.2.0	3.2.1 and patch	CONF-19390 and CONF-19402	High
Searching Confluence	2.7.4 – 3.2.0	3.2.1 and patch	CONF-19382	High
Attachment upload	3.0.2 – 3.2.0	3.2.1 and patch	CONF-19388	High
Content rendering	3.0.0 – 3.2.0	3.2.1 and patch	CONF-19441	High
Advanced Macros plugin	3.1.0 – 3.2.0	3.2.1 and plugin upgrade	CONF-19403	High
Social Bookmarking plugin	3.0.0 – 3.2.0	3.2.1 and plugin upgrade	CONF-19381	High

Risk Mitigation

We recommend either patching or upgrading your Confluence installation to fix these vulnerabilities. Please see the 'fix' section below.

Alternatively, if you are not in a position to upgrade or patch immediately and you judge it necessary, you can disable public access (such as anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Fix

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Confluence 3.2.1 fixes all of these issues. See the release notes. You can download Confluence 3.2.1 from the download centre.

If you cannot upgrade to Confluence 3.2.1, you can patch your existing installation using the patches and plugin upgrades listed below. We strongly recommend upgrading to 3.2.1 however, since it adds even more security features than the patches.

Changed behaviour in Confluence

We have removed the `indexbrowser.jsp` and the `viewdocument.jsp` pages that used to provide access to the Confluence index browser. Instead, if you need to see more details of the indexed pages in your Confluence site, you can download and run Luke. Luke is a development and diagnostic tool that accesses existing Lucene indexes and allows you to display and modify their content in several ways. See our document on content index administration.

> Our thanks to **Brett Porter** of **The Apache Software Foundation** and to **David Belcher** of **Research in Motion**, who reported some of the vulnerabilities mentioned above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

XSS Vulnerability in Database Check Utility (Not Bundled with Confluence)

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Confluence Security.

Risk Assessment

We have identified and fixed a cross-site scripting (XSS) vulnerability in the Atlassian database check utility that some customers may have installed. The utility is a JSP file, supplied as an attachment to a documentation page .

Note that this utility is not bundled with Confluence. This vulnerability applies to you only if you have downloaded and installed the JSP.

Vulnerability

An attacker can inject their own JavaScript when invoking the database check utility. The rogue JavaScript will be executed when a user invokes the URL. For more details, please refer to CONF-19406.

Risk Mitigation

If you have previously downloaded and installed the `testdatabase.jsp` utility from the documentation page, you should now remove the `testdatabase.jsp` file from your `<confluence-install>\confluence` directory.

When you need to use the utility again, you can download the updated version from the same documentation page.

Fix

If you have previously downloaded and installed the `testdatabase.jsp` utility from the documentation page, you should now remove the `testdatabase.jsp` file from your `<confluence-install>\confluence` directory.

When you need to use the utility again, you can download the updated version from the same documentation

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page.

> **This fix is not part of Confluence 3.2.1**
>
> Because the JSP file is not shipped with the Confluence installation, there is no patch for this vulnerability and there is no fix for it in Confluence 3.2.1. Please check your installation and remove or update the JSP if present.

Unnecessary Exposure of and Access to Information

Severity

Atlassian rates these vulnerabilities as **high** and **moderate**, according to the scale published in Confluence Security.

Risk Assessment

We have identified a number of areas where Confluence exposes an unnecessary amount of information that may be useful to an attacker if such an attacker gained access to the information.

Vulnerability

We have identified a number of areas where Confluence exposes an unnecessary amount of information, including sensitive information such as usernames and passwords. If an attacker gains access to such information, it may allow such an attacker to gain access to administrative areas and functions of Confluence that they are not authorised to use. Details of each vulnerability are in the table below.

For more details please refer to the related JIRA issues, also shown in the table below.

Confluence action	Affected Confluence Versions	Fix Availability	More Details	Severity
Support request form	3.1.0 – 3.2.0	3.2.1 only	The Confluence support request form automatically generates a zip file containing system information and log files, and submits the file to a given email address along with the support request. The zip file includes configuration files containing usernames, passwords and license details. See CONF-19391	High

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Support request form	2.7.0 – 3.2.0	3.2.1 only	The Confluence support request form offers a 'CC' email address, allowing the support request and all attached information to be sent to any email address. In addition, it is also possible to set the default email address to any email address, via the Confluence Administration Console. See CONF-19392	High
XML site backup	2.7.0 – 3.2.0	3.2.1 only	It is possible to download an XML backup of the Confluence site from the Confluence Administration Console. See CONF-19393	High
Daily site backup	2.7.0 – 3.2.0	3.2.1 only	The path to the daily site backup is configurable via the Confluence Administration Console. It is possible to set the daily backup path and (partial) name through the web UI. This allows an attacker to put the backup in a location that is served by the application server. See CONF-19397	Moderate

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SOAP and XML-RPC APIs	2.7.0 – 3.2.0	3.2.1 only	The SOAP and XML-RPC APIs give too much information when returning an error about an incorrect login. See CONF-19398	High
Information about Confluence administrators	2.7.0 – 3.2.0	3.2.1 only	The list of Confluence administrators is accessible via a URL and shows the username, full name and email address of all administrators. See CONF-19395	Moderate

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities. Please see the 'fix' section below.

Alternatively, if you are not in a position to upgrade or patch immediately, consider applying these measures:

- Control the access to your administrator accounts, as described in our document on best practices for configuring Confluence security.
- Disable access to the SOAP and XML-RPC APIs, if these remote APIs are not required. (Remote API access is disabled by default.) See the page about enabling remote APIs.
- Manually remove the list of Confluence administrators that is accessible via a URL, by editing the relevant Velocity template file as follows:
    1. Edit the `administrators.vm` file, located in `{confluence-install}/confluence` for standalone installations, or at the root of the web app for WAR installations.
    2. Replace the content with a message that you would like to be displayed whenever someone accesses this URL. For example:

```
<html>
  <head>
    <title>$action.getText("title.administrators")</title>
  </head>
  <body>
    The list of Confluence administrators is no longer available. If
you would like to contact an administrator, please email admins at
example dot com.
  </body>
</html>
```

    3. Save the file. (There is no need to restart Confluence.)

Fix

Confluence 3.2.1 fixes these issues. See the release notes. You can download Confluence 3.2.1 from the downl

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oad centre.

Changed Behaviour in Confluence

In order to fix these problems, we have changed Confluence's behaviour as follows:

- We have removed all license, username and password information from the zip file generated by the Confluence support request form.
- It is no longer possible to specify a 'CC' email address on the Confluence support request form.
- By default, it is no longer possible to specify a site support email address in the 'General Configuration' section of the Confluence Administration Console. Administrators can restore this functionality by updating the `confluence.cfg.xml` file found in the Confluence Home Directory. Confluence now recognises a new property in this configuration file, called `admin.ui.allow.site.support.email`. If the value of the property is 'true', it will be possible to specify a site support email address via the Confluence Administration Console. If the value of this property is 'false' or the property is not present in the file, the email address is not configurable. By default in Confluence 3.2.1 and later, the value is 'false'.
- By default, the path to the daily site backup is no longer configurable via the Confluence Administration Console. Confluence now recognises a new property called `admin.ui.allow.daily.backup.custom.location` in the `confluence.cfg.xml` file. If the value of this property is 'true', the administrator can change the daily backup path. If the value of this property is 'false' or the property is not present in the file, the backup path is not configurable. By default in Confluence 3.2.1 and later, the value is 'false'.
- By default, it is no longer possible to download an XML backup of the Confluence site from the Confluence Administration Console. Instead, you need access to the Confluence server machine in order to retrieve the XML site backup file. Confluence now recognises a new property called `admin.ui.allow.manual.backup.download` in the `confluence.cfg.xml` file. If the value of this property is 'true', the Administration Console provides an option to download the XML site backup file. If the value of this property is 'false' or the property is not present in the file, the XML download is not available from the Administration Console. By default in Confluence 3.2.1 and later, the value is 'false'.
- On invalid login attempts, the SOAP and XML-RPC APIs no longer give away the specific information that the user does not exist or that the password is invalid.
- The `administrators.action` URL no longer opens a page showing the list of Confluence administrators. Instead, the URL will now present a form which you can use to email all the administrators of the site. This is preferable since it does not give the user any information about who these administrators are. See our documentation on configuring the administrator contact page.

General Tightening of the Confluence Security Model

Severity

Atlassian rates these vulnerabilities as **high** and **moderate**, according to the scale published in Confluence Security.

Risk Assessment

We have improved the security of the following areas in Confluence:

- Prevention of brute force attacks by imposing a maximum number of repeated login attempts.
- Handling of decorator layouts.

Vulnerability

We have identified and fixed a problem where Confluence allows an unlimited number of repeated login attempts, potentially opening Confluence to a brute force attack. We have also improved the security around the handling of decorator layouts. Details of each improvement are in the table below.

For more details please refer to the related JIRA issues, also shown in the table below.

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Confluence action	Affected Confluence Versions	Fix Availability	More Details	Severity
Site and space decorator layouts	All versions up to and including 3.2.0	3.2.1 and patch	The BootstrapManager exposed in site and space layout templates should be read only. See CONF-19401	High
Login	All versions up to and including 3.2.0	3.2.1 only	Confluence does not set a maximum to the number of repeated login attempts. This makes Confluence vulnerable to a brute force attack. See CONF-19396	Moderate

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities. Please see the 'fix' section below.

Alternatively, if you are not in a position to upgrade immediately, you can patch your existing installation using the patches listed below. The patch will fix the problem with the decorator layouts.

You can prevent brute force attacks by following our guidelines on using Fail2Ban to limit login attempts.

Fix

Confluence 3.2.1 fixes these issues. See the release notes. You can download Confluence 3.2.1 from the download centre.

Alternatively, if you are not in a position to upgrade immediately, you can patch your existing installation using the patches listed below. The patch will fix the problem with the decorator layouts.

Changed Behaviour in Confluence

In order to fix these problems, we have changed Confluence's behaviour as follows:

- We have improved the security in the way Confluence handles decorator layouts. The BootstrapManager is now read only.
- After three failed login attempts, Confluence will display a Captcha form asking the user to enter a given word when attempting to log in again. This will prevent brute force attacks via the login screen. In addition, after three failed login attempts via the XML-RPC or SOAP API, an error message will be returned instructing the user to log in via the web interface. Captcha will automatically be activated when they attempt this login.

Available Patches and Plugin Upgrades

If for some reason you cannot upgrade to Confluence 3.2.1, you can apply the following patches and plugin

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upgrades to fix the most pressing vulnerabilities described in this security advisory.

Step 1 of the Patch Procedure: Install the Patches

Patches are available for Confluence 3.2.0, 3.1.2, 3.0.2, 2.10.4, 2.9.3 and 2.8.3. You need to upgrade to the specified bug-fix release of the relevant major version before applying the patches. For example, if your version is Confluence 3.0.0, first upgrade to 3.0.2 and then apply the relevant patch.

The available patches address the following issues:

- XSS in search (CONF-19382).
- XSS in attachment upload (CONF-19388).
- XSS in the index browser JSP (CONF-19404).
- XSS in the JSP that provides an administrator with the location on the file system where the attachments for a given space are stored (CONF-19404).
- XSS in the JSP that allows an administrator to reset null emails addresses (CONF-19404).
- XSS in colour scheme settings (CONF-19384).
- XSS in error messages (CONF-19390 and CONF-19402).
- XSS in content rendering (CONF-19441).
- Secure handling of site and space decorator layouts (CONF-19401).

Each patch covers all of the above issues, and is applicable to the specific version of Confluence. To install the patch, download the appropriate version and follow the instructions below.

Your Confluence Version	File
3.2.0	confluence-project-3.2.0-stable.zip
3.1.2	confluence-project-3.1-stable.zip
3.0.2	confluence-project-3.0-stable.zip
2.10.4	confluence-project-2.10-stable.zip
2.9.3	confluence-project-2.9-stable.zip
2.8.3	confluence-project-2.8-stable.zip

Applying the patch

If you are using the Standalone distribution of Confluence:

1. Make a backup of the `<confluence_install_dir>/confluence/` directory.
2. Download the `confluence-x-patch.zip` file from the location given in the table above, for your version of Confluence.
3. Expand the zip file into `<confluence_install_dir>/confluence/`, overwriting the existing files in that location.
4. Restart Confluence.

If you are using the WAR distribution of Confluence:

1. Make a backup of the `<confluence_exploded_war>/confluence/ directory`.
2. Download the `confluence-x-patch.zip` file from the location given in the table above, for your version of Confluence.
3. Expand the zip file into `<confluence_exploded_war>/confluence/`, overwriting the existing files in that location.

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4. Run '`build.sh clean`' on UNIX, or '`build.bat clean`' on Windows.
5. Run '`build.sh`' on UNIX or '`build.bat`' on Windows.
6. Redeploy the Confluence web app into your application server.

Step 2 of the Patch Procedure: Upgrade your Plugins

Two of the above vulnerabilities exist in plugins and are therefore not included in the patch. To fix these vulnerabilities, you will need to upgrade the affected plugin to get the fixed version. You can upgrade the plugins in the normal manner, via the **Confluence Plugin Repository**. Please refer to the documentation for more details on installing plugins.

1. If you are running **Confluence 3.1.0 or later**, you will need to install the latest version of the Confluence Advanced Macros plugin. Earlier versions of Confluence are not affected and therefore do not need an upgraded plugin.
2. If you are running **Confluence 3.0.0 or later**, you will need to install the latest version of the Social Bookmarking plugin. Earlier versions of Confluence are not affected and therefore do not need an upgraded plugin.

Step 3 of the Patch Procedure: Remove the Database Check Utility if Previously Installed

If you have previously downloaded and installed the `testdatabase.jsp` utility from the documentation page, you should now remove the `testdatabase.jsp` file from your `<confluence-install>\confluence` direct ory. See above for more details of this utility.

Confluence Security Advisory 2010-06-02

This security advisory announces a vulnerability in the Confluence Mail Page plugin that may expose a Confluence site to XSS (cross-site scripting) attacks, if it is enabled (note, the Confluence Mail Page plugin is disabled by default). If you do not have this plugin enabled, your site will not be affected. However, we recommend that you still read the advisory below.

In this advisory:

- XSS Vulnerability in Confluence Mail Page Plugin
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix

XSS Vulnerability in Confluence Mail Page Plugin

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a security vulnerability which may affect Confluence instances in a public environment. This flaw is a cross-site scripting (XSS) vulnerability that could occur if you have the Confluence Mail Page plugin enabled. The Confluence Mail Page plugin is bundled with Confluence, although it is disabled by default.

- The attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to the attacker's own web server.
- The attacker's text and script might be displayed to other people viewing the Confluence page. This is

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potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Vulnerability

An attacker can execute their own JavaScript when a user enters a custom URL into the browser address bar (e.g. the user clicks a crafted link in an email). The rogue JavaScript will be executed when the user invokes the URL. For more details, please refer to CONF-19802.

Risk Mitigation

We recommend installing the updated Confluence Mail Page plugin into your Confluence installation to fix this vulnerabilities. Please see the 'Fix' section below.

Alternatively, if you are not in a position to undertake this immediately and you judge it necessary, you can disable the Confluence Mail Page plugin (note, the plugin is disabled by default). You may also wish to disable public access (e.g. anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

Fix

These issues have been fixed in the latest version (v1.10) of the Confluence Mail Page plugin, which you can download from the Atlassian Plugin Exchange. Installation instructions are available on the plugin documentation page.

Please note, version 1.10 of the Confluence Mail Page plugin will only work with Confluence 3.2. You will need to upgrade to Confluence 3.2 before installing the updated plugin.

Confluence Security Advisory 2010-07-06

This advisory announces a number of security vulnerabilities in earlier versions of Confluence that we have found and fixed in Confluence 3.3. In addition to releasing Confluence 3.3, we also provide patches (in the form of plugin upgrades) for the vulnerabilities mentioned. You will be able to apply these plugin upgrades to older versions of Confluence. There will, however, be a number of security improvements in Confluence 3.3 that cannot be patched or backported. We recommend upgrading to Confluence 3.3 rather than applying the plugin upgrades.

In this advisory:

- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
    - Option 1 (Recommended): Upgrade to Confluence 3.3
    - Option 2: Upgrade or Disable the Affected Plugins

XSS Vulnerabilities

Severity

Atlassian rates the severity level of these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

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Risk Assessment

We have identified and fixed a number of cross-site scripting (XSS) vulnerabilities which may affect Confluence instances in a public environment. These vulnerabilities are exposed in the Confluence functions described in the table below.

- An attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to such an attacker's own web server.
- XSS vulnerabilities potentially allow an attacker to embed their own JavaScript into a Confluence page. An attacker's text and script might be displayed to other people viewing the page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Vulnerability

We have identified and fixed vulnerabilities in the Confluence features described in the table below.

Confluence Feature	Affected Confluence Versions	Issue Tracking
PDF export	3.1.0 – 3.2.1	CONF-20121
Clickr theme	2.7.0 – 3.2.1	CONF-20126
Tasklist macro	2.8.0 – 3.2.1	CONF-20119
Contributors plugin (Contributors macro and Contributors Summary macro)	3.0.0 – 3.2.1	CONF-20122 CONF-20125

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities. Please see the 'fix' section below.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can apply one or both of the following mitigations:

- Disable every one of the affected plugins, as listed below. You can disable plugins via the Confluence Administration Console. See our documentation on installing and configuring plugins.
- Disable public access (such as anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

In addition, please refer to our guidelines on best practices for configuring Confluence security. In particular, please read our guidelines on using Apache to limit access to the Confluence administration interface.

Fix

Please choose one of the options below that best suits your Confluence version and your ability to upgrade immediately.

Option 1 (Recommended): Upgrade to Confluence 3.3

We recommend that you upgrade to **Confluence 3.3**, which fixes all of the security issues reported in this

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advisory. See the Confluence 3.3 release notes. You can download Confluence 3.3 from the download centre.

Option 2: Upgrade or Disable the Affected Plugins

If you cannot upgrade your Confluence installation, you can upgrade or disable the affected plugins to fix the vulnerabilities described in this security advisory.

- You can upgrade the plugins in the normal manner, via the **Confluence Plugin Repository** or by manually uploading the JAR. Please refer to the documentation for more details on installing plugins.
- You can disable plugins via the Confluence Administration Console. See our documentation on installing and configuring plugins.

Affected Feature	Confluence Versions that Can Update the Plugin	Upgrade or Disable Plugin
PDF export plugin	3.1 – 3.3	If you cannot upgrade to Confluence 3.3: • If you are running Confluence 3.1.x or 3.2.x, you should install version 1.9 of the PDF Export plugin. • If you are running Confluence 3.0.2 or earlier, you do not need to take any action as these versions are not affected by the security flaw.
Clickr theme	3.2 – 3.3	If you cannot upgrade to Confluence 3.3: • If you are running Confluence 3.2.x, you should install version 2.10 of the Clickr Theme plugin. • If you are running Confluence 3.1.2 or earlier, you should **disable** the 'Clickr Theme' plugin.
Tasklist macro	3.1 – 3.3	If you cannot upgrade to Confluence 3.3: • If you are running Confluence 3.1.x or 3.2.x, you should install version 3.2.5.2 of the Dynamic Task List 2 plugin. • If you are running Confluence 2.8.x to 3.0.x, you should **disable** the 'Dynamic Task List 2' plugin. • If you are running Confluence 2.7.x or earlier, you do not need to take any action as these versions are not affected by the security flaw.

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Contributors plugin	3.0 – 3.3	If you cannot upgrade to Confluence 3.3: • If you are running Confluence 3.0.x to 3.2.x, you should install version 1.2.6 of the Contributors plugin. • If you are running Confluence 2.10.4 or earlier, you do not need to take any action as these versions are not affected by the security flaw.

Confluence Security Advisory 2010-08-17

This advisory announces a security vulnerability in Confluence 3.3 that we have found and fixed in Confluence 3.3.1. We recommend that you upgrade to Confluence 3.3.1 to fix this vulnerability.

In this advisory:

- Secure Administrator Session Vulnerability
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix

Secure Administrator Session Vulnerability

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a vulnerability in the Secure Administrator Sessions feature, introduced in Confluence 3.3, that allows it to be bypassed.

Vulnerability

If an attacker is able to gain access to a session with administrator privileges, they will be able to access all administrator functions without having to re-authenticate.

This vulnerability exists in **Confluence 3.3 only**.

See CONF-20508 for more details.

Risk Mitigation

We recommend upgrading your Confluence installation to fix these vulnerabilities. Please see the 'fix' section below.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public access (such as anonymous access and public signup) to your wiki until you have applied the necessary upgrade. For even tighter control, you could restrict access to trusted groups.

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Fix

Confluence 3.3.1 fixes this issue. See the release notes. You can download Confluence 3.3.1 from the download centre.

Confluence Security Advisory 2010-09-21

This advisory announces a number of security vulnerabilities in earlier versions of Confluence that we have found and fixed in Confluence 3.3.3. We recommend that you upgrade to Confluence 3.3.3 to fix these vulnerabilities.

In this advisory:

- Path Traversal Vulnerability in Various Confluence Actions
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- Configuration of Office Connector Temporary Storage Location
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- XSS Vulnerability in the Office Connector
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- XSRF Vulnerability in Confluence Mail Page Plugin
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- Available Patches and Plugin Upgrades
  - Step 1 of the Patch Procedure: Install the Patch
    - Applying the patch
  - Step 2 of the Patch Procedure: Upgrade your Plugins

Path Traversal Vulnerability in Various Confluence Actions

Severity

Atlassian rates this vulnerability as **critical**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank a vulnerability as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a path traversal vulnerability in various Confluence actions. By exploiting a path traversal vulnerability, attackers may be able to retrieve any file on the server that is running Confluence, based

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on the permissions of the user under which Confluence is running. Path traversal attacks are also called 'directory traversal' or 'dot-dot-slash' (../) attacks.

The degree to which a Confluence instance is vulnerable depends on a number of factors in the implementation of the instance. See the mitigation strategies below, for details of how you can reduce your vulnerability.

You can read more about path traversal attacks at Open Web Application Security Project (OWASP) and other places on the web.

Vulnerability

The path traversal vulnerability exists in various Confluence actions, in **all versions of Confluence up to and including 3.3.1**.

See CONF-20668 for issue tracking.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix this vulnerability.

Alternatively, if you are not in a position to upgrade immediately, please consider the following mitigation strategies:

- Make sure that you do not start Confluence from the root directory when starting Confluence automatically. Instead, start it from a reduced-scope directory such as the `{Confluence-installation}/bin` directory.
- Upgrade your Tomcat version to 6.0.26 or later. This is relevant if you are using a WAR distribution of Confluence in your own Tomcat server.
- If you are running Confluence under UNIX, you should run Confluence inside a `chroot` jail. See Best Practices for UNIX chroot() Operations from Steve Friedl.
- In addition, please refer to our guidelines on Tomcat security best practices. (This is a JIRA document but the principles apply to Confluence.) In particular, you should restrict the file access of the username under which Confluence is running.

Fix

Confluence 3.3.3 fixes this issue. See the release notes. You can download Confluence 3.3.3 from the download centre.

If you cannot upgrade to Confluence 3.3.3, you can patch your existing installation using the patches listed below.

> Our thanks to **Warren Leung** of **UCLA**, who reported this vulnerability. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Configuration of Office Connector Temporary Storage Location

Severity

Atlassian rates this vulnerability as **high**, according to the scale published in Severity Levels for Security Issues.

Risk Assessment

Earlier versions of Confluence allow the administrator to set the temporary storage location for the View File macro, part of the Office Connector. Provided an attacker has gained administrative access to the system in some way, they could then exploit this vulnerability to save malicious files onto the file system.

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Vulnerability

This vulnerability exists in the Office Connector configuration, made available to Confluence administrators via the Confluence Administration Console and the related Confluence action.

This vulnerability affects **versions of Confluence from 2.8 up to and including 3.3.1**, where the Office Connector is installed. Please note that the Office Connector is bundled in Confluence 2.10 and later.

See CONF-20669 for issue tracking.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix this vulnerability.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can choose one of the following mitigration strategies:

- Disable the Office Connector plugin. You can disable plugins via the Confluence Administration Console. See our documentation on installing and configuring plugins.
- Disable public access (such as anonymous access and public signup) to your wiki until you have applied the necessary upgrade. For even tighter control, you could restrict access to trusted groups.

In addition, please refer to our guidelines on best practices for configuring Confluence security.

Fix

Confluence 3.3.3 fixes this issue. Administrators must edit a properties file to configure the path. See the release notes for more information. You can download Confluence 3.3.3 from the download centre.

If you cannot upgrade to Confluence 3.3.3, you can patch your existing installation using the patches listed below.

XSS Vulnerability in the Office Connector

Severity

Atlassian rates the severity level of this vulnerability as **high**, according to the scale published in Severity Levels for Security Issues.

Risk Assessment

We have identified and fixed a cross-site scripting (XSS) vulnerability which may affect Confluence instances, including publicly available instances.

- An attacker might take advantage of the vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to such an attacker's own web server.
- XSS vulnerabilities potentially allow an attacker to embed their own JavaScript into a Confluence page. An attacker's text and script might be displayed to other people viewing the page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Vulnerability

The XSS vulnerability is exposed in the document import function of the Confluence Office Connector.

This vulnerability exists in **Confluence 3.3.1 only**, where the Office Connector is enabled. Please note that the Office Connector is bundled in Confluence.

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See CONF-20670 for issue tracking.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix this vulnerability.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable the Office Connector plugin. You can disable plugins via the Confluence Administration Console. See our documentation on installing and configuring plugins.

In addition, please refer to our guidelines on best practices for configuring Confluence security. In particular, please read our guidelines on using Apache to limit access to the Confluence administration interface.

Fix

Confluence 3.3.3 fixes this issue. See the release notes. You can download Confluence 3.3.3 from the download centre.

XSRF Vulnerability in Confluence Mail Page Plugin

Severity

Atlassian rates the severity level of this vulnerability as **high**, according to the scale published in Severity Levels for Security Issues.

Risk Assessment

We have identified and fixed a cross-site request forgery (XSRF) vulnerability which may affect Confluence instances, including publicly available instances.

An attacker might take advantage of the vulnerability to trick users into emailing the contents of restricted pages to an arbitrary address without their knowledge. An XSRF attack works by exploiting the trust that a site has for the user. If a user is logged in to Confluence and an attacker tricks their browser into making a request to a Confluence URL, then the task is performed as the logged in user.

You can read more about XSRF attacks at cgisecurity and other places on the web.

Vulnerability

The XSRF vulnerability is exposed in the Confluence Mail Page plugin.

This vulnerability exists in **versions of Confluence from 2.4 up to and including 3.3.1**, where the Mail Page plugin is enabled. Note that the Mail Page plugin is disabled by default. If you do not have this plugin enabled, your site will not be affected.

See CONF-20671 for issue tracking.

Risk Mitigation

We recommend that you upgrade your Confluence installation, or install the updated Confluence Mail Page plugin into your Confluence installation to fix this vulnerability.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable the Confluence Mail Page plugin. (Note that the plugin is disabled by default).

Fix

Confluence 3.3.3 fixes this issue. See the release notes. You can download Confluence 3.3.3 from the download

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centre.

The latest version (v1.12) of the Confluence Mail Page plugin also fixes this issue. You can download the plugin from the Atlassian Plugin Exchange. Please refer to the documentation for instructions on installing plugins.

Available Patches and Plugin Upgrades

If for some reason you cannot upgrade to Confluence 3.3.3, you can apply the following patches and plugin upgrades to fix the vulnerabilities described in this security advisory.

Step 1 of the Patch Procedure: Install the Patch

A patch is available for Confluence 3.2.1. (That is, the Confluence 3.2.1_01 distribution.) If you have Confluence 3.2.0, you need to upgrade to Confluence 3.2.1 before applying the patch.

The patch addresses the following issue:

- Path traversal vulnerability (CONF-20668).

Applying the patch

If you are using the Confluence 3.2.1 distribution:

1. Shut down Confluence.
2. Make a backup of the `<confluence_install_dir>/confluence/` directory.
3. Download the confluence-3.2.1-to-3.3.2-security-patch.zip file.
4. Expand the zip file into `<confluence_install_dir>/confluence/`, overwriting the existing files.
5. Restart Confluence.

If you are using the WAR distribution of Confluence:

1. Shut down Confluence.
2. Make a backup of the `<confluence_exploded_war>/confluence/ directory`.
3. Download the confluence-3.2.1-to-3.3.2-security-patch.zip file.
4. Expand the zip file into `<confluence_exploded_war>/confluence/`, overwriting the existing files.
5. Run '`build.sh clean`' on UNIX, or '`build.bat clean`' on Windows.
6. Run '`build.sh`' on UNIX or '`build.bat`' on Windows.
7. Redeploy the Confluence web app into your application server.
8. Restart Confluence.

Step 2 of the Patch Procedure: Upgrade your Plugins

Some of the above vulnerabilities exist in plugins and are therefore not included in the patch. To fix these vulnerabilities, you will need to upgrade the affected plugin to get the fixed version. You can upgrade the plugins in the normal manner, via the **Confluence Plugin Repository**. Please refer to the documentation for more details on installing plugins.

1. Install the latest version (v1.12) of the Mail Page plugin.
2. Install version 1.7.1 of the Office Connector plugin.

Confluence Security Advisory 2010-10-12

This advisory announces a number of security vulnerabilities in earlier versions of Confluence that we have found and fixed in Confluence 3.4. In addition to releasing Confluence 3.4, we also provide patches for the vulnerabilities mentioned below. You will be able to apply these patches to existing installations of Confluence 3.3.3. However, we recommend that you upgrade to Confluence 3.4 to fix these vulnerabilities.

In this advisory:

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- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
- Available Patches and Plugin Upgrades
  - Step 1 of the Patch Procedure: Install the Patch
  - Step 2 of the Patch Procedure: Upgrade the Affected Plugins

XSS Vulnerabilities

Severity

Atlassian rates the severity level of these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of cross-site scripting (XSS) vulnerabilities which may affect Confluence instances, including publicly available instances.

- An attacker might take advantage of an XSS vulnerability to steal other users' session cookies or other credentials, by sending the credentials back to such an attacker's own web server.
- XSS vulnerabilities potentially allow an attacker to embed their own JavaScript into a Confluence page. An attacker's text and script might be displayed to other people viewing the page. This is potentially damaging to your company's reputation.

You can read more about XSS attacks at cgisecurity, CERT and other places on the web.

Vulnerability

The table below describes the parts of Confluence affected by the XSS vulnerabilities.

Confluence Feature	Affected Confluence Versions	Issue Tracking
Space names	2.9 – 3.3.3	CONF-20740
Office Connector	3.0 – 3.3.3	CONF-20963
Tasklist macro	1.3 – 3.3.3	CONF-20964

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public access (such as anonymous access and public signup) to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

We also recommend that you read our guidelines on best practices for configuring Confluence security and using Apache to limit access to the Confluence administration interface.

Fix

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Confluence 3.4 fixes these issues. For a full description of this release, see the release notes. You can download Confluence 3.4 from the download centre.

If you cannot upgrade to Confluence 3.4, you can patch your existing installation using the patches listed below.

Available Patches and Plugin Upgrades

If for some reason you cannot upgrade to Confluence 3.4, you can apply the following patches and plugin upgrades to fix the vulnerabilities described in this security advisory.

Step 1 of the Patch Procedure: Install the Patch

A patch is available for Confluence 3.3.3.

The patch addresses the following issues:

- XSS vulnerability in space names (CONF-20740).
- XSS vulnerability in Office Connector (CONF-20963).

If you are using the Confluence distribution:

1. Shut down Confluence.
2. Make a backup of the `<confluence_install_dir>/confluence/` directory.
3. Download the confluence-3.3.3-to-3.4-security-patch.zip file.
4. Expand the zip file into `<confluence_install_dir>/confluence/`, overwriting the existing files.
5. Restart Confluence.

If you are using the WAR distribution of Confluence:

1. Shut down Confluence.
2. Make a backup of the `<confluence_exploded_war>/confluence/` directory.
3. Download the confluence-3.3.3-to-3.4-security-patch.zip file.
4. Expand the zip file into `<confluence_exploded_war>/confluence/`, overwriting the existing files.
5. Run '`build.sh clean`' on UNIX, or '`build.bat clean`' on Windows.
6. Run '`build.sh`' on UNIX or '`build.bat`' on Windows.
7. Redeploy the Confluence web app into your application server.
8. Restart Confluence.

Step 2 of the Patch Procedure: Upgrade the Affected Plugins

Some of the above vulnerabilities exist in plugins and are therefore not included in the patch. To fix these vulnerabilities, you will need to upgrade the affected plugins. You can upgrade the plugins in the normal manner, via the **Confluence Plugin Repository**. Please refer to the documentation for more details on installing plugins.

- Install the latest version (v3.3.1) of the Dynamic Tasklist 2 plugin.
- Install the latest version (v1.2.2) of the Documentation Theme plugin.

Confluence Security Advisory 2010-11-15

Security Vulnerability in Confluence Remote API

Severity

Atlassian rates the severity level of this vulnerability as **critical**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

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Risk Assessment

We have identified and fixed a vulnerability in the Remote API which affects Confluence instances, including publicly available instances. The Remote API allows an attacker to escalate user privileges, excluding the level of system administrator privileges.

Vulnerability

The table below describes the Confluence versions and the specific functionality affected by the RPC vulnerability.

Confluence Feature	Affected Confluence Versions	Fixed Version	Issue Tracking
User Access	2.7 – 3.4	3.4.2	CONF-21162

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix this vulnerability.

We strongly advise that you disable the remote APIs until your Confluence instance is patched or upgraded. If the Remote API is vital, we recommend you disable anonymous access to the remote API.

We also recommend that you read our guidelines on best practices for configuring Confluence security.

Fix

Confluence 3.4.2 fixes this issue. For a full description of this release, see the release notes. You can download Confluence 3.4.2 from the download centre.

If you cannot upgrade to Confluence 3.4.2, you can patch your existing installation using the patch listed below.

Available Patch

If for some reason you cannot upgrade to the latest version of Confluence, you can apply the following patch to fix the vulnerability described in this security advisory.

Vulnerability	Patch
Security vulnerability in Confluence Remote API	confluence-3.4.2-security-patch-for-2.7-to-3.4.1.zip

Patch Procedure: Install the Patch

A patch is available for Confluence 2.7 – 3.4.1.

The patch addresses the following issue:

- Security vulnerability in Confluence RPC (CONF-21162).

Applying the patch

If you are using the Confluence 2.7 – 3.4.1 distributions:

1. Shut down Confluence.
2. Make a backup of the `<confluence_install_dir>/confluence/` directory.

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3. Download the confluence-3.4.2-security-patch-for-2.7-to-3.4.1.zip file.
4. Expand the zip file into `<confluence_install_dir>/confluence/`, overwriting the existing files.
5. Restart Confluence.
6. Visit <Confluence base url>/admin/patch342applied.jsp and confirm that it reports: "The Patch for Confluence 3.4.2 has been correctly applied."

If you are using the WAR distribution of Confluence:

1. Shut down Confluence.
2. Make a backup of the `<confluence_exploded_war>/confluence/ directory`.
3. Download the confluence-3.4.2-security-patch-for-2.7-to-3.4.1.zip file.
4. Expand the zip file into `<confluence_exploded_war>/confluence/`, overwriting the existing files.
5. Run '`build.sh clean`' on UNIX, or '`build.bat clean`' on Windows.
6. Run '`build.sh`' on UNIX or '`build.bat`' on Windows.
7. Redeploy the Confluence web app into your application server.
8. Restart Confluence.
9. Visit <Confluence base url>/admin/patch342applied.jsp and confirm that it reports: "The Patch for Confluence 3.4.2 has been correctly applied."

Confluence Security Advisory 2011-01-18

This advisory announces a number of security vulnerabilities that we have found and fixed in recent versions of Confluence. We also provide patches that you will be able to apply to existing installations of Confluence to fix these vulnerabilities. However, we recommend that you upgrade your Confluence installation rather than applying the patches. Enterprise Hosted customers should request an upgrade by raising a support request at http://support.atlassian.com. JIRA Studio is not vulnerable to any of the issues described in this advisory.

Atlassian is committed to improving product security. The vulnerabilities listed in this advisory have been discovered by Atlassian, unless noted otherwise. The reporter may also have requested that we do not credit them.

In this advisory:

- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
  - Patches

XSS Vulnerabilities

Severity

Atlassian rates the severity level of these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

Risk Assessment

We have identified and fixed a number of cross-site scripting (XSS) vulnerabilities which may affect Confluence instances, including publicly available instances (that is, internet-facing servers). XSS vulnerabilities potentially allow an attacker to embed their own JavaScript into a Confluence page. You can read more about XSS attacks at cgisecurity.com, The Web Application Security Consortium and other places on the web.

Vulnerability

The table below describes the Confluence versions and the specific functionality affected by the XSS

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vulnerabilities.

Confluence Feature	Affected Confluence Versions	Issue Tracking
Code macro	2.7 – 3.4	CONF-21098
Attachments macro	3.3 – 3.4	CONF-21099
Bookmarks macro	3.1 – 3.4.3	CONF-21390
Global Reports macro	2.7 – 3.4.3	CONF-21391
Recently Updated macro	3.0 - 3.4.3	CONF-21392
Pagetree macro	2.7 - 3.4.3	CONF-21393
Create Space Button macro	2.7 - 3.4.3	CONF-21394
Documentation Link macro	2.7 – 3.4.5	CONF-21508

Our thanks to **dave b**, who reported the vulnerability in the Documentation Link macro. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public signup to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

We also recommend that you read our guidelines on best practices for configuring Confluence security.

Fix

Confluence 3.4.6 fixes these issues. For a full description of this release, see the release notes. You can download the latest version of Confluence from the download centre.

Patches

If for some reason you cannot upgrade to the latest version of Confluence, you can apply patches to fix the vulnerabilities described in this security advisory. The patches are attached to the relevant issues, as listed in the table above.

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> Please note that we have released a number of advisories about Confluence recently. We recommend that you review them and upgrade to the most recent release of the product or apply external security controls if you cannot. Most of the disclosed vulnerabilities are not critical and often present less risk when used in a corporate environment with no access from the Internet.
>
> We usually provide patches only for vulnerabilities of critical severity, as an interim solution until you can upgrade. You should not expect that you can continue patching your system instead of upgrading. Our patches are often non-cumulative – we do not recommend that you apply multiple patches from different advisories on top of each other, but strongly recommend to upgrade to the most recent version regularly.
>
> **We recommend patching only when you can neither upgrade nor apply external security controls.**

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Code Macro	atlassian-renderer-6.2.jar	CONF-21098	Download
3.3.x	Code Macro	atlassian-renderer-6.0.6.jar	CONF-21098	Download

Customers running Confluence 3.4.x:

Please replace the following JAR file with the updated atlassian-renderer-6.2.jar:

```
CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/lib/atlassian-renderer.jar
```

Customers running Confluence 3.3.x:

Please replace the following JAR file with the updated atlassian-renderer-6.0.6.jar:

```
CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/lib/atlassian-renderer.jar
```

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Attachments macro	attachments-table.vm-3.4.x.zip	CONF-21099	Download
3.3.x	Attachments macro	attachments-table.vm.zip	CONF-21099	Download

Customers running Confluence 3.4.x:

Please replace the following *vm* file with the updated attachments-table.vm-3.4.x.zip:

```
CONFLUENCE_INSTALL_DIR/confluence/pages/includes/attachments-table.vm
```

Customers running Confluence 3.3.x:

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Please replace the following *vm* file with the updated attachments-table.vm:

`CONFLUENCE_INSTALL_DIR/confluence/pages/includes/attachments-table.vm`

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x, 3.3.x	Bookmarks macro	socialbookmarking-1.3.4.jar	CONF-21390	Download

Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **socialbookmarking.jar** with the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Global Reports Macro	confluence-dashboard-macros-3.4.4.jar	CONF-21391	Download
3.3.x	Global Reports Macro	confluence-dashboard-macros-1.13.1.jar	CONF-21391	Download

Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **confluence-dashboard-macros.jar** the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Code Macro	confluence-advanced-macros-1.12.3.jar	CONF-21392	Download
3.3.x	Code Macro	confluence-advanced-macros-1.9.2.jar	CONF-21392	Download

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Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **confluence-advanced-macros.jar** with the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Pagetree Macro	pagetree-1.20.jar	CONF-21393	Download

Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **pagetree.jar** with the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Create Space Button macro	confluence-dashboard-macros-3.4.4.jar	CONF-21394	Download
3.3.x	Create Space Button macro	confluence-dashboard-macros-1.13.1.jar	CONF-21394	Download

Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **confluence-dashboard-macros.jar** with the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Supported Version	Confluence Feature	File Name	Issue Tracking	Download Security Update
3.4.x	Documentation Link macro	confluence-advanced-macros-1.12.3.jar	CONF-21508	Download

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3.3.x	Documentation Link macro	confluence-advanced-macros-1.9.2.jar	CONF-21508	Download

Update the *.jar* file with the fix contained in the file archive (*zip*). Follow these steps to do so:

- Browse to `CONFLUENCE_INSTALL_DIR/confluence/WEB-INF/classes/com/atlassian/confluence/setup`
- Open the file **atlassian-bundled-plugins.zip**
- Decompress the contents into another location
- Replace the current **confluence-advanced-macros.jar** with the correct file according to your version.
- Compress all the *jar* files into another zip with the same name as the original file (*atlassian-bundled-plugins.zip*)
- Please note, make sure you place the files directly inside the *zip*, not contained inside another folder.

Confluence Security Advisory 2011-03-24

This cumulative advisory announces a number of security vulnerabilities that we have found in Confluence and fixed in recent versions of Confluence. We also provide upgraded plugins and patches that you will be able to apply to existing installations of Confluence to fix these vulnerabilities. However, we recommend that you upgrade your complete Confluence installation rather than upgrading only the affected plugins. **Enterprise Hosted** customers should request an upgrade by raising a support request at http://support.atlassian.com. **JIRA Studio** is not vulnerable to any of the issues described in this advisory.

Atlassian is committed to improving product security. The vulnerabilities listed in this advisory have been discovered by Atlassian, unless noted otherwise. The reporter may also have requested that we do not credit them.

In this advisory:

- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
  - Patches
    - Include Page Macro
    - Activity Stream Gadget
    - Action links of attachments lists
    - Table of Contents macro

XSS Vulnerabilities

Severity

Atlassian rates the severity level of these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

These vulnerabilities are **not** critical. This is an independent assessment and you should evaluate its applicability to your own IT environment.

Risk Assessment

We have identified and fixed a number of cross-site scripting (XSS) vulnerabilities which may affect Confluence instances, including publicly available instances (that is, Internet-facing servers). XSS vulnerabilities allow an attacker to embed their own JavaScript into a Confluence page. You can read more about XSS attacks at cgisecurity.com, The Web Application Security Consortium and other places on the web.

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Vulnerability

The table below describes the Confluence versions and the specific functionality affected by each of the XSS vulnerabilities.

Confluence Feature	Affected Confluence Versions	Issue Tracking
Include Page macro	2.7 – 3.4.6	CONF-21604
Activity Stream gadget	3.1 – 3.4.6	CONF-21606
Action links of attachments lists	2.7 – 3.4.7	CONF-21766
Table of Contents macro	2.9 – 3.4.8	CONF-21819

Our thanks to **Dave B**, who reported the vulnerability in the action links of attachments lists. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public signup to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

We also recommend that you read our guidelines on best practices for configuring Confluence security.

Fix

Confluence 3.4.9 or later fixes all of these issues. Some issues have been fixed in earlier versions as described in the table above. For a full description of this release, see the release notes. You can download the latest version of Confluence from the download centre. The most recent version at the time of this advisory is Confluence 3.5.

Patches

If for some reason you cannot upgrade to the latest version of Confluence, you can upgrade the relevant plugins (below) in your Confluence installation to fix the vulnerabilities described in this security advisory.

For details on upgrading Confluence's plugins using the plugin manager, see:

- Upgrading your Existing Plugins (for Confluence 3.4.x) or
- Installing and Configuring Plugins using the Plugin Repository Client (for Confluence 3.3.x).

Patches are also attached to the relevant issues (listed in the table above) if you need to apply these fixes manually.

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Please note that we have released a number of advisories about Confluence recently. We recommend that you review them and upgrade to the most recent release of the product or apply external security controls if you cannot. Most of the disclosed vulnerabilities are not critical and often present less risk when used in a corporate environment with no access from the Internet.

We usually provide patches only for vulnerabilities of critical severity, as an interim solution until you can upgrade. You should not expect that you can continue patching your system instead of upgrading. Our patches are often non-cumulative – we do not recommend that you apply multiple patches from different advisories on top of each other, but strongly recommend to upgrade to the most recent version regularly.

We recommend patching only when you can neither upgrade nor apply external security controls.

Include Page Macro

Supported Confluence Versions	Issue Tracking	File Name	Downloadable Patch
3.4.x	CONF-21604	confluence-advanced-macros-1.12.4.jar	Download
3.3.x	CONF-21604	confluence-advanced-macros-1.9.3.jar	Download

To apply this fix, use the plugin manager to upgrade the **Advanced Macros** plugin to a version greater than or equal to that specified in the file name above.

Activity Stream Gadget

Supported Confluence Versions	Issue Tracking	File Name	Downloadable Patch
3.3.x	CONF-21606	streams-confluence-plugin-3.3-CONF-21606.jar	Download
3.4.x	CONF-21606	streams-confluence-plugin-3.4.6.jar	Download

It's currently not possible to upgrade the Activity Streams Plugin automatically using the 3.4 plugin manager or the 3.3 plugin repository. Instead, you will need to manually install the plugin as follows:

1. Download the JAR file for your version of Confluence (see above).
2. Install the plugin manually using the "Upload Plugin" link on the "Install" tab of the plugin manager.

Action links of attachments lists

Supported Confluence Versions	Issue Tracking	File Name	Downloadable Patch

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3.3.x, 3.4.x	CONF-21766	confluence-attachments-plugin-2.20.jar	Download

To apply this fix, use the plugin manager to upgrade the **Confluence Attachments Plugin** plugin to a version greater than or equal to that specified in the file name above.

Table of Contents macro

Supported Confluence Versions	Issue Tracking	File Name	Downloadable Patch
3.3.x, 3.4.x	CONF-21819	toc-plugin-2.4.12.jar	Download

To apply this fix, use the plugin manager to upgrade the **Table of Contents Plugin** plugin to a version greater than or equal to that specified in the file name above.

Confluence Security Advisory 2011-05-31

> It has been incorrectly advised previously that CONF-22479 (User Preferences) affects all versions starting 2.7 while in fact it is exploitable only in 3.5 and above. Our sincere apologies, this will not happen again.
>
> You can still apply the patch to 3.4 in order to remove the root cause of this bug and potentially prevent other similar vulnerabilities from appearing

This advisory announces security vulnerabilities that we have found in Confluence and fixed in a recent version of Confluence. We also provide upgraded plugins and patches that you will be able to apply to existing installations of Confluence to fix these vulnerabilities. However, we recommend that you upgrade your complete Confluence installation rather than upgrading only the affected plugins. **Enterprise Hosted** customers should request an upgrade by raising a support request at http://support.atlassian.com. **JIRA Studio** is not vulnerable to the issues described in this advisory.

Atlassian is committed to improving product security. The vulnerabilities listed in this advisory have been discovered by Atlassian, unless noted otherwise. The reporter may also have requested that we do not credit them.

In this advisory:

- XSS Vulnerabilities
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
  - Patches
  - Patch Procedure: Install the Patch
    - Applying the patch
- XSRF Vulnerability
  - Severity
  - Risk Assessment
  - Vulnerability
  - Risk Mitigation
  - Fix
  - Patches
  - Patch Procedure: Install the Patch

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- Applying the patch

XSS Vulnerabilities

Severity

Atlassian rates the severity level of both these vulnerabilities as **high**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, medium or low. These vulnerabilities are **not** critical. This is an independent assessment and you should evaluate its applicability to your own IT environment.

Risk Assessment

We have identified and fixed cross-site scripting (XSS) vulnerabilities that may affect Confluence instances, including publicly available instances (that is, Internet-facing servers). XSS vulnerabilities allow an attacker to embed their own JavaScript into a Confluence page. You can read more about XSS attacks at cgisecurity.com, The Web Application Security Consortium and other places on the web.

Vulnerability

The table below describes the Confluence versions and the specific functionality affected by the XSS vulnerabilities.

Confluence Feature	Affected Confluence Version	Fixed Version	Issue Tracking
Login	3.5 – 3.5.2	3.5.3	CONF-22402
User Preferences	3.5 – 3.5.2	3.5.3	CONF-22479

Our thanks to Marian Ventuneac (http://www.ventuneac.net) who reported the vulnerabilities mentioned above. We fully support the reporting of vulnerabilities and we appreciate it when people work with us to identify and solve the problem.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public signup to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

We also recommend that you read our guidelines on best practices for configuring Confluence security.

Fix

These vulnerabilities (CONF-22402 and CONF-22479) are both fixed in Confluence 3.5.3, and later versions. For a full description of the latest version of Confluence, see the release notes. You can download the latest version of Confluence from the download centre.

If you cannot upgrade to the latest version of Confluence, you can temporarily patch your existing installation using the patch listed below. We strongly recommend upgrading and not patching.

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Patches

If you are running Confluence 3.5, we highly recommend that you upgrade to Confluence 3.5.3, or later.
If you are running Confluence 3.4, you can apply the following patch to fix the CONF-22479 vulnerability. The CONF-22402 vulnerability does not affect Confluence 3.4.

Vulnerability	Patch	Patch File Name
User Preferences	Attached to issue CONF-22479	CONF-22479_patch.zip

Patch Procedure: Install the Patch

A patch is available for Confluence 3.4 – 3.4.9.

The patch addresses the following issue:

Security vulnerability in Confluence User Preferences (CONF-22479).

Applying the patch

If you are using Confluence 3.4 – 3.4.9:

1. Download the CONF-22479_patch.zip file that is attached to the CONF-22479 issue.
2. Stop Confluence.
3. Make a backup of the <confluence_install_dir> directory.
4. Expand the downloaded zip file into <confluence_install_dir>, overwriting the existing files.
5. Check that the following files were created:
    - confluence/WEB-INF/classes/com/atlassian/confluence/core/ConfluenceActionSupport.properties
    - confluence/WEB-INF/classes/com/atlassian/confluence/languages/DefaultLocaleManager.class
    - confluence/WEB-INF/classes/com/atlassian/confluence/user/actions/EditMySettingsAction.class
6. Restart Confluence.

XSRF Vulnerability

Severity

Atlassian rates the severity level of both this vulnerability as **medium**, according to the scale published in Severity Levels for Security Issues for Security Issues. The scale allows us to rank the severity as critical, high, medium or low.
This vulnerability is **not** critical. This is an independent assessment and you should evaluate its applicability to your own IT environment.

Risk Assessment

We have identified and fixed a cross-site request forgery (XSRF) vulnerability that may affect Confluence instances, including publicly available instances (that is, Internet-facing servers). XSRF vulnerabilities allow an attacker to trick users into unintentionally adding bookmarks to Confluence spaces. You can read more about XSRF attacks at http://www.cgisecurity.com/csrf-faq.html and other places on the web.

Vulnerability

The table below describes the Confluence versions and the specific functionality affected by the XSRF vulnerability.

Confluence Feature	Affected Confluence Version	Fixed Version	Issue Tracking

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Social Bookmarking plugin	3.0 – 3.4.9	3.5	CONF-22565

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix these vulnerabilities.

Alternatively, if you are not in a position to upgrade immediately and you judge it necessary, you can disable public signup to your wiki until you have applied the necessary patch or upgrade. For even tighter control, you could restrict access to trusted groups.

We also recommend that you read our guidelines on best practices for configuring Confluence security for configuring Confluence security.

Fix

This vulnerability (CONF-22565) is fixed in Confluence 3.5, and later versions.
For a full description of the latest version of Confluence, see the release notes. You can download the latest version of Confluence from the download centre.

If you cannot upgrade to the latest version of Confluence, you can temporarily patch your existing installation using the patch listed below. We strongly recommend upgrading and not patching.

Patches

If you are running Confluence 3.5, the CONF-22565 vulnerability is already fixed, but we highly recommend that you upgrade to the latest version of Confluence.
If you are running Confluence 3.4, you can apply the following patch to fix the CONF-22565 vulnerability.

For details on upgrading Confluence's plugins using the plugin manager, see:

- Upgrading your Existing Plugins

Vulnerability	Patch	Patch File Name
Social Bookmarking plugin	Attached to issue CONF-22565	socialbookmarking-1.3.9.jar

Patch Procedure: Install the Patch

A patch is available for Confluence 3.4 – 3.4.9.

The patch addresses the following issue:

- Security vulnerability in Confluence Settings Social Bookmarking plugin (CONF-22565).

Applying the patch

If you are using Confluence 3.4 – 3.4.9, use the plugin manager to upgrade the Social Bookmarking plugin to a version equal to or greater than that specified in the file name above.
For details on using the plugin manager, see Upgrading your Existing Plugins.

Confluence Security Advisory 2012-05-17

This advisory discloses a **critical** security vulnerability that exists in all versions of Confluence up to and including 4.1.9.

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- **Customers who have downloaded and installed Confluence** should upgrade their existing Confluence installations to fix this vulnerability.
- **Enterprise Hosted customers** need to request an upgrade by raising a support request at http://support.atlassian.com in the "Enterprise Hosting Support" project.
- **JIRA Studio and Atlassian OnDemand customers** are not affected by any of the issues described in this advisory.

Atlassian is committed to improving product security. The vulnerability listed in this advisory has been discovered by Atlassian, unless noted otherwise. The reporter may also have requested that we do not credit them.

If you have questions or concerns regarding this advisory, please raise a support request at http://support.atlassian.com/.

In this advisory:

- Critical XML Parsing Vulnerability
  - Severity
  - Description
  - Risk Mitigation
  - Fix

Critical XML Parsing Vulnerability

Severity

Atlassian rates the severity level of this vulnerability as **critical**, according to the scale published in Severity Levels for Security Issues. The scale allows us to rank the severity as critical, high, moderate or low.

This is an independent assessment and you should evaluate its applicability to your own IT environment.

Description

We have identified and fixed a vulnerability in Confluence that results from the way third-party XML parsers are used in Confluence. This vulnerability allows an attacker to:

- execute denial of service attacks against the Confluence server, or
- read all local files readable to the system user under which Confluence runs.

The attacker does not need to have an account with the affected Confluence instance.

All versions of Confluence **up to and including 4.1.9** are affected by this vulnerability. This issue can be tracked here: **CONF-25077** - Authenticate to see issue details

The Gliffy for Confluence plugin is also vulnerable to this exploit. If you are using the Gliffy plugin for Confluence with *any* version of Confluence, you will need to upgrade it (see 'Fix' section below) or disable it.

Risk Mitigation

We recommend that you upgrade your Confluence installation to fix this vulnerability.

Alternatively, if you are not in a position to upgrade immediately, you should do **all** of the following until you can upgrade. Please note, these measures will only limit the impact of the vulnerability, they will not mitigate it completely.

- Disable access to the SOAP and XML-RPC APIs, if these remote APIs are not required. Note, remote API access is disabled by default. See enabling remote APIs for instructions.
- Disable the following plugins/plugin modules (see Disabling or Enabling a Plugin):

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    - Office Connector plugin
    - JUnitReport macro module of the confluence-advanced-macros plugin (called "Advanced Macros" in the interface)
    - confluence-jira3-macros plugin (called "JIRA Macros" in the interface)
    - WebDAV
- Disable public access (such as anonymous access and public signup) to Confluence until you have upgraded.
- Ensure that your Confluence system user is restricted as described in best practices for configuring Confluence security.

Fix

Upgrade

1. Upgrade to Confluence 4.2 or later which fixes this vulnerability. For a full description of this release, see the Confluence 4.2 Release Notes. The following releases have also been made available to fix these issues in older Confluence versions. You can download these versions of Confluence from the download centre.

    - Confluence 4.1.10 for Confluence 4.1
    - Confluence 4.0.7 for Confluence 4.0
    - Confluence 3.5.17 for Confluence 3.5
2. Upgrade the following Confluence third-party plugins, if you are using them. The table below describes which version of the plugin you should upgrade to, depending on your Confluence version. See Upgrading your Existing Plugins for instructions on how to upgrade a plugin.

Plugin	Confluence 4.2	Confluence 4.1	Confluence 4.0	Confluence 3.5
Gliffy plugin for Confluence	4.2	4.2	4.2	4.2

Patches

There are no patches available for this vulnerability. Due to the extent of the changes required to fix the vulnerability, it is not possible to provide patches that resolve the issue without compromising the reliability of Confluence. You must upgrade to fix this vulnerability.

Configuring Confluence Security

This section gives guidelines on configuring the security of your Confluence site.

Other topics:

- For information about user management, groups and permissions, please refer to the internal security overview.
- For an overview of Confluence application security, see the page on Confluence security.

Setting up a Secure Confluence Site

- Confluence Cookies
- Configuring Secure Administrator Sessions
- Using Fail2Ban to limit login attempts
- Securing Confluence with Apache
    - Using Apache to limit access to the Confluence administration interface
- Managing External Referrers
    - Excluding external referrers
    - Hiding external referrers

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    - Ignoring External Referrers
- Best Practices for Configuring Confluence Security
- Hiding the People Directory
- Configuring Captcha for Spam Prevention
- Hiding External Links From Search Engines
- Configuring Captcha for Failed Logins
- Configuring XSRF Protection
- User Email Visibility
- Anonymous Access to Remote API
- Running Confluence Over SSL or HTTPS
- Connecting to LDAP or JIRA or Other Services via SSL
- Configuring RSS Feeds
- Preventing and Cleaning Up Spam

Confluence Cookies

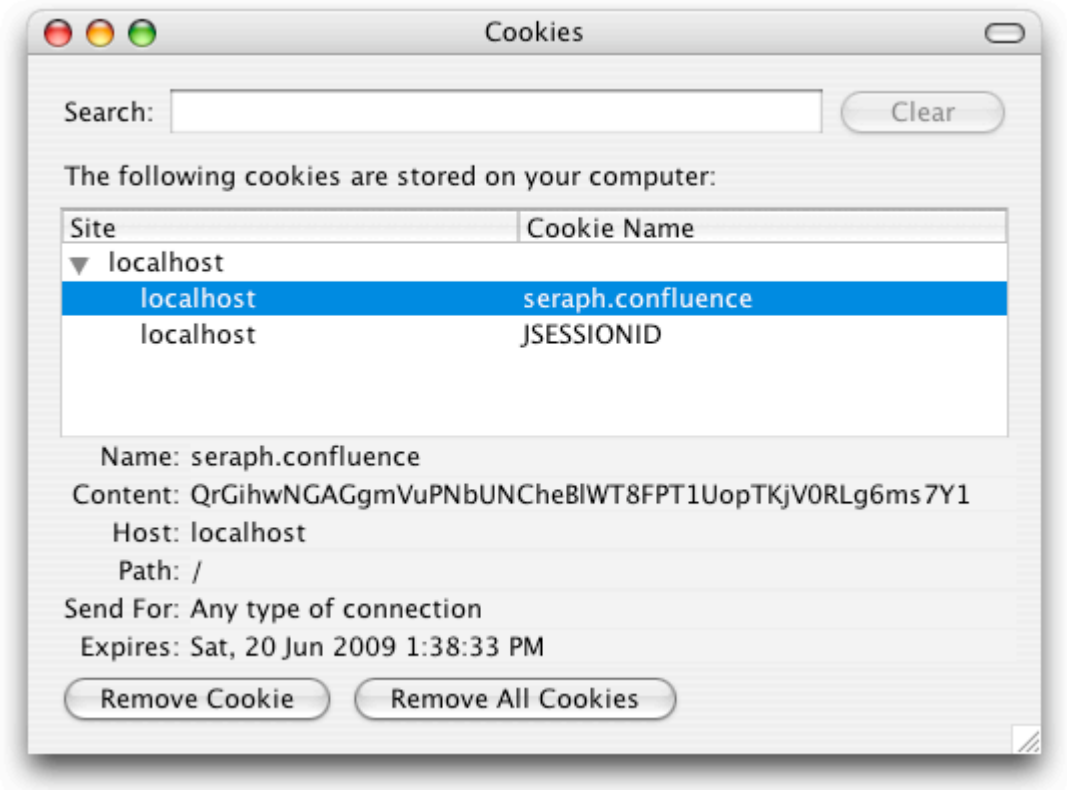
This page lists cookies stored in Confluence users' browsers which are generated by Confluence itself. This page does not list cookies that may originate from 3rd-party Confluence plugins.

Authentication cookies

Confluence uses Seraph, an open source framework, for HTTP cookie authentication. Confluence uses two types of cookies for user authentication:

- The JSESSIONID cookie is created by the application server and used for session tracking purposes. This cookie contains a random string and the cookie expires at the end of every session or when the browser is closed.
- The 'remember me' cookie, `seraph.confluence`, is generated by Confluence when the user selects the **Remember me** check box on the login page.

You can read about cookies on the Wikipedia page about HTTP cookies.



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On this page:

- Authentication cookies
  - The 'remember me' cookie
- Other Confluence cookies
- Notes

The information on this page does not apply to Confluence OnDemand.

The 'remember me' cookie

The 'remember me' cookie, `seraph.confluence`, is a long-lived HTTP cookie. This cookie can be used to authenticate an unauthenticated session. Confluence generates this cookie when the user selects the **Remember me** check box on the login page.

Cookie key and contents

By default, the cookie key is `seraph.confluence`, which is defined by the `login.cookie.key` parameter in the `CONFLUENCE-INSTALLATION/confluence/WEB-INF/classes/seraph-config.xml` file.

The cookie contains a unique identifier plus a securely-generated random string (i.e. token). This token is generated by Confluence and is also stored for the user in the Confluence database.

Use of cookie for authentication

When a user requests a web page, if the request is not already authenticated via session-based authentication or otherwise, Confluence will match the 'remember me' cookie (if present) against the token (also if present), which is stored for the user in the Confluence database.

If the token in the cookie matches the token stored in the database and the cookie has not expired, the user is authenticated.

Life of 'remember me' cookies

You can configure the maximum age of the cookie. To do that you will need to modify the `CONFLUENCE-INSTALLATION/confluence/WEB-INF/classes/seraph-config.xml` file and insert the following lines below the other `init-param` elements:

```
<init-param>
 <param-name>autologin.cookie.age</param-name>
 <param-value>2592000</param-value><!-- 30 days in seconds -->
</init-param>
```

Automatic cleanup of 'remember me' tokens

Every cookie issued by Confluence has a corresponding record in the database. A scheduled job runs on the 20th of every month to clean up expired tokens. The name of the trigger is `clearExpiredRememberMeTokensTrigger`.

Note: The only purpose of this job is to prevent the database table from growing too big. For authentication purposes, Confluence will ignore expired tokens even if they still exist in the database.

Is it possible to disable the 'remember me' feature?

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Confluence does not offer an option for disabling the 'Remember Me' feature. See the workaround.

Other Confluence cookies

There are several cookies that Confluence uses to store basic 'product presentation' states. Confluence users' authentication details are not stored by these cookies.

Cookie Key	Purpose	Cookie Contents	Expiry
doc-sidebar	Remembers the user's preference for the width of the navigation sidebar in the Confluence documentation theme.	The width of the sidebar in pixels. For example, 300px	One year from the date it was set or was last updated.
confluence.list.pages.cookie	Remembers the user's last chosen tab in the "list pages" section.	The name of the last selected tab. For example, list-content-tree	One year from the date it was set or was last updated.
confluence.browse.space.cookie	Remembers the user's last chosen tab in the "browse space" section	The name of the last selected tab. For example, space-pages	One year from the date it was set or was last updated.
confluence-language	Remembers the user's language chosen on the login page. This cookie relates to a feature that allows a user to change Confluence's language from (and including) the login page, when the language presented to the user prior to logging in is not appropriate.	A locale relating to the chosen language. For example, de_DE	360 days from the date it was set or was last updated.
AJS.conglomerate.cookie	Tracks which general tabs were last used (e.g. in Confluence's plugin manager) or expansion elements were last opened or closed.	One or more key-value strings which indicate the states of your last general tab views or expansion elements.	One year from the date it is set or was last updated.

Notes

- The *autocomplete* feature in browser text fields (which are typically noticeable when a user logs in to Confluence) is a browser-specific feature, not a Confluence one. Confluence cannot enable or disable this autocompletion, which is typically set through a browser's settings.

RELATED TOPICS

Administrators Guide Home Confluence Documentation Home

Configuring Secure Administrator Sessions

Confluence protects access to its administrative functions by requiring a secure administration session to use the Confluence administration console or administer a space. When a Confluence administrator (who is logged into Confluence) attempts to access an administration function, they are prompted to log in again. This logs the administrator into a temporary secure session that grants access to the Confluence/space administration console.

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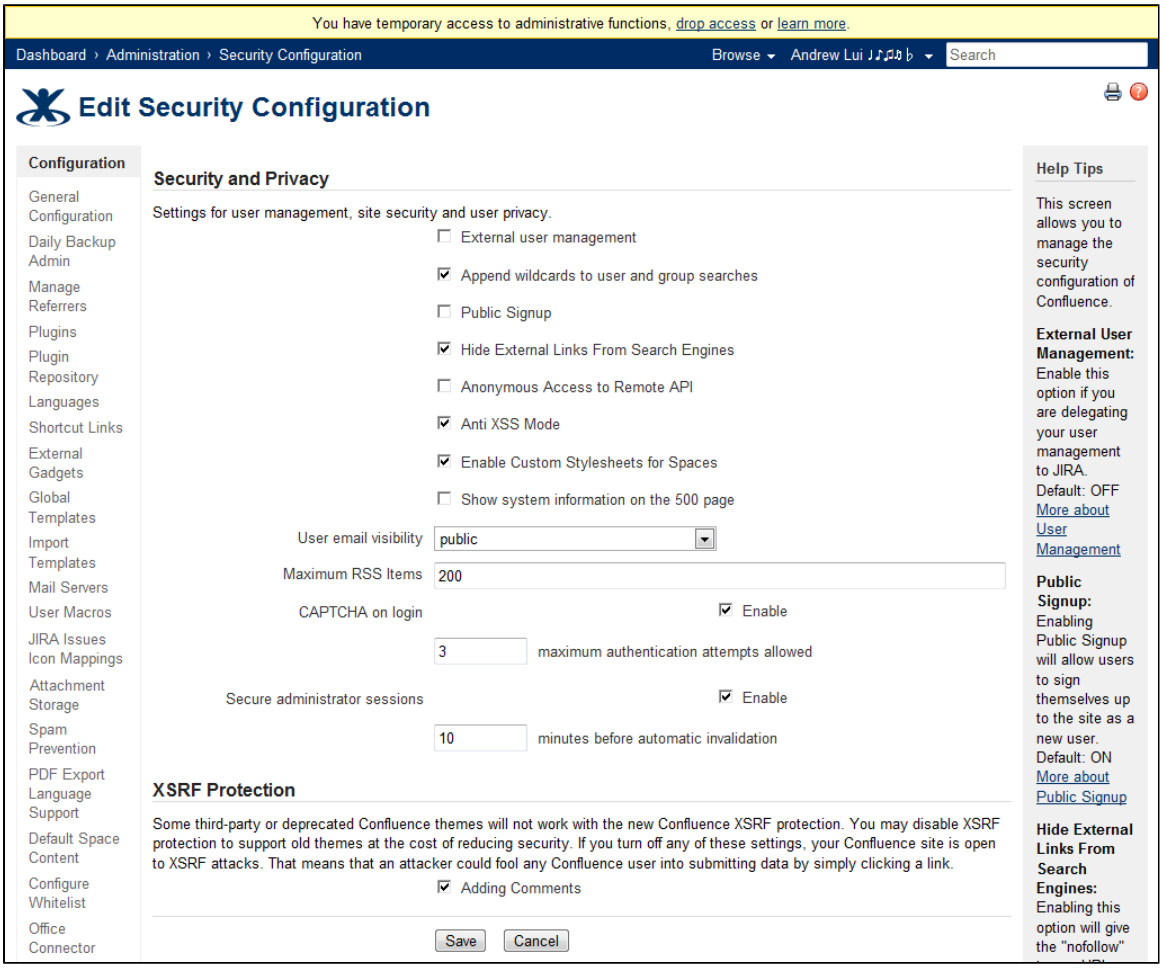
The temporary secure session has a rolling timeout (defaulted to 10 minutes). If there is no activity by the administrator in the Confluence/space administration console for a period of time that exceeds the timeout, then the administrator will be logged out of the secure administrator session (note, they will remain logged into Confluence). If the administrator does click an administration function, the timeout will reset.

> *The information on this page does not apply to Confluence OnDemand.*

To configure secure administrator sessions:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Security Configuration**' in the '**Security**' section. The 'Edit Security Configuration' screen will be displayed.
3. Click the '**Edit**' link.
   - To disable secure administrator sessions (i.e. administrators will not be required to log into a secure session to access the administration console), uncheck the '**Enable**' checkbox next to '**Secure administrator sessions**'.
   - To change the timeout for secure administrator sessions, update the value in textbox next to '**minutes before invalidation**'. The default timeout for a secure administration session is 10 minutes.
4. Click the '**Save**' button.



Screenshot above: Configuring secure administrator sessions

Notes

- **Disabling password confirmation.** Confluence installations that use a custom authentication mechanism may run into problems with the Confluence security measure that requires password confirmation. If necessary, you can set the `password.confirmation.disabled` system property to

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disable the password confirmation functionality. See Recognised System Properties. See issue CONF-20958 "Confluence features that require password confirmation (websudo, captcha) do not work with custom authentication".
- **WebSudo.** The feature that provides secure administrator sessions is also called 'WebSudo'.
- **Manually ending a secure session.** An administrator can choose to manually end their secure session by clicking the '**drop access**' link in the banner displayed at the top of their screen.
- **Note for developers.** Secure administrator sessions can cause exceptions when developing against Confluence or deploying a plugin. Please read this FAQ: How do I develop against Confluence with Secure Administrator Sessions? Note: The Confluence XML-RPC and REST APIs are not affected by secure administration sessions.

Using Fail2Ban to limit login attempts

What is Fail2Ban?

We need a means of defending sites against brute-force login attempts. Fail2Ban is a Python application which trails logfiles, looks for regular expressions and works with Shorewall (or directly with iptables) to apply temporary blacklists against addresses that match a pattern too often. This can be used to limit the rate at which a given machine hits login URLs for Confluence.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Prerequisites

- Requires Python 2.4 or higher to be installed
- Needs a specific file to follow, which means your Apache instance needs to log your Confluence access to a known logfile. You **should adjust the configuration below** appropriately.

How to set it up

This list is a skeletal version of the instructions

- There's an RPM available for RHEL on the download page, but you can also download the source and set it up manually
- Its configuration files go into `/etc/fail2ban`
- The generic, default configuration goes into `.conf` files (`fail2ban.conf` and `jail.conf`). Don't change these, as it makes upgrading difficult.
- Overrides to the generic configuration go into `.local` files corresponding to the `.conf` files. These only need to contain the specific settings you want overridden, which helps maintainability.
- Filters go into `filter.d` — this is where you define regexps, each going into its own file
- Actions go into `action.d` — you probably won't need to add one, but it's handy to know what's available
- "jails" are a configuration unit that specify one regexp to check, and one or more actions to trigger when the threshold is reached, plus the threshold settings (e.g. more than 3 matches in 60 seconds causes that address to be blocked for 600 seconds)
- Jails are defined in `jail.conf` and `jail.local`. Don't forget the `enabled` setting for each one — it can be as bad to have the wrong ones enabled as to have the right ones disabled.

Running Fail2Ban

- Use `/etc/init.d/fail2ban {start|stop|status}` for the obvious operations
- Use `fail2ban-client -d` to get it to dump its current configuration to STDOUT. Very useful for troubleshooting.
- Mind the CPU usage; it can soak up resources pretty quickly on a busy site, even with simple regexp
- It can log either to syslog or a file, whichever suits your needs better

Common Configuration

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jail.local

```
# The DEFAULT allows a global definition of the options. They can be
override
# in each jail afterwards.

[DEFAULT]

# "ignoreip" can be an IP address, a CIDR mask or a DNS host. Fail2ban
will not
# ban a host which matches an address in this list. Several addresses
can be
# defined using space separator.
# ignoreip = <space-separated list of IPs>

# "bantime" is the number of seconds that a host is banned.
bantime  = 600

# A host is banned if it has generated "maxretry" during the last
"findtime"
# seconds.
findtime  = 60

# "maxretry" is the number of failures before a host get banned.
maxretry = 3


[ssh-iptables]

enabled  = false


[apache-shorewall]

enabled  = true
filter   = cac-login
action   = shorewall
logpath = /var/log/httpd/confluence-access.log
bantime = 600
maxretry = 3
findtime = 60
backend = polling
```

Configuring for Confluence

> The following is an example only, and you should adjust it for your site.

filter.d/confluence-login.conf

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```
[Definition]

failregex = <HOST>.*"GET /login.action

ignoreregex =
```

Securing Confluence with Apache

The following outlines some basic techniques to secure a Confluence instance using Apache. These instructions are basic to-do lists and should not be considered comprehensive. For more advanced security topics see the "Further Information" section below.

- Using Apache to limit access to the Confluence administration interface
- Using Fail2Ban to limit login attempts

Further Information

Running Confluence behind Apache

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

Using Apache to limit access to the Confluence administration interface

Limiting administration to specific IP addresses

The Confluence administration interface is a critical part of the application; anyone with access to it can potentially compromise not only the Confluence instance but the entire machine. As well as limiting access to users who really need it, and using strong passwords, you should consider limiting access to it to certain machines on the network or internet. If you are using an Apache web server, this can be done with Apache's **Location** functionality as follows:

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

1. Create a file that defines permission settings

This file can be in the Apache configuration directory or in a system-wide directory. For this example we'll call it "sysadmin_ips_only.conf". The file should contain the following:

```
Order Deny,Allow
 Deny from All

 # Mark the Sysadmin's workstation
 Allow from 192.168.12.42
```

2. Add the file to your Virtual Host

In your Apache Virtual Host, add the following lines to restrict the administration actions to the Systems Administrator:

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This configuration assumes you've installed Confluence under '/confluence'. If you have installed under '/' or elsewhere, adjust the paths accordingly.

```
<Location /confluence/admin>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/consumers/list>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/view-consumer-info>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/service-providers/list>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/service-providers/add>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/consumers/add>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/consumers/add-manually>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/oauth/update-consumer-info>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/pages/templates/listpagetemplates.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/pages/templates/createpagetemplate.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/spacepermissions.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/pages/listpermissionpages.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/removespace.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/importmbox.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/viewmailaccounts.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/addmailaccount.action?>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/importpages.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/flyingpdf/flyingpdf.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/spaces/exportspacehtml.action>
  Include sysadmin_ips_only.conf
</Location>
```

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```
<Location /confluence/spaces/exportspacexml.action>
  Include sysadmin_ips_only.conf
</Location>
<Location /confluence/plugins/servlet/embedded-crowd>
  Include sysadmin_ips_only.conf
</Location>
```

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```
<Location /confluence/plugins/servlet/upm>
  Include sysadmin_ips_only.conf
</Location>
```

Managing External Referrers

An external referrer is any site that links to your Confluence instance. Each time someone clicks on the external link, your Confluence site can record the click as a referral.

By default, external referrers for a page are listed under '**Hot Referrers**' on the '**Info**' screen of the page. (See *Screenshot 1* below.) Confluence shows a maximum of 10 referrers. If there are more than 10, confluence shows the 10 with the highest number of hits.

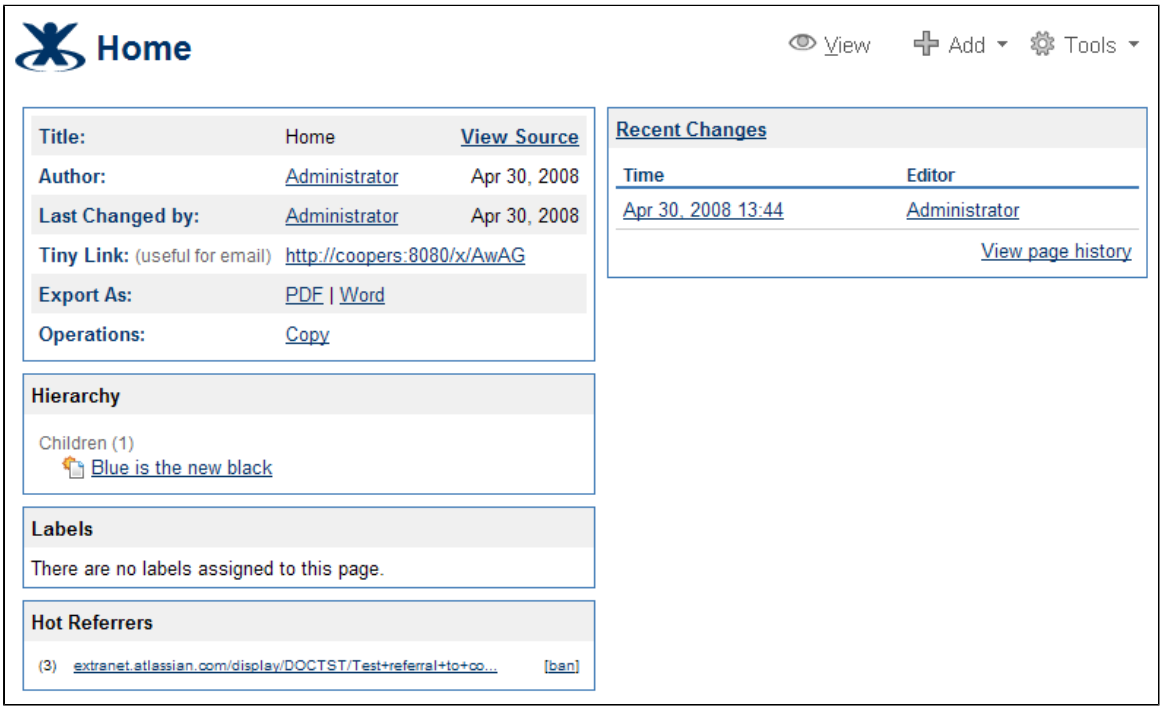
Note that you do *not* need to enable trackback in order to have external referrers enabled.

To manage your external referrers:

1. Choose **Browse** > **Confluence Admin**.
2. Select the '**Manage Referrers**' option (See *Screenshot 2* below.).

The following actions will be available:

- Record or ignore all external referrers: By default, Confluence records the number of hits made to a page from the link on the external site. If you turn this option off, Confluence will not record the hits.
- Show or hide all external referrers: By default, Confluence lists the external referrers as '**Hot Referrers**' on the '**Info**' screen of a page, as shown below. If you turn this option off, external referrers will not be listed on the page.
- Specify which external referrers to exclude: You can decide which referrers you want to exclude from being displayed on your site.



Screenshot above: Hot Referrers showing on a page's Info screen

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Screenshot above: Managing external referrers

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Excluding external referrers

An external referrer is any site that links to your Confluence instance. Each time someone clicks on the external link, your Confluence site can record the click as a referral.

You can exclude external referrers to prevent them from being recorded or displayed anywhere on your site. Once you have specified your list of blocked URLs, any incoming links from URLs that match the list will no longer be recorded. Referrer URLs are blocked if they start with any of the URLs in the exclusion list. So http://evilspamsite.blogspot.com will also match http://evilspamsite.blogspot.com/nastypage.html

There are two instances where you may want to do this:

1. If you are running a Confluence installation that is open to public:
   In a site that is open to public, one unfortunate problem is that malicious sites can spam the display of a page's incoming links statistics. This is usually done to get the site's URL to appear in the sidebar. By adding these sites to the 'excluded referrers' list, you can prevent them from being listed on your site.
2. If Confluence is installed on a server with multiple domain names or IP addresses:
   Confluence will consider any URL originating from the domain name where Confluence is installed as an internal link. However, if Confluence is installed on a server with multiple domain names or IP addresses, you will need to add the other domain name prefixes to this list to let Confluence know that any links from these domains should not be considered external links.

You need to be a Confluence administrator and to know the URL of the site to add it to the excluded referrers list.

To add a URL to the excluded referrers list:

1. Choose **Browse** > **Confluence Admin**.
2. Select **Manage Referrers** in the left-hand panel.
3. Add the URL to the 'Excluded External Referrer Prefixes' section.
   - You must include 'http://' at the front of the URL.
   - You can add more than one URL by putting each URL on a new line.

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Record External Referrers:	On | Off
Show Referrers in Page Info:	On | Off
Excluded External Referrer Prefixes:	Add Purge All http://www.google.com (del | purge) http://www.yahoo.com (del | purge)

Screenshot above: Excluding external referrers

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Hiding external referrers

By default, Confluence lists the external referrers as '**Hot Referrers**' on the '**Info**' screen of a page. If you turn this option off, external referrers will not be listed on the page.

To hide external referrers:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Manage Referrers**' in the left-hand panel.
3. Click '**Off**' beside '**Show Referrers in Page Info**'.

Record External Referrers:	On | Off
Show Referrers in Page Info:	On | Off
Excluded External Referrer Prefixes:	Add Purge All

Screenshot: Managing external referrers

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Ignoring External Referrers

An external referrer is any site that links to your Confluence instance. Each time someone clicks on the external link, your Confluence site can record the click as a referral. By default, Confluence records the number of hits

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made to a page from any link on an external site. If you turn this option off, Confluence will not record the hits.

To ignore external referrers:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Manage Referrers**' in the left-hand panel.
3. Click '**Off**' beside '**Record External Referrers**'.

Record External Referrers:	On | Off
Show Referrers in Page Info:	On | Off
Excluded External Referrer Prefixes:	Add Purge All

Screenshot above: Managing external referrers

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Best Practices for Configuring Confluence Security

The best way to harden a system is to look at each of the involved systems individually. Contact your company's security officer or department to find out what security policies you should be using. There are many things to consider, such as the configuration of your underlying operating systems, application servers, database servers, network, firewall, routers, etc. It would be impossible to outline all of them here.

This page contains guidelines on good security practices, to the best of our knowledge.

> *The information on this page does not apply to Confluence OnDemand.*

Configuring the Web Server

Please refer to the following guides for system administrators:

- How to configure Apache to lock down the administration interface to those people who really need it: Using Apache to limit access to the Confluence administration interface.
- How to reduce the risk of brute force attacks: Using Fail2Ban to limit login attempts.

Configuring the Application Server

See the following system administrator guide for general hints on the application server level:

- Tomcat security best practices

Configuring the Application

The way you set up Confluence roles, permissions and processes makes a big difference in the security of your Confluence site.

Below are some more Confluence-specific items to consider. None of these provides 100% security. They are

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measures to reduce impact and to slow down an intruder in case your system does become compromised.

- Keep the number of Confluence administrators extremely low. For example, 3 system administrator accounts should be the maximum.
- Similarly, restrict the number of users with powerful roles or group memberships. If only one department should have access to particularly sensitive data, then do restrict access to the data to those users. Do not let convenience over-rule security. Do not give all staff access to sensitive data when there is no need.
- The administrators should have separate Confluence accounts for their administrative roles and for their day to day roles. If John Doe is an administrator, he should have a regular user account without administrator access to do his day to day work (such as writing pages in the wiki). This could be a 'john.doe' account. In addition, he should have an entirely separate account (that cannot be guessed by an outsider and that does not even use his proper name) for administrative work. This account could be 'jane smith' – using a username that is so obscure or fake that no outsider could guess it. This way, even if an attacker singles out the actual person John Doe and gets hold of his password, the stolen account would most likely be John's regular user account, and the attacker cannot perform administrative actions with that account.
- Lock down administrative actions as much as you can. If there is no need for your administrators to perform administrative actions from outside the office, then lock down access to those actions to known IP adresses, for example. See Using Apache to limit access to the Confluence administration interface.
- Put documented procedures in place for the case of employees leaving the company.
- Perform security audits regularly. Know who can help in case a security breach occurs. Perform 'what if' planning exercises. ('What is the worst thing that could happen if a privileged user's password were stolen while he's on vacation? What can we do to minimise damage?').
- Make sure the Confluence database user (and all datasource database users) only has the amount of database privileges it really needs.
- Monitor your binaries. If an attacker compromises an account on your system, he will usually try to gain access to more accounts. This is sometimes done by adding malicious code, such as by modifying files on the system. Run routine scripts that regularly verify that no malicious change has been made.

As another precaution:

- Regularly monitor the above requirements. There are many things that could start out well, but deteriorate over time:
  - A system may start out with just 3 administrators, but over the course of a year this could grow to 30 administrators if no one prevents expansion.
  - Apache administration restrictions may be in place at the start of the year, but when the application server is migrated after a few months, people may forget to apply the rules to the new system.

Again, keep in mind that the above steps may only be a fraction of what could apply to you, depending on your security requirements. Also, keep in mind that none of the above rules can guarantee anything. They just make it harder for an intruder to move quickly.

Hiding the People Directory

The People Directory provides a list of all users in your Confluence system.

If you need to disable the People Directory set the following system properties on your application server command line:

- **To disable the People Directory for anonymous users,**

```
-Dconfluence.disable.peopledirectory.anonymous=true
```

- **To disable the People Directory entirely,**

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```
-Dconfluence.disable.peopledirectory.all=true
```

The information on this page does not apply to Confluence OnDemand.

This workaround will prevent the People directory from appearing on the dashboard, but if you navigate to the profile of a user, and then click on the "People" in the breadcrumb link (Dashboard >> **People** >> FullName >> Profile) or you go to the URL directly `<CONFLUENCE_INSTALL>/browsepeople.action`, you will be able to access the people directory.

To workaround this, set up Apache webserver in front of confluence and redirect requests to this URL.

To remove the link on the dashboard:

Procedure for Confluence 2.5.2 to 2.9.x. only

This only applies to Confluence 2.5.2 to 2.9.x. Confluence 2.10.x or later only needs to configure system properties using the above.
Edit the <confluence-install>/confluence/decorators/global.vmd:
Comment out line 37:

```
<!--                    <img
src="$req.contextPath/images/icons/people_directory_32.gif"
align='absmiddle' height="32" width="32"> <b><a class="fontSizeDefault"
href="$req.contextPath/peopledirectory.action">
$action.getText("people.directory.title")</a></b><span
class="smalltext"> -
$action.getText("people.directory.description")</span><br> -->
```

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Configuring Captcha for Spam Prevention

You need to be a Confluence administrator to configure Captcha for spam prevention in Confluence.

If your Confluence site is open to the public you may find that automated spam is being added, in the form of

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comments or new pages.

You can configure Confluence to deter automated spam by asking users to prove that they are human before they are allowed to:

- Sign up for an account.
- Add a comment.
- Create a page.
- Edit a page.
- Send a request to the Confluence administrators.

Captcha is the technical term for a test that can distinguish a human being from an automated agent such as a web spider or robot. You can read more about Captcha on Wikipedia.

When Captcha is switched on, users will need to recognise a distorted picture of a word, and must type the word into a text field. This is easy for humans to do, but very difficult for computers.

Screenshot above: Example of a Captcha test

You can configure Confluence to enforce Captcha for certain types of users. You can exempt logged-in users (they will have completed a Captcha when they signed up) or members of particular groups.

By default, Captcha for spam prevention is disabled. If you enable it, the default is that Captcha for spam prevention will apply to anonymous users only. Only anonymous users will have to perform the Captcha test when creating comments or editing pages. Captcha images will not be shown to logged-in users.

To enable Captcha for spam prevention in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Spam Prevention**' from the 'Configuration' menu on the left.
3. Turn on Captcha by clicking the '**ON**' link.
4. If you want to disable Captcha for certain groups:
    - Select '**No one**' if you want everyone to see Captchas.
    - Select '**Signed in users**' if you want only anonymous users to see Captchas.
    - If you want everyone to see Captchas except members of specific groups, select the '**Members of the following groups**' and enter the group names in the text box.
      You can click the magnifying-glass icon to search for groups. Search for all or part of a group name and click the '**Select Groups**' button to add one or more groups to the list.
    - To remove a group from the list, delete the group name.
5. Click the '**Save**' button.

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Hiding External Links From Search Engines

Hiding external links from search engines helps to discourage spammers from posting links on your site. If you turn this option on, any URLs inserted in pages and comments will be given the 'nofollow' attribute, which prevents search engines from following them.

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Shortcut links (e.g. CONF-2622@JIRA) and internal links to other pages within Confluence are not tagged.

> *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

To hide external links from search engines:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Security Configuration**' in the left panel.
3. This will display the '**Security Configuration**' screen. Click '**Edit**'.
4. Check the '**Hide External Links From Search Engines**' checkbox.
5. Click the '**Save**' button.

> **Background to the nofollow attribute**
>
> As part of the effort to combat the spamming of wikis and blogs (Confluence being both), Google came up with some markup which instructs search engines not to follow links. By removing the main benefit of wiki-spamming it's hoped that the practice will stop being cost-effective and eventually die out.

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Configuring Captcha for Failed Logins

If you have confluence administrator permissions, you can configure Confluence to impose a maximum number of repeated login attempts. After a given number of failed login attempts (the default is three) Confluence will display a Captcha form asking the user to enter a given word when attempting to log in again. This will prevent brute force attacks on the Confluence login screen.

Similarly, after three failed login attempts via the XML-RPC or SOAP API, an error message will be returned instructing the user to log in via the web interface. Captcha will automatically be activated when they attempt this login.

> *The information on this page does not apply to Confluence OnDemand.*

'Captcha' is the technical term for a test that can distinguish a human being from an automated agent such as a web spider or robot. You can read more about Captcha on Wikipedia.

When Captcha is activated, users will need to recognise a distorted picture of a word, and must type the word into a text field. This is easy for humans to do, but very difficult for computers.

Screenshot above: Example of a Captcha test

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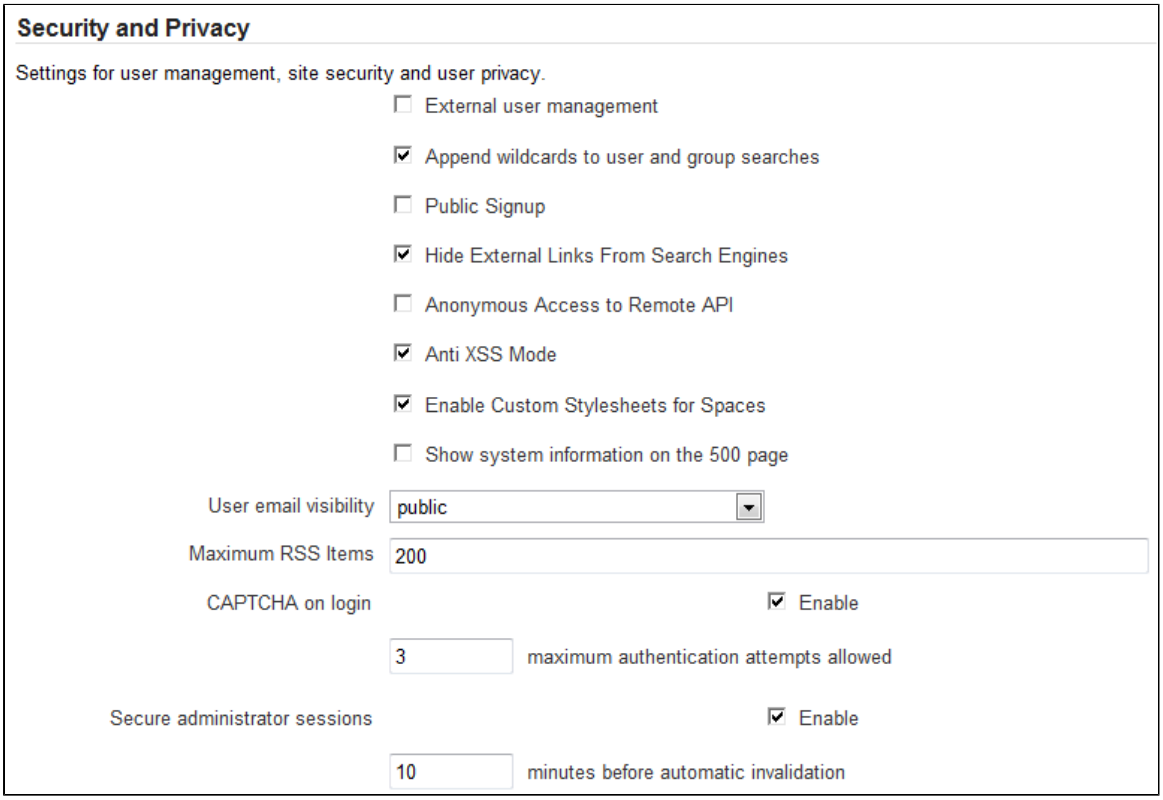
Enabling, Disabling and Configuring Captcha for Failed Logins

By default, Captcha for failed logins is enabled and the number of failed login attempts is set to three.

To enable, disable and configure Captcha for failed logins:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Security Configuration**' from the 'Security' menu on the left.
3. Click the '**Edit**' button.
4. To enable Captcha:
   - Check the '**Enable**' checkbox next to '**CAPTCHA on login**'.
   - Set the maximum number of failed logins next to '**Maximum Authentication Attempts Allowed**'. You must enter a number greater than zero.
5. To **disable** Captcha, remove the check from the '**Enable**' checkbox.
6. Click the '**Save**' button.



Screenshot above: Configuring Captcha for failed logins

Notes

- **Disabling all password confirmation requests, including Captcha on login.** Confluence installations that use a custom authentication mechanism may run into problems with the Confluence security measure that requires password confirmation. If necessary, you can set the `password.confirmation.disabled` system property to disable the password confirmation functionality on administrative actions, change of email address and Captcha for failed logins. See Recognised System Properties.

Related Topics

Administrators Guide Home Confluence Documentation Home

Configuring XSRF Protection

Confluence requires an XSRF token to be present on comment creation, to prevent users being tricked into unintentionally submitting malicious data (read more about XSRF (Cross Site Request Forgery)). All of the themes bundled with Confluence have been designed to use this feature. However, if you are using a custom

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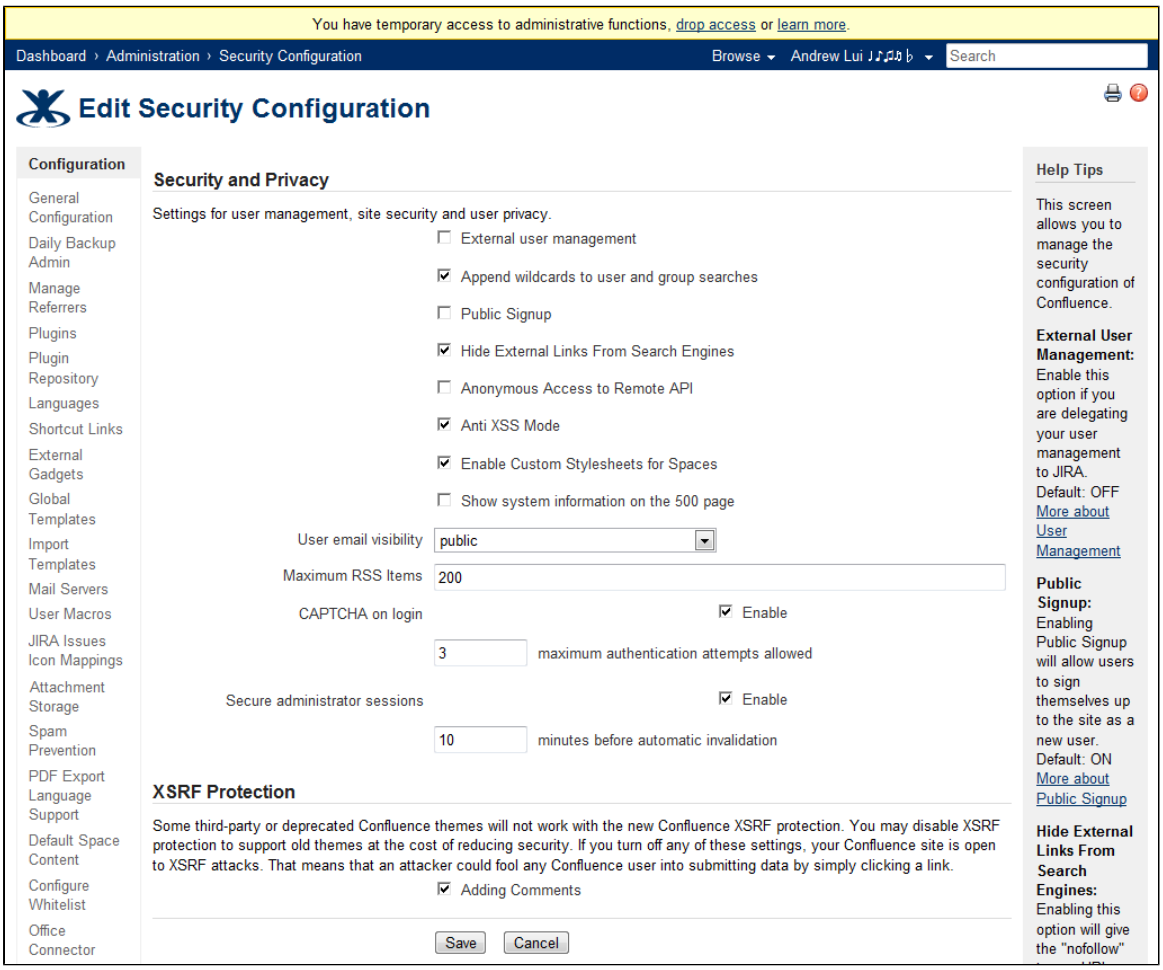
theme that does not support this security feature, you can disable it.

⚠ **Please carefully consider the security risks before you disable XSRF protection in your Confluence installation.**

> ⚠ *Some functionality described on this page is restricted in Confluence OnDemand.*

To configure XSRF protection:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Security Configuration**' in the '**Security**' section. The 'Edit Security Configuration' screen will be displayed.
3. Click the '**Edit**' link.
4. To disable XSRF protection, uncheck the '**Add Comments**' checkbox in the '**XSRF Protection**' section.
5. Click the '**Save**' button.



Screenshot: Configuring XSRF protection

User Email Visibility

Confluence provides three options for email address privacy which can be configured by a Confluence administrator from the **Administration Console**:

- **Public**: email addresses are displayed publicly.
- **Masked**: email addresses are still displayed publicly, but masked in such a way to make it harder for spam-bots to harvest them.
- **Only visible to site administrators**: only Confluence administrators can see the email addresses. Note that, if you select this option, email addresses will not be available in the 'User Search' popup (e.g. when

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setting Page Restrictions).

> *The information on this page does not apply to Confluence OnDemand.*

To configure user email visibility:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Security Configuration**' in the left-hand panel. The '**Security Configuration**' screen will be displayed.
3. Click '**Edit**'. The fields on the '**Security Configuration**' screen will be editable.
4. Select one of the options from the '**User email visibility**' dropdown: '**public**', '**masked**', or '**only visible to site administrators**'.
5. Click the '**Save**' button.

Screenshot above: Email Visibility

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Anonymous Access to Remote API

Sites may wish to disable anonymous access to the remote API to make it harder for malicious users to write 'bots' that perform bulk changes to the site. If you wish to enable the Remote APIs but do not want anonymous users to access Confluence remotely, you can disable anonymous access from the **Administration Console**.

To disable anonymous access to Remote APIs:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Security Configuration**' in the left panel. The '**Security Configuration**' screen will be displayed.
3. Click '**Edit**'. The fields on the '**Security Configuration**' screen will now be editable.
4. Uncheck the '**Anonymous Access to API**' checkbox.
5. Click the '**Save**' button.

Related Topics

No content found for label(s) security-options.

Administrators Guide Home Confluence Documentation Home

Running Confluence Over SSL or HTTPS

> This page documents configuration of SSL, rather than of Confluence itself. Atlassian will support Confluence with this configuration, but we cannot guarantee to help you debug problems with SSL. Please be aware that this material is provided for your information only, and that you use it at your own risk.

This document tells you how to configure Confluence to enable access via HTTPS (HTTP over SSL), so that your Confluence logins and data are encrypted during transport to and from Confluence. SSL encryption is a

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good way to safeguard your Confluence data and user logins from being intercepted and read by outsiders.

These instructions apply to the following platforms:

- **Confluence or Confluence WAR distribution using Tomcat.** Apache Tomcat is the application server shipped with Confluence, and is the only supported application server. If you are using a different application server or Apache HTTP Server ("httpd"), see the page on Apache with mod_proxy for instructions on how to terminate an SSL connection at the Apache web server.
- **Java 6.** JDK 1.6 is the supported Java version for Confluence. Note that you need the JDK, since it includes the `keytool` utility used in the instructions below. The JRE is not enough. If you are using JDK 1.5, please refer to the Java SE documentation to see the differences in the `keytool` utility from JDK 1.5 to JDK 1.6.

The default connector port for Confluence is 8090, while a plain Tomcat installation (used for EAR / WAR distribution) will default to 8080.

On this page:

- Step 1. Create or Request a New SSL Certificate
- Step 2. Modify the Server Configuration File in your Confluence Installation
- Step 3. Specify the Location of your Certificate
- Step 4. Change your Confluence Base URL to HTTPS
- Step 5. Add a Security Constraint to Cause Redirect of All URLs to HTTPS
- Notes
- Troubleshooting

The information on this page does not apply to Confluence OnDemand.

Step 1. Create or Request a New SSL Certificate

You will need a valid SSL certificate before you can enable HTTPS. If you already have a certificate prepared, skip to step 2 below.

You can choose to create a self-signed certificate or to use a certificate issued by a certificate authority (CA, sometimes also called a 'certification authority'). We described both options below.

Certificate Option 1 – Create a Self-Signed Certificate

Self-signed certificates are useful if you require encryption but do not need to verify the identity of the requesting website. In general, you might use a self-signed certificate on a test environment and on internal corporate networks (intranets).

Because the certificate is not signed by a certificate authority (CA), users may receive a message that the site is not trusted and may have to perform several steps to accept the certificate before they can access the site. This usually will only occur the first time they access the site.

Follow the steps below to generate a certificate using Java's `keytool` utility. This tool is included in the JDK.

1. Use Java's `keytool`utility to generate the certificate:
    - On Windows, run the following command at the command prompt:

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```
"%JAVA_HOME%\bin\keytool" -genkeypair -alias tomcat -keyalg RSA
```

- On OS X or UNIX-based systems, run the following command at the command prompt:

```
$JAVA_HOME/bin/keytool -genkeypair -alias tomcat -keyalg RSA
```

2. When asked for a **password**:
   - Specify the password you want to use for the certificate (private key). Note that the password text will not appear as you type it.
   - Make a note of the password you choose, because you will need it in the next step when editing the configuration file.
   - The default password is '`changeit`'.
3. Follow the prompts to specify your name, organisation and location. This information is used to construct the X.500 Distinguished Name (DN) of the entity. The CN ("What is your first and last name?") must match the fully-qualified hostname of the server running Confluence, otherwise Tomcat will not be able to use the certificate for SSL. For example for a Confluence running on a server named "confluence.example.com": `CN=confluence.example.com, OU=Java Software Division, O=Sun Microsystems Inc, C=US`
4. Enter 'y' to confirm the details.
5. When asked for the **password** for '`tomcat`' (the alias you entered in the keytool command above), press the 'Enter' key. This specifies that your keystore entry will have the **same password** as your private key. You MUST use the same password here as was used for the keystore password itself. This is a restriction of the Tomcat implementation.
6. You certificate is now ready. Go to step 2 below.

Certificate Option 2 – Use a Certificate Issued by a Certificate Authority

When running Confluence in a production environment, you will need a certificate issued by a certificate authority (CA, sometimes also called a 'certification authority') such as VeriSign, Thawte or TrustCenter. The instructions below are adapted from the Tomcat documentation.

First you will generate a local certificate and create a 'certificate signing request' (CSR) based on that certificate. You will submit the CSR to your chosen certificate authority. The CA will use that CSR to generate a certificate for you.

1. Use Java's `keytool` utility to generate a local certificate, as described in the previous section.
2. Use the `keytool` utility to generate a CSR, replacing the text `<MY_KEYSTORE_FILENAME>` with the path to and file name of the `.keystore`file generated for your local certificate:

```
keytool -certreq -keyalg RSA -alias tomcat -file certreq.csr -keystore
<MY_KEYSTORE_FILENAME>
```

3. Submit the generated file called `certreq.csr` to your chosen certificate authority. Refer to the documentation on the CA's website to find out how to do this.
4. The CA will send you a certificate.
5. Import the new certificate into your local keystore:

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```
keytool -importcert -alias tomcat -keystore <MY_KEYSTORE_FILENAME> -file
<MY_CERTIFICATE_FILENAME>
```

If you receive an error, and you use Verisign or GoDaddy, you may need to export the certificate to PKCS12 format along with the private key.

1. First, remove the certificate added above from the keystore:

```
keytool -delete -alias tomcat -keystore
<MY_KEYSTORE_FILENAME>
```

2. Then export to PKCS12 format:

```
openssl pkcs12 -export -in <MY_CERTIFICATE_NAME> -inkey
<MY_PRIVATEKEY_NAME> -out <MY_PKC12_KEYSTORE_NAME> -name
tomcat -CAfile
<MY_ROOTCERTIFICATE_NAME-alsoCalledBundleCertificateInGoDad
dy> -caname root
```

3. Then import from PKCS12 to jks:

```
keytool -importkeystore -deststorepass
<MY_DESTINATIONSTORE_PASSWORD> -destkeypass
<MY_DESTINATIONKEY_PASSWORD> -destkeystore
<MY_KEYSTORE_FILENAME> -srckeystore
<MY_PKC12_KEYSTORE_NAME> -srcstoretype PKCS12 -srcstorepass
<MY_PKC12_KEYSTORE_PASSWORD> -alias tomcat
```

Step 2. Modify the Server Configuration File in your Confluence Installation

1. Edit the server configuration file at this location: `{CONFLUENCE-INSTALLATION}>/conf/server.xml`.
2. Uncomment the following lines:

```
<Connector port="8443" maxHttpHeaderSize="8192"
                   maxThreads="150" minSpareThreads="25"
maxSpareThreads="75"
                   enableLookups="false" disableUploadTimeout="true"
                   acceptCount="100" scheme="https" secure="true"
                   clientAuth="false" sslProtocol="TLS" SSLEnabled="true"
                   URIEncoding="UTF-8"
keystorePass="<MY_CERTIFICATE_PASSWORD>"/>
```

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3. Replace the text `<MY_CERTIFICATE_PASSWORD>` with the password you specified for your certificate.
4. Make sure that the attribute-value pair `SSLEnabled="true"` is part of the `Connector` element, as shown above. If this attribute is not present, attempts to access Confluence will time out.
5. Save the server configuration file.

Step 3. Specify the Location of your Certificate

By default, Tomcat expects the keystore file to be named `.keystore` and to be located in the user home directory under which Tomcat is running (which may or may not be the same as your own home directory). This means that, by default, Tomcat will look for your SSL certificates in the following location:

- On Windows: `C:\Documents and Settings\\#CURRENT_USER#\.keystore`
- On OS X and UNIX-based systems: `~/.keystore`

You may decide to move the certificate to a custom location. If your certificate is not in the default location, you will need to update your server configuration file as outlined below, so that Tomcat can find the certificate.

1. Edit the server configuration file at this location: `{CONFLUENCE-INSTALLATION}>/conf/server.xml`
2. Add the attribute `keystoreFile="<MY_CERTIFICATE_LOCATION>"` to the `Connector`element, so that the element looks like this:

```
<Connector port="8443" maxHttpHeaderSize="8192"
                   maxThreads="150" minSpareThreads="25"
maxSpareThreads="75"
                   enableLookups="false" disableUploadTimeout="true"
                   acceptCount="100" scheme="https" secure="true"
                   clientAuth="false" sslProtocol="TLS" SSLEnabled="true"
                   URIEncoding="UTF-8"
keystorePass="<MY_CERTIFICATE_PASSWORD>"
                   keystoreFile="<MY_CERTIFICATE_LOCATION>"/>
```

3. Replace the text `<MY_CERTIFICATE_LOCATION>` with the path to your certificate, including the path and the name of the `.keystore` file.
4. Save the server configuration file.

Step 4. Change your Confluence Base URL to HTTPS

1. In your browser, go to the Confluence Administration Console.
2. Change the Server Base URL to HTTPS. See the documentation on configuring the server base URL.
3. Restart Tomcat and access Confluence on `https://<MY_BASE_URL>:8443/`.

Step 5. Add a Security Constraint to Cause Redirect of All URLs to HTTPS

Although HTTPS is now activated and available, the old HTTP URLs (http://localhost:8090) are still available. Now you need to redirect the URLs to their HTTPS equivalent. You will do this by adding a security constraint in `web.xml`. This will cause Tomcat to redirect requests that come in on a non-SSL port.

1. Check whether your Confluence site uses the **RSS macro**. If your site has the RSS macro enabled, you may need to configure the URL redirection with a firewall rule, rather than by editing the `web.xml` file. Skip the steps below and follow the steps on the RSS Feed Macro page instead.
2. Otherwise, Edit the file at `<CONFLUENCE_INSTALLATION>/confluence/WEB-INF/web.xml`.
3. Add the following declaration to the end of the file, **before** the `</web-app>`tag:

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```
<security-constraint>
  <web-resource-collection>
    <web-resource-name>Restricted URLs</web-resource-name>
    <url-pattern>/</url-pattern>
  </web-resource-collection>
  <user-data-constraint>
    <transport-guarantee>CONFIDENTIAL</transport-guarantee>
  </user-data-constraint>
</security-constraint>
```

4. Restart Confluence and access http://localhost:8090. You should be redirected to https://localhost:8443/login.action.

Confluence has two web.xml files. The other one is at `<CONFLUENCE_INSTALLATION>/conf/web.xml`. Please only add the security constraints to `<CONFLUENCE_INSTALLATION>/confluence/WEB-INF/web.xml`, as described above.

Notes

- **Background information on generating a certificate:** The '`keytool -genkeypair`' command generates a key pair consisting of a public key and the associated private key, and stores them in a keystore. The command packages the public key into an X.509 v3 self-signed certificate, which is stored as a single-element certificate chain. This certificate chain and the private key are stored in a new keystore entry, identified by the `alias` that you specify in the command. The Java SE documentation has a good overview of the utility.
- **Custom SSL port:** If you have changed the port that the SSL connector is running on from the default value of 8443, you must update the `redirectPort` attribute of the standard HTTP connector to reflect the new SSL port. Tomcat needs this information to know which port to redirect to when an incoming request needs to be secure.
- **Multiple instances on the same host:** When running more than one instance on the same host, it is important to specify the *address* attribute in the `<CONFLUENCE_INSTALLATION>/conf/server.xml` file because by default the connector will listen on **all available network interfaces**, so specifying the address will prevent conflicts with connectors running on the same default port. See the Tomcat Connector documentation for more about setting the address attribute: http://tomcat.apache.org/tomcat-5.5-doc/config/http.html

```
<Connector port="8443" address="your.confluence.url.com"
maxHttpHeaderSize="8192"
                   maxThreads="150" minSpareThreads="25"
maxSpareThreads="75"
                   enableLookups="false" disableUploadTimeout="true"
                   acceptCount="100" scheme="https" secure="true"
                   clientAuth="false" sslProtocol="TLS" SSLEnabled="true"
                   URIEncoding="UTF-8"
keystorePass="<MY_CERTIFICATE_PASSWORD>"
                   keystoreFile="<MY_CERTIFICATE_LOCATION>"/>
```

- **Protection for logins only or for individual spaces:** As of Confluence 3.0, Atlassian does not support HTTPS for logins only or for specific pages. We support only site-wide HTTPS. To see the reasoning behind this decision, please see CONF-18120 and CONF-4116.

Troubleshooting

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- Check the Confluence knowledge base articles on troubleshooting SSL.
- If any of your users will access Confluence from **Internet Explorer 7 on Vista**, please note the following additional points when using Java's `keytool`utility:
  - Make sure that you specify the `-keyalg RSA` option, as shown in the example of the `keytool` co mmand above. The default is the SHA1 algorithm, which results in an error 'Internet Explorer cannot display the webpage' on IE7 on Vista.
  - You may also need to specify the `-sigalg MD5withRSA` option. Otherwise, SHA1 will be used even if you specify the `-keyalg RSA` option. See this Atlassian blogpost for more information.
- Problems with **Internet Explorer being unable to download attachments**: Applying SSL site wide can prevent IE from downloading attachments correctly. To fix this problem, edit `<CONFLUENCE_INSTALLAT ION>/conf/server.xml` and add the following line within the `<Context ... />`element:

```
<Valve className="org.apache.catalina.authenticator.NonLoginAuthenticator"
       disableProxyCaching="true" securePagesWithPragma="false" />
```

Related Topics

- SSL Configuration HOW-TO in the Apache Tomcat 6.0 documentation
- SSL Configuration HOW-TO in the Apache Tomcat 5.5 documentation
- keytool - Key and Certificate Management Tool in the Java SE documentation
- Connecting to LDAP or JIRA or Other Services via SSL
- Supported Platforms

Connecting to LDAP or JIRA or Other Services via SSL

This page describes how to get Confluence connecting to external servers over SSL, via the various SSL-wrapped protocols.

Here are some examples of when you may need to connect to an external server over SSL/HTTPS:

- You need to connect to an LDAP server, such as Active Directory, if the LDAP server is running over SSL.
  For specific instructions for Active Directory, see Configuring an SSL Connection to Active Directory.
- You want to set up JIRA as a trusted application in Confluence, when JIRA is running over SSL.
- You want to refer to an https://... URL in a Confluence macro.

If you want to run Confluence itself over SSL, see Running Confluence Over SSL or HTTPS.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

> ✅ There's a Beta version of a Confluence SSL plugin that facilitates this process.

Importing SSL Certificates

The following commands apply to JDK 1.5. For commands/syntax relevant to JDK 1.6, please refer to this document from Oracle.

1. Add the root certificate to your default Java keystore with the following command. This is the certificate that was used to authorise the LDAP server's certificate. It will be either the one that was used for signing it, or will come from further up in the trust chain, possibly the root certificate. This is often a self-signed

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certificate, when both ends of the SSL connection are within the same network. Again, the exact alias is not important.

```
keytool -import -alias serverCert -file RootCert.crt -keystore
%JAVA_HOME%/jre/lib/security/cacerts (Windows)
keytool -import -alias serverCert -file RootCert.crt -keystore
$JAVA_HOME/jre/lib/security/cacerts (Linux/Unix/Mac)
```

2. Import your LDAP or JIRA server's public certificate into the JVM Keystore. This is the certificate that the LDAP server will use to set up the SSL encryption. You can use any alias of your choosing in place of "JIRAorLDAPServer.crt".

```
keytool -import -alias ldapCert -file JIRAorLDAPServer.crt
-keystore %JAVA_HOME%/jre/lib/security/cacerts (Windows)
keytool -import -alias ldapCert -file JIRAorLDAPServer.crt
-keystore $JAVA_HOME/jre/lib/security/cacerts (Linux/Unix/Mac)
```

3. Verify that the certificate has been added successfully by entering the following command:

```
keytool -list -keystore %JAVA_HOME%/jre/lib/security/cacerts
(Windows)
keytool -list -keystore $JAVA_HOME/jre/lib/security/cacerts
(Unix/Linux)
keytool -list -keystore /Library/Java/Home/lib/security/cacerts
(Mac)
```

4. Ensure that you have updated JAVA_OPTS to specify the path to the keystore, as specified in Connecting to SSL services, before restarting Tomcat/Confluence.
   There is no need to specify an alias for Confluence to use. On connecting to the LDAP server, it will search through the keystore to find a certificate to match the key being presented by the server.

Troubleshooting

Check the following knowledge base articles:

- Unable to Connect to SSL Services due to PKIX Path Building Failed sun.security.provider.certpath.SunCertPathBuilderException
- SSL troubleshooting articles

Related Topics

Configuring an SSL Connection to Active Directory
Configuring Web Proxy Support for Confluence
Running Confluence Over SSL or HTTPS

Configuring RSS Feeds

A Confluence System Administrator can configure the following aspects of RSS feeds:

- The maximum number of items that Confluence returns to an RSS feed request.
- The maximum time period that Confluence allows to respond to an RSS feed request.

Both of these are set in the 'Edit Security Configuration' screen.

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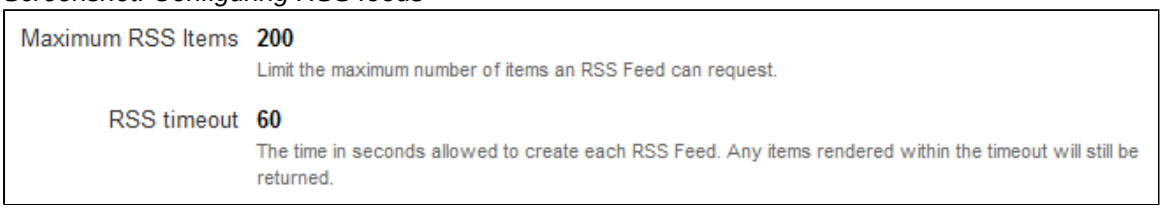
The information on this page does not apply to Confluence OnDemand.

To configure RSS feeds:

1. Choose **Browse** > **Confluence Admin**.
2. Click **Security Configuration** in the left panel. The 'Edit Security Configuration' screen will be displayed.
3. Click **Edit**.
4. Edit the value for **Maximum RSS Items**. The default value is 200.
5. Edit the value for **RSS timeout**.
6. Click **Save**.

Screenshot: Configuring RSS feeds



Notes

- When using the RSS Feed Builder, a user could potentially enter such a large value for the number of feed items returned that Confluence would eventually run out of memory.
- When using the Feed Builder, if a users a value greater than this setting (or less than 0) they will get a validation error.
- If any pre-existing feeds are set to request more than the configured maximum, they will be supplied with only the configured maximum number of items. This is done silently - there is no logging and no message is returned to the RSS reader.
- If Confluence times out when responding to an RSS feed request, any items already rendered are returned.

Related Topics

Using the RSS Feed Builder

Preventing and Cleaning Up Spam

If you have a public-facing Confluence site, your site may be affected by spammers.

Stopping Spammers

To prevent spammers:

1. Enable Captcha. See Configuring Captcha for Spam Prevention.
2. Run Confluence behind an Apache webserver and create rules to block the spammer's IP address.

Blocking Spam at Apache or System Level

If a spam bot is attacking your Confluence site, they are probably coming from one IP address or a small range of IP addresses. To find the attacker's IP address, follow the Apache access logs in real time and filter for a page that they are attacking.

For example, if the spammers are creating users, you can look for `signup.action`:

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```
$ tail -f confluence.atlassian.com.log | grep signup.action
1.2.3.4 - - [13/Jan/2010:00:14:51 -0600] "GET /signup.action HTTP/1.1"
200 9956 "-" "Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1)"
37750
```

Compare the actual spam users being created with the log entries to make sure you do not block legitimate users. By default, Apache logs the client's IP address in the first field of the log line.

Once you have the offender's IP address or IP range, you can add it to your firewall's blacklist. For example, using the popular Shorewall firewall for Linux you can simply do this:

```
# echo "1.2.3.4" >> /etc/shorewall/blacklist
# /etc/init.d/shorewall reload
```

To block an IP address at the Apache level, add this line to your Apache vhost config:

```
Deny from 1.2.3.4
```

You can restart Apache with a "graceful" command which will apply the changes without dropping any current sessions.

If this still does not stop the spam, then consider turning off public signup.

Deleting Spam

Profile Spam

By 'profile spam', we mean spammers who create accounts on Confluence and post links to their profile page.

If you have had many such spam profiles created, it is easier to delete them via SQL, as described below.

To delete a spam profile:

1. Shut down Confluence and back up your database. **Note:** This step is essential before you run any SQL commands on your Confluence dattabase.
2. Find the last real profile:

```
SELECT bodycontentid,body FROM bodycontent WHERE contentid IN
  (SELECT contentid FROM content WHERE contenttype='USERINFO')
  ORDER BY bodycontentid DESC;
```

3. Look through the bodies of the profile pages until you find where the spammer starts. You may have to identify an number of ranges.
4. Find the killset:

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```
CREATE TEMP TABLE killset AS SELECT
bc.bodycontentid,c.contentid,c.username FROM
  bodycontent bc JOIN content c ON bc.contentid=c.contentid WHERE
  bodycontentid >= BOTTOM_OF_SPAM_RANGE AND bodycontentID <=
TOP_OF_SPAM_RANGE
  AND  c.contenttype='USERINFO';

DELETE FROM bodycontent WHERE bodycontentid IN (SELECT
bodycontentid FROM killset);

DELETE FROM links WHERE contentid IN (SELECT contentid FROM
killset);

DELETE FROM content WHERE prevver IN (SELECT contentid FROM
killset);

DELETE FROM attachments WHERE pageid IN (SELECT contentid FROM
killset);

DELETE FROM content WHERE contentid IN (SELECT contentid FROM
killset);

DELETE FROM os_user_group WHERE user_id IN (SELECT id FROM killset
k JOIN os_user o ON o.username=k.username);

DELETE FROM os_user WHERE username IN (SELECT username FROM
killset);
```

5. Once the spam has been deleted, restart Confluence and rebuild the index. This will remove any references to the spam from the search index.

Notes

- See CONF-1469. Your comments that issue are very much appreciated.

Design and Layout

- Choosing a Default Language
- Custom Decorator Templates
- Customising Look and Feel Overview
  - Customising Colour Schemes
  - Customising Site and Space Layouts
    - Adding a Navigation Sidebar
      - Adding an All Versions Section to your Navigation Bar
    - Upgrading Customised Site and Space Layouts
  - Global Templates
  - Importing Templates
  - Modify Confluence Interface Text
  - Working With Decorator Macros
  - Customising a Specific Page
  - Customising PDF or HTML Content
  - Customising the Dashboard
  - Customising the eMail Templates
  - Customising the Login Page

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- Themes Overview
  - Applying a Theme to a Site
  - Customising the Left Navigation Theme
  - Modifying Look and Feel (for themes)
    - Configuring the Theme Plugin
    - Including Cascading Stylesheets in Themes
  - Creating a Theme

Some functionality described on this page is restricted in Confluence OnDemand.

RELATED TOPICS

Modifying Confluence Interface Text
Site Configuration

Choosing a Default Language

Administrators can define a default language to be applied to all spaces in your Confluence site. Note that individual users can select a language preference for their session.

The information on this page does not apply to Confluence OnDemand.

Setting the Default Language

To change the default language for the Confluence site:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Languages**' in the 'Configuration' section of the left-hand panel.
3. The '**Language Configuration**' screen will appear. Select the language that you want to use as the default language for your Confluence site.

Other Settings that Affect the Language

Individual users can choose the language that Confluence will use to display screen text and messages. Note that the list of supported languages depends on the language packs installed on your Confluence site.

The language used for your session will depend on the settings below, in the following order of priority from highest to lowest:

- The language preference defined in your user profile. Note that you need to be logged in for this setting to take effect.
- The language that you choose by clicking an option at the bottom of the Confluence login screen. Confluence stores this value in a cookie. When the cookie expires, the setting will expire too.
- The language set in your browser.
  - Note that your Confluence administrator can disable this option by setting a system property.
  - The browser sends a header with a prioritised list of languages. Confluence will use the first supported language in that list.
- The default language for your site, as defined by your Confluence site administrator.

Showing User Interface Key Names for Translation

For those customers working on creating translations of the Confluence user interface, from 4.1 onwards there is a feature that will help. After opening the Confluence dashboard, you can simply add this text to the end of your Confluence URL, like so:

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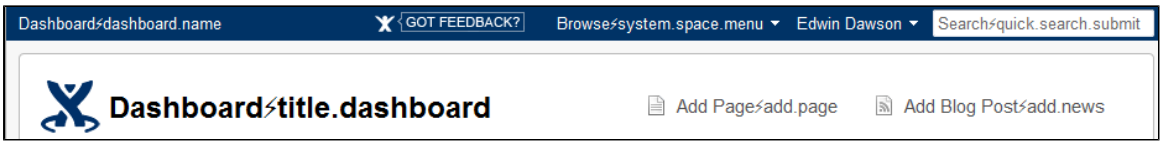
```
?i18ntranslate=on
```

Then press Enter.

This will then cause each element of the user interface to display its special **key name** while Confluence is still in an interactive mode. This makes it easier to find the essential context for each key, which can then be searched on http://translations.atlassian.com where you can enter an appropriate translation for your custom language pack.

The key names are displayed with a "lightning bolt" graphic between elements of the names. For example, the buttons will show up with elements shown like so:



For example, for the **Browse** button, the associated key **system.space.menu** can be found on http://translations.atlassian.com, allowing you to write a better translation for the term **Browse**, being able to see the full context of where the UI element belongs and what it means to the user.

To turn off the translation view, add this code to the end of the Confluence URL:

```
?i18ntranslate=off
```

RELATED TOPICS

Editing User Settings
Recognised System Properties
Configuring Indexing Language
Installing a Language Pack

Custom Decorator Templates

About Decorators

Confluence is built on top of the Open Source SiteMesh library, a web-page layout system that provides a consistent look and feel across a site. SiteMesh works through "decorators" that define a page's layout and structure, and into which the specific content of the page is placed. If you are interested, you can read more on the SiteMesh website.

What this means for Confluence is that you can customise the look and feel of almost all of your Confluence site through editing three decorators:

- The "Main" decorator defines the look and feel of most pages on the site
- The "Popup" decorator defines the look and feel of the popup windows such as the "Insert Link" and "History" pages.
- The "Printable" decorator defines the look and feel of the printable versions of pages (available through the icon on each page)

You can view and edit these decorators from within Confluence: they are available from the "Layouts" option on the site's Administration menu. Changes to the decorators will affect all spaces hosted on that Confluence installation.

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The decorator that is used to draw Confluence's administrative pages can not be edited from within Confluence. This means that if you make some editing mistake that renders the rest of the site unuseable, the administrative pages should still be available for you to fix the template.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Browsing the Default Decorators

At any time, you can browse the default decorators that come packaged with Confluence by following the "View Default" links on the "Site Layouts" page. The template browser also allows you to view the "#parsed" templates that are included within the template when it is compiled. While you can't edit these included templates, you will probably have to copy some or all of them into your custom template as you do your customisation.

Editing Custom Decorators: Add a Logo

To edit Confluence decorators, you should have a good knowledge of HTML, and some understanding of the Velocity templating language.

The first thing you will see when you choose to create a custom "Main" decorator is... there's not much to edit. By default, most of the content of this decorator is included from other files:

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```
<html>
<head>
     <title>$title - Confluence</title>

     #standardHeader()
</head>
<body onload="placeFocus()">

<div id="Content">
     <table border="0" cellpadding="0" cellspacing="0" width="100%">
         <tr>
             <td width="60%" rowspan=2
class="logocell">#pagetitle("spacenametitle")</td>

             <td width="40%" align="right"
valign="top">#globalnavbar("table")</td>
         </tr>
         #if ($setup.isSetupComplete())
         <tr>
             <td align=right valign="bottom">
                 #usernavbar()
                 #printableicon()
                 #helpicon()
             </td>
         </tr>
         #end
     </table>

     #breadcrumbsAndSearch()

     <table border="0" cellpadding="5" cellspacing="0" width="100%"><tr><td>
<table border="0" cellpadding="0" cellspacing="0" width="100%"><tr>

     <td valign="top" class="pagebody">
## The "toolbar-style" page operations
## #if ($page.getProperty("page.operations"))
## <table align="right" class="toolbar"><tr><td>
## $page.getProperty("page.operations")
## </td></tr></table>
## #end

         #if ($page.getProperty("page.surtitle"))
             $page.getProperty("page.surtitle")
         #end

         #if (!$page.getProperty("page.no-page-header"))
             <div class="pageheader">
                 <span class="pagetitle">$title</span>
             </div>
         #end

         $body
     </td>

#parse ("/decorators/includes/complete_footer.vmd")
```

We can add our logo, changing the "logocell" table cell:

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```
<td width="60%" rowspan=2 class="logocell">
<img align="right"
src=http://www.atlassian.com/images/atlassian_logo.gif
width="203" height="60">#pagetitle("spacenametitle")</td>
```

When you insert this into the right section of the template and hit save, visitors to the site will see the logo at the top of each page. Note, the administrative pages will be unaffected: you will have to go to the dashboard or to a space to see the changes you have made.

Macros

Some parts of the page are drawn using Velocity macros, including the navigation bar. The macros you should know about when editing decorators are described in Working With Decorator Macros.

If Something Goes Terribly Wrong

From the "Site Layouts" page in Confluence's administrative menu, you can delete your custom templates. When you do this, the default template will be restored, fixing anything that may have been broken.

Alternatively, the custom templates are stored in the DECORATOR table in the database. If you have somehow managed to render Confluence completely unuseable through editing your templates, delete the relevant entries from the DECORATOR table.

For Advanced Users

The `velocity` directory is at the front of Confluence's velocity template search path. As such, you can override *any* of Confluence's velocity templates by placing an identically named file in the right place.

While we don't recommend you do this unless you know exactly what you're doing, it does give you complete control over the look of every aspect of Confluence. It also means that you can edit your templates in a text-editor if you wish, rather than through the web interface.

There are, however, two important caveats:

1. Velocity is configured to cache templates in memory. When you edit a page from within Confluence, it knows to reload that page from disk. If you are editing the pages on disk, you will either have to turn off velocity's caching temporarily in `WEB-INF/classes/velocity.properties`, or restart the server to make your changes visible.
2. Because we only officially support the modification of the three global decorator files, other changes may interact unpredictably with future versions of Confluence. When upgrading, you should always test your custom modifications thoroughly before deploying them on a live site.

Customising Look and Feel Overview

You can customise the 'look and feel' of Confluence at both the global and space levels.

Any changes you make to the look and feel of the site at the global level will be applied as the default look and feel for all the spaces in the site. This means that any customisations will only be reflected in the "Default" theme. No other theme will have an impact from this change. An individual space can be configured to have its own look and feel through the space administration screens.

> ⚠ *Some functionality described on this page is restricted in Confluence OnDemand.*

Here's how you can customise the look and feel of your site:

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- **Colour Scheme** : Change the colour scheme of the user interface.
- **Layouts** : Change the site layout, which determines how the controls are laid out in the site. This does not change the actual page layouts, but it does change the way the surrounding controls appear in the page.
- **Themes** : Use themes for advanced layout customisation.

RELATED TOPICS

No content found for label(s) customising-looknfeel.

Administrators Guide Home Confluence Documentation Home

Customising Colour Schemes

A Confluence administrator can configure a new colour scheme for the site dynamically from the **Administration Console**.

The default colour scheme for the site will also become the default for all spaces within it. However, it is possible for space administrators to configure a different colour scheme for spaces from the space administration screens.

> *The information on this page does not apply to Atlassian OnDemand sites with multiple apps. If you are using Confluence-only OnDemand, the information does apply.*

To change the site's colour scheme:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Colour Scheme**' in the left-hand panel.
   This will bring up a new screen. See screenshot below.
3. Click '**Edit**'. Enter standard HTML/CSS2 colour codes, or use the colour-picker to choose a new colour from the palette provided. Any changes you make will immediately be reflected across the Confluence installation.

The colour scheme applies to the following UI elements:

- **Top Bar** - the bar across the top of the page that contains the breadcrumbs
- **Tab Navigation Background** - the background colour of the tab navigation menus
- **Tab Navigation Text** - the text of the tab navigation menus
- **Breadcrumbs Text** - the breadcrumbs text in the top bar of the page
- **Space Name Text** - the text of the current space name located above the page title
- **Heading Text** - all heading tags throughout the space.
- **Links** - all links throughout the space.
- **Borders and Dividers** - table borders and dividing lines.
- **Tab Navigation Background Highlight** - the background colour of the tab navigation menu when highlighted
- **Tab Navigation Text Highlight** - the text of the tab navigation menu when highlighted
- **Top Bar Menu Selected Background** - the background colour of the top bar drop down menu when selected
- **Top Bar Menu Item** - the text colour of the menu items in the top bar drop down menu
- **Page Menu Selected Background** - the background colour of the drop down page menu when selected
- **Page Menu Item Text** - the text of the menu items in the drop down page menu
- **Menu Item Selected Background** - the background colour of the menu item when selected (applies to both the top bar and page drop down menus)
- **Menu Item Selected Text** - the text colour of the menu item when selected (applies to both the top bar and page drop down menus)

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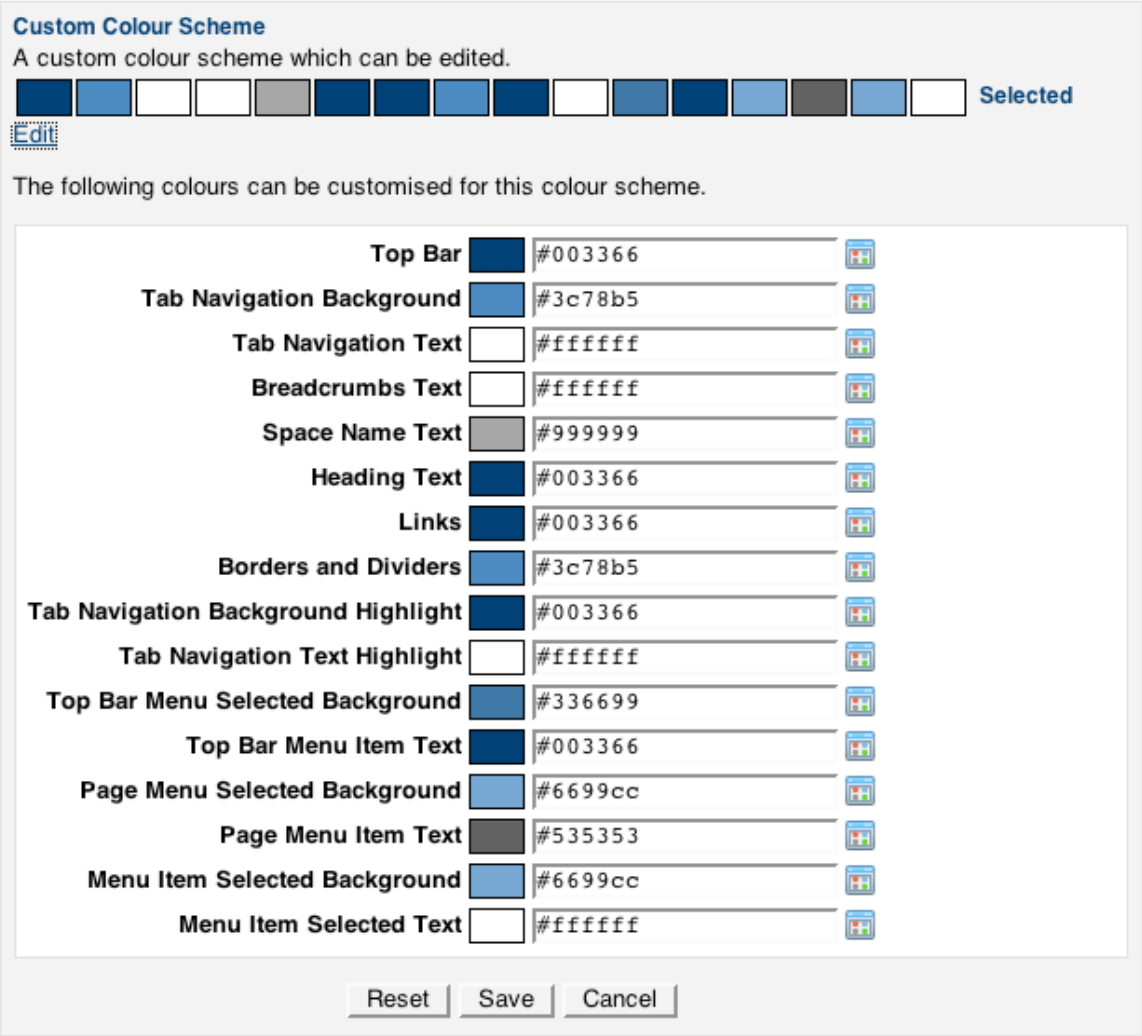
Please note that some UI elements are specific to the default theme and may not take effect for other themes.



Screenshot above: Editing a site's colour scheme

Note

If you mess things up, just click the '**Reset**' button and then try again.

Related Topics

No content found for label(s) customising-looknfeel.

Administrators Guide Home Confluence Documentation Home

Customising Site and Space Layouts

You can modify Confluence's look and feel by editing the 'decorator' (layout) files. Modifying these files allows you to change the look and feel of:

- The Confluence site as a whole, which includes all spaces within the Confluence site.
- An individual space within the Confluence site.

This page tells you how to customise the layout files for your Confluence site as a whole. These customisations:

- Modify the default 'decorator' files of each space in your site.
- Are reflected in every space unless the space's own equivalent layout files have been customised.

You need System Administrator permissions to perform these customisations.

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You can also customise the layout files for a given space. For more information, refer to Customising Space Layouts. Space layout customisations override the equivalent site customisations.

> *The information on this page does not apply to Confluence OnDemand.*

> If you modify the look and feel of Confluence by following these instructions, you will need to update your customisations when upgrading Confluence. The more dramatic the customisations are, the harder it will be to reapply your changes when upgrading. Please take this into account before proceeding with your customisation. For more information on updating your customisations, please refer to Upgrading Customised Site and Space Layouts .

Confluence is built on top of the open source SiteMesh library, a web-page layout system. Read more on the SiteMesh website. To edit the layout of Confluence, you will need to modify these decorator files. A decorator file is a .vmd file and is written in a very simple programming language called Velocity. You can learn more from the Velocity User Guide.

Once you are familiar with Velocity, you can edit the decorator files to personalise the appearance of Confluence.

The decorator files in Confluence are grouped into the following categories:

- **Site layouts**: These are used to define the controls that surround each page in the site. For example, the header and the footer.
- **Content layouts**: These control the appearance of content such as pages and blog posts. They do not change the way the pages themselves are displayed, but allow you to alter the way the surrounding comments or attachments are displayed.
- **Export layouts**: These control the appearance of spaces and pages when they are exported to HTML. If you are using Confluence to generate a static website, for example, you will need to modify these layouts.

Editing a site decorator file

1. Choose **Browse** > **Confluence Admin**.
2. Select **Layouts** under **Look and Feel** in the left-hand navigation panel.
   - Click **View Default** to view the .vmd file.
   - Click **Create Custom** to edit the default .vmd file. This will open up the .vmd file in edit mode.
3. Make changes and click **Update**.

If something goes wrong: Click **Reset Default** to revert to the original layouts.

Using Velocity macros

When editing Custom Decorator Templates, there are a number of macros available to define complex or variable parts of the page such as menus and breadcrumbs. You may insert these macros anywhere in your templates. More information on Working With Decorator Macros.

For advanced users

Overriding Velocity templates

The `velocity` directory is at the front of Confluence's Velocity template search path. As such, you can override *any* of Confluence's Velocity templates by placing an identically named file in the right place. While we don't

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recommend you do this unless you know exactly what you're doing, it does give you complete control over the look of every aspect of Confluence. It also means that you can edit your templates in a text-editor if you wish, rather than through the web interface.

Caching

Velocity is configured to cache templates in memory. When you edit a page from within Confluence, it knows to reload that page from disk. If you are editing the pages on disk, you will either have to turn off velocity's caching temporarily in `WEB-INF/classes/velocity.properties`, or restart the server to make your changes visible.

Location of Velocity files

In Confluence 2.6 and later, some Velocity files are located inside the Confluence JAR file that can be found at `confluence/WEB-INF/lib/confluence-x.x.x.jar`. To override files inside this JAR (which you can open with any ZIP tool like WinZip or 7-Zip), put your customised file in the same directory structure under `confluence/WEB-INF/classes/`.

For example, the file `templates/macros/alphaindex.vm` inside confluence.jar can be replace by putting your custom file in `WEB-INF/classes/templates/macros/alphaindex.vm`. You do not need to modify the file inside the JAR.

See also How Do I Edit Files in Confluence JAR Files?.

Finding the layout via the URL

If the layout has changed so extensively as to not be visible, you can browse to the URL directly:

```
http://<confluence base
url>/admin/resetdecorator.action?decoratorName=decorators/main.vmd
```

Substitute the base URL and the appropriate .vmd file.

RELATED TOPICS

No content found for label(s) customising-looknfeel.

Velocity Template Overview
Basic Introduction to Velocity

Administrators Guide Home Confluence Documentation Home

Adding a Navigation Sidebar

You can include a left-hand navigation sidebar (table of contents) in your Confluence space. There are two ways to do this:

- ✅ **Recommended: Use the Documentation Theme** – The Documentation theme provides the left-hand navigation sidebar that you see in this documentation. **Please go to the page that tells you how to configure the Documentation theme**.
- **Customise the Space Layouts** — This is an alternative method (documented below) that is more complex to set up than the Documentation theme and requires more maintenance with Confluence major release upgrades.

> ⚠️ *The information on this page does not apply to Confluence OnDemand.*

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Notes to Read before you Start

Please take note of the following points before you use the method documented on this page:

- **Reapply customisation whenever you upgrade Confluence.** Every time you upgrade Confluence, you must reapply the layout customisations described on this page. When you upgrade to a new major Confluence version (such as moving from Confluence 2.9.x to Confluence 2.10.x or from Confluence 3.0.x to Confluence 3.1.x) you will need to reapply the layout customisation. See instructions below.
- **Check your wiki permissions.** To customise a space layout as described below, you must be a space administrator in the given space and you must be a system administrator on the Confluence site. See the overview of permissions and the glossary entries for space administrator and for Confluence administrator and system administrator.

Customising your Space Layouts to Add a Navigation Sidebar

Screenshot: A left-hand navigation bar resulting from customising the space layouts

Follow the instructions below to add the navigation sidebar to your Confluence space.

Step 1. Create the TreeNavigation Page

First, you will create a Confluence page containing the `pagetree` macro. This is just a normal Confluence page. The only slight oddity is that it should reside at the root of your space, instead of under the space's home page.

Follow these instructions:

1. Go to the 'Space Pages' view for the current space. To do this:
    - Go to a page in the space and choose **Browse** > **Pages**.

    You are now at the 'root' level of your space. The 'root' level contains pages that are added above the space's home page, not as children of the home page.
2. At the root level of the space, create a page named 'TreeNavigation'.
3. On the page, insert the following text:

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```
{pagetree}
```

4. Now decide if you want to add extra functionality to your page tree. By default, using the code above, the page tree will use the home page of the space as its root. You can choose to:
   - Specify a different root for your page tree.
   - Add a search box at the top of the tree.
   - Allow the viewers to expand and collapse the whole tree.
   - Control other aspects of the display.
     For more information, read about the Pagetree macro.

Step 2. Change the Space's Page Layout

Now you will change the space's page layout, to include the above page on the left of every web page displayed.

1. Choose **Browse** > **Space Admin**.
   Note: 'Space Admin' is displayed only if you are a space administrator for that space, or you are a super user (a member of the `confluence-administrators` group).
2. Make sure the Confluence Default theme is selected from the **Themes** menu.
3. Click **Layout** in the **Look and Feel** section.
   Note: The layout option is only displayed if you are a system administrator on the Confluence site.
4. Click **Create Custom** in the **Page Layout** section.
5. In the layout, locate the **VIEW** section, and find this code:

```
<div class="wiki-content">
$body
</div>
```

6. Replace the above code block with this code:

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```
#if ($action.isPrintableVersion() == false)
<style>
.spacetree * ul{
padding-left:0px;
margin-left: 0px;
}
.spacetree * li{
margin-left: 5px;
padding-left:5px;
}

</style>

<table cellspacing="2" cellpadding="5">
<tr>
<td valign="top" align="left" width="22%" bgcolor="#F9F9F9"
class="noprint">
<div class="tabletitle">Table of Contents</div>
<div class="spacetree">
#includePage($helper.spaceKey "TreeNavigation")
</div>
</td>
<td valign="top" align="left" width="78%" class="pagecontent">
<div class="wiki-content">
$body
</div>
</td>
</tr>
</table>
#else
<div class="wiki-content">
    $body
</div>
#end
```

7. If you want to, you can change the table title in the above code from 'Table of Contents' to something else. For example, it might say 'Confluence Documentation'.
8. Save the updated layout.

Reapplying the Customisation on Upgrade

When you upgrade to a new major Confluence version (e.g. from Confluence 2.9.x to Confluence 2.10.x or from Confluence 3.0.x to Confluence 3.1.x), you will need to reapply this customisation.

Reason:
The new Confluence version may contain updates to the space layouts. Because you have customised the space layouts, Confluence will not overwrite your customisation. So your space will not get the latest updates until you set the layout to default and then reapply your changes.

Here's how to do it:

1. First make a copy of your customised code, if you have changed it from the code above:
    - Go to **Space Admin**, click **Layout** and edit the customised page layout (as created above).
    - Copy the section of code that inserts the customised left-hand navigation panel.
    - Close the page layout.
2. Click **Reset Default** next to **Page Layout**, to set the page layout back to default. This will bring in the new code for the upgraded version of Confluence.

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3. Create a custom layout as described in step 2 above, and reinsert the custom left-hand navigation code.
4. Save the updated layout.

RELATED TOPICS

Configuring the Documentation Theme
Customising Site and Space Layouts
Upgrading Customised Site and Space Layouts
Example Confluence Designs

Adding an All Versions Section to your Navigation Bar

This page gives an example of how you might add an 'All Versions' section to your navigation side bar, as currently used in the Confluence documentation, Crowd documentation and the other Atlassian product documentation spaces.

If you are viewing this page online on the Atlassian documentation wiki, you will be able to see the 'All Versions' section at the top left of the navigation sidebar. Below is a screenshot.

A number of people have asked how we do it, so this page gives the answer. For details about creating the navigation side bar itself, please refer to Adding a Navigation Sidebar.

> *The information on this page does not apply to Confluence OnDemand.*

Adding the Version Index to the Navigation Sidebar

This is how we added the 'All Versions' section to the sidebar:

- For each product (Confluence, Crowd, Bamboo, etc) there is a page in the Inclusions Library of the ALLDOC space. The page lists all the versions of that product's documentation, linking to the relevant spaces. For example, here is the page for Confluence and the page for Crowd.
  We put the 'all versions' page in ALLDOC because the page is used in a number of different spaces, via the {include} macro. For example, the 'all versions' page may be included:
  - In every documentation space (each version) for the product concerned, such as DOC, CONF29, CONF28, CROWD, CROWD013, CROWD012, etc.
  - In the Enterprise Hosting doc space.
  - As a panel on the documentation home page, as shown in the 'All Versions' panel of the above screenshot, as well as in the left-hand navigation bar.
  - Any other places where useful.
- In each documentation space, there is a page called 'TreeNavigationVersions' like this one or this one, which copies in the content of the above 'all versions' page.
- For each documentation space, the space's page layout now includes two pages instead of just one:
  - The 'TreeNavigation' page, as already described on the page above.
  - The new 'TreeNavigationVersions' page.

Here's the relevant section of our page layout as it is currently for the Confluence documentation (DOC) space:

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```
#if ($action.isPrintableVersion() == false)
<style>
.spacetree * ul{
padding-left:0px;
margin-left: 0px;
}
.spacetree * li{
margin-left: 5px;
padding-left:5px;
}

</style>

<table cellspacing="2" cellpadding="5">
<tr>
<td valign="top" align="left" width="30%" bgcolor="#eeecec" class="noprint">
<div class="tabletitle">All Versions</div>
<div class="spacetree">
#includePage($helper.spaceKey "TreeNavigationVersions")
</div>
<div class="tabletitle">Confluence 2.10 Documentation</div>
<div class="spacetree">
#includePage($helper.spaceKey "TreeNavigation")
</div>
</td>
<td valign="top" align="left" width="70%" class="pagecontent">
<div class="wiki-content">
$body
</div>
</td>
</tr>
</table>
#else
<div class="wiki-content">
    $body
</div>
#end
```

Adding the Expand/Collapse Functionality to the Version Index

Another question we are asked is how we group the content of the included page under a collapsible control.

We use the Expand macro. The details are on the Expand macro's documentation page.

Related Topics

Adding a Navigation Sidebar

Upgrading Customised Site and Space Layouts

As Confluence evolves, so do the default site and space layouts that drive the rendering of every page. As new functionality is added or current functionally is changed, the default layouts are modified to support these changes.

> If you are using custom layouts based on defaults from a previous Confluence version, you run the risk of **breaking functionality**, or worse, **missing out on great new features**!

Take care on each new release of Confluence to reapply your changes to the new default templates.

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To reapply your custom layouts, you need to:

1. Obtain the source of your custom layouts from your current version of Confluence.
2. Reapply your customisations to the new default layouts.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Step 1. Obtain your Custom Layouts

Ideally, you should keep a record of each customisation you have applied to each of your Confluence site or space layouts.

If not, you should be able to find your customisations using the following method. This method extracts all site- and space-level layouts from your Confluence site as a single output. From this output, you should be able to identify your customisations.

> ✅ This method is handy to use if you have:
>
> - Many spaces with space layout customisations, or
> - Do not have an independent record of your site or space layout customisations.

Custom layouts are stored in the `DECORATOR` table within your Confluence database. You can `SELECT` for the source of the layout using SQL like this:

```
mysql> select SPACEKEY,DECORATORNAME,BODY from DECORATOR;
+----------+---------------------+------+
| SPACEKEY | DECORATORNAME       | BODY |
+----------+---------------------+------+
| NULL     | decorators/main.vmd | ...  |
+----------+---------------------+------+
1 row in set (0.03 sec)
```

*This example was tested on **MySQL**, but should be applicable to all SQL databases.*

Step 2. Reapply your Customisations

When you upgrade Confluence to another major release of Confluence, you will need to manually reapply any customisations you made to any site-wide or space-specific layouts. Unless otherwise stated, you should not need to reapply customisations after conducting a minor release upgrade of Confluence.

What are 'major' and 'minor' releases? Major release upgrades are ones where the 1st digit of Confluence's version number or the 1st digit after the 1st decimal place differ after the upgrade, for example, when upgrading from Confluence 3.0 to 3.1, or 2.8 to 3.0. Minor release upgrades are ones where the 1st digit of Confluence's version number and the 1st digit after the 1st decimal place remain the same after the upgrade, for example, when upgrading Confluence 3.0 to 3.0.1.

If you have made Confluence site-wide layout customisations:

1. Choose **Browse** > **Confluence Admin**.
2. Select **Layouts** under **Look and Fee**' in the left-hand navigation panel. The decorators are grouped under **Site**, **Content** and **Export** layouts.
3. Ensure you have all your customisations available (preferably in a form which can be copied and pasted).
4. Click **Reset Default** next to the layout whose customisations need to be reapplied.

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5. Click **Create Custom** next to the same layout and reapply your customisations (by copying and pasting them) into the appropriate locations within the new default layout.
6. Click the **Save** button.
7. Repeat this procedure from step 4 for each layout whose customisations need to be reapplied.

If you have made space-specific layout customisations:

1. Visit any page in the relevant space.
2. Choose **Browse** > **Space Admin**.
   Note: 'Space Admin' is displayed only if you are a space administrator for that space, or you are a super user (a member of the `confluence-administrators` group).
3. Click **Layout** under **Look and Feel** in the left-hand navigation panel. The decorators are grouped under **Site**, **Content** and **Export** layouts.
4. Ensure you have all your customisations available (preferably in a form which can be copied and pasted).
5. Click **Reset Default** next to the layout whose customisations need to be reapplied.
6. Click **Create Custom** next to the same layout and reapply your customisations (by copying and pasting them) into the appropriate locations within the new default layout.
7. Click the **Save** button.
8. Repeat this procedure from step 5 for each layout whose customisations need to be reapplied.

Step 3. Test your Modifications Carefully

Changes may interact unpredictably with future versions of Confluence. When upgrading, you should always test your custom modifications thoroughly before deploying them on a live site. It's beyond the scope of Atlassian Support to test and deploy these changes.

Turning Off Caching

Velocity is configured to cache templates in memory. When you edit a page from within Confluence, it knows to reload that page from disk. If you are editing the pages on disk, you will either have to turn off Velocity's caching temporarily in `WEB-INF/classes/velocity.properties`, or restart the server to make your changes visible.

The `velocity.properties` file is available in the `confluence-x.x.x.jar` file, where `x.x.x` is the Confluence version number. The JAR file is located in the `WEB-INF/lib` directory. If you wish to make modification to the files in the JAR, we recommend the following steps:

1. Stop Confluence.
2. Make a backup copy of the JAR file.
3. Un-jar the file
4. Locate and edit the appropriate file that you wish to modify.
5. Re-jar the `confluence-x.x.x.jar` file.
6. Relocate the JAR file to the appropriate directory.
7. Restart Confluence.

RELATED TOPICS

Customising Site and Space Layouts

Global Templates

A template is a predefined page that can be used as a prototype when creating new pages. Templates are useful for giving pages a common style or format. See Working with Templates.

Importing Templates

A template is a predefined page that can be used as a prototype when creating new pages. Templates are useful for giving pages a common style or format.

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Confluence ships with a number of templates, including the 'Charts', 'Document List' and 'Meeting Notes' templates. These templates are not available for use by default. However, if you have the appropriate permissions to access the Administration Console, you can import any of these templates to be used globally or within a specific space.

In addition, you can download additional template bundles from the Atlassian Plugin Exchange and then make them available by importing them.

Quick guide to importing a template:

1. Go to the Confluence Administration Console and choose **Import Templates**.
2. Select the templates that you want to import.
3. Select the space to import the templates to, or choose to import them as global templates.
4. Choose **Import**.

The rest of this page gives more detail about the above steps.

On this page:

- Step 1. Check the templates installed on your Confluence site
- Step 2. (Optional) Upload additional templates from the Atlassian Marketplace
- Step 3. Import a template to make it available to users
- Notes

Related pages:

- Working with Templates
- Editing a template
- Removing a Template
- Working with Pages

Step 1. Check the templates installed on your Confluence site

To see the templates that are currently available for import on your Confluence site:

1. Log in to Confluence as a System Administrator or Confluence Administrator.
2. Choose **Browse** > **Confluence Admin**.
3. Select '**Import Templates**' in the left-hand panel. The '**Import Templates**' screen will appear, listing the template packages installed on your Confluence instance (for example, 'Default Templates Package') and the templates included in each package.

Step 2. (Optional) Upload additional templates from the Atlassian Marketplace

Additional templates are available as plugins, known as template packages. Follow the steps below if you want to add template packagess to your site that were not shipped with your Confluence installation.

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

To upload more templates:

1. Go to the Atlassian Marketplace and download the template bundle that you need.
2. Log in to Confluence as a System Administrator or Confluence Administrator.
3. Choose **Browse** > **Confluence Admin**.
4. Choose **Plugins** in the left-hand panel.
5. The **Plugins** screen will appear. Choose the **Install Plugins** tab.
6. Choose **Upload Plugin**, browse to find the template bundle file that you downloaded, and upload it to Confluence.

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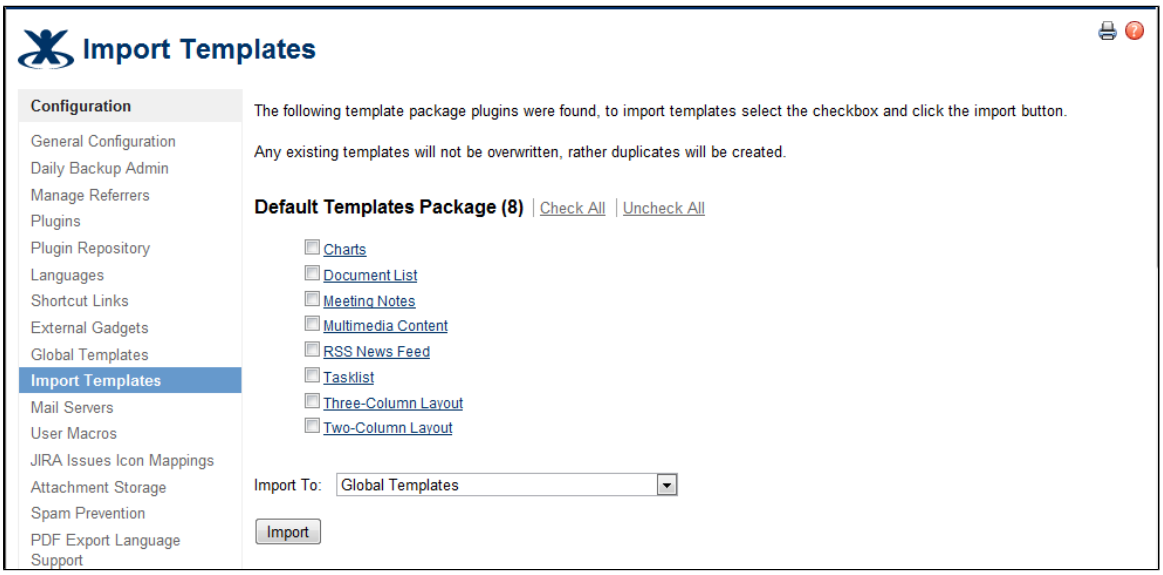
Step 3. Import a template to make it available to users

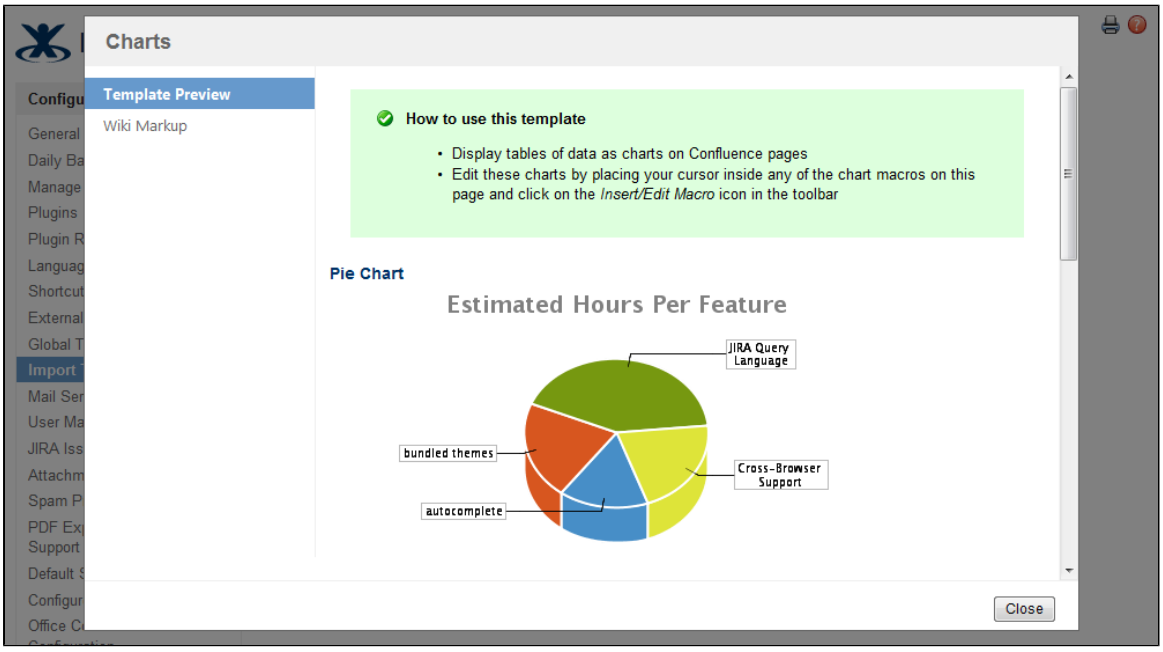
To import a template:

1. Log in to Confluence as a System Administrator or Confluence Administrator.
2. Choose **Browse** > **Confluence Admin**.
3. Choose **Import Templates** in the left-hand panel. The **Import Templates** screen will appear, listing the template packages installed on your Confluence site (for example, 'Default Templates Package') and the templates included in each package.
4. Select the templates to be imported by ticking the check boxes next to the relevant template names.
   You can see a preview of the template by clicking the template name.
5. Select the import destination for the templates in the **Import To** dropdown. If you want the templates to be available to only a specific space, select the name of the space, otherwise select **Global Templates** to make the templates available to all spaces.
6. Choose **Import**.

Screenshot: Importing a template



Screenshot: Previewing a template



Notes

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- **Building your own custom template bundles.** You can build a template bundle as a plugin and then deploy it to your Confluence instance. You can then import the templates from your custom template bundle, as described above. You will need some programming knowledge to develop a custom template bundle. See Creating A Template Bundle.
- **Duplicate template names.** If a template with the same name already exists on import, a duplicate template of the same name will be created. You will need to check the templates and rename them manually.
- **Removing the template.** Removing the plugin that contains a template will not remove the template from your Confluence site if you have already imported it. You will need to remove the template manually via the administration console or space administration screen.

Modify Confluence Interface Text

All Confluence UI text is contained in a single Java properties file. This file can be modified to change the default text, and also to translate Confluence into other languages than English.

The UI text file is `ConfluenceActionSupport.properties`. From your Confluence install directory:

```
\confluence\WEB-INF\lib\confluence-3.x.jar

Within this File, the relevant file to edit is
:\com\atlassian\confluence\core\ConfluenceActionSupport.properties.
```

Refer to Editing jar files for reference.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

The file contains parameters with `name=value` pairs, in the format:

```
parameter.name=Parameter value
```

Parameter names are any text before the '=' character and should never be modified. Any text after the '=' character is the parameter value, which can be modified freely and can also contain variables. An example involving variables is:

```
popular.labels=The three most popular labels are {0}, {1} and {2}.
```

For more information on replacing values, check out Translating ConfluenceActionSupport Content. Note that plugins store their text internally, so you must modify plugin text individually.

Steps For Modification

1. Stop Confluence
2. Under your install directory, open `\confluence\WEB-INF\lib\confluence-3.x.jar\com\atlassian\confluence\core\ConfluenceActionSupport.properties`
3. Search for the text you wish to modify, replace it and save the file in `<Confluence-Install>\confluence\WEB-INF\classes\com\atlassian\confluence\core`. Please create this folder structure, if it does not exist already.

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> ✅ If you re-bundle the JAR file, rather than re-deploy the class in the `WEB-INF\classes` directory, make sure to move the backup JAR file out of the /lib directory, or the backup may be deployed by mistake.

4. Restart Confluence

Common Modifications

- Rename 'Dashboard' by searching for `Dashboard`. To change "Dashboard" to "My Portal", change `dashboard.name=Dashboard` to `dashboard.name=My Portal`

Common Modifications

Task	Search For	Notes
Rename 'Dashboard'	Dashboard	The `dashboard.name` parameter has the name. To change 'Dashboard' to 'My Portal', change `dashboard.name=Dashboard` to `dashboard.name=My Portal` and update any other occurrences of the word 'Dashboard' in the instance
Modify login page text	login.	The `login.instructions` parameter has the "Enter your account details below to login to Confluence" text

Modify Keyboard Shortcuts

Confluence provides a set of keyboard shortcuts. You could customise the shortcuts by making modifications inside the `ConfluenceActionSupport.properties` file.

- To disable a particular shortcut, you can simply just comment out a respective line of code. One may like to disable the shortcut to one of the navigation links: *View, Edit, Attachments, Info* . For instance, to disable shortcut to *Attachments*one would comment out the following line:

```
#navlink.attachments.accesskey=a
```

- To modify an access key, one could simply just change the letter, bearing in mind the fact that the letter must be unique.

Working With Decorator Macros

Decorator Macros are Velocity macros which are used to draw complex or variable parts of the page such as menus and breadcrumbs when editing Custom decorators. Decorator macros can be inserted anywhere in your templates.

The macro is called by inserting a string of the form: #macroName("argument1" "argument2" "argument3").There are no commas between the arguments. Unless otherwise noted, these macros take no arguments.

NOTE: These macros will only work reliably when customising `main.vmd`. They may not work in other Velocity decorators. Decorator macros will not work inside normal confluence pages.

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The information on this page does not apply to Confluence OnDemand.

Macro	Usage
`#breadcrumbs()`	Draws the "You are here" breadcrumbs list, like the one found above the page name in the default template.
`#includePage(pageTitle)`	Includes a confluence page with the specified title. If you have 2 or more pages with the same title across multiple spaces, this macro will include the page belonging to the space you are currently viewing.
`#searchbox()`	Inserts a search box into the page, like the one to the far right of the breadcrumbs in the default template.
`#globalnavbar(type)`	Draws the global navigation bar, as found in the top right-hand corner of the default template. The navigation bar can be displayed in two modes:
`#globalnavbar("table")`	Displays the navigation bar in its default mode: drawn as a table of links with coloured backgrounds and mouse-over effects.
`#globalnavbar("text")`	Displays the navigation bar as series of text links separated by `|` characters.
`#usernavbar()`	Draws the user-specific navigation-bar. This bar contains the links to the user's profile and history, or to the login and signup pages if the user is not logged in.
`#helpicon()`	Draws the help icon, and link to the Confluence help page.
`#printableicon()`	On pages where a printable version is available, draws the printable page icon, linking to the printable version of the page. Otherwise, draws nothing
`#pagetitle(class)`	When you are viewing a page in a Confluence space, draws the name of the space that page is in. Otherwise, writes the word "CONFLUENCE".The "class" argument is the CSS class that the title should be drawn in. Unless you have customised your Confluence installation's CSS file, you should call this with "spacenametitle" as the class: `#pagetitle("spacenametitle")`

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`#poweredby()`	Writes out the "Powered by Confluence" and Confluence version-number boilerplate found at the bottom of the default template.
`#bottomshadow()`	Draws the fading shadow-effect found at the bottom of the content area in the default template.
`#dashboardlink()`	Inserts a link to the dashboard page.

RELATED TOPICS

No content found for label(s) admin-macros.

Customising a Specific Page

If you'd like to change the appearance of a specific page, you can modify the corresponding Velocity template. Here's how to find out which one:

1. Access the page. Note the name of the action. For example, the "Contact Administrators" page is `<baseURL>/administrators.action`.
2. Browse to <confluence-install>/confluence/WEB-INF/lib/confluence-x.y.jar. Copy the file.
3. Unzip or unjar the file using a standard unzipper or the java jar utility.
4. Open xwork.xml. Search the file for the name of the action corresponding to the page you'd like to modify. You'll see an entry like:

```
<action name="administrators"
class="com.atlassian.confluence.user.actions.AdministratorsAction">
            <interceptor-ref name="defaultStack"/>
            <result name="success"
type="velocity">/administrators.vm</result>
        </action>
```

5. The file to look for is the vm or vmd file. In the above example, it's administrators.vmd. Because there is no context path (just a / before the name of the file), its in the root of the Confluence webapp. For the stand-alone, that's <confluence-install>/confluence folder.
6. Modify the file.

For details on how to configure the file, check the Velocity Template Overview.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

RELATED CONTENT

No content found for label(s) customising-looknfeel.

Customising PDF or HTML Content

To customise Confluence's PDF output, you can edit the CSS stylesheets used by the PDF exporter. See Customising Exports to PDF.

To customise the HTML output, you will need to modify the file `confluence-x.y.z-jar/com/atlassian/confluence/pages/Page.htmlexport.vm`. See How Do I Edit Files in Confluence JAR Files? to learn how to repackage this file.

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Customising the Dashboard

If you are a Confluence Administrator, you can customise the global dashboard, affecting the way all users will see the dashboard.

Confluence users can customise their own view of the dashboard too. See the user's guide.

Sending users to a space home page instead of the dashboard

See Configuring the Site Home Page.

Editing the top left-hand section of the dashboard

See Editing the Site Welcome Message.

Disabling the 'Popular' tab on the dashboard

In some environments, you may prefer not to display the new 'Popular' tab on the dashboard. For example, if your wiki allows only a small group of people to log in and contribute content or comments. then the tab may not be relevant to you.

To prevent the tab from appearing, you can disable the relevant plugin module. You need System Administrator permissions to do this. Go to the **Dashboard Macros** plugin (See Configuring a Plugin), click **Manage plugin modules** and disable the **Popular Tab** module.

On this page:

- Sending users to a space home page instead of the dashboard
- Editing the top left-hand section of the dashboard
- Disabling the 'Popular' tab on the dashboard
- Advanced customisations
  - Editing the bottom left-hand section of the dashboard
  - Editing the top right-hand action bar
  - Modifying the global template or layout

Related pages:

- Customising your Personal Dashboard
- Customising Look and Feel Overview

⚠ *The information on this page does not apply to Confluence OnDemand.*

Advanced customisations

These configurations require knowledge of plugin development and/or the Velocity template language. See our guide to the Atlassian Plugin SDK and our introduction to Velocity.

Editing the bottom left-hand section of the dashboard

This section can be updated using Confluence web panels. You can add items to the dashboard by including a web panel with the key `atl.dashboard.left`:

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```
<web-panel key="{key}" location="atl.dashboard.left">
                    <resource name="view" type="velocity"
location="{location}"/>
                </web-panel>
```

You can remove the existing entities panel by disabling the global-entities-panel plugin from the dashboard macros plugin.

Editing the top right-hand action bar

You can add more links to the top right navigation bar by adding web items to `system.dashboard.button`:

```
<web-item key="{key}" name="{name}" section="system.dashboard.button">
                    <label key="{label}"/>
                    <link/>
                    <styleClass/>
                </web-item>
```

Modifying the global template or layout

You can also modify files to add content to the global dashboard.

To make modifications to the dashboard, modify the global template `/confluence/decorators/global.vmd` or the layout at **Administration** > **Layouts** > **Global Layout**.

For example, search the global layout for these macros:

```
$helper.renderConfluenceMacro("{recently-updated-dashboard:dashboard|showProfilePic=true}")
```

To modify the bundled plugin macros used in the Confluence dashboard:

1. Modify the `atlassian-bundled-plugins.zip` file located at `<Confluence install>/confluence/WEB-INF/classes/com/atlassian/confluence/setup`.
2. Update the `confluence-dashboard-macros-x.x.jar` file, rezip it and then put it back to `<Confluence install>/confluence/WEB-INF/classes/com/atlassian/confluence/setup`. Refer to How Do I Edit Files in Confluence JAR Files?.
3. Delete the JAR from `<confluence-home>/bundled-plugins`.
4. Restart Confluence.

To customise the space list, you can work with `spacelist.vm`.

Customising the eMail Templates

> Customisations to the Confluence email templates will need to be reapplied when you upgrade Confluence. Consider this before making drastic changes to the layout, and be sure to keep a list of what you have changed for your upgrade process later.

Only administrators with access to the server where Confluence is running can modify the Confluence email templates.

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> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Process to change the email templates

1. Shut down your test instance of Confluence.
2. In the Confluence web application folder, find the file `/confluence/WEB-INF/lib/confluence-2.x.jar`.
3. Make a copy of this file as a backup.
4. Learn how to edit files within .jar archives.
5. Within the jar file, find the `/templates/email` folder. Find the appropriate file(s) within that folder.
6. Edit the file with a text editor to make the required changes. The content is mostly HTML, but has some Velocity template variables in it. See Velocity Template Overview for more information about how these work.
7. Again using the guide on editing files within .jar archives, either rejar the set of folders or drop the new files into the identical folder structure in the `WEB-INF/classes` directory.
8. Start Confluence up again and test your changes.
9. Apply the changes to your production Confluence instance.

The same process can be applied to modify most of the templates in the Confluence web application. For velocity files that are not in a jar file, you need not shut down and restart Confluence. Be careful to test your changes before applying them to a live site. The templates contain code that is vital for Confluence to function, and it is easy to accidentally make a change that prevents use of your site.

RELATED TOPICS

- Velocity Template Overview
- Customising Site and Space Layouts
- Customising Look and Feel Overview
- Modify Confluence Interface Text

Customising the Login Page

This page gets you started on customising the Confluence login page, to add your own logo or custom text. This will not customise the login *process*, just what users sees when they log in.

Notes:

- Customisations to the Confluence login page will need to be reapplied when you upgrade Confluence. Consider this before making drastic changes to the layout, and be sure to keep a list of what you have changed for your upgrade process later.
- Please test your changes on a **test** Confluence site first.

Only administrators with access to the server where Confluence is running can modify the Confluence login page.

> **Related pages:**
>
> - Editing the Global Logo
> - Velocity Template Overview
> - Customising Site and Space Layouts
> - Customising Look and Feel Overview
> - Modify Confluence Interface Text

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

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To change the login page:

1. Shut down your Confluence server.
2. In the Confluence installation directory, find the file `confluence/login.vm`.
3. Make a copy of this file as a backup.
4. Edit the file with a text editor to make the required changes. The content contains a mixture of HTML and Velocity. See Velocity Template Overview (in our developer documentation).
5. Start Confluence and test your changes.

The same process can be applied to modify most of the templates in the Confluence web application. Be careful to test your changes before applying them to a live site. The templates contain code that is vital for Confluence to function, and it is easy to accidentally make a change that prevents use of your site.

Themes Overview

Themes are pre-defined style sets that can be applied to alter the appearance of your site. Themes allow you to personalise the 'look and feel' of Confluence. You can apply a theme to your entire Confluence site and to individual spaces. Choose a specific theme if you want to add new functionality or significantly alter the appearance of Confluence.

Confluence comes with a selection of themes. In addition, a site administrator can install new themes as plugins via the Confluence Administration Console. Provided that the theme is installed into your Confluence site, any space administrator can apply a theme to a space.

By default when you create a new space, the space will have the Confluence default theme.

To look at the themes installed:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Themes**' under 'Look and Feel' in the left-hand panel.
3. You will see a list of all installed themes.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Adaptavist's Theme Builder Plugin for Confluence allows you to customise your Confluence site by adding layouts, logo banners, menu-driven navigation, style sheets, footers and more.

Related Topics

No content found for label(s) themes-configuration.

Administrators Guide Home Confluence Documentation Home

Applying a Theme to a Site

Themes allow you to personalise the 'look and feel' of Confluence. You can apply a theme to your entire Confluence site and to individual spaces. Choose a specific theme if you want to add new functionality or significantly alter the appearance of Confluence.

Confluence comes with a selection of themes. In addition, a site administrator can install new themes as plugins via the Confluence Administration Console. Provided that the theme is installed into your Confluence site, any space administrator can apply a theme to a space.

By default when you create a new space, the space will have the Confluence default theme.

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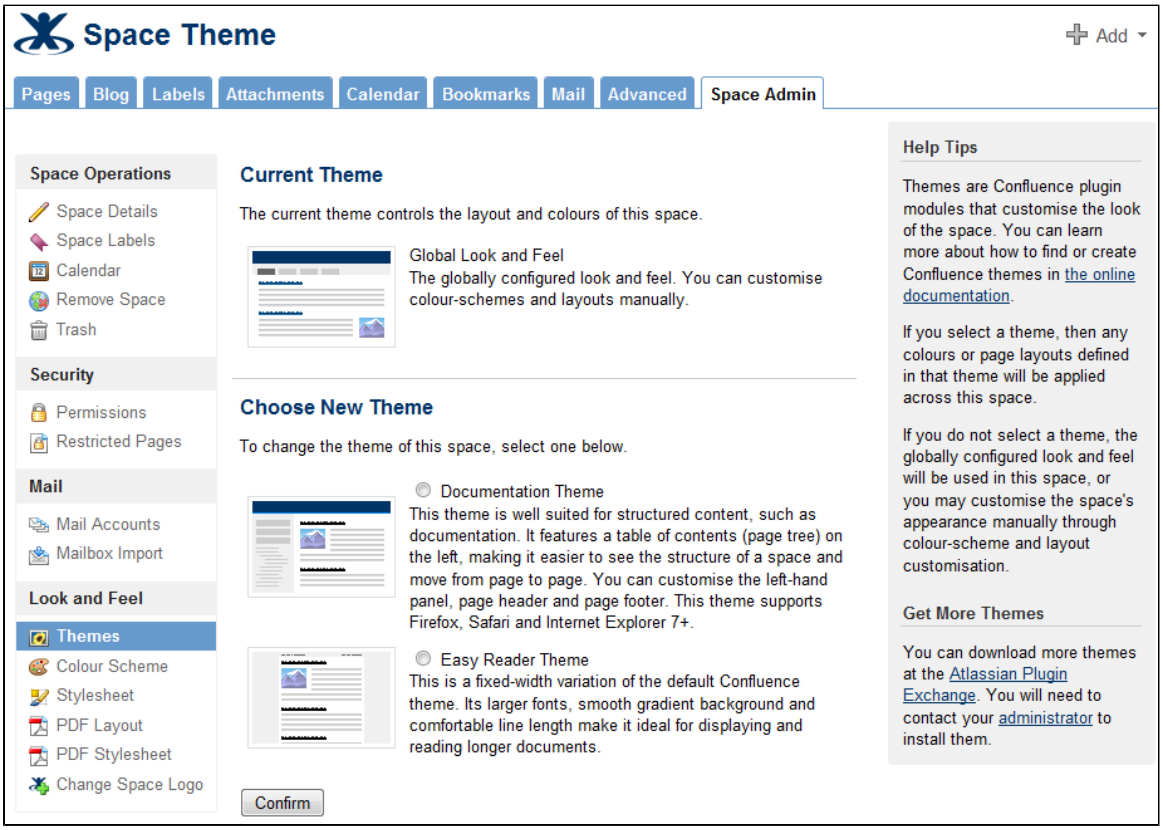
To apply a theme across the site,

1. Ensure that the theme you wish to apply has been installed as a plugin.
2. Choose **Browse** > **Confluence Admin**.
3. Select '**Themes**' under '**Look and Feel**' in the left-hand panel.
4. The screen will display all available themes. Click a radio button to select a theme.
5. Click '**Confirm**'.

Screenshot : Applying a theme



RELATED TOPICS

No content found for label(s) themes-configuration.

Administrators Guide Home Confluence Documentation Home

Customising the Left Navigation Theme

The Left Navigation theme is no longer part of Confluence

This theme is no longer part of Confluence and is not supported from Confluence 3.4 onwards. We suggest the Documentation theme, as it provides a customisable left-hand navigation panel and additional configurable features. If you are using an earlier version of Confluence, please refer to the documentation for your version. For example, go to the documentation for Confluence 3.3.

Modifying Look and Feel (for themes)

Here's how you can define a new look and feel for Confluence in your theme:

1. **Layout** : Edit Confluence's layout by modifying the decorator files that are used to define it.
   - Working with Decorators
   - Velocity Template Overview

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- Configuring the atlassian.plugin.xml file to reference the decorators

2. **Colour schemes** : Configure a new colour scheme for your theme. **Optional**
   - Configuring a new colour scheme
   - Configuring the atlassian.plugin.xml file to include the new colour scheme
3. **Stylesheet** : Include a stylesheet to define your theme. **Optional**

Note that for every component you edit, you will need to configure the `atlassian-plugin.xml` which is the central configuration file for the plugin to override the default files with the new files you've created.

The information on this page does not apply to Confluence OnDemand.

Layout: Working with decorators

What are decorators?

Confluence is built on top of the Open Source SiteMesh library, a web-page layout system. To edit the layout of Confluence, you will need to modify these decorator files. A decorator file is a '.vmd' file and is written in a very simple programming language called **Velocity**. Learn more about Velocity.

Confluence comes bundled with a set of decorator or VMD files that you can customize. Broadly these are categorised into **Site**, **Content** and **Export** decorators. These are further grouped into categories called *contexts* and under each context has various *modes* (ways of viewing the context).

To make editing easier, layout for similar screens (example: view and edit page screens) is configured through the same VMD file. So, if you want to customize how the Confluence **View Page Screen** or **Edit Page Screen** lo oks, you can make **both** of these changes inside one decorator file: **page.vmd**.

Decorator	Context	Mode	Comment
page.vmd	page	'view', 'edit', 'edit-preview', 'view-information', and 'view-attachments'	
blogpost.vmd	blogpost (news)	'view', 'edit', 'edit-preview', and 'remove'	We prefer to use 'news' as an end-user term; all templates and classes use 'blogpost' to indicate RSS related content
mail.vmd	mail	'view', 'view-thread' and 'remove'	

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space.vmd	space-pages, space-mails, space-blogposts, space-templates, space-operations, space-administration	CONTEXT: "space-pages". MODES: "list-alphabetically", "list-recently-updated", "list-content-tree", "create-page". CONTEXT: "space-mail". MODES: "view-mail-archive". CONTEXT: "space-blogposts". MODES: "view-blogposts", "create-blogpost". CONTEXT: "space-templates". MODES: "view-templates". CONTEXT: "space-operations". MODES: "view-space-operations". CONTEXT: "space-administration". MODES: "view-space-administration", "list-permission-pages".	space.vmd handles a wide range of options, this context is accessed by clicking on 'browse space' in the default theme of Confluence (tabbed theme)
global.vmd	global	'dashboard', 'view-profile', 'edit-profile', 'change-password-profile', 'edit-notifications-profile'	
main.vmd	n/a (header and footer formatting)		main.vmd is used to control the header and footer of each page, not the page specific presentation logic

For example, if you wanted to remove the 'Attachments' tab on the view page screen, you would make this layout change in the page.vmd file - where the 'view' mode is handled (as shown below).

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```
#*
     Display page based on mode: currently 'view', 'edit', 'preview-edit', 'info'
and 'attachments.
     See the individual page templates (viewpage.vm, editpage.vm, etc.) for the
setting of the mode parameter.
   *#
   ## VIEW
   #if ($mode == "view")

       <make layout modifications here>

   #elseif ...
```

Step One: Copying the decorators

The easiest way to begin configuring a new layout is by copying the default decorator files and editing them to suit your theme.

1. Choose **Browse** > **Confluence Admin**.
2. Select **Layouts** in the left panel. This will display options to view and edit the default decorators.
3. Copy the files that you intend to modify and place them in a directory structure that makes sense to you. See example below.

Step Two: Creating a directory structure for the decorators:

You should place your decorators in a directory hierarchy which makes sense to you. We recommend that you place the atlassian-plugin.xml file at the top level of the directory structure, and then place the decorators in directories which make a meaningful division of what they do.

Here is an example:

```
atlassian-plugin.xml
com/atlassian/confluence/themes/mytheme/
com/atlassian/confluence/themes/mytheme/global.vmd
com/atlassian/confluence/themes/mytheme/space.vmd
com/atlassian/confluence/themes/mytheme/mail.vmd
com/atlassian/confluence/themes/mytheme/blogpost.vmd
com/atlassian/confluence/themes/mytheme/main.vmd
com/atlassian/confluence/themes/mytheme/page.vmd
```

Step Three: Editing the decorators

To edit the decorators, you will require knowledge of a very simple programming language called **Velocity**. Learn more about Velocity.

Decorator Macros

When editing the decorators, you will need to use **Decorator Macros** to draw complex or variable parts of the page such as menus and breadcrumbs. See Working With Decorator Macros

Theme Helper Object

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When editing decorator files you will also come across a variable called **$helper** - this is the **theme helper object**.

The following table summarises what this object can do:

Behaviour	Explanation
$helper.domainName	displays the base URL of your Confluence instance on your page. This is useful for constructing links to your own Confluence pages.
$helper.spaceKey	returns the current space key or null if in a global context.
$helper.spaceName	returns the name of the current space
$helper.renderConfluenceMacro("{create-space-button}")	renders a call to a Confluence Macro for the velocity context
$helper.getText("key.key1")	looks up a key in a properties file matching `key.key1=A piece of text` and returns the matching value ("A piece of text")
$helper.action	returns the XWork action which processed the request for the current page.

If you are on a page or space screen you also have access to the actual page and space object by using `$helper.page` and `$helper.space` respectively.

If you want to deliver more into what other methods are available in this object, please see our API's for ThemeHelper.

Step Four: Configuring the central configuration file to reference the new decorators

How to do this is explained in Configuring the Theme Plugin

Working with colour schemes for themes

Configuring the colour scheme

The easiest way to configure a colour scheme is to do it dynamically from the **Administration Console** (as you would normally when you want to change the site's colour scheme online), and then express it as an xml file. This method makes it possible for you to experiment with different colours and test them out before including the colour scheme in your theme.

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Colour scheme**' in the left panel.
3. Use the colour picker to define the colours for the following UI elements:

- **Top Bar** - the bar across the top of the page that contains the breadcrumbs.

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- **Space Name Text** - the text of the current space name located above the page title.
- **Heading Text** - all heading tags throughout the space.
- **Links** - all links throughout the space.
- **Borders and Dividers** - table borders and dividing lines.
- **Menu Bar Background** - background of top navigational buttons
- **Menu Bar Text** - text that appears on the menu bar
- **Menu Bar Background Highlight** - background colour of menu bar when highlighted.
- **Menu Bar Text Highlight** - menu bar text when highlighted

More information on customising colour schemes

Expressing the colour scheme as XML

Once, you have decided on the colours for the different UI elements, you will need to configure the atlassian.plugin.xml to include the new colour scheme. How to do this is explained in detail in Configuring the Theme Plugin.

RELATED TOPICS

No content found for label(s) themes-configuration.

Administrators Guide Home Confluence Documentation Home

Configuring the Theme Plugin

Each plugin is described in its own `atlassian-plugin.xml` file, which specifies attributes of the plugin, including a description of each module it contains. Once you have modified the different components to define a new look and feel for your theme, you will need to configure this file so Confluence knows where to look when overriding the default files.

The easiest way to begin is by copying the `atlassian-plugin.xml` from one of the default themes bundled with Confluence and modifying it for your theme.

> *The information on this page does not apply to Confluence OnDemand.*

The structure of an `atlassian-plugin.xml` file is fairly self-explanatory:

```
<atlassian-plugin key="com.atlassian.confluence.themes.tabless" name="Plain
Theme">
   <plugin-info>
       <description>This theme demonstrates a plain look and feel for Confluence.
It is useful as a building block for your own themes.</description>
       <version>1.0</version>
       <vendor name="Atlassian Software Systems Pty Ltd"
url="http://www.atlassian.com/"/>
   </plugin-info>

    <theme key="tabless" name="Tabless Theme"
class="com.atlassian.confluence.themes.BasicTheme">
        <description>plain Confluence theme.</description>
        <layout key="com.atlassian.confluence.themes.tabless:main"/>
        <layout key="com.atlassian.confluence.themes.tabless:global"/>
        <layout key="com.atlassian.confluence.themes.tabless:space"/>
        <layout key="com.atlassian.confluence.themes.tabless:page"/>
```

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```
        <layout key="com.atlassian.confluence.themes.tabless:blogpost"/>
        <layout key="com.atlassian.confluence.themes.tabless:mail"/>
        <colour-scheme
key="com.atlassian.confluence.themes.tabless:earth-colours"/>
    </theme>

    <layout key="main" name="Main Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/main.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/main.vmd"/>
    </layout>

    <layout key="global" name="Global Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/global.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/global.vmd"/>
    </layout>

    <layout key="space" name="Space Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/space.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/space.vmd"/>
    </layout>

    <layout key="page" name="Page Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/page.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/page.vmd"/>
    </layout>

    <layout key="blogpost" name="Blogpost Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/blogpost.vmd">
        <resource type="velocity" name="decorator"

location="com/atlassian/confluence/themes/tabless/blogpost.vmd"/>
    </layout>

    <layout key="mail" name="Mail Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/mail.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/mail.vmd"/>
    </layout>


    <colour-scheme key="earth-colours" name="Brown and Red Earth Colours"
                    class="com.atlassian.confluence.themes.BaseColourScheme">
         <colour key="topbar" value="#440000"/>
         <colour key="spacename" value="#999999"/>
         <colour key="headingtext" value="#663300"/>
         <colour key="link" value="#663300"/>
         <colour key="border" value="#440000"/>
         <colour key="navbg" value="#663300"/>
         <colour key="navtext" value="#ffffff"/>
         <colour key="navselectedbg" value="#440000"/>
         <colour key="navselectedtext" value="#ffffff"/>
```

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```
    </colour-scheme>

</atlassian-plugin>
```

Modifying the `atlassian-plugin.xml` file

We will configure this file section by section.

Plugin information

```
<atlassian-plugin key="com.atlassian.confluence.themes.tabless" name="Plain
Theme">
   <plugin-info>
       <description>This theme demonstrates a plain look and feel for Confluence.
It is useful as a building block for your own themes.</description>
       <version>1.0</version>
       <vendor name="Atlassian Software Systems Pty Ltd"
url="http://www.atlassian.com/"/>
   </plugin-info>
```

plugin key : Specify a key that uniquely identifies the plugin, eg. com.example.themes.dinosaur

name : Give the plugin a name.

description : Provide a short description of the plugin.

vendor : Replace the text with your information.

Theme information

```
<theme key="dinosaurs" name="Dinosaur Theme"
       class="com.atlassian.confluence.themes.BasicTheme">
    <description>A nice theme for the kids</description>
    <colour-scheme key="com.example.themes.dinosaur:earth-colours"/>
    <layout key="com.example.themes.dinosaur:main"/>
    <layout key="com.example.themes.dinosaur:mail-template"/>
</theme>
```

theme key : Specify a key that uniquely identifies the theme.

class : The class of a theme must implement `com.atlassian.confluence.themes.Theme`. The `com.atlassian.confluence.themes.BasicTheme` class provided with Confluence gathers together all the resources listed within the module definition into a theme.

name : Give the theme a name. Make sure that you replace all instances of the theme name with this name.

description : Provide a short description of your theme

colour-scheme key : A theme can contain an optional `colour-scheme` element that defines which colour-scheme module this theme will use. If you are using a new colour scheme, enter its key.

layout key : A theme can contain any number of `layout` elements that define which layouts should be applied in this theme. Refer to these modules by their **complete module key** as shown above.

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Referencing the decorators

You will need to add a layout entity as shown below for each of the decorators you are using. See working with decorators

```
<layout key="page" name="Page Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
            overrides="/decorators/page.vmd">
        <resource type="velocity" name="decorator"
                  location="com/atlassian/confluence/themes/tabless/page.vmd"/>
</layout>
```

class : The class which each decorator, or layout, is mapped to must implement `com.atlassian.confluence.themes.VelocityDecorator`.

overrides : The layout entry must provide an `overrides` attribute which defines which decorator within Confluence is being overrridden by the theme.

Location : Specify the location of the new decorator file, so Confluence know where to look when overriding the default decorator.

It is possible for a theme to use modules that aren't in the same plugin as the theme. Just keep in mind that your theme will be messed up if the plugin that the theme depends on is removed.

Including the colour scheme

Colour schemes can be pre-configured for your theme dynamically from the **Administration Console**. See configuring colour schemes

To transport them within a theme however, they need to be expressed in the `atlassian-plugin.xml` file as shown above.

```
<colour-scheme key="earth-colours" name="Brown and Red Earth Colours"
                class="com.atlassian.confluence.themes.BaseColourScheme">
     <colour key="topbar" value="#440000"/>
     <colour key="spacename" value="#999999"/>
     <colour key="headingtext" value="#663300"/>
     <colour key="link" value="#663300"/>
     <colour key="border" value="#440000"/>
     <colour key="navbg" value="#663300"/>
     <colour key="navtext" value="#ffffff"/>
     <colour key="navselectedbg" value="#440000"/>
     <colour key="navselectedtext" value="#ffffff"/>
</colour-scheme>
```

colour-scheme key : Specify a key that uniquely identifies the colour scheme.

name : Give a name to the colour scheme.

class : The class of the colour scheme must implement `com.atlassian.confluence.themes.ColourScheme`. The `com.atlassian.confluence.themes.BaseColourScheme` class provided with Confluence sets the colours based on the module's configuration.

colour key: For each UI element, you will need to add its name and value.

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See configuring colour scheme

RELATED TOPICS

No content found for label(s) themes-configuration.

Administrators Guide Home Confluence Documentation Home

Including Cascading Stylesheets in Themes

Confluence allows you to integrate your own stylesheets within the theme plugin so you can have greater control over the appearance of your site. Confluence's main stylesheet is a useful reference when overriding styles and can be found in the Confluence install directory under `...confluence/styles/site-css.vm`.

> *The information on this page does not apply to Confluence OnDemand.*

Step One: Defining the stylesheet in the atlassian-plugin.xml

To make a stylesheet available to a decorator, you will need to reference it as a resource from within the central configuration file - `atlassian-plugin.xml`.

Here is an example where a stylesheet is being used to define the 'leftnavigation' theme:

```
<layout key="main" name="Main Decorator"
class="com.atlassian.confluence.themes.VelocityDecorator"
overrides="/decorators/main.vmd">
<resource type="velocity" name="decorator"
location="templates/leftnavigation/main.vmd"/>
<resource type="stylesheet" name="leftnav.css"
location="templates/leftnavigation/leftnav-css.vm">
</resource>
</layout>
```

The resource parameter takes three arguments:

- **Type**: The type of resource-in this instance, 'stylesheet'.
- **Name**: The name of the stylesheet.
- **Location**: The location of the file represented in the jar archive you will use to bundle your theme.

Step Two: Using the stylesheet in the decorator

To reference the stylesheet in the decorator, you will need to use the #pluginStylesheet velocity macro.

For example, here's how you reference the leftnav.css file defined in the layout entry above:

```
#pluginStylesheet("com.atlassian.confluence.themes.leftnavigation:main"
"leftnav.css")
```

The macro takes two arguments:

- **completePluginKey**: The complete plugin key which is constructed from the pluginkey and the layout key like this: {**pluginKey**}:{**layoutKey**}
  In the above example, `com.atlassian.confluence.themes.leftnavigation` is the key of the

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plugin, and `main` is the key of the layout.
- **stylesheetName**: the name of the stylesheet

If you place your stylesheet **after** the `#standardHeader` macro in the decorator, the contents of your custom stylesheet will override those in Confluence's default stylesheet.

If your stylesheet needs to reference the colour scheme, you need to use the space stylesheet macro instead:

```
#pluginSpaceStylesheet("com.atlassian.confluence.themes.leftnavigation:main"
"leftnav.css" $spaceKey)
```

You can then use colour scheme references in your stylesheet, similar to Confluence's stylesheets, and they will be replaced with the appropriate global or space-specific colour scheme:

```
.navItemOver {
    color: $action.navSelectedTextColor;
}
```

RELATED TOPICS

No content found for label(s) themes-configuration.

Administrators Guide Home Confluence Documentation Home

Creating a Theme

Unsure what a theme is? See the overview of themes.

If you want to create your own theme, you will need to write a Confluence plugin. Please refer to the following pages:

- Get started with plugin development.
- Create a theme using the theme plugin module.

Related pages:

- Including Cascading Stylesheets in Themes
- Applying a Theme to a Site
- Applying a Theme to a Space
- Configuring the Documentation Theme
- Configuring the Documentation ThemeInstalling Plugins and Macros
- Confluence Administrator's Guide

The information on this page does not apply to Confluence OnDemand.

Importing Data

- Importing Content from Another Wiki

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- Universal Wiki Converter
- Importing Content Into Confluence

> *The information on this page does not apply to Confluence OnDemand.*

Importing Content from Another Wiki

The Universal Wiki Converter (UWC) allows you to import content from other wikis into Confluence. The Confluence Administration Console offers a link to the Universal Wiki Converter documentation and download sites.

> **You need to install and run the UWC separately from Confluence.**

The UWC is a standalone application that communicates with Confluence remotely. You cannot install the UWC directly into Confluence. Instead, download the UWC separately and run it according to the instructions below.

> *The information on this page does not apply to Confluence OnDemand.*

The UWC supports many wiki dialects. In addition, the UWC is an extensible framework, which means that developers can continue writing new conversion modules for other wikis. To see the latest list of conversions available, please refer to the UWC documentation.

- Download the latest version of the UWC.
- For information on installation and usage, see the UWC Quick Start Guide.
- For information on developing your own converter module, see the UWC Developer Documentation.
- For information about a specific wiki, including a list of currently supported wikis, see the UWC documentation.
- To ask a question, see the UWC discussions on Atlassian Answers.

Screenshot: Links from the Confluence Administration Console to the UWC

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RELATED TOPICS

- Importing Content Into Confluence
- Importing Data

Performance Tuning

This document describes tuning your application for improved performance. It is not a guide to troubleshooting Confluence outages. Check Troubleshooting Confluence Hanging or Crashing for help if Confluence is crashing.

Description

Like any server application, Confluence may require some tuning as it is put under heavier use. We do our best to make sure Confluence performs well under a wide variety of circumstances, but there's no single configuration that is best for everyone's environment and usage patterns.

If you are having problems with the performance of Confluence and need our help resolving them, you should read Requesting Performance Support.

Use the latest version of your tools

Use the latest versions of your application servers and Java runtime environments. Newer versions are usually

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better optimized for performance. As an example, our internal performance tests show a **20% speed-up** (when viewing pages under load) between Tomcat 6 on Java 6 vs Tomcat 5.5 on Java 5 **out of the box**.

Avoid swapping due to not enough RAM

Always watch the swapping activity of your server. If there is not enough RAM available, your server may start swapping out some of Confluence's heap data to your hard disk. This will slow down the JVM's garbage collection considerably and affect Confluence's performance. In clustered installations, swapping can lead to a Cluster Panic due to Performance Problems. This is because swapping causes the JVM to pause during Garbage Collection, which in turn can break the inter-node communication required to keep the clustered nodes in sync.

On this page:

- Description
- Use the latest version of your tools
- Avoid swapping due to not enough RAM
- Being aware of other systems using the same infrastructure
- Choice of database
- Database connection pool
- Database in general
- Database indexes
- Database statistics and query analysers
- Cache tuning in Confluence and Apache
- Antivirus software
- Enabling HTTP compression
- Virtual operating systems
- Performance testing
- Access logs
- Built-in profiler
- Application server memory settings
- Web server configuration
- Parallel GC
- Troubleshooting possible memory leaks
- Plugins

The information on this page does not apply to Confluence OnDemand.

Being aware of other systems using the same infrastructure

It may sound tempting: Just have one powerful server hosting your database and/or application server, and run **all** your crucial programs on that server. **If** the system is set up perfectly, then you might be fine. Chances are however that you are missing something, and then one application's bug might start affecting other applications. So if Confluence is slow every day around noon, then maybe this is because another application is using the shared database to generate complicated reports at that time? Either make sure applications can't harm each other despite sharing the same infrastructure, or get these systems untangled, for example by moving them to separate instances that can be controlled better.

Choice of database

The **embedded database** that is provided with Confluence is meant only to be used for evaluation, not for production Confluence sites. After the evaluation finishes, you will certainly need to switch to an external

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relational database management system. Beyond this, we do not recommend any particular RDBMS over another. We recommend using what you are familiar with, because your ability to maintain the database will probably make far more difference to what you get out of it than the choice of database itself.

Database connection pool

If load on Confluence is high, you may need more simultaneous connections to the database.

- If you are using JNDI data-sources, you will do this in your application server's configuration files.
- If you have configured Confluence to access the database directly, you will need to manually edit the hibernate.c3p0.max_size property in the confluence.cfg.xml file in your confluence.home directory. After you have changed the URL in this file, restart Confluence.

To assess whether you need to tune your database connection pool, take thread dumps during different times (including peak usage). Inspect how many threads have concurrent database connections.

Database in general

If Confluence is running slowly, one of the most likely cause is that there is some kind of bottleneck in (or around) the database.

The first item you should check is the **"Database Latency"** field in the System Information tab in the admin console.

Database Connection Transaction Isolation	Read committed
Database Latency	0
	Confluence Usage

The latency is calculated by sending a trivial request to the database, querying a table which is known to have only one column and one row. ("select * from CLUSTERSAFETY"). Obviously this query should be blazing fast, and return within 1 or 2 milliseconds. If the value displayed is between 3 and 5 milliseconds, you might already have an issue. If the value is above 10ms, then you **definitely** need to investigate and improve something! A few milliseconds may not sound so bad, but consider that Confluence sends quite a few database queries per page request, and those queries are a lot more complex too! High latency might stem from all sorts of problems (slow network, slow database, connection-pool contention, etc), so it's up to you to investigate. Don't stop improving until latency is below 2ms on average.

Obviously, latency is just the very first thing to look at. You may get zero latency and still have massive database problems, e.g. if your tables are poorly indexed. **So don't let a low latency fool you either.**

Database indexes

Especially if you have more than a few thousand active users, and all most obvious measures have been tried out but the database still seems to be under high load, you should consider engaging a database administrator (DBA) to tune the database specifically to the demands that your particular Confluence installation is placing on it. If you do not have a full-time DBA and can't even get one for temporary consulting, you may want to consult the database indexing advice that we have been gathering from customer reports and our own experience running and developing Confluence. The instructions on that page are for Oracle, but most of the indexes can be applied to (and will help with) any database.

(These database indexes are now created automatically when Confluence is installed, but existing installations upgrading to a more recent version may still need to add them manually)

Database statistics and query analysers

Modern databases have query optimisers based on collecting statistics on the current data. Using the SQL EXPLAIN statement will provide you information on how well the query optimiser is performing. If the cost

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estimate is wildly inaccurate then you will need to run statistics collection on the database. The exact command will depend on your database and version. In most cases you can run statistics collection while Confluence is running, but due to the increased load on the database it's best to do this after normal hours or on a week-end.

Cache tuning in Confluence and Apache

To reduce the load on the database, and speed up many operations, Confluence keeps its own cache of data. Tuning the size of this cache may speed up Confluence (if the caches are too small), or reduce memory (if the caches are too big).

Please have a look at our documentation on Cache Performance Tuning for information on how to tune Confluence caches.

To improve performance of a large Confluence site, we recommend that you move the caching of static content from the JVM into Apache. This will prevent the JVM from having a number of long running threads serving up static content. See Configuring Apache to Cache Static Content via mod_disk_cache.

Antivirus software

Antivirus software greatly decreases the performance of Confluence. Antivirus software that intercepts access to the hard disk is particularly detrimental, and may even cause errors with Confluence. You should configure your antivirus software to ignore the Confluence home directory, its index directory and any database-related directories.

Enabling HTTP compression

If bandwidth is responsible for bottlenecking in your Confluence installation, you should consider enabling HTTP compression. This may also be useful when running an external facing instance to reduce your bandwidth costs.

Take note of the known issues with HTTP compression in versions of Confluence prior to 2.8, which may result in high memory consumption.

Virtual operating systems

Virtual Environments such as VMWare can cause Confluence CPU to spike. Run Confluence on a native OS. Refer to the list of supported operating systems for Confluence in the Supported Platforms topic.

Note: In some situation the VMTools can crash, cause a excessive context switches and interrupts causing the JVM to run slowly and Confluence to start up very slowly.

Performance testing

You should try out all configuration changes on a demo system. Ideally, you should run and customize loadtests that simulate user behaviour. Learn about how to test performance issues using the Performance Testing Scripts .

Access logs

You can find out which pages are slow and which users are accessing them by enabling Confluence's built-in access logging.

Built-in profiler

You can identify the cause of page delays using Confluence's built-in profiler according to Troubleshooting Slow Performance Using Page Request Profiling.

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Application server memory settings

See How to Fix Out of Memory Errors by Increasing Available Memory.

Web server configuration

For high-load environments, performance can be improved by using a web server such as Apache in front of the application server. There is a configuration guide to Running Confluence behind Apache.

When configuring your new web server, make sure you configure sufficient threads/processes to handle the load. This applies to both the web server and the application server connector, which are typically configured separately. If possible, you should enable connection pooling in your web server connections to the application server.

Parallel GC

If you have multiple CPU's on your server, you can add -XX:+UseParallelOldGC to your JAVA_OPTS options. This will allow garbage collection of the Tenured Space to happen in parallel with the application and can boost performance and can reduce slow performance spikes. For more information, please refer to our detailed page on Garbage Collector Performance Issues, and Sun's summary of collectors.

Troubleshooting possible memory leaks

Some external plugins, usually ones that have been written a long time ago and that are not actively maintained anymore, have been reported to consume memory and never return it. Ultimately this can lead to a crash, but first this manifests as reduced performance. The Troubleshooting Confluence Hanging or Crashing guide is a good place to start. Some of the known causes listed there could result in performance issues short of a crash or hang.

Plugins

Some 3rd-party plugins were not written to scale to large enterprises' needs.

Confluence has been optimized to work under high load and with many pages. Some 3rd party plugins however have been written with small size companies in mind, and can't cope with large numbers of concurrent users, or large numbers of pages and permissions, or large numbers of spaces. It is impossible to tell which ones will fail under which conditions, but it will always help to turn off 3rd-party plugins that are not strictly mission-critical while investigating performance issues.

RELATED TOPICS

Garbage Collector Performance Issues
Cache Performance Tuning
Cache Performance Tuning for Specific Problems
Performance Testing Scripts
Working with Confluence Logs
Operating Large or Mission-Critical Confluence Installations
Confluence Clustering Overview
Requesting Performance Support
Confluence Administrator's Guide
Configuring Confluence

Cache Performance Tuning

Confluence performance can be significantly affected by the performance of its caches. It is essential for the administrator of a large production installation of Confluence to tune the caches to suit its environment. There are several configurable parameters for each of the cache regions, most notably cache size, cache expiry delay and eviction policy. In the majority of the cases, cache size is the parameter you would want to change.

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Fortunately, from Confluence 3.0, it is very easy to adjust cache sizes through the Administration Console. However, if you need to modify parameters other than a cache size, you would need to modify the relevant configuration files manually.

The cache performance information for your Confluence installation is available under **Administration > Cache Statistics**. For more information about the numbers displayed on that screen, see Cache Statistics.

Notes:

- To improve performance of a large Confluence site, we recommend that you move the caching of static content from the JVM into Apache. This will prevent the JVM from having a number of long running threads serving up static content. See Configuring Apache to Cache Static Content via mod_disk_cache.
- If you only need to modify Confluence's maximum cache sizes, you can do this through the Cache Statistics feature of the Administration Console.

Cache tuning example

As an example of how to tune Confluence's caches, let's have a look at the following table:

Caches	% Used	% Effectiveness	Objects/Size	Hit/Miss/Expiry
Attachments	87%	29%	874/1000	78226/189715/187530
Content Attachments	29%	9%	292/1000	4289/41012/20569
Content Bodies	98%	81%	987/1000	28717/6671/5522
Content Label Mappings	29%	20%	294/1000	4693/18185/9150
Database Queries	96%	54%	968/1000	105949/86889/83334
Object Properties	27%	18%	279/1000	5746/25386/8102
Page Comments	26%	11%	261/1000	2304/17178/8606
Users	98%	5%	982/1000	6561/115330/114279

The caches above are of size 1000 (meaning that it can contain up to 1000 objects), which is the default size for caches in the default cache scheme. Refer to Confluence Cache Schemes for more explanation.

You can tell when a cache size needs to be increased because the cache has both:

- a high usage percentage (above 75%)
- a low effectiveness percentage.

Check the 'effectiveness' versus the 'percent used'. A cache with a low percent used need not have its size lowered; it does not use more memory until the cache is filled.

Based on this, the sizes of the "Attachments", "Database Queries", and "Users" caches should be increased to improve their effectiveness.

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As the stored information gets older or unused it will expire and be eliminated from the cache. Cache expiry may be based on time or on frequency of use.

There is not much that you can do with a cache that has both a low percentage of usage and effectiveness. Over time, as the cache is populated with more objects and repeat requests for them are made, the cache's effectiveness will increase.

On this page:

- Cache tuning example
- Finding the configuration file
- Cache key mappings
- Standard editions of Confluence
- Clustered editions of Confluence
- Important caches
- Cache tuning follow-up
- Notes

Related pages:

- Cache Performance Tuning for Specific Problems
- Confluence Cache Schemes
- Performance Testing Scripts
- Working with Confluence Logs
- Operating Large or Mission-Critical Confluence Installations
- Confluence Clustering Overview
- Requesting Performance Support
- Confluence Administrator's Guide
- Configuring Confluence

The information on this page does not apply to Confluence OnDemand.

Finding the configuration file

The caches are configured in `ehcache.xml` (for standard editions) or `confluence-coherence-cache-config-clustered.xml` (for clustered editions) which is stored in `<confluence-home>/config/`.

Oracle Coherence Licensing Change:

- Due to a license agreement change,Confluence is now available in two editions:
  - **Standard Edition** — Confluence with Ehcache's caching technology (available to customers with non-clustered Confluence licenses).
    If you are currently running a clustered installation of Confluence, please do not upgrade it with a standard edition of Confluence.
  - **Clustered Edition** — Confluence with Oracle's Coherence clustering and distributed caching technology (available to customers with Confluence clustered licenses only).
- For more information about these changes, please refer to the Coherence License Changes document.
- If you have a Confluence clustered license, are running a clustered installation of Confluence and wish to upgrade to Confluence version 2.6 or later, please ensure that you download only a clustered edition of Confluence and please refer to the Confluence 3.0.1 Upgrade Notes for additional upgrade information.

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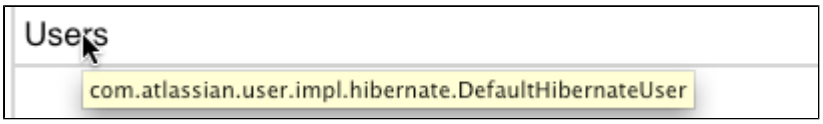
Cache key mappings

The cache configuration file configures caches by their keys. When you move your mouse over the the cache names displayed on the cache statistics page, a tooltip will indicate the actual cache key for that cache name.



Using our example from the table above, if we were to modify parameters for the `Users` cache we would need to change the cache with the key `com.atlassian.user.impl.hibernate.DefaultHibernateUser`. Do not get confused with `Users (External Mappings)` and `Users (External Groups)` which are in themselves, two separate caches. "Users" is the friendly name for `com.atlassian.user.impl.hibernate.DefaultHibernateUser`.

Standard editions of Confluence

In standard editions of Confluence, the caching layer is Ehcache.

Understanding the Ehcache configuration file

For more information about the Ehcache configuration file and a full reference on Ehcache configuration, please refer to the Ehcache configuration documentation.

Converting your Coherence configuration to Ehcache

> This section only applies to customers who:
>
> - Have an installation of Confluence that was downloaded before the 4th of September 2009.
> - Intend to (or have already) upgraded to Confluence 3.0.1 or later (or to Confluence versions 2.6.3, 2.7.4, 2.8.3, 2.9.3 and 2.10.4).
> - Will use a non-clustered Confluence license for the Confluence upgrade.
> - Have implemented customisations to their Confluence installation's cache configuration file (`confluence-coherence-cache-config.xml`).

To maintain your existing cache configuration file settings, you will need to transfer any cache customisations you have implemented in the Coherence cache configuration file (`confluence-coherence-cache-config.xml`) to the relevant entries in the Ehcache cache configuration file (`ehcache.xml`).

Each cache has a `cache-mapping` element in the Coherence file (of which there is an equivalent `cache` element in the `ehcache.xml` file). Unfortunately, copying across your customisations is not quite a straightforward process because the Coherence file defines several 'caching schemes' to store the actual cache values, which in turn are referenced by the `cache-mapping` elements. In contrast, the `ehcache.xml` file does not support caching schemes and a cache's values are expressed explicitly in separate parameters of a `cache` element.

To convert your Coherence cache configuration file customisations across to the equivalent Ehcache file:

1. Open both the `confluence-coherence-cache-config.xml` and `ehcache.xml` files in a text editor. These files are located in the `<confluence-home>/config` directory.
   If you implemented your customisations in a version of Confluence prior to 3.0, you will most likely find the `confluence-coherence-cache-config.xml` file in the `<confluence-install>/confluence/WEB-INF/classes` directory.
2. In the customised `confluence-coherence-cache-config.xml` file:
   a. Identify the caching schemes that were customised in this file and make a note of the values of all

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its child elements.
Typically, each caching scheme is located inside a `local-scheme` element and all of these are enclosed within the `cache-schemes` element, which appears towards the end of this file.

b. Note each customised caching scheme by the content of its `scheme-name` element.
c. For each `cache-mapping` element (which typically appears towards the top of this file), identify if it has a `scheme-name` element whose content matches one noted in the previous step and if so, make a note of its associated `cache-name` element.

3. In the `ehcache.xml` file:

   a. Identify each `cache` element whose 'name' parameter matches the `cache-name` elements noted in step '2c'.
   b. Using the mappings table below, apply the values noted in step '2a' to the appropriate parameters of the `cache` elements identified in the previous step ('3a').

Mappings table showing how elements of the Coherence cache configuration file map to parameters of the equivalent Ehcache file.

Coherence Element	Ehcache Attribute
`high-units`	`maxElementsInMemory`
`expiry-delay` > 0s	`timeToIdleSeconds` - Use this attribute for expiry delays greater than 0s along with the `eternal` attrib ute set to 'false'
`expiry-delay` = 0s	`eternal` - For expiry delays of 0s, set this attribute to 'true'.

Clustered editions of Confluence

Understanding the Coherence configuration file

The Coherence configuration file is a mapping of *cache keys* to *cache schemes*. Each cache scheme controls the expiry, eviction policy and size of the caches linked to it. A cache scheme can extend another scheme.

For a full reference, see the Oracle's Coherence cache configuration documentation.

Defining caching scheme mappings in Coherence cache config file

If a cache key does not have an explicit definition in the caching scheme mappings (defined in `confluence-coherence-cache-config.xml`) then it will use the "default" `cache-mapping`.

In our example, `com.atlassian.user.impl.hibernate.DefaultHibernateUser` is not explicitly defined in the caching scheme mappings. Hence to increase the expiry-delay to 2 hours, we will need to define the mapping ourselves and add the following within the `<caching-scheme-mapping>...</caching-scheme-mapping>` tags:

```
<cache-mapping>
<cache-name>com.atlassian.user.impl.hibernate.DefaultHibernateUser</cache-name>
<scheme-name>cache:com.atlassian.user.impl.hibernate.DefaultHibernateUser</scheme
-name>
</cache-mapping>
```

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Then we will need to define a cache schema with name `cache:com.atlassian.user.impl.hibernate.DefaultHibernateUser` within `<caching-schemes>...</caching-schemes>` tags.

```
<local-scheme>
<scheme-name>cache:com.atlassian.user.impl.hibernate.DefaultHibernateUser</scheme
-name>
<scheme-ref>default</scheme-ref>
<high-units>10000</high-units>
<expiry-delay>7200</expiry-delay>
</local-scheme>
```

It's possible to define a local-scheme mapping for a cache key without defining certain parameters (e.g. `<high-units>`). In such a cases, their parameters will be inherited from `scheme-ref` scheme, which is the `default` scheme in our case.

Important caches

> ⚠ The following suggestions are general guidelines. In cases of large databases, 20-30% of the size of the table may be unnecessarily large. Check the effectiveness and Percent Used categories in the cache for more specific assessments.

- **`com.atlassian.confluence.core.ContentEntityObject`** (known as **`Content Objects`** cache) should be set to at least 20-30% of the number of content entity objects (pages, comments, emails, news items) in your system. To find the number of content entity objects, use the query `select count(*) from CONTENT where prevver is null`.
- **`com.atlassian.confluence.core.ContentEntityObject.bodyContents`** (known as **`Content Body Mappings`** cache)
  should be set to at least 20% of the number of content entity objects (pages, comments, emails, news items) in your system. To find the number of content entity objects, use the query `select count(*) from CONTENT where prevver is null`.
- **`com.atlassian.confluence.security.PermissionCheckDispatcher.isPermitted()`** (known as **`User Authorized URLs`** cache)
  should be set to at least the number of concurrent users you expect to access Confluence at the same time
- **`com.atlassian.user.impl.hibernate.DefaultHibernateUser`** (known as **`Users`** cache) should be set to the number of users you have: `select count (*) from users`. Note that by default, this will also control the LDAP user's cache, including expiration.
- **`com.atlassian.confluence.security.SpacePermission`** (known as **`Permissions`** cache) should be set to the number of space permissions in your deployment (a good rule of thumb is 20 times the number of spaces). You can find the number of space permissions using the query `select count(*) from SPACEPERMISSIONS`.

Cache tuning follow-up

After you have made changes to your cache config, doing a follow up on the changes in the next week or after the expected performance spike would be important.

Make sure that you take a screenshot of the cache statistics before and after the change. Then compare them with the cache statistics in the later period where performance improvement is expected.

Notes

You can monitor what's in the cache by using a JSP included in the Confluence distribution. Browse to <base-URL>/admin/cachecontents.jsp to monitor the cache contents.

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Cache Performance Tuning for Specific Problems

The following are more specific performance problems that can be resolved from tuning the cache.

LDAP cache sizes and expiry does not appear to be picked up.

This is a known problem, please refer to CONF-11858 for the solution.

> *The information on this page does not apply to Confluence OnDemand.*

"Edit Page" screen takes a long time to load

If your installation of Confluence is suffering from this problem, it may be due to a insufficient SpacePermissions cache size. To address this problem, first determine the number of space permission objects in your Confluence instance. You can do this by running this query against your database:

```
> select count(*) from SPACEPERMISSIONS
```

Now locate the cache entry for SpacePermissions in your `confluence-coherence-cache-config.xml`:

```
<local-scheme>

<scheme-name>cache:com.atlassian.confluence.security.CachingSpacePermissionManage
r.permissions</scheme-name>
        <scheme-ref>default</scheme-ref>
        <high-units>10000</high-units>
        <expiry-delay>0s</expiry-delay>
</local-scheme>
```

Adjust the **maxElementsInMemory** or **high-units** property to the number of space permissions you have (in the example above, I've used 10000). Also, just as important, you need to adjust the **timeToLiveSeconds** or **expiry-delay** property to `0`.

Note: 10K of space permissions consumes approximately 8MB of memory. Please ensure there is enough memory allocated to your instance to cater for this.

How to set specific cache settings

1. Find the cache name from the cache name mappings:
   - For **Confluence 2.5.x and earlier**, the cache name mappings are in file `confluence/WEB-INF/classes/com/atlassian/confluence/admin/actions/cache-name-mappings.properties`.
   - For **Confluence 2.6.0 and later**, you will find the cache name mappings in the file `com/atlassian/confluence/core/ConfluenceActionSupport.properties` which is packed into the `confluence-2.x.*.jar file`.
2. Find the appropriate `<cache-mapping>` tag in `confluence-coherence-cache-config.xml` or `confluence-coherence-cache-config-clustered.xml`. If the tag doesn't exist, you can create it within the `<caching-scheme-mapping>`tag.

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> Attached to this page are corrected copies of confluence-coherence-cache-config.xml and confluence-coherence-cache-config-clustered.xml. These are updated from a bug CONF-11857.

3. The `<scheme-name>` will correspond to a `<local-scheme>`tag below. It refers to a scheme reference. Either change the high-units tag in the scheme reference, or add a high-units tag to override the scheme reference. For example, the following tag would change the Content Bodies cache from the default 1000 units to 2000 units:

```
<local-scheme>
<scheme-name>cache:com.atlassian.confluence.core.ContentEntityObjec
t.bodyContents</scheme-name>
<high-units>2000</high-units>
<scheme-ref>default</scheme-ref>
<expiry-delay>0s</expiry-delay>
</local-scheme>
```

   Another popular cache to change is the LDAP related User cache:

```
<local-scheme>
<scheme-name>user</scheme-name>
<scheme-ref>default</scheme-ref>
<high-units>5000</high-units>
<expiry-delay>300s</expiry-delay>
</local-scheme>
```

4. After updating the appropriate file, you do not need to repack it into the jar to use it. You can simply place the file in your `confluence/WEB-INF/classes/` directory. The file in this directory will override the settings in your jar file. If you want to back out the changes, you only need to remove the file from your `confluence/WEB-INF/classes/` directory — then the default values in the `confluence-coherence-cache-config.xml` located in your jar file will apply.

You can find more information about configuring the Coherence cache in the Coherence cache documentation.

RELATED TOPICS

Cache Performance Tuning
Performance Testing Scripts
Confluence Cache Schemes
Working with Confluence Logs
Operating Large or Mission-Critical Confluence Installations
Confluence Clustering Overview
Requesting Performance Support
Confluence Administrator's Guide
Configuring Confluence

Confluence Cache Schemes

Default Scheme

If a cache has not been defined, then it will use the default cache size and expiry. As the start of your `confluen`

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`ce/WEB-INF/classes/confluence-coherence-cache-config.xml` file you will notice the following:

```
<cache-mapping>
  <cache-name>*</cache-name>
  <scheme-name>default</scheme-name>
</cache-mapping>
```

So basically all caches will default to using the default scheme, which is defined as below:

```
<!-- Default scheme -->
<local-scheme>
  <scheme-name>default</scheme-name>

<class-name>com.atlassian.confluence.cache.tangosol.ExpiryCountingLocalCache</cla
ss-name>
  <high-units>1000</high-units>
  <expiry-delay>3600</expiry-delay>
</local-scheme>
```

I.e. with a size of 1000 Objects and an expiry of 3600 seconds. Other schemes use the above as their default and either override the size of the cache, or the length of the expiry.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Common Schemes

In addition to the default scheme, there are also common schemes used in Confluence caches:

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```
<!-- Common schemes -->
<local-scheme>
  <scheme-name>large</scheme-name>
  <scheme-ref>default</scheme-ref>
  <high-units>10000</high-units>
</local-scheme>
<local-scheme>
  <scheme-name>medium</scheme-name>
  <scheme-ref>default</scheme-ref>
  <high-units>5000</high-units>
</local-scheme>
<local-scheme>
  <scheme-name>small</scheme-name>
  <scheme-ref>default</scheme-ref>
  <high-units>100</high-units>
</local-scheme>
<local-scheme>
  <scheme-name>large-transient</scheme-name>
  <scheme-ref>default</scheme-ref>
  <high-units>10000</high-units>
  <expiry-delay>300s</expiry-delay>
</local-scheme>
<local-scheme>
  <scheme-name>user</scheme-name>
  <scheme-ref>default</scheme-ref>
  <high-units>5000</high-units>
  <expiry-delay>300s</expiry-delay>
</local-scheme>
```

RELATED TOPICS

Cache Performance Tuning
Confluence Cache Schemes
Cache Performance Tuning for Specific Problems
Requesting Performance Support
Confluence Administrator's Guide
Configuring Confluence

Memory usage and requirements

Managing Confluence's performance and memory usage really depends on what resources are available - Confluence will run faster if you give it lots of memory for its caches, but it should still be able to run quite well in low-memory environments, with the right tuning. Below are some tips on getting the most out of your Confluence site.

On this page:

The information on this page does not apply to Confluence OnDemand.

Increasing the amount of memory available to Confluence

See Increasing JIRA Memory for details on how to increase the memory available to web application servers typically used to run Confluence.

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Embedded Database

The embedded HSQL database that comes with Confluence essentially holds all your data in memory while the Confluence server is running. If you are running out of memory, you should consider migrating Confluence to some external RDBMS.

Caching

By default, Confluence keeps large in-memory caches of data to improve its responsiveness and the user experience. The trade off is an increase in memory requirements to support the cache. Administrators of larger Confluence sites may need to configure the size of their caches to improve performance.

To customise Confluence's cache to meet your needs, see cache tuning.
To increase the amount of memory available to confluence, see How to Fix Out of Memory Errors by Increasing Available Memory.

Mail error queue

Confluence keeps a copy of all emails that it failed to send within an internal error queue. In the event of intermittent failures such as network connectivity issues, the emails in this queue can be manually resent when the problem is fixed. Under certain circumstances, the mail queue can fill up with large objects. The queue is regularly flushed, but if you get a *lot* of mail errors, you might get a spike in memory usage.

Attachments

The indexing of large attachments requires that the attachment be loaded into memory. In the case of large attachments, this can cause a temporary strain on the systems resources, and may result in indexing failing because the attachment could not be fully loaded into memory.

System backup / restore

The Confluence backup and restore process scales linearly with the size of data. This can have a significant impact on large Confluence instances where the amount of data exceeds the amount of available memory. If you are experiencing an `OutOfMemoryError` during either a backup or restore processes, then we strongly recommend that you choose and Production Backup Strategy.

If you encounter an `OutOfMemoryError` while restoring a backup and wish to overcome this issue by increasing memory, how much more will you need to make this process work? A good rule of thumb is to have a look at the size of the `entities.xml` file in your backup. This file contains all of the data Confluence will be loading, so at least that much is required. Add another 64-128Mb to ensure that Confluence has enough memory to load and function and that should be enough. To increase the amount of memory available to Confluence, see How to Fix Out of Memory Errors by Increasing Available Memory.

Known issues that we do not have control over.

There are also some memory issues we don't have any control over. For example,

- There's a memory leak in the Oracle 10g JDBC drivers. Not much we can do about that.
- one customer found a rather nasty memory leak that appeared to originate inside Tomcat 5, but only using the IBM JDK on PowerPC.

If you are having problems that appear to result from a memory leak, file an issue on http://support.atlassian.com . Our memory profiler of choice is YourKit. It would be helpful to us if you can provide us with a memory dump from that tool showing the leak.

Confluence is taking long periods of time to respond to some actions

A common cause of random pauses in Confluence is the JVM running garbage collection. To determine if this is

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what is happening, enable verbose garbage collection and look at how long Java is taking to free up memory. If the random pauses match when Java is running its garbage collection, garbage collection is the cause of the pause.

Verbose garbage collection will generate log statements that indicate when Java is collecting garbage, how long it takes, and how much memory has been freed.

To enable gc logging, start Confluence with the option `-XX:+PrintGCDetails -XX:+PrintGCTimeStamps -verbose:gc -Xloggc:gc.log`. Replace `gc.log` with an absolute path to a `gc.log` file.

For example, with a Windows service, run:

```
tomcat5 //US//Confluence ++JvmOptions="-XX:+PrintGCDetails
-XX:+PrintGCTimeStamps -verbose:gc -Xloggc:c:\confluence\logs\gc.log"
```

or in `bin/setenv.sh`, set:

```
export CATALINA_OPTS="$CATALINA_OPTS -XX:+PrintGCDetails
-XX:+PrintGCTimeStamps -verbose:gc -Xloggc:${CATALINA_BASE}/logs/gc.log"
```

If you modify `bin/setenv.sh`, you will need to restart Confluence for the changes to take effect.

What can you do to minimise the time taken to handle the garbage collection? See http://java.sun.com/docs/hotspot/gc1.4.2/ for details on tuning the JVM to minimise the impact that garbage collection has on the running application.

Requesting Performance Support

Basic Performance Troubleshooting Steps

Begin with the following procedures:

1. Go through the Troubleshooting Confluence Hanging or Crashing page to identify the major known performance problems
2. Proceed with the Performance Tuning tips to help optimize performance

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Requesting Basic Performance Support

If those tips don't help or you're not sure where to start, open a support ticket starting with at least the basic information:

1. The atlassian-confluence.log
2. The catalina.out log (or your application server log), with a series of three thread dumps separated by 10 seconds
3. A description with as much detail as possible regarding:
    a. What changes have been made to the system?
    b. When did performance problems begin?
    c. When in the day do performance issues occur?
    d. What pages or operations experience performance issues?

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e. Is there a pattern?

Continue with as much of the Advanced Performance Troubleshooting information as you can.

Advanced Performance Troubleshooting

Please gather **all** of the information listed below and include it in your support request, even if you think you have a good idea what's causing the problem. That way we don't have to ask for it later.

System Information

Confluence Server

- Take a screenshot of Confluence's `Administration System Information` (or save the page as HTML)
- Take a screenshot of Confluence's `Administration Cache Statistics` (or save the page as HTML)
- Find out the exact hardware Confluence is running on
  - How many CPUs? What make and model? What MHz?
  - How much memory is installed on the machine?
  - How much memory is assigned to Confluence's JVM? (i.e. what are the -Xmx and -Xms settings for the JVM?)
  - What other applications are being hosted on the same box?

Confluence Content

- How many *users* are registered in Confluence?
- On average, to how many *groups* does each user belong?
- How many *spaces* (global and personal) are there in your Confluence server?
- How many of those spaces would be viewable by the average user?
- Approximately how many *pages*? (Connect to your database and perform '`select count(*) from content where prevver is null and contenttype = 'PAGE''`)
- How much data is being stored in Bandana (where plugins usually store data)? (Connect to your database and perform '`select count(*), sum(length(bandanavalue)) from bandana`')

The Database

- What is the exact version number of Confluence's database server?
- What is the exact version number of the JDBC drivers being used to access it? (For some databases, the full filename of the driver JAR file will suffice)
- Is the database being hosted on the same server as Confluence?
- If it is on a different server, what is the network latency between Confluence and the database?
- What are the database connection details? How big is the connection pool? If you are using the standard configuration this information will be in your confluence_cfg.xml file. Collect this file. If you are using a Data source this information will be stored in your application server's configuration file, collect this data.

User Management

- Are you using external user management or authentication? (i.e. JIRA or LDAP user delegation, or single sign-on)
- If you are using external JIRA user management, what is the latency between Confluence and JIRA's database server?
- If you are using LDAP user management:
  - What version of which LDAP server are you using?
  - What is the latency between Confluence and the LDAP server?

Diagnostics

Observed Problems

- Which pages are slow to load?

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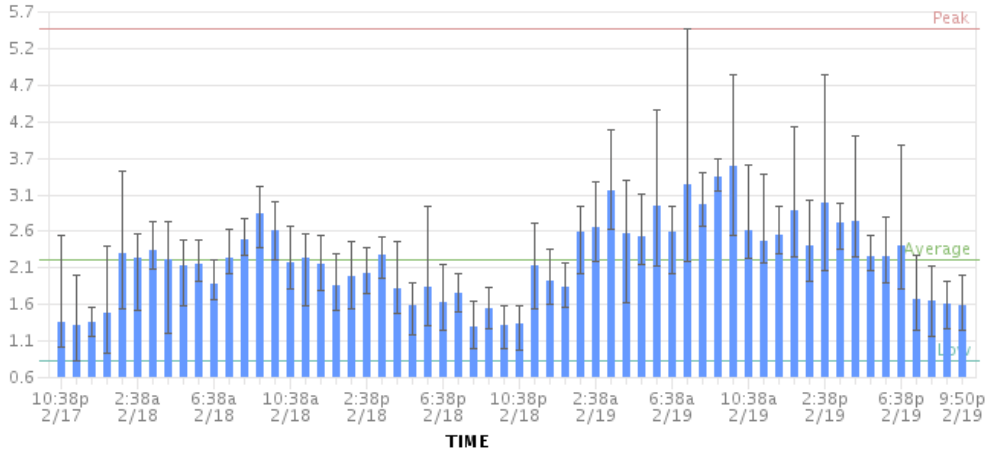
    - If it is a specific wiki page, attach the wiki source-code for that page
- Are they always slow to load, or is the slowness intermittent?

Monitoring data

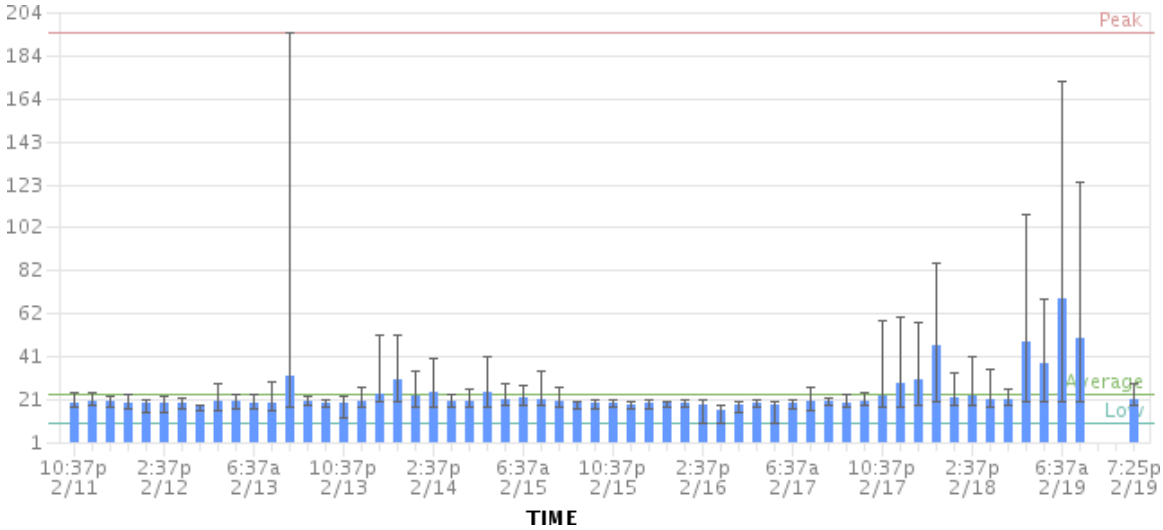
Before drilling down into individual problems, helps a lot to understand the nature of the performance problem. Do we deal with sudden spikes of load, or is it a slowly growing load, or maybe a load that follows a certain pattern (daily, weekly, maybe even monthly) that only on certain occasions exceeds critical thresholds? It helps a lot to have access to continuous monitoring data available to get a rough overview.

Here are sample graphs from the confluence.atlassian.com system, showing

Load
This graph shows the load for two consecutive days. The obvious pattern is that the machine is under decent load, which corresponds to the user activity, and there is no major problem.



Resin Threads and Database Connections



Active number of Java Threads

These two charts show the active threads in the application server (first chart) and the size database connectio pool (second chart). As you can see, there was a sudden spike of server threads and a corresponding spike of db-connections.

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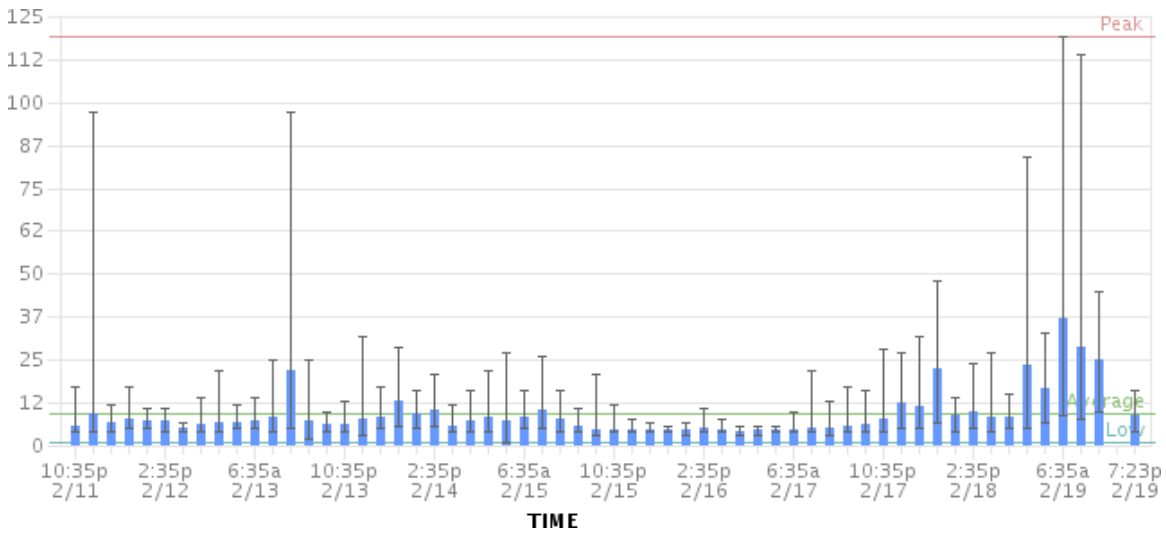

The database connection pool size

The database connection pool size peaked over 112, which happened to be more than the maximum number c connections the database was configured for (100). So it was no surprise that some requests to Confluence failed and many users thought it had crashed, since many requests could not obtain the crucial database connections.

We were able to identify this configuration problem quite easily just by looking at those charts. The next spikes were uncritical because more database connections were enabled.

The bottom line being: it helps a lot to monitor your Confluence systems continuously (we use Hyperic, for example), and it helps even more if you are able to send us graphs when you encounter problems.

Access logs

- How to Enable User Access Logging, including redirecting the logs to a separate file
  - You can run this file through a log file analyser such as AWStats, or manually look through for pages which are slow to load.

Profiling and Logs

- Enable Confluence's built-in profiling for long enough to demonstrate the performance problem using Troubleshooting Slow Performance Using Page Request Profiling.
  - If a single page is reliably slow, you should make several requests to that page
  - If the performance problem is intermittent, or is just a general slowness, leave profiling enabled for thirty minutes to an hour to get a good sample of profiling times
- Find Confluence's standard output logs (which will include the profiling data above). Take a zip of the entire logs directory.
- Take a thread dump during times of poor performance

CPU Load

- If you are experiencing high CPU load, please install the YourKit profile and attach two profiler dumps taken during a CPU spike. If the CPU spikes are long enough, please take the profiles 30-60 seconds apart. The most common cause for CPU spikes is a virtual machine operating system.
- If the CPU is spiking to 100%, try Live Monitoring Using the JMX Interface, in particular with the Top threads plugin.

Instance Metrics and Scripts

- It is essential to understand the user access and usage of your instance. Please use the access log scripts and sql scripts to generate Usage statistics for your instance.

Next Step

Open a ticket on https://support.atlassian.com and attach all the data you have collected. This should give us the

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information we need to track down the source of your performance problems and suggest a solution. Please follow the progress of your enquiry on the support ticket you have created.

If your site is non-responsive, please use our Live Support during business hours once you have created the ticket to escalate your problem.

Access Log Scripts

The access log scripts are attached to this page. To use the scripts:

1. Unzip the 7z file.
2. Copy all the daily access logs to a folder called `logs`.
3. Run `Atlassian-processDailyLog.rb`. This will generate a `csv` file called `summary.csv` and several directories which contain the access logs of each defined user action.
4. Run the appropriate script `Atlassian-processDailyLog-hourly.rb <admin/comment/create/edit/search/rss>`. Each script will generate a different `csv` file. For example, `Atlassian-processDailyLog-hourly.rb admin` will process the admin logs extracted in step 3.
5. Import the `csv` files to `www-log-Analysis.xls` (`summary.csv` to 'raw stats - daily' sheet and `admin.csv` to 'admin -hours' sheet, etc) to generate the load profiles and graphs. You may need to modify the number of rows in each sheet depending on the number of logs.

The information on this page does not apply to Confluence OnDemand.

Note

All scripts are written in Ruby and assume the log file name contains the string 'confluence.atlassian.com-access.log'. Scripts need to be changed if another name is used. Modify the line: `filenameRegexp = Regexp.new('confluence.atlassian.com-access.log')`

Troubleshooting Slow Performance Using Page Request Profiling

This page tells you how to enable page-request profiling. With profiling turned on, you will see a record of the time it takes (in milliseconds) to complete each action made on any Confluence page. If Confluence is responding slowly, an internal timing trace of the slow page request can help to identify the cause of the delay.

You will need access to the Confluence server to view a profile.

On this page:

- Enabling Page-Request Profiling
- Profiling an Activity
- Example of a Profile
- Start Confluence with Profiling Enabled

The information on this page does not apply to Confluence OnDemand.

Enabling Page-Request Profiling

To see just the slow performing macros, see Identifying Slow Performing Macros.

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From **Confluence 2.7**, you can use the '**Logging and Profiling**' option to enable or disable profiling.

You need to have System Administrator permissions in order to perform this function.

To enable page profiling,

1. Go to the '**Administration Console**' and click '**Logging and Profiling**' in the '**Administration**' section of the left-hand panel.
2. The '**Logging and Profiling**' screen appears. Click the '**Enable Profiling**' button.
   If profiling is already enabled, the button will be labelled 'Disable Profiling' instead.

To disable page profiling,

1. Go to the '**Administration Console**' and click '**Logging and Profiling**' in the '**Administration**' section of the left-hand panel.
2. The '**Logging and Profiling**' screen appears. Click the '**Disable Profiling**' button.
   If profiling is already disabled, the button will be labelled 'Enable Profiling' instead.

Screenshot: Changing Log Levels and Profiling

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Performance Profiling

Profiling is currently OFF.

Enable Profiling

SQL Logging

Enable SQL Logging

Log4j Logging

Choose from one of the predefined logging options or configure logging below.

Production Diagnostic

OR:

Customise specific logging settings

Add New Entry

Class/Package Name	New Level	
	INFO	Add entry

Existing Levels

Class/Package Name	Current Level	New Level	
com.atlassian.confluence.cluster	INFO	INFO	Remove
com.atlassian.confluence.cluster.safety	INFO	INFO	Remove
com.atlassian.confluence.importexport.impl.PdfExporter	ERROR	ERROR	Remove
com.atlassian.confluence.lifecycle	INFO	INFO	Remove
com.atlassian.confluence.upgrade	INFO	INFO	Remove
com.atlassian.core.util.FileUtils	ERROR	ERROR	Remove
com.atlassian.upgrade	INFO	INFO	Remove
net.sf.hibernate.cache.ReadWriteCache	ERROR	ERROR	Remove
net.sf.hibernate.impl.SessionImpl	ERROR	ERROR	Remove
net.sf.hibernate.type.CustomType	ERROR	ERROR	Remove
net.sf.hibernate.util.JDBCExceptionReporter	ERROR	ERROR	Remove
org.apache.fop	ERROR	ERROR	Remove
root	WARN	WARN	Remove

Save

Profiling an Activity

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1. Enable profiling, using either of the methods described above.
   Profiles for every page hit, for all users, will now be logged to your application server's default logs until Confluence is restarted. Note that each time a user visits a link, a single profile is printed.
2. Confirm that profiles are being written to the Confluence log file — see Working with Confluence Logs for location of the log files and other details.
3. Perform the activity that is resulting in unusually slow response time.
4. Copy the profile for that action. When deciding which profiles to copy, look for the links that took a long time to respond. If a single page is slow, only that profile is necessary. If Confluence is generally or intermittently slow, copy all profiles logged during the slowdown until a reasonable sample has been collected.
5. If you were instructed to profile your instance by Atlassian technical support, attach all relevant profiles to your support ticket.
6. Turn profiling off again, using either of the methods described above.
7. Confirm that profiles are no longer being printed to the Confluence log file.

Example of a Profile

Below are the first few lines of a normal profile for accessing a page called Confluence Overview.

```
[344ms] - /display/ds/Confluence+Overview
  [313ms] - SiteMesh: parsePage:
http://localhost:8080/display/ds/Confluence+Overview
    [313ms] - XW Interceptor: Before defaultStack:
/pages/viewpage.action (ViewPageAction.execute())
      [0ms] - SpaceAwareInterceptor.intercept()
      [16ms] - PageAwareInterceptor.intercept()
        [0ms] - AOP: PageManager.getPage()
        [16ms] - AOP: PermissionManager.hasPermission()
          [0ms] - AOP: SpacePermissionManager.hasPermission()
          [16ms] - AOP: SpacePermissionManager.hasPermission()
        [0ms] - AOP: SpacePermissionManager.hasPermission()
      [0ms] - AOP: SpacePermissionManager.hasPermission()
      [281ms] - XW Interceptor: After defaultStack:
/pages/viewpage.action (ViewPageAction.execute())
        [281ms] - XW Interceptor: After validatingStack:
/pages/viewpage.action (ViewPageAction.execute())
           ...
```

Start Confluence with Profiling Enabled

There may be some situations where you may wish to have Confluence profiling enabled during startup. This may be useful if you restart often and may forget to enable profiling for Support/Trouble-shooting purposes.

Edit the file *CONFLUENCE_HOME\confluence\WEB-INF\web.xml*. You should see a stanza similar to the one below. Set the parameter value for **autostart** to **true**:

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```
<filter>
        <filter-name>profiling</filter-name>

<filter-class>com.atlassian.core.filters.ProfilingAndErrorFilter</filter
-class>
        <init-param>
            <!-- specify the which HTTP parameter to use to turn the
filter on or off -->
            <!-- if not specified - defaults to "profile.filter" -->
            <param-name>activate.param</param-name>
            <param-value>profile</param-value>
        </init-param>
        <init-param>
            <!-- specify the whether to start the filter automatically
-->
            <!-- if not specified - defaults to "true" -->
            <param-name>autostart</param-name>
            <param-value>true</param-value>
        </init-param>
    </filter>
```

Remember to turn it back to **false** or your logs will grow very large.

RELATED TOPICS

Requesting Performance Support
Working with Confluence Logs

Compressing an HTTP Response within Confluence

Confluence supports HTTP GZip transfer encoding. This means that if a user's web browser supports it, Confluence will compress the data it sends to the user. This will speed up Confluence over slow or congested Internet links, and reduce the amount of bandwidth consumed by a Confluence server.

Gzipping the HTTP Response is available in Confluence 1.4 and later.

You should turn on Confluence's GZip encoding if:

- Users are accessing Confluence over the Internet, or a WAN connection with limited bandwidth.
- You wish to reduce the amount of data transfer between the Confluence server and client.

If you are accessing Confluence over a Local Area Network or over a particularly fast WAN, you may wish to leave GZip encoding disabled. If the network is fast enough that transferring data from Confluence to the user isn't a limiting factor, the additional CPU load caused by having to compress each HTTP response may in fact slow Confluence down.

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Known issues in Confluence 2.7 and earlier

There are known issues with the GZip filter and memory consumption evident in versions 2.7 of Confluence and earlier (CONF-9930). If you are running a large instance of Confluence 2.7 or earlier and frequently experiencing 'out of memory' errors, we recommend that you do not enable HTTP compression. These issues have been resolved in Confluence 2.8.

Enabling HTTP Compression

1. Choose **Browse** > **Confluence Admin**.
2. Select '**General Configuration**' in the left-hand panel.
3. Enable '**Compress HTTP Responses**'.

In Confluence 2.8 and later, you can configure which types of content are compressed within Confluence. By default, the following mime types will be compressed:

- text/htmltext
- javascript
- text/css
- text/plain
- application/x-javascript
- application/javascript

If you wish to change the types of content to be compressed, add a replacement `urlrewrite-gzip-default.xml` file within the `WEB-INF/classes/com/atlassian/gzipfilter/` directory in your Confluence Installation Directory. A sample file is provided as an attachment. Generally speaking, it is unlikely that you will need to alter this file.

RELATED TOPICS

Performance Tuning
Confluence Administrator's Guide

Performance Testing Scripts

Load Testing Confluence

This page contains scripts and hints on load-testing your Confluence installations.

Introduction

Before making a new Confluence instance available to your users it is useful to get a feel for how it will perform under your anticipated load and where you may need to consider improving your configuration to remove bottlenecks. Likewise, before making changes to your Confluence instance it would again be useful to assess the impact of these changes before making them live in a production context.

This kind of testing is not an exact science but the tools and process described here are intended to be a straightforward, configurable and extensible way of allowing you to begin this kind of load testing.

It will rarely be the case that these scripts will perform representative testing for you 'out of the box'. But either through configuration or by extending the scripts it should be possible to build an appropriate load test.

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Load testing scripts are not designed for a production environment

The load testing scripts will update the data within the targeted Confluence instance and are not designed to be run against a production server. If you want to load test your production environment you will need to perform these tests on a backup of your data and restore your real data after the tests.

On this page:

- Load Testing Confluence
- Introduction
- Setup
- Quick, Just Tell Me How To Run It.
- Creating the Test Data
- Running the Test

The information on this page does not apply to Confluence OnDemand.

Setup

You will need the following -

- A Confluence server, set up and running with an admin user. The scripts assume a default username and password for this user: 'admin'/'admin'.
- Ensure the Confluence Remote API is enabled in the administration options. See Enabling the Remote API for details on how to configure this.
- Apache JMeter
- The load testing scripts and resources which are available in our public Maven repository — Please choose the version that most closely matches your Confluence version and download the ZIP or Gzip file in that directory. If in doubt, download the ZIP file archive.

Users have reported problems when using the Windows built-in unzip utility. Please use a third party file archiving and extraction program (for example, 7-Zip) to extract these performance tests.

The test scripts have been updated to work with Confluence 3.4 in version 3.4. Using an older version of the tests will result in errors when running the test.

Quick, Just Tell Me How To Run It.

If you don't want to read the rest of this document, here are the main points:

1. Download and Unzip the performance tests
2. Open a command prompt and change directory to the `performanceTest` directory that has just been unzipped.
3. Create the test data:

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```
<jmeter location>/bin/jmeter -n -t jmeter-test-setup.jmx
-Jspace.zip=<path to a demo space ZIP file> -Jadmin.user=<username>
-Jadmin.pass=<password>
```

4. Run the test:

```
<jmeter location>/bin/jmeter -n -t jmeter-test-fixedload.jmx
```

The remainder of this document is just an elaboration of those two steps.

> For information on how to use JMeter please refer to the manual

Creating the Test Data

A known data set is required to run the testing against. By default this is the Confluence demo space (space key = DS) although this can be changed (more on this later). If you decide to use the Confluence demo space, ensure that the group "confluence-users" is able to update content in this space.

The script `jmeter-test-setup.jmx` is used to:

- create a set of users to be used in the test
- import the Confluence demo space for running tests against.

You should first ensure that you don't already have the demo space (key = DS) on your test instance. Delete it if you do.

Run the script from the `performanceTest` directory as follows:

```
<jmeter location>/bin/jmeter -n -t jmeter-test-setup.jmx
-Jspace.zip=<path to a space export.zip>-Jadmin.user=<username>
-Jadmin.pass=<password>
```

Where:

- `<path to a space export.zip>` is the absolute path to the space export zip you want to be used in your testing. For example, the path to `demo-site.zip` as found in your Confluence distribution or source: `<confluence install>/confluence/WEB-INF/classes/com/atlassian/confluence/setup/demo-site.zip`
- `<username>` and `<password>` are the username and password for an admin user that is able to create Confluence users and to import spaces.

By default the setup process will create 250 users — 50 each of the following formats: tstreader<n>, tstcommentor<n>, tsteditor<n>, tstcreator<n> and tstsearcher<n>. The password for each matches the username.

A typical run of the setup script will only take a few seconds.

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Removing the Test Data

You can reverse the effects of the setup script by setting the `remove.data` parameter to `true`, e.g.

```
<jmeter location>/bin/jmeter -n -t jmeter-test-setup.jmx
-Jremove.data=true -Jadmin.user=<username> -Jadmin.pass=<password>
```

Setup Script Parameters

You can modify the behaviour of the setup script via JMeter parameters. These are supplied on the command line in the form `-J<parameter name>=<parameter value>`.

Parameter	Default	Explanation
script.base	.	The absolute path to the script. Defaults to the current working directory.
space.zip	N/A	The absolute path to space export zip file to be imported as test data.
remove.data	false	Run the script in reverse — remove all test data.
admin.user	admin	The admin user name used to import data and create users.
admin.pass	admin	The password for the admin user.
confluence.context	confluence	The confluence webapp context.
confluence.host	localhost	The address or host name of the test instance.
confluence.port	8080	The port of the test instance.
space.key	ds	The space key for the space import that will be tested against.
space.setup	true	Control whether the test space will be created (or removed).
commentor.max	250	The number of users to be created for making comments.
creator.max	250	The number of users to be created for adding pages.
editor.max	250	The number of users to be created for editing existing pages.

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reader.max	250	The number of users to be created for viewing existing pages.
searcher.max	250	The number of users to be created for performing searches.
resource.max	250	The number of users to be created for downloading site resources.
attachments.max	250	The number of users to be created for downloading attachments.

Setup Script Output

On the console you will see no obvious indication of success or otherwise. JMeter will output something similar to this:

```
Created the tree successfully
Starting the test @ Mon Apr 14 17:35:08 EST 2008 (1208158508222)
Tidying up ... @ Mon Apr 14 17:35:08 EST 2008 (1208158508928)
... end of run
```

The `scripts location/results` directory will contain the file `jmeter-result-setuptest.jtl`. There were failures or errors if there are any assertions in this file that have the value `true` for the failure or error element, e.g.

```
<assertionResult>
<name>Manage Users</name>
<failure>true</failure>
<error>false</error>
<failureMessage>Test failed: URL expected to contain
/browseusers.action/</failureMessage>
</assertionResult>
```

Running the Test

The test script itself will put Confluence under a fixed load. Each thread group will attempt to do a certain amount of work for a prescribed period of time (30 minutes by default). This is by design so that load during test runs can accurately be compared against each other.

Execute the test as follows:

```
<jmeter location>/bin/jmeter -n -t jmeter-test-fixedload.jmx
```

Where:
`<scripts location>` is the absolute path to where you extracted the scripts e.g. `/Users/YourName/Download/performanceTest`. This is needed for the script to find its external resources.

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Test Behaviour

The test has a number of parameters to tweak its behaviour but generally speaking it has the rough format of:

- 5 groups of users - readers, commentors, searchers, editors and creators.
  - readers simply view a set of individual pages or browse space functionality.
  - commentors add comments to a set of pages.
  - searchers perform searches on a fixed set of keywords.
  - editors make small additions to the end of a set of pages.
  - creators add new pages to a particular space.
- Each individual user in each group will repeat for a fixed amount of time with a small pause between each request.

Note that there is **no execution of JavaScript** by the client. Keep this in mind if you use this test to gauge Confluence performance in a production environment.

There is also very little use of permissions in these tests. All data involved is accessible to all of the test users.

Test Script Parameters

You can modify the behaviour of the test script via JMeter parameters. These are supplied on the command line in the form `-J<parameter name>=<parameter value>`.

Parameter	Default	Explanation
script.base	.	The absolute path to the script. Defaults to the current working directory.
confluence.context	confluence	The confluence webapp context.
confluence.host	localhost	The address or host name of the test instance.
confluence.port	8080	The port of the test instance.
create.page.prefix	Nihilist	The title prefix for any created page e.g. Nihilist00001.
script.runtime	1800	The amount of time the script will run for in seconds.

Test Thread Parameters

Parameter	Default	Explanation
threads.reader	15	Number of readers.
pause.reader	2000	The approximate (within 500ms) millisecond pause between reader repeats.
threads.searcher	8	Number of searchers.

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pause.searcher	2000	The approximate (within 500ms) millisecond pause between searcher repeats.
threads.creator	3	Number of page creators.
pause.creator	2000	The approximate (within 500ms) millisecond pause between creator repeats.
threads.editor	3	Number of page editors.
pause.editor	2000	The approximate (within 500ms) millisecond pause between editor repeats.
threads.commentor	4	Number of page commentors.
pause.commentor	2000	The approximate (within 500ms) millisecond pause between commentor repeats.

In version 3.0 of the tests, it's now possible to control the percentage executions of certain actions. These percentages are defined in the "Thread Details" configuration screen.

So with the default parameters, you are emulating a load on Confluence of 33 concurrent users who will each be hitting the server approximately every 2 seconds (16 users per second).

23 of these users are read only (searchers or readers) and 10 of them are read/write — 11 read only users per second and 5 read/write users per second.

Test Script Output

During the run of the test script Jmeter will output progress to the console of the form:

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```
Created the tree successfully
Starting the test @ Fri Apr 18 00:07:39 EST 2008 (1208441259523)
Display Summary Results During Run + 462 in 77.6s = 5.9/s Avg: 1564 Min:
18 Max: 33738 Err: 1 (0.22%)
Display Summary Results During Run + 1338 in 189.9s = 7.0/s Avg: 3596
Min: 24 Max: 34545 Err: 0 (0.00%)
Display Summary Results During Run = 1800 in 257.6s = 7.0/s Avg: 3074
Min: 18 Max: 34545 Err: 1 (0.06%)
Display Summary Results During Run + 1046 in 200.9s = 5.2/s Avg: 4529
Min: 40 Max: 50461 Err: 0 (0.00%)
Display Summary Results During Run = 2846 in 438.2s = 6.5/s Avg: 3609
Min: 18 Max: 50461 Err: 1 (0.04%)
Display Summary Results During Run + 677 in 201.2s = 3.4/s Avg: 6638
Min: 46 Max: 27636 Err: 0 (0.00%)
Display Summary Results During Run = 3523 in 618.1s = 5.7/s Avg: 4191
Min: 18 Max: 50461 Err: 1 (0.03%)
Display Summary Results During Run + 561 in 197.5s = 2.8/s Avg: 8326
Min: 171 Max: 39494 Err: 0 (0.00%)
Display Summary Results During Run = 4084 in 798.3s = 5.1/s Avg: 4759
Min: 18 Max: 50461 Err: 1 (0.02%)
Display Summary Results During Run + 555 in 199.2s = 2.8/s Avg: 8247
Min: 160 Max: 45270 Err: 0 (0.00%)
Display Summary Results During Run = 4639 in 978.0s = 4.7/s Avg: 5177
Min: 18 Max: 504
```

Garbage Collector Performance Issues

This document relates broadly to memory management with Oracle's Hotspot JVM. These are recommendations based on Support's successful experiences with customers and their large Confluence instances.

Please **do not** use the Concurrent Mark Sweep (CMS) Collector with Confluence, unless otherwise advised by Atlassian Support. It requires extensive manual tuning and testing, and is likely to result in degraded performance.

The information on this page does not apply to Confluence OnDemand.

Summary

1. Set the Young space up to 30-40% of the overall heap: `-XX:NewSize=<between 30% and 40% of your Xmx value, eg, 384m>`
2. Use a parallel collector: `-XX:+UseParallelOldGC` (make sure this is **Old** GC)
3. limit the Tomcat connector's spare thread counts to minimize impact
4. *effectively* disable explicit garbage collection triggered from distributed remote clients `-Dsun.rmi.dgc.client.gcInterval=900000 -Dsun.rmi.dgc.server.gcInterval=900000`
5. Disable remote clients from triggering a full GC event `-XX:+DisableExplicitGC`
6. set the minimum and maximum Xmx and Xms values as the same (eg. `-Xms1024m -Xmx1024m`) to discourage address map swapping
7. Turn on GC logging (add the flags `-verbose:gc -Xloggc:<confluence-home>/logs/gc.log -XX:+PrintGCTimeStamps -XX:+PrintGCDetails`) and submit the logs in a support ticket

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   a. (Optional) You can enable date stamps: `-XX:+PrintGCDateStamps` This makes the logs easier to read via the naked eye, but may run into problems if you're trying to use third-party applications to view the GC logs.
8. Use Java 1.6
9. Read below if heap > 2G

See Configuring System Properties for how to add these properties to your environment.

Background

Performance problems in Confluence, and in rarer circumstances for JIRA, generally manifest themselves in either:

- frequent or infrequent periods of viciously sluggish responsiveness, which requires a manual restart, or, the application eventually and almost inexplicably recovers
- some event or action triggering a non-recoverable memory debt, which in turn envelops into an application-fatal death spiral (Eg. overhead GC collection limit reached, or Out-Of-Memory).
- generally consistent poor overall performance across all Confluence actions

There are a wealth of simple tips and tricks that can be applied to Confluence, that can have a significantly tangible benefit to the long-term stability, performance and responsiveness of the application.

On this page:

- Summary
- Background
- Why Bad Things Happen
- Appreciate how Confluence and the JAVA JVM use memory
- Memory is contiguous
- Figure out which (default) collector implementation your vendor is using
- Use the Parallel Garbage Collector
- Restrict ability of Tomcat to 'cache' incoming requests
- Disable remote (distributed) garbage collection by Java clients
- Virtual Machines are Evil
- Use Java 1.6
- Use -server flag
- If using 64bit JRE for larger heaps, use `CompressedOops`
- Use NUMA if on SPARC, Opteron or recent Intel (Nehalem or Tukwila onwards)
- Use 32bit JRE if Heap < 2GB
- JVM core dumps can be instigated by memory pressures
- Artificial Windows memory limit
- Instigate useful monitoring techniques
- Tuning the frequency of full collections
- Performance tuning works

Why Bad Things Happen

Confluence can be thought of like a gel or a glue, a tool for bringing things together. Multiple applications, data-types, social networks and business requirements can be efficiently amalgamated, leading to more effective collaboration. The real beauty of Confluence, however, is its agility to mould itself into your organizations' DNA - your existing business and cultural processes, rather than the other way around - your organization having to adapt to how the software product works.

The flip side of this flexibility is having many competing demands placed on Confluence by its users. Historically, this is an extraordinarily broad and deep set of functions, that really, practically can't be predicted for individual use cases.

The best mechanism to protect the installation is to place Confluence on a foundation where it is fundamentally

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more *resilient* and able to react and cope with competing user requirements.

Appreciate how Confluence and the JAVA JVM use memory

The Java memory model is naive. Compared to a unix process, which has four *intensive* decades of development built into time-slicing, inter-process communication and intelligent deadlock avoidance, the Java thread model really only has 10 years at best under its belt. As it is also an interpreted language, particular idiosyncrasies of the chosen platform Confluence is running can also influence how the JRE reacts. As a result it is sometimes necessary to *tune* the jvm parameters to give it a "hint" about how it should behave.

There are circumstances whereby the Java JVM will take a mediocre option in respect to resource contention and allocation and struggle along with ofttimes highly impractical goals. For example, The JRE will be quite happy to perform at 5 or 10% of optimum capacity if it means overall application stability and integrity can be ensured. This often translates into periods of extreme sluggishness, which effectively means that the application isn't stable, and isn't integral (as it cannot be accessed).

This is mainly because Java shouldn't make assumptions on what kind of runtime behavior an application needs, but it's plain to see that the charter is to assume 'business-as-usual' for a wide range of scenarios and really only react in the case of dire circumstances.

Memory is contiguous

The Java memory model *requires* that memory be allocated in a *contiguous* block. This is because the heap has a number of side data structures which are indexed by a scaled offset (ie n*512 bytes) from the start of the heap. For example, updates to references on objects within the heap are tracked in these "side" data structures.

Consider the differences between:

1. Xms (the *allocated* portion of memory)
2. Xmx (the *reserved* portion of memory)

Allocated memory is fully backed, memory mapped physical *allocation* to the application. That application now owns that segment of memory.

Reserved memory (the difference between Xms and Xmx) is memory which is *reserved* for use, but not physically mapped (or backed) by memory. This means that, for example, in the 4G address space of a 32bit system, the *reserved* memory segment can be used by other applications, but, because Java requires *contiguous* memory, if the *reserved* memory requested is occupied the OS must swap that memory out of the reserved space either to another non-used segment, or, more painfully, it must swap to disk.

Permanent Generation memory is also contiguous. The net effect is even if the system has vast quantities of *cumulative* free memory, Confluence demands *contiguous* blocks, and consequently undesirable swapping may occur if segments of requested size do not exist. See Causes of OutOfMemoryErrors for more details.

Please be sure to position Confluence within a server environment that can successfully complete competing requirements (operating system, contiguous memory, other applications, swap, and Confluence itself).

Figure out which (default) collector implementation your vendor is using

Default JVM Vendor implementations are subtly different, but in production can differ enormously.

The Oracle JVM *by default* splits the heap into three *spaces*

1. Young (New, divided into Eden and Survivor)
2. Tenured (Old)
3. Permanent Generation (classes & library dependencies)

Objects are central to the operation of Confluence. When a request is received, the Java runtime will create new objects to fulfill the request in the Eden Space. If, after some time, those objects are still required, they may be

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moved to the Tenured (Old) space. But, typically, the *overwhelming majority* of objects created die young, within the Eden space. These are objects like method local references within a while or for loop, or Iterators for scanning through Collections or Sets.

But in IBM J9 the default policy is for a single, contiguous space - one large heap. The net effect is that for large Websphere environments, garbage collection can be terribly inefficient - and capable of suffering outages during peak periods.

> For *larger instances with performance issues*, it is recommended to tune Confluence such that there is a large Young space, at *up to* 50% the overall size of the heap.

`-XX:NewSize=XXXm` where XXX is the size in megabytes, is the command line parameter. `-XmnXXXm` can also be used interchangeably. Ie. -XX:NewSize=700m, -Xmn700m

By setting a larger `NewSize`, the net effect is that the JRE will spend less time garbage collecting, clearing dead memory references, compacting and copying memory between spaces, and more time *doing actual work*.

Use the Parallel Garbage Collector

Confluence out of the box, and Oracle Java as default, uses the *serial* garbage collector on the Full Tenured heap. The Young space is collected in parallel, but the Tenured is not. This means that at a time of load if a full collection event occurs, since the event is a 'stop-the-world' serial event then *all application threads* other than the garbage collector thread are taken off the CPU. This can have severe consequences if requests continue to accrue during these 'outage' periods. As a rough guide, for every gigabyte of memory allocated allow a full second (exclusive) to collect.

If we parallelize the collector on a multi-core/multi-cpu architecture instance, we not only *reduce* the total time of collection (down from whole seconds to fractions of a second) but we also improve the *resiliency* of the JRE in being able to recover from high-demand occasions.

Additionally, Oracle provide a CMS, Concurrent Mark-Sweep Collector (`-XX:+UseConcMarkSweepGC`), which is optimized for higher-throughput, server-grade instances. As a general rule, the Parallel Collector (-XX:+UseParallelOldGC) is the right choice for JIRA or Confluence installations, unless otherwise advised by support.

Restrict ability of Tomcat to 'cache' incoming requests

Quite often the fatal blow is swung by the 'backlog' of accumulated web requests whilst some critical resource (say the index) is held hostage by a temporary, expensive job. Even if the instance is busy garbage collecting due to load, Tomcat will still trigger new http requests and cache internally, as well as the operating system beneath which is also buffering incoming requests in the socket for Tomcat to pick up the next time it gets the CPU.

```
<Connector port="8090" protocol="HTTP/1.1"
      maxHttpHeaderSize="8192" maxThreads="150" minSpareThreads="25"
maxSpareThreads="75" useBodyEncodingForURI="true"
      enableLookups="false" redirectPort="8443" acceptCount="100"
connectionTimeout="20000" disableUploadTimeout="true"/>
```

Here the Tomcat Connector is configured for 150 "maxThreads" with an "acceptCount" of 100. This means up to 150 threads will awaken to accept (but importantly not to *complete*) web requests during performance outages, and 100 will be cached in a queue for further processing when threads are available. That's 250 threads, many of which can be quite expensive in and of themselves. Java will attempt to juggle all these threads concurrently and become extremely inefficient at doing so, exacerbating the garbage collection performance issue.

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Resolution: reduce the number of `maxThreads` and `acceptCount` to something slightly higher than normal 'busy-hour' demands.

Disable remote (distributed) garbage collection by Java clients

Many clients integrate third-party or their own custom applications to interrogate, or add content to Confluence via its RPC interface. The Distributed Remote Garbage Collector in the client uses RMI to trigger a remote GC event in the Confluence server. Unfortunately, as of this writing, a `System.gc()` call via this mechanism triggers a full, serial collection of the entire Confluence heap (as it needs to remove references to remote client objects in its own deterministic object graph). This is a deficiency in the configuration and/or implementation of the JVM. It has the potential to cause severe impact if the remote client is poorly written, or operating within a constricted JVM.

This can be disabled by using the flag `-XX:+DisableExplicitGC` at startup.

Virtual Machines are Evil

Vmware Virtual Machines, whilst being extremely convenient and fantastic, also cause particular problems for Java applications because it's very easy for host operating system resource constraints such as temporarily insolvent memory availability, or I/O swapping, to cascade into the Java VM and manifest as extremely unusual, frustrating and seemingly illogical problems. We already document some disk I/O metrics with VMware images. Although we now *officially* support the use of virtual instances we absolutely do not recommend them unless maintained correctly.

This is not to say that vmware instances cannot be used, but, they must be used with due care, proper maintenance and configuration. Besides, if you are reading this document because of poor performance, the first action should be to remove any virtualization. Emulation will never beat the real thing and always introduces more black box variability into the system.

Use Java 1.6

Java 1.6 is generally regarded via public discussion to have an approximate 20% performance improvement over 1.5. Our own internal testing revealed this statistic to be credible. 1.6 is compatible for all supported versions of Confluence, and we **strongly recommend** that installations not using 1.6 should migrate.

Use -server flag

The hotspot server JVM has specific code-path optimizations which yield an approximate 10% gain over the client version. Most installations *should* already have this selected by default, but it is still wise to force it with -server, especially on some Windows machines.

If using 64bit JRE for larger heaps, use `CompressedOops`

For every JDK release, Oracle also build a "Performance" branch in which specifically optimized performance features can be enabled; it is available on the Java SE page after a brief survey. These builds are certified production grade.

Some blogs have suggested a 25% performance gain and a reduction in heap size when using this parameter. The use and function of the `-XX:+UseCompressedOops` parameter is more deeply discussed on Oracle's Official Wiki (which itself uses Confluence!)

Use NUMA if on SPARC, Opteron or recent Intel (Nehalem or Tukwila onwards)

`-XX:+UseNUMA` flag enables the Java heap to take advantage of Non-Uniform-Memory-Architectures. JAVA will place data structures relevant to the thread which it owns / operates on, in memory locations closest to that particular processor. Depending on the environment, gains can be substantial. Intel market NUMA as Quick Path

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Interconnect™.

Use 32bit JRE if Heap < 2GB

Using a 64bit JRE when the heap is under 2GB will cause substantial degradation in heap size and performance. This is because nearly every object, reference, primitive, class and variable will use twice as much memory to be addressed.

A 64bit JRE/JDK is only recommended if heaps greater than 2GB are required. If so, use `CompressedOops`.

JVM core dumps can be instigated by memory pressures

If your instance of Confluence is throwing Java core dumps, it's known that memory pressure and space/generation sizings can influence the frequency and occurrence of this phenomena.

If your Tomcat process completely disappears and the logs record similar to:

```
#
# An unexpected error has been detected by HotSpot Virtual Machine:
#
#  SIGSEGV (0xb) at pc=0xfe9bb960, pid=20929, tid=17
#
# Java VM: Java HotSpot(TM) Server VM (1.5.0_01-b08 mixed mode)
# Problematic frame:
# V  [libjvm.so+0x1bb960]
#

---------------  T H R E A D  ---------------

Current thread (0x01a770e0):  JavaThread "JiraQuartzScheduler_Worker-1"
[_thread_in_vm, id=17]

siginfo:si_signo=11, si_errno=0, si_code=1, si_addr=0x00000000

Registers:
 O0=0xf5999882 O1=0xf5999882 O2=0x00000000 O3=0x00000000
 O4=0x00000000 O5=0x00000001 O6=0xc24ff0b0 O7=0x00008000
 G1=0xfe9bb80c G2=0xf5999a48 G3=0x0a67677d G4=0xf5999882
 G5=0xc24ff380 G6=0x00000000 G7=0xfdbc3800 Y=0x00000000
 PC=0xfe9bb960 nPC=0xfe9bb964
```

then you should upgrade the JVM. See SIGSEGV Segmentation Fault JVM Crash.

Artificial Windows memory limit

On Windows, the maximum heap allocatable to the Tomcat 32bit wrapper process is around 1400MB. If the instance is allocated too close to this limit, **chronic garbage collection is likely to result**, often producing JAVA core dumps similar to:

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```
#
# A fatal error has been detected by the Java Runtime Environment:
#
# java.lang.OutOfMemoryError: requested 8388608 bytes for GrET in
C:\BUILD_AREA\jdk6_18\hotspot\src\share\vm\utilities\growableArray.cpp.
Out of swap space?
#
#  Internal Error (allocation.inline.hpp:39), pid=11572, tid=12284
#  Error: GrET in
C:\BUILD_AREA\jdk6_18\hotspot\src\share\vm\utilities\growableArray.cpp
#
# JRE version: 6.0_18-b07
# Java VM: Java HotSpot(TM) Server VM (16.0-b13 mixed mode windows-x86 )
# If you would like to submit a bug report, please visit:
#   http://bugreport.sun.com/bugreport/crash.jsp
#

---------------  T H R E A D  ---------------

Current thread (0x002af800):  GCTaskThread [stack:
0x00000000,0x00000000] [id=12284]
```

or,

```
#
# A fatal error has been detected by the Java Runtime Environment:
#
# java.lang.OutOfMemoryError: requested 123384 bytes for Chunk::new. Out
of swap space?
#
#  Internal Error (allocation.cpp:215), pid=10076, tid=4584
#  Error: Chunk::new
#
# JRE version: 6.0_18-b07
# Java VM: Java HotSpot(TM) Server VM (16.0-b13 mixed mode windows-x86 )
# If you would like to submit a bug report, please visit:
#   http://bugreport.sun.com/bugreport/crash.jsp
#

---------------  T H R E A D  ---------------

Current thread (0x6ca4d000):  JavaThread "CompilerThread1" daemon
[_thread_in_native, id=4584, stack(0x6cd10000,0x6cd60000)]
```

Workarounds include:

- changing the server OS to something other than Windows. For example, Linux
- switching to the 64 bit Tomcat wrapper (this is not supported)
- reducing memory allocation to the Tomcat process. Try backing off 100MB at a time and observe the results.

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Instigate useful monitoring techniques

At all times the best performance tuning recommendations are based on current, detailed metrics. This data is easily available and configurable and helps us **tremendously** at Atlassian when diagnosing reported performance regressions.

1. enable JMX monitoring
2. enable Confluence Access logging
3. enable Garbage Collection Logging
4. Take Thread dumps at the time of regression. If you can't get into Confluence, you can take one externally.
5. Jmap can take a memory dump in real time without impacting the application. Syntax: `jmap -heap:format=b <process_id>`

Great tools available include:

- The excellent VisualVM, documentation.
- Thread Dump Analyzer - a great all-round thread debugging tool, particularly for identifying deadlocks.
- Samurai, an excellent alternative thread analysis tool, good for iterative dumps over a period of time.
- GC Viewer - getting a bit long in the tooth, but is a good mainstay for GC analysis.
- GChisto - A GC analysis tool written by members of the Sun Garbage Collection team.

Documentation:

- Sun's White Paper on Garbage Collection in Java 6.
- Sun's state-of-the-art JavaOne 2009 session on garbage collection (registration required).
- IBM stack: Java 5 GC basics for WebSphere Application Server.
- An Excellent IBM document covering native memory, thread stacks, and how these influence memory constricted systems. Highly recommended for additional reading.
- The complete list of JRE 6 options
- I strongly recommend viewing George Barnett's Summit 2010 performance presentation, Pulling a Rabbit from a Hat.

> Atlassian recommends at the very least to get VisualVM up and running (you willneed JMX), and to add Access and Garbage Collection logging.

Tuning the frequency of full collections

The JVM will generally only collect on the full heap when it has no other alternative, because of the relative size of the Tenured space (it is typically larger than the Young space), and the natural probability of objects within tenured not being eligible for collection, i.e. they are still alive.

Some installations can trundle along, only ever collecting in Young space. As time goes on, some object will survive the initial Young object collection and be promoted to Tenured. At some point, it will be dereferenced and no longer reachable by the deterministic, directed object graph. However, the occupied memory will still be held in limbo as "dead" memory until a collection occurs in the Tenured space to clear and compact the space.

It is not uncommon for moderately sized Confluence installations to reclaim as much as 50% of the current heap size on a full collection; This is because full collections occur so infrequently. By reducing the occupancy fraction heap trigger, this means that more memory will be available at any time, meaning that fewer swapping/object collections will occur during the busy hour.

Atlassian would classify frequency tuning on collections as an **advanced** topic for further experimentation, and is provided for informational purposes only. Unfortunately, it's impractical for Atlassian to support these kinds of changes in general.

Performance tuning works

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Atlassian has a number of high profile and some *extremely* high demanding, mission-critical clients who have successfully, usually through trial and error, applied these recommendations to production instances and have significantly improved their instances. For more information, please file a support case at support.atlassian.com.

Operating Large or Mission-Critical Confluence Installations

This page gives guidelines for operational management teams who are responsible for a large Confluence installation, or for a Confluence installation which is crucial to the business of their organisation.

Introduction to this Page

Motivation for Presenting these Guidelines

Most Confluence installations start off small. Ten people in an early-adoption department use it for a couple of weeks. Everything works well and the good news starts spreading. Adoption increases throughout the organisation. More and more people use the wiki, and more and more rely on Confluence being up and running. After a while even the CEO starts blogging. And then a system outage occurs.

Now what?

Wikis like Confluence often grow into mission-critical applications within just a few months. Often adoption is so fast that IT departments haven't had the time to scale up their support.

We have assembled some requirements to help you make sure that your installation of Confluence can be mission critical. There are no surprises to be found here — all of the requirements would apply to any other piece of software that is mission critical within your organisation.

Who should Read these Guidelines?

The guidelines **do not apply to you** if you are using Confluence with just a few dozen users, and no one really minds if Confluence is down for a couple of hours because your database has crashed.

But if any one of the following applies to you, then these guidelines are **a must read for you**!

- The wiki has become your organisation's documentation base.
- Your users can't work properly when Confluence is down.
- Your boss or customer threatens to terminate your contract if you don't meet a strict service level agreement (SLA), such as 99.9% availability.

On this page:

- Motivation for Presenting these Guidelines
- Who should Read these Guidelines?
- Dedicated Hardware for Confluence
- Dedicated Qualified Staff
- Constant Monitoring of Production Systems
- Adherence to Strict Upgrade Procedures
- Testing of Upgrades before Production Implementation
- Enforcing Security Guidelines
- Load-Testing Environments
- Tuning
- Related Topics

⚠ *The information on this page does not apply to Confluence OnDemand.*

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Requirements of Large or Mission-Critical Confluence Installations

Dedicated Hardware for Confluence

In a small work group with a few dozen or even hundreds of users, your Confluence installation can happily share the CPUs, memory and disks with other low-profile applications and a database.

But with thousands or even tens of thousands of users, you need dedicated hardware that runs Confluence and nothing else, and it needs to be fast hardware with plenty of RAM. While you *can* run Confluence in a virtualised environment such as VMware, we suggest you don't do it for mission-critical or high-load installations unless you are a real expert in virtualisation. Otherwise your other VMs might have performance problems which propagate to Confluence.

If you experience database-related problems, you should consider moving the Confluence database to a dedicated machine. Confluence itself can run queries that impact the performance of other applications, and other application problems or scheduled tasks can have an adverse affect on the usability of Confluence.

Dedicated Qualified Staff

If your Confluence installation is mission critical and your service level agreements require 24/7 up time, you need to be able to pinpoint problems quickly. You need qualified staff, dedicated to looking after Confluence, who are available during business hours and possibly beyond.

If you require assistance from the Atlassian Support team, you may need to answer some pretty technical questions to help us diagnose what is going on in your systems. Also keep in mind that Atlassian support assists you in finding problems in Confluence, but we can't help you administer your systems.

In particular, we recommend that you have dedicated staff in the roles listed below.

Operations Team with General Administrators

If your organisation relies on Confluence being up and running around the clock with very little downtime, you need people who can set up, maintain, tune and improve your Confluence installation. This requires at least one person, but ideally you will have a team of operational engineers.

If your wiki is mission critical, chances are that other IT systems within your organisation have already made it necessary to have such an operations team. So you will probably not need to hire someone specifically to administrate Confluence. But it is vital that supporting and maintaining Confluence is added to the list of responsibilities of that operations teams, and that you can get them to troubleshoot and analyse Confluence at short notice.

If problems arise and you need to contact Atlassian Support, these engineers will be our first point of contact. We may ask them to provide details of log files, application-server settings, monitoring systems, and so on.

Network Staff

If Confluence is mission critical for large numbers of users, it is vital that you have dedicated network staff available to track down problems when they arise.

A mission-critical installation will usually be used by hundreds or even thousands of users, and you don't want to keep them waiting because a network card breaks, or because someone has made an undocumented change to the network and you don't have an expert around who can figure it out.

Again, this only applies to mission-critical systems. If you use Confluence for less critical collaboration and knowledge sharing, and a broken network cable causing a day's downtime is no major catastrophe, then you will not need dedicated networking staff.

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Database Staff

If Confluence is mission critical for a large number of users, you need an experienced database administrator (DBA) available to troubleshoot database performance issues and other potential problems. It is dangerous not to have an experienced full-time DBA at hand at short notice when running a mission critical application. While small installations of Confluence basically work 'out of the box', any system that involves high load or high-availability requirements needs continual monitoring, optimising and fine tuning of the Confluence database. Database monitoring is no trivial task — it's not something that anyone can learn quickly.

Developers

You may have decided to customise Confluence by changing its source-code, or by writing your own plugins. If your server is mission-critical, you must nominate staff who will be responsible for that code, and they must be up for the task. Otherwise you might end up in a situation in which your server experiences downtimes because of custom code is broken, or does not work with a newer version of Confluence anymore, but you can't fix the problem because no one knows how the customized code works, and you can't uninstall it either because it has become critical for your Confluence usage pattern. Keep good track of changes, and have someone available to jump into action if there is a problem Don't let the summer intern write mission-critical plugins, unless you have more senior staff to maintain that code as long as it is in use.

Constant Monitoring of Production Systems

You will need to monitor your production systems constantly.

When the wiki is the lifeblood of your organisation, you need know exactly what is going on inside, so that you can plan for future needs and analyse potential bottlenecks.

Monitoring involves a number of essential tasks, including those listed below:

- Monitoring log files.
- Checking for HTTP-availability and performance (e.g. by getting the same page every five minutes and displaying the time on a graph).
- Looking at many different parameters such as load, connections, IO, database-trends, and so on.
- Charting long-term trends.
- Keeping an access log of requests to the web server. This is vital, especially when requesting performance-related support from Atlassian.

Monitoring a web application like Confluence implies also monitoring the subsystems it uses. Many outages and downtimes are caused by broken mail servers, databases running out of space, file systems filling up and so on. It is often possible to detect these trends way before the actual web application breaks down. Keep an eye on the file system, and if you see it is getting closer to 90% utilisation, you can mend the situation without Confluence breaking down. Or even if the worst case happens (e.g. the database breaks down and Confluence is affected straight away) then having the proper monitoring for the database server makes troubleshooting a lot easier.

> **Tools for Monitoring Confluence**
>
> At Atlassian we use Hyperic. But the list of monitoring systems is long and we can't recommend a specific product over the other. If your organisation has a monitoring system already, make sure you hook up Confluence to it. If you don't have a monitoring system yet, you need to install one as soon as you feel Confluence is mission critical.

As an example of what our monitoring UI looks like, have a look at this screenshot:

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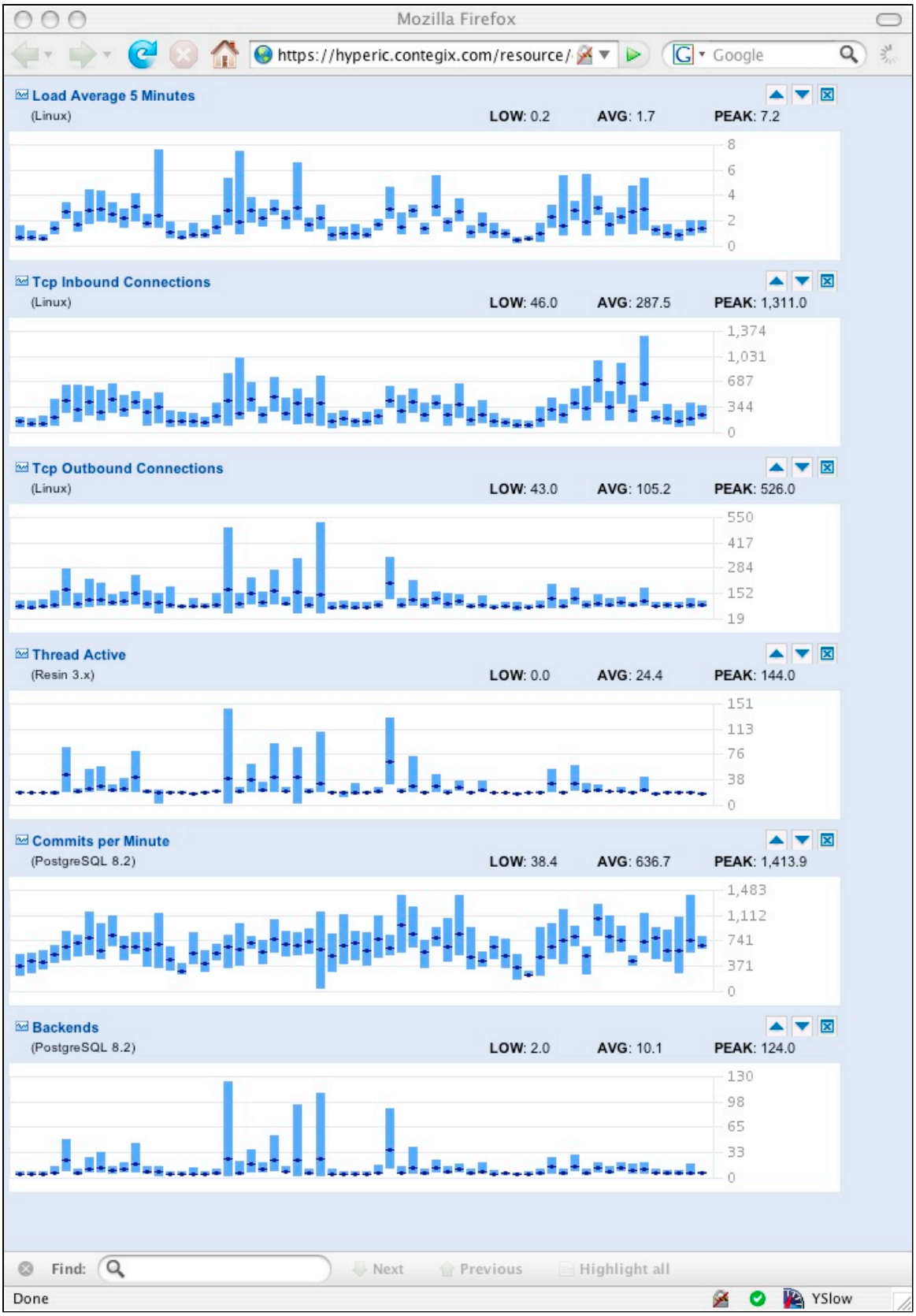

The following screenshot shows one of our sensors looking at the HTTP response times of our documentation wiki over the last 8 days. You can clearly see an incident four days ago. Having the graph (and regularly looking at it) allowed us to pinpoint the problem. We analysed the access logs and found that webpage-profiling had been enabled but not disabled again, which caused performance problems.

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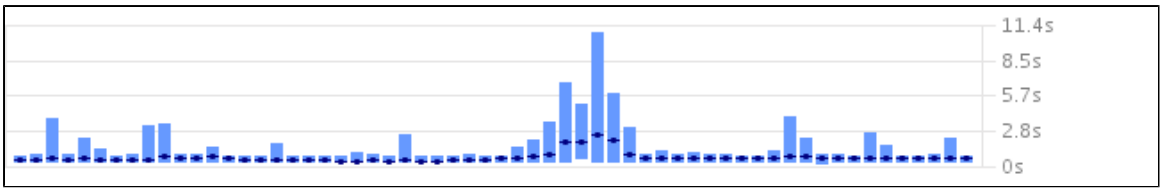

This page would get too long if we described all our monitoring sensors - but just to give you an impression, this is what we monitor on the JVM level alone.

JVM basics

- Current Loaded Classes
- Daemon Thread Count
- Heap Memory Committed
- Heap Memory Max
- Heap Memory Used
- Loaded Classes
- Loaded Classes per Minute
- Object Pending Finalization Count
- Peak Thread Count
- Thread Count
- Unloaded Classes
- Unloaded Classes per Minute

JVM garbage collection

- Collection Count
- Collection Count per Minute
- Collection Time
- Collection Time per Minute

JVM memory: (Metrics for Eden space, Old Gen, Survivor space, Perm Gen)

- Commited Memory
- Used Memory

We get the same level of detail for our database, for the file system, for the CPU, for the network, and so on. Not all of this is needed all the time. But if your company depends on an application, then the more information you have at your fingertips the better. Fortunately these metrics can be extracted quite easily once you have a monitoring system in place.

Adherence to Strict Upgrade Procedures

Your organisation will have its own upgrading procedure. Here are a few recommendations that you should add to your list:

- Our main recommendation: Never change more than one component at a time. Sometimes it may be tempting to upgrade the server hardware when you upgrade Confluence, but we recommend you don't do that. It makes pinpointing errors much more difficult. So, for example, don't upgrade hard disks in conjunction with a Confluence version upgrade, don't change the Confluence configuration at the same time as you upgrade your Apache software, and don't upgrade a major third-party plugin the day you move your database system to a new machine. The list is endless, these were just a few examples to get you thinking.
- After each upgrade step, run Confluence for a couple of days to check that everything is still fine.
- Keep track diligently of what you change, and when. It will be nearly impossible for us to help you if you can't tell us what exactly you changed at what time.
- Keep a copy of all log files produced during the upgrade, together with notes about what changed between successive restarts.

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Always take careful note of the upgrade notes published with the Confluence Release Notes of each Confluence version, as well as the Confluence Upgrade Guide.

Example

Here you can see an extract of our change log for `http://confluence.atlassian.com` — the server that hosts this very page.

Sydney time	Server time	Event	Reason/Purpose (including JIRA issues)
	2008-03-25 22:18	Started upgrade to 2.8-m9-r3 (build #1314)	
	2008-03-25 22:25	App server brought down due to failed database upgrade	
	2008-03-26 00:51	Server brought back up after database restored from backup. Running 2.8-m9-r3.	
	2008-03-28 04:18	GC algorithm changed from concurrent to parallel collector. Max heap increased from 1.4 GB to 2.0 GB	
	2008-04-24	Hyperic agent started with connection to Resin.	
	2008-05-08 20:30 - 22:30	Manual updates to menu.css, comments.js and comments.css in webapp	Temporary fix for @JIRA, @JIRA which was impacting performance
	2008-05-12	Updated cache sizes for five caches, bounced server.	Cache efficiency was low on these caches.
2008-05-13 18:00-18:20	2008-05-13 03:00-03:20	Upgrade from Resin 3.0 to Tomcat 5.5	
2008-05-14 16:30-17:00		Upgrade from Confluence 2.8.1-rc2 to 2.8.1-rc3	
	2008-05-14 20:30	Install new cronjob as j2ee for automating access log analysis	@JIRA

Testing of Upgrades before Production Implementation

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You should test upgrades in a staging environment.

Before rolling out a new version of Confluence (or of the software or hardware that it uses, e.g. database systems, application servers, data storage), make sure that you test the upgrade with real data (e.g. a database dump) on a completely independent machine.

Here's an example of what such a test would pick up: The new release of Confluence may not be compatible with a custom third party plugin you have previously installed, thus breaking the plugin's functionality. You may not even know that anyone installed that plugin — but maybe many people are already using it. You'll want to find out about this before you actually roll out the new version of Confluence.

Here is an outline for a simple upgrade test:

1. Create a clone of your production environment, using a database dump to obtain a copy of the Confluence data. We'll call this your 'staging environment'.
2. Upgrade the staging environment to the new version of Confluence.
3. Ask a few selected users from different departments to check the pages they commonly access, but have them do it in the staging environment.

✅ Hint: In addition to finding weirdnesses with plugins, this may also show whether training for new functionality is needed in some of the departments. The IT department staff may be able to handle the upgrade to a new version of Confluence without training, but perhaps the sales representatives who use the wiki less often will need some training.

> **Getting a license for your staging environment**
> The page Getting a License for a Staging Environment does not exist.

Enforcing Security Guidelines

Security is one of the most important issues for Confluence. We are constantly spending large amounts of effort to keep up with security threats and to Confluence's security model. We treat security breaches with utmost priority, and the recent releases have been improved to fend off advanced attack vectors like cross-site scripting (XSS), cross-site request forgery (XSRF) and header injection flaws. Altogether we believe that Confluence is a very secure product. But of course as with any software there are occasional bugs, and we are fixing security issues whenever they come up. We regularly release minor software releases that contain security fixes. This means you should upgrade your system frequently. Obviously this can affect your system's uptime. You should also make sure your whole infrastructure around Confluence is made robust as well (consider operating systems, webservers, application servers, networks, social engineering aspects, etc).

As with any other distributed system, you need to decide on a case by case basis if classified documents can be stored in it. It is common practice to store the most secure documents on computers that are not even connected to the physical intranet. Please contact your company's security officer to learn more about your enterprise's security procedures.

Make sure to have qualified staff around, so you can deal with security issues quickly. Once a security patch becomes available or a security incident happens, speed is essential.

Please refer to our dedicated Configuring Confluence Security page for more technical details.

Load-Testing Environments

Many customers ask us,

> *So, how many users and spaces can I put into Confluence, and what is the best hardware do to so?*

The answer is, 'It depends'.

It depends a lot on your use case. Confluence is so successful because it can cover a huge range of use cases.

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If most of your users only access Confluence infrequently, it is no problem to have 70 000 to 100 000 users. But if each user is a power-user who uses the system the whole day, there's a substantial decrease in number Confluence can take without tuning. If your pages are short, simple, and don't contain a lot of macros, then the situation will be vastly different from a system that relies heavily on macros, background-tasks, or other features.

If your system is large (for example serving more than 10 000 users or storing more than 1000 spaces) or mission-critical (which it could be with as few as 1000 users who use it all the time) you need one or more more load-testing environments.

Even if your system is working nicely for 20 000 users right now, it might take just another 2000 users to push it over the edge.

We recommend the following basic procedure:

- Set up an environment that closely resembles your production environment.
- Gather statistics from your production system.
- Regularly apply a similar kind of load (and slightly higher) to the load-testing environment.
- Analyse how well Confluence scales for your usage patterns.

The Confluence development team has load-testing scripts available which you can use to simulate load. You can also contact Atlassian Support for more details.

Tuning

You may need to be able to tune your installation in the ways mentioned below.

Optimising your System

If you have large numbers of users, then downloading all the static content (CSS, default images, JavaScript-files) may result in a high additional load on the application server that can be offloaded to a caching web server.

Please refer to the following additional information:

- Our general Performance Tuning page.
- Information on configuring a large Confluence installation.

Limiting Third-Party Plugins

You may have to restrict the number of third-party plugins installed on your Confluence instance.

Most third-party plugins are not specifically written for high-load environments. What works fine in low-load environments could have unexpected and adverse effects when thousands of users are competing for your application server's CPU time or for database IO.

A common source of problems is access to database connections. If you have fewer users than database connections, it does not matter if an operation holds on to a database connection for two seconds while it downloads some data from the internet. With hundreds of concurrent users, this could quickly become a bottleneck.

Confluence itself is tested and optimised to handle high loads and avoids these kinds of problems. But if you install a number of plugins that have not been tested against high load, your system may become unstable.

We recommend that you load test the common use cases of each unofficial third-party plugin if your Confluence installation is mission critical. Only activate plugins that are vital to your business, and never allow experimental plugins onto your production system until they have been tested in a staging environment.

Selecting and Tuning your JVM

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You should select your JVM carefully and you may need to be able to tune it.

The selection of the JVM for your large Confluence instance can have a huge impact on the performance perceived by the users. Between versions 1.4 and 6 of the Sun Java JVM there have been some impressive improvements in performance, especially under high concurrent load.

Here are some essential guidelines:

- Always run the most recent point release of your selected JVM.
- Where ever possible run the most recent major release from your selected JVM manufacturer. The Sun JVM version 6 is much faster than 1.4, especially under high loads.
- Tune your garbage collection algorithms. Experiment with different algorithms and settings to get the response times you desire in your environment. Here are some specific guidelines for Sun JVM in the Sun documentation:
  - Java 6
  - Java 5
  - Java 1.4

Customising Confluence to Optimise Performance

You may need to customise Confluence for performance reasons. Depending on your usage scenario, there may be ways to enhance Confluence performance that become necessary when you reach a certain level of usage.

Here are some things you might decide to do:

- Remove the display of the space list on the Dashboard. See Customising the Dashboard.
- Configure any search appliances or other crawlers which are configured to index the Confluence site:
  - These should be suitably rate limited.
  - Configure them to crawl only pages in the `/display/` URL path, and only current versions of pages.

Please refer to our general Performance Tuning page for more details.

Related Topics

Performance Tuning
Configuring a Large Confluence Installation
Confluence Clustering Overview
Requesting Performance Support
Confluence Administrator's Guide
Configuring Confluence
Server Hardware Requirements Guide
How to Fix Out of Memory Errors by Increasing Available Memory

Scheduled Jobs

The administration console allows you to schedule various administrative jobs in Confluence, so that they are executed at regular time intervals. The types of jobs which can be scheduled cover:

- Confluence site backups
- Storage optimisation jobs to clear Confluence's temporary files and caches
- Index optimisation jobs to ensure Confluence's search indexes are up to date
- Mail queue optimisation jobs to ensure Confluence's mail queue is maintained and notifications have been sent.

You need to have System Administrator permissions in order to configure and execute jobs.

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On this page:

- Accessing Confluence's Scheduled Jobs Configuration
- Executing a Job Manually
- Configuring a Job's Schedule
- Disabling/Re-enabling a Job
- Viewing a Job's Execution History
- Types of Jobs
- Cron Expressions

⚠️ *The information on this page does not apply to Confluence OnDemand.*

Accessing Confluence's Scheduled Jobs Configuration

To access Confluence's Scheduled Jobs configuration page:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**Scheduled Jobs**' under '**Administration**' in the left panel to open the 'Scheduled Jobs' page. For each job listed down this page, the following information is shown:
   - **Job** — the name of a job.
   - **Status** — the job's status, which is either 'Scheduled' (it it is currently enabled) or 'Disabled'. See below for details on disabling or re-enabling a job.
   - **Last Execution** — the date and time when the job was last executed. This field will be empty of the job was never executed.
   - **Next Execution** — the date and time when the job is next scheduled to be executed. This field will contain dash symbol ('-') if the job is disabled.
   - **Avg. Duration** — the length of time (in milliseconds) that it took to complete the job's last execution.
   - **Actions** — allows you to configure the job, execute it manually, view a history of previous executions or disable the job.

Job	Status	Last Execution	Next Execution	Avg. Duration	Actions
Back Up Confluence	Scheduled	28-Feb-2011 02:00:00	02-Mar-2011 02:00:00	220	History | Run | Edit | Disable
Check Cluster Safety	Scheduled	01-Mar-2011 17:29:30	01-Mar-2011 17:30:00	12	History | Run
Clean Index Queue	Scheduled	28-Feb-2011 02:00:00	02-Mar-2011 02:00:00	115	History | Run | Edit | Disable
Clean Temporary Directory	Scheduled	28-Feb-2011 04:00:00	02-Mar-2011 04:00:00	180	History | Run | Edit
Clear Expired Mail Errors	Scheduled	28-Feb-2011 03:00:00	02-Mar-2011 03:00:00	80	History | Run | Edit
Clear Expired Remember Me Tokens	Scheduled		20-Mar-2011 00:00:00	0	Run | Edit
Email Daily Reports	Scheduled	28-Feb-2011 00:00:00	02-Mar-2011 00:00:00	571	History | Run | Edit | Disable
Flush Did You Mean Index	Scheduled		01-Mar-2011 18:00:00	0	Run | Edit | Disable
Flush Index Queue	Scheduled	01-Mar-2011 17:29:00	01-Mar-2011 17:30:00	50	History | Run
Flush Local Task Queue	Scheduled	01-Mar-2011 17:29:00	01-Mar-2011 17:30:00	6	History
Flush Mail Queue	Scheduled	01-Mar-2011 17:29:00	01-Mar-2011 17:30:00	5	History | Run | Edit | Disable
Flush Task Queue	Scheduled	01-Mar-2011 17:29:00	01-Mar-2011 17:30:00	4	History | Run | Disable
Optimise Indexing	Scheduled	28-Feb-2011 15:00:00	02-Mar-2011 03:00:00	47	History | Run | Edit
Poll Mail	Scheduled	01-Mar-2011 17:29:00	01-Mar-2011 17:30:00	12	History | Run | Edit | Disable

Screenshot above: Scheduled Jobs

Executing a Job Manually

1. Access the 'Scheduled Jobs' configuration page (above).
2. Locate the job you wish to execute manually and click its '**Run**' link in the 'Actions' column. The job will be run immediately.
   ✅ Refer to 'Types of Jobs' (below) for detailed descriptions about each job.

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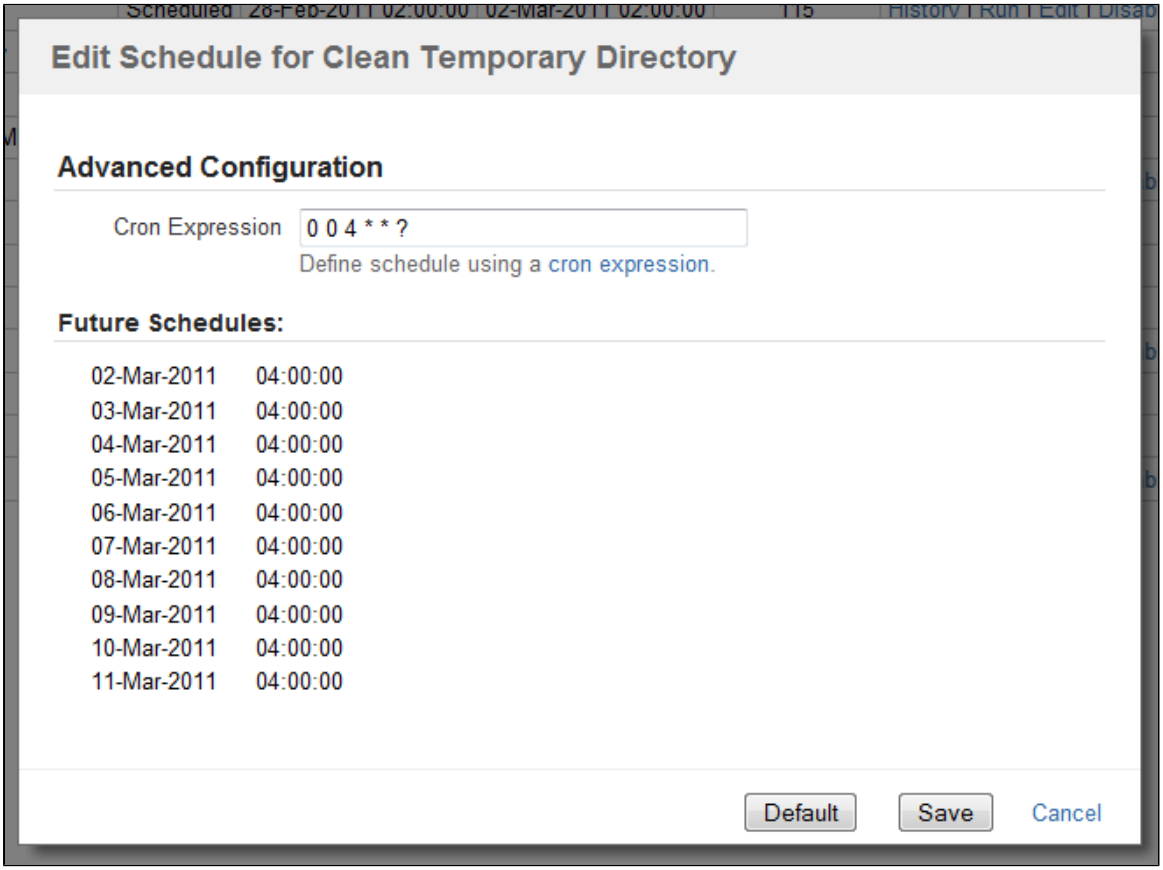
Not all jobs can be run manually.

Configuring a Job's Schedule

1. Access the 'Scheduled Jobs' configuration page (above).
2. Locate the job whose schedule you wish to configure and click its '**Edit**' link in the 'Actions' column. The job's 'Edit Schedule for job' dialog box opens.
   Refer to 'Types of Jobs' (below) for detailed descriptions about each job.
3. Enter an appropriate cron expression to define the frequency with which the job is executed.
   Refer to 'Cron Expressions' (below) for more details about their syntax. To revert the job's schedule back to its default settings, click the '**Default**' button.
4. Click '**Save**' to record your job's new schedule.

   Not all jobs' schedules are configurable.



Screenshot above: Configuring a Job's Schedule

Disabling/Re-enabling a Job

By default, all jobs in Confluence are enabled.

1. Access the 'Scheduled Jobs' configuration page (above).
2. Locate the job you wish to disable/re-enable.
   Refer to 'Types of Jobs' (below) for detailed descriptions about each job.
   - If a job is enabled, click its '**Disable**' link in the 'Actions' column to disable the job.
   - If a job is disabled, click its '**Enable**' link in the 'Actions' column to enable the job.

     Not all jobs in Confluence can be disabled.

Viewing a Job's Execution History

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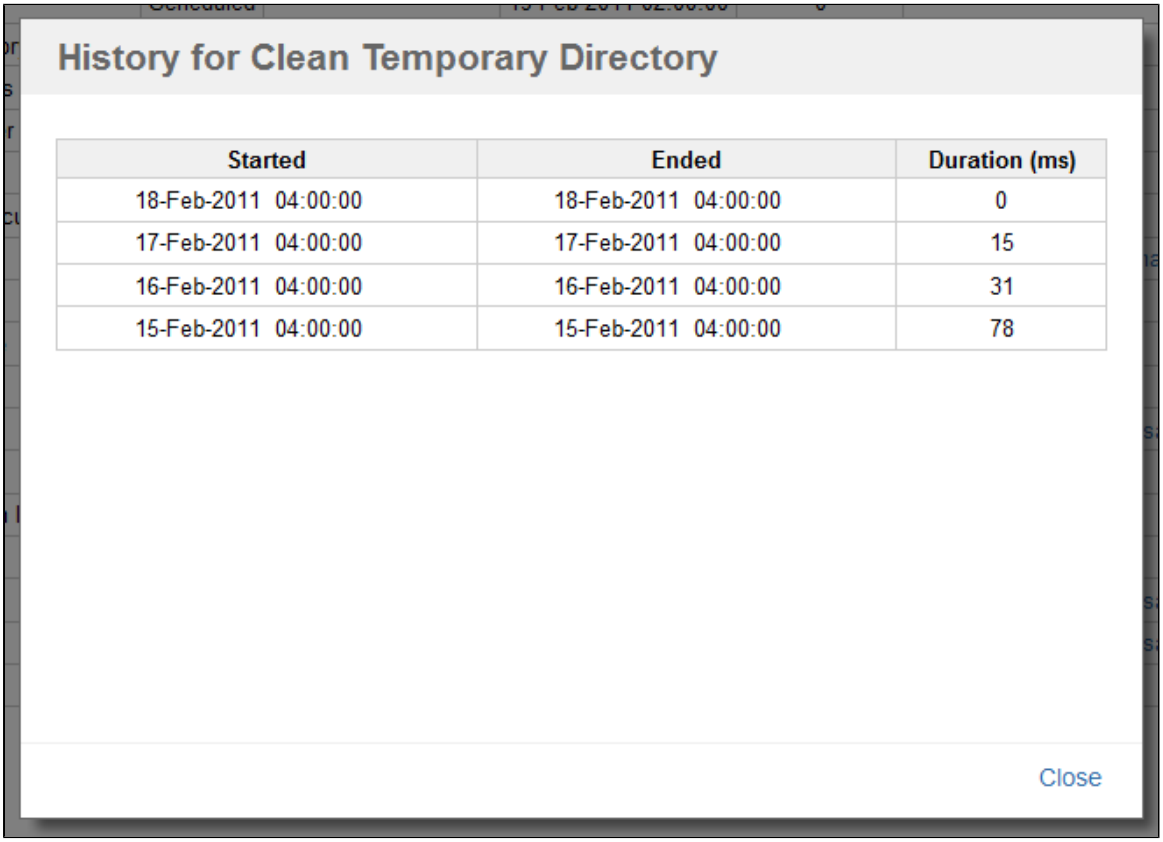
1. Access the 'Scheduled Jobs' configuration page (above).
2. Locate the job whose execution history you wish to view and click the '**History**' link.
   If a job has not completed at least one execution, its 'History' link will not be available.
   Refer to 'Types of Jobs' (below) for detailed descriptions about each job.
   The 'History for job' dialog box opens, showing a list of previous executions of the job in reverse chronological order, including the:
   - Start date and time
   - End date and time
   - The length of time (in milliseconds) that it took to complete the job



Screenshot above: Job Execution History

Types of Jobs

Job Name	Description	Execution Behaviour	Default Schedule
Back Up Confluence	Performs a backup of your entire Confluence site.	Per cluster	At 2am every day

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Check Cluster Safety	For clustered Confluence installations, this job ensures that only one Confluence instance in the cluster writes to the database at a time. For standard (non-clustered) editions of Confluence, this job is useful for alerting customers who have accidentally connected a second Confluence instance to a Confluence database which is already in use.	Per cluster	Every 30 seconds
Clean Index Queue	Triggers a periodical clean of the index queue to ensure that its size does NOT grow indefinitely.	Per cluster	At 2am every day
Clean Temporary Directory	Cleans up temporary files generated in the 'temp' subdirectory of the Confluence home directory. This temp directory may be created by exports etc. This does not include the temp directory locate d in the confluence install directory.	Per node	At 4am every day
Clear Expired Mail Errors	Clears notification errors in the mail error queue. A notification error is sent to the mail error queue whenever the notification fails to be sent due to an error.	Per cluster	At 3am every day
Clear Expired Remember Me Tokens	Clears all expired 'Remember Me' tokens from the Confluence site. Remember Me tokens expire after two weeks.	Per cluster	On the 20th of each month

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Email Daily Reports	Emails a daily summary report of all Confluence changes to all subscribers. Since each email report only records changes from the last 24-hour period, it is recommended that you only change the time of this job whilst keeping the job's frequency to 24 hours.	Per cluster	At 12am every day
Flush Did You Mean Index	Flushes changes to the 'Did You Mean' index, which keeps the 'Did You Mean' feature up to date. Confluence records each content update in the 'Did You Mean' index.	Per node	Every 2 hours from 12 am
Flush Index Queue	Flushes changes to Confluence's index so that Confluence's search results are up to date. Confluence records each content update in its search index.	Per node	Every minute
Flush Local Task Queue	Flushes the local task queue. (These are internal Confluence tasks that are typically flushed at a high frequency.)	Per node	Every minute
Flush Mail Queue	Sends notifications that have been queued up in the mail queue.	Per cluster	Every minute
Flush Task Queue	Flushes the task queue. (These are internal Confluence tasks that are typically flushed at a high frequency.)	Per node	Every minute

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Optimise Indexing	Compacts the confluence indexes to maintain searching performance. ✅ This task is demanding on system resources and does not need to be performed too regularly. If you see Confluence performance deteriorate around 3pm, try scheduling this job for 3am only and check if search performance remains reasonable.	Per node	At 3am and 3pm every day
Poll Mail	Polls POP accounts on all spaces that have them configured.	Per cluster	Every minute

Cron Expressions

A cron expression is a string of 6-7 'time interval' fields that defines the frequency with which a job is executed. Each of these fields can be expressed as either a numerical value or a special character and each field is separated by at least one space or tab character.

The table below is shows the order of time interval fields in a cron expression and each field's permitted numerical values.

You can specify a special character instead of a numerical value for any field in the cron expression to provide flexibility in defining a job's frequency. Common special characters include:

- '*' — a 'wild card' that indicates 'all permitted values'.
- '?' — indicates 'ignore this time interval' in the cron expression. That is, the cron expression will not be bound by the time interval (such as 'Month', 'Day of week' or 'Year') to which this character is specified.

For more information about cron expressions, please refer to the Cron Trigger tutorial on the Quartz website.

Order in cron expression	Time interval field	Permitted values*	Required?
1	Seconds	0-59	Yes
2	Minutes	0-59	Yes
3	Hours	0-23	Yes
4	Day of month	1-31	Yes
5	Month	1-12 or JAN-DEC	Yes
6	Day of week	1-7 or SUN-SAT	Yes
7	Year	1970-2099	No

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* Excluding special characters.

RELATED TOPICS

Trigger Module
Configuring Backups

Search

No content found for label(s) modify-search.

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Setup Confluence To Index External Sites

Confluence Indexing External Sites

Confluence cannot easily index external sites due to technical reasons, but there are two alternatives:

1. Embed External Pages Into Confluence
2. Replace Confluence Search

> *The information on this page does not apply to Confluence OnDemand.*

Technical Reasons

Confluence indexes pages using a customised Lucene search engine that returns matching pages, mail and blog posts for which the searcher has view permission. It would require significant source code modifications to enable Confluence to process search results from external pages, as the indexing process has been customised to utilise internal Confluence metadata. Note that users can still index content from new attachment filetypes.

Embed External Pages Into Confluence

If you only have a small number of external sites to index, you may prefer to enable the HTML-include Macro an d use it embed the external content inside normal Confluence pages.

Replace Confluence Search

Use your own programmer resources to replace Confluence's internal search with a crawler that indexes both Confluence and external sites. This advanced option is easier than modifying the internal search engine. It requires removing Confluence internal search from all pages and replacing the internal results page with your own crawler front-end.

1. Setup a replacement federated search engine to index the Confluence site, as well as your other sites, and provide the results that way. You would need to host a web crawler, such as these open-source crawlers. Note that you can perform a search in Confluence via the remote API
2. Replace references to the internal search by modifying the site layout so that it links to your search front-end
3. Host another site containing the search front-end. You may wish to insert it into a suitable context path in your application server so that it appears to be from a path under Confluence. Tomcat sets Confluence's paths from the Confluence install\confluence\WEBINF\web.xml file.

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RELATED TOPICS

Setup External Search Tool To Index Confluence

Setup External Search Tool To Index Confluence

Any web crawler can be configured to index Confluence content, for example the Google Search Appliance or similar. If a login is required to view content that will be indexed, you should create a Confluence user specifically for the search crawler to use. Grant this user view rights to all content you wish to index, but deny that user all delete and administration rights. This ensures that an aggressive crawler will not be able to perform actions that could modify the site. There is also a forum thread on Google Mini integration.

External applications can also use the search function in the Confluence Remote API.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Related Information

No content found for label(s) modify-search.

Working with Confluence Logs

Confluence uses Apache's log4j logging service. This allows a developer or administrator to control the logging behavior and the log output file by editing a configuration file, without touching the application binary. There are six known log4j logging levels.

If you request help from Atlassian Support, we will almost always ask for the `atlassian-confluence.log` from the `confluence-home/logs` directory. You can access the logs from the Confluence Administration Console, via the support tool. If you cannot access the Confluence Administration Console, check the properties file at `<confluence-installation>/confluence/WEB-INF/classes/confluence-init.properties`, look for the `confluence.home` setting in that file, then find the logs in the Confluence home directory.

On this page:

- Finding the Confluence Log Files
- Finding the Log Configuration File
- Changing the Destination of the Log Files
- Changing the Logging Levels
- Using Some Specific Confluence Logging Options
- Scanning Log Files for Known Problems
- Notes

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Finding the Confluence Log Files

This section describes Confluence's default logging behaviour, assuming that you have not changed the destination of the logs. In order to unify logging across different application servers, Confluence uses the `atlassian-confluence.log` as its primary log, not the application server log.

Both the Confluence and Confluence EAR/WAR distributions follow the same default behaviour:

- When you start Confluence, log entries will be sent to the application server logs until Confluence has

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completed its initial bootstrap. Any log entries written to the console will be repeated into the log in the Confluence home directory as described below.
- Once the initial startup sequence is complete, all logging will be to `<confluence-home>/logs/atlassian-confluence.log`. For example: `c:/confluence/data/logs/atlassian-confluence.log`.

Note that the default location is the Confluence **home directory**, not the application server's log file. The home directory is specified in `<confluence-installation>/confluence/WEB-INF/classes/confluence-init.properties`.

Finding the Log Configuration File

Confluence's logging behaviour is defined in the following properties file:
`<CONFLUENCE-INSTALL>/confluence/WEB-INF/classes/log4j.properties`

This file is a standard log4j configuration file, as described in the Apache log4j documentation.

Changing the Destination of the Log Files

Terminology: In log4j, an output destination is called an 'appender'.

To change the destination of the log files, you need to stop Confluence and then change the settings in the '**Logging Location and Appender**' section of the `log4j.properties` file. The location of this file is described above.

In the standard properties file, you will find entries for two appenders:

- `com.atlassian.confluence.logging.ConfluenceHomeLogAppender` – This is a custom appender which controls the default logging destination described above. This appender allows the following settings:
  - MaxFileSize
  - MaxBackupIndex
- `org.apache.log4j.RollingFileAppender` – If you want to log to a different location, uncomment the `RollingFileAppender` line and change the destination file in the line below it. Comment out the previous lines referring to the `ConfluenceHomeLogAppender`.

Confluence ships with the full suite of appenders offered by log4j. Read more about appenders in the log4j documentation.

Changing the Logging Levels

See Configuring Logging for instructions on how to change the logging configuration of Confluence.

Using Some Specific Confluence Logging Options

This section contains some pointers to specific log configurations you may need.

Log the Details of SQL Requests made to the Database

You may want to increase Confluence's logging so that it records individual SQL requests sent to the database. This is useful for troubleshooting specific problems.

You can enable detailed SQL logging in two ways:

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- At runtime – see instructions above.
- Via the logging properties file – see the detailed instructions.

Log the Details of Users Viewing/Accessing each Confluence Page

You can configure the log to show which users are accessing which pages in Confluence. This can only be done via the logging properties file – see the detailed instructions.

Scanning Log Files for Known Problems

Confluence provides an inbuilt log scanner that will check your Confluence logs for errors and attempt to match them against known issues in our knowledge base and bug tracker. See Troubleshooting Problems and Requesting Technical Support.

Notes

- **Finding the thread dumps.** Thread dumps are logged to the application server log file.

RELATED TOPICS

Important Directories and Files
Enabling Detailed SQL Logging
Enabling user access logging
Generating a Thread Dump
Enabling Page Request Profiling
Troubleshooting Problems and Requesting Technical Support

Administrators Guide Home Confluence Documentation Home

log4j Logging Levels

Logging Levels

- **DEBUG** - designates fine-grained informational events that are most useful to debug an application (*what is going on*)
- **INFO** - announcements about the normal operation of the system - scheduled jobs running, services starting and stopping, user-triggered processes and actions
- **WARN** - any condition that, while not an error in itself, may indicate that the system is running sub-optimally
- **ERROR** - a condition that indicates something has gone wrong with the system
- **FATAL** - a condition that indicates something has gone wrong so badly that the system can not recover
- **TRACE** - n/a within confluence

> There are two ways to modify the logging levels, as described in Working with Confluence Logs.
>
> 1. Modifying the runtime log levels via the **Administration Console**.
> 2. Manually modifying the `<Confluence-Install>\confluence\WEB-INF\classes\log4j.properties` file.

> *The information on this page does not apply to Confluence OnDemand.*

Default Log Level

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The standard Confluence log level **WARN** is a way for Confluence to communicate with the server administrator. Logging at WARN level and higher should be reserved for situations that require some kind of attention from the server administrator, and for which corrective action is possible.

Reference : log4j manual

Integrating Confluence with Other Applications

You can integrate Confluence with other applications using **Application Links**. The Application Links feature allows you to link Confluence to applications like Atlassian's JIRA. Linking two applications allows you to share information and access one application's functions from within the other. For example, if you linked your Confluence server with a JIRA server, you could view JIRA issues in a Confluence page via the JIRA Issues Macro.

> *The information on this page does not apply to Confluence OnDemand.*

Getting Started

The Application Links quick start guide provides instructions on how to set up the most common application link configuration.

Administrator's Guide

The administrator's guide is for administrators who want to configure application links for their applications. The guide contains information on adding a new application link, configuring the authentication for an application link, setting up project links and more.

Developer Resources

These resources are for developers who want to develop with the Application Links plugin. Take a look at the Development Hub.

Related Topics

- Configuring Application Links
- Confluence and JIRA

Configuring Application Links

An application link is a trust relationship between two applications. Linking two applications allows you to share information and to access one application's functions from within the other.

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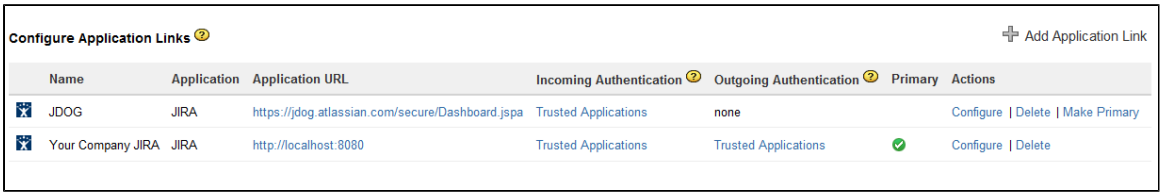

Screenshot above: Application links for a Confluence server

Notes

- In the above screenshot, the column titled '**Incoming Authentication**' is visible in Confluence 3.5.1 and

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later. The column does not appear in Confluence 3.5.

Related Topics

- Adding an Application Link
- Configuring Authentication for an Application Link
- Editing an Application Link
- Making an Application Link the Primary Link
- Relocating an Application Link
- Upgrading an Application Link
- Deleting an Application Link
- Configuring Project Links across Applications

Adding an Application Link

This page describes how to add a new application link in Confluence. The process for adding an application link is different depending on whether the application that you are linking Confluence to, supports Application Links (i.e. has Application Links installed) or not.

If you are linking Confluence to an application that does not have Application Links, you will need to do additional configuration in that application. This is because Application Links in Confluence will not be able to automatically configure authentication in your remote application.

Please read the appropriate set of instructions below:

- Linking to an application that supports Application Links.
- Linking to an application that does not support Application Links.

On this page:

- Adding an Application Link to an Application That Supports Application Links
- Adding an Application Link to an Application That Does Not Support Application Links
- Notes

⚠️ *The information on this page does not apply to Confluence OnDemand.*

Adding an Application Link to an Application That Supports Application Links

Before you begin:

- Make sure that the base URL is set correctly in Confluence. See Configuring the Server Base URL for instructions.
- Make sure that the base URL is set correctly in the application which you intend to link to. See the appropriate instructions: JIRA instructions | FishEye/Crucible instructions | Bamboo instructions). This is required for synchronisation to work correctly.

To link to an application that supports Application Links:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click '**Add Application Link**'. Step 1 of the link wizard will appear.
3. Enter the **server URL** of the application that you want to link to (the 'remote application').
4. Click the '**Next**' button. Step 2 of the link wizard will appear.
5. Enter the following information:
    - '**Create a link back to this server**' – Tick this check box if you want to create a two-way link between the remote application and your application. If you want to do this, you will need to enter

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the username and password of an administrator for the remote application.
Note: These credentials are only used to authenticate you to the remote applicaiton, so that Application Links can make the changes required for the new link. The credentials are not saved.
- '**Reciprocal Link URL**' – The URL you give here will override the base URL specified in your remote application's administration console, for the purposes of the application links connection. Application Links will use this URL to access the remote application.

6. Click the '**Next**' button. Step 3 of the link wizard will appear.
7. Enter the information required to configure authentication for your application link:
   - '**The servers have the same set of users**' or '**The servers have different sets of users**' – Select one of these options depending on how you manage users between the two applications.
   - '**These servers fully trust each other**' – Tick this check box if you know that the code in both applications will behave itself at all times and are sure each application will maintain the security of its private key.
     For more information about configuring authentication, see Configuring Authentication for an Application Link.
8. Click the '**Create**' button to create the application link.

Step 1 Step 2

Screenshots above: Adding an application link to an application that supports Application Links (click to view full-sized images)

Adding an Application Link to an Application That Does Not Support Application Links

Before you begin:

- Make sure that the base URL is set correctly in Confluence. See Configuring the Server Base URL for instructions.
- Make sure that the base URL is set correctly in the application which you intend to link to. See the appropriate instructions: JIRA instructions | FishEye/Crucible instructions | Bamboo instructions). This is required for synchronisation to work correctly.

To link to an application that does not support Application Links:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click '**Add Application Link**'. Step 1 of the 'Link to another server' dialogue will be displayed.
3. Enter the server URL of the application that you want to link to, in the '**Server URL**' field. Click the '**Next**'

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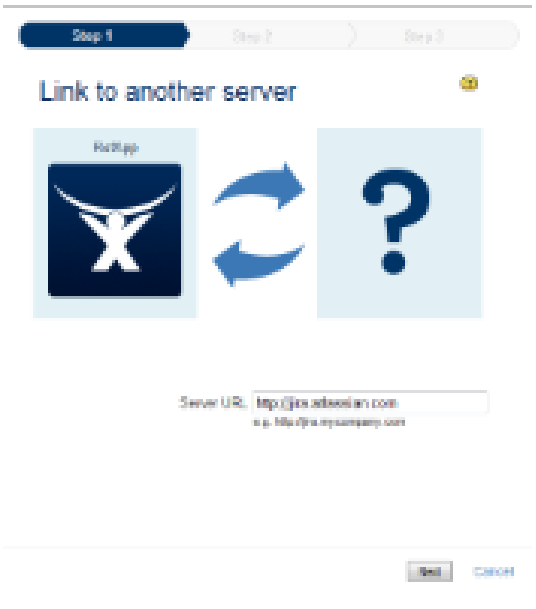
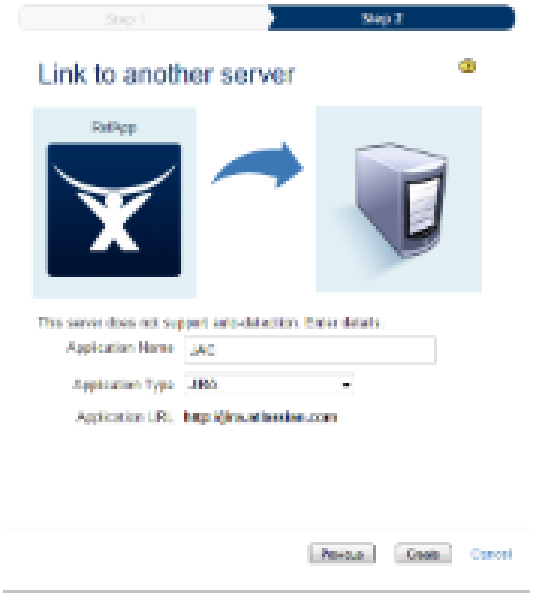
button. Step 2 of the 'Link to another server' dialogue will be displayed.

4. Fill out the fields, as follows:
    - '**Application Name**' — Enter the name by which this remote application will be referred to, in your application.
    - '**Application Type**' — Select the type of application that you are linking to: Bamboo, FishEye/Crucible, JIRA, Confluence, Subversion.
    - '**Application URL**' — This will be set to the server URL you entered in the previous step and will not be editable.
5. Click the '**Create**' button to create the application link. The 'Configure Application Links' page will be displayed, listing all of the application links that have currently been set up for your application including the one you just added.
6. Configure the desired authentication type (Trusted Applications, OAuth, basic HTTP, none) for your new application link. See Configuring Authentication for an Application Link.
7. In your application that does not support Application Links, configure the same type of authentication that you configured for your application link's *outgoing* authentication (in the previous step). For example, if you configured outgoing Trusted Applications authentication in your Application-Links-enabled application, you also need log into your non-Application-Links application and manually configure Trusted Applications (see the relevant administrator's documentation for the application).



Step 1



Step 2

Screenshots above: Adding an application link to an application that supports Application Links (click to view full-sized images)

Notes

Related Topics

- Making an Application Link the Primary Link
- Configuring Authentication for an Application Link
- Configuring Project Links across Applications

Configuring Authentication for an Application Link

Configuring authentication for an application link is essentially defining the level of trust between Confluence and the application that it is linked to.

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On this page:

- Choosing Authentication for an Application Link
- Security Implications for each Authentication Type
- About Primary Authentication Types
- About Impersonating and Non-Impersonating Authentication Types

The information on this page does not apply to Confluence OnDemand.

Choosing Authentication for an Application Link

The level of authentication that you should configure for your application link depends on a number of factors.

- **Do the two applications you are linking trust each other?** i.e. are you sure that the code in the application will behave itself at all times and that the application will maintain the security of its private key?
- **Do the two applications you are linking share the same user base or not?**
- **Do you have administrative access to the application you are linking to?**

Common scenarios include:

- If the two applications you are linking **trust each other** and **share the same user base**, configure **two-way authentication using Trusted Applications** for both incoming and outgoing authentication. For example, you may link your internal Confluence server to an internal JIRA server.
- If the two applications you are linking **trust each other** but **do not share the same user base**, configure **two-way authentication using OAuth** for both incoming and outgoing authentication. For example, you may link your internal Confluence server to an external (customer-facing) JIRA server.
- If you **do not have administrative rights to the application that you are linking to** (e.g. linking to a public FishEye server), configure a **one-way outgoing link** authenticated using **basic HTTP authentication or do not configure any authentication** for the link. For example, you may link your external Confluence server to a partner organisation's Confluence server. An unauthenticated link will still allow the local application to render hyperlinks to the remote application or query anonymously-accessible APIs.

The flowchart below provides a guide to what authentication you should configure for your application link.

Read the following topics for information on how to configure authentication for an application link:

- Configuring Basic HTTP Authentication for an Application Link
- Configuring OAuth Authentication for an Application Link
- Configuring Trusted Applications Authentication for an Application Link
- Incoming and Outgoing Authentication

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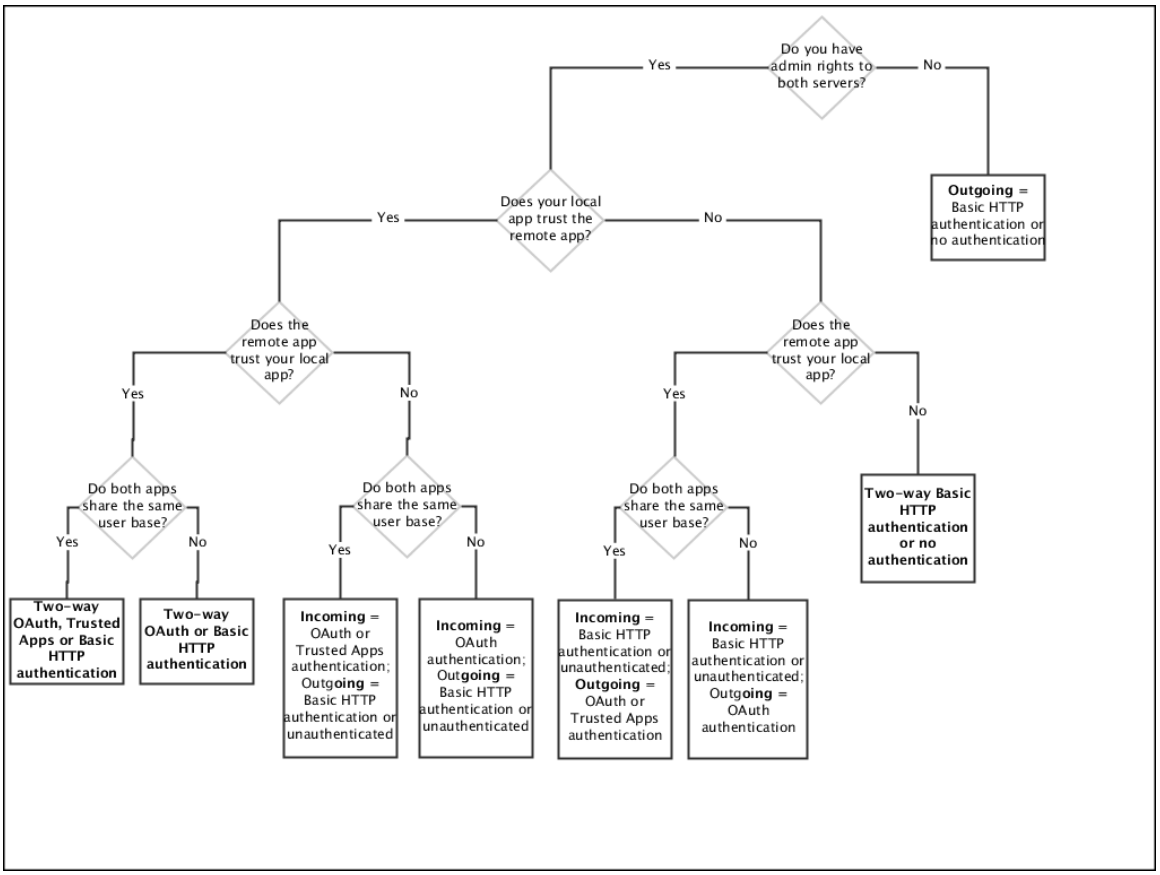

Flowchart above: Determining what authentication to configure for an Application Link

Security Implications for each Authentication Type

If you configure **Trusted Applications authentication** for your application (i.e. your servers have the same set of users and they fully trust each other), please be aware of the following security implications:

- Trusted applications are a **potential security risk**. When you configure Trusted Applications authentication, you are allowing one application to access another as any user. This allows all of the built-in security measures to be bypassed. Do not configure a trusted application unless you know that all code in the application you are trusting will behave itself at all times, and you are sure that the application will maintain the security of its private key.

If you configure **OAuth authentication** for your application (i.e. your servers have different sets of users and they fully trust each other), please be aware of the following security implications:

- Adding an OAuth consumer requires the transmission of sensitive data. To prevent 'man-in-the-middle' attacks, it is recommended that you **use SSL** for your applications while configuring OAuth authentication.
- Do not link to an application using OAuth authentication, unless you **trust all code in the application** to behave itself at all times. OAuth consumers are a potential security risk to the applications that they are linked to.

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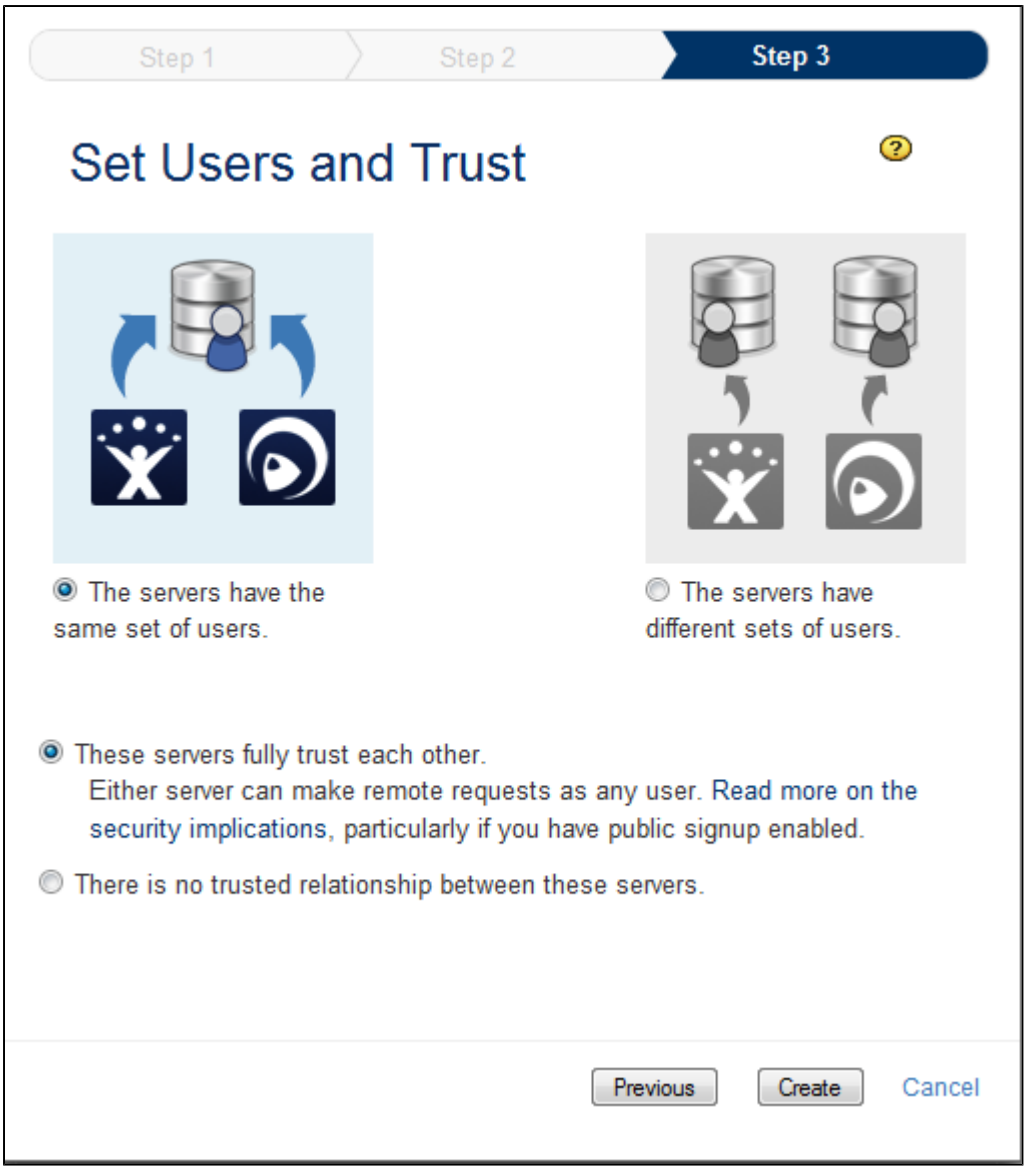

Screenshot above: Configuring authentication during application link setup

About Primary Authentication Types

You can configure multiple authentication types for each application link. When a feature makes a request using an Application Link, it will use one of the configured authentication types. If more than one authentication type is configured, it will by default use the authentication type that is marked as the primary authentication type. The default authentication type is indicated by the green tick next to the authentication type on the list application link screen.

You **cannot** configure which authentication type is the primary authentication type. The primary authentication type is determined automatically by Application Links and depends on a weight defined by each authentication type method. However, every feature that uses Application Links can also choose to use a specific authentication type and might not use the default primary authentication type.

About Impersonating and Non-Impersonating Authentication Types

Applications Links allows you to configure 'impersonating' and 'non-impersonating' authentication types:

- **Impersonating authentication types** make requests on behalf of the user who is currently logged in. People will see only the information that they have permission to see. This includes OAuth and Trusted Applications authentication.
- **Non-impersonating authentication types** always use a pre-configured user when making a request.

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Everyone logged into the system will see the same information. This includes basic HTTP authentication.

Configuring Basic HTTP Authentication for an Application Link

The instructions on this page describe how to configure **Basic HTTP authentication** for outgoing authentication and/or incoming authentication for an application link.

Basic HTTP authentication allows Confluence to provide user credentials to a remote application and vice versa. Once authenticated, one application can access specified functions on the other application on behalf of that user. For example, if you supply the credentials of a Confluence administrator on your Confluence server to a remote application, the remote application will be able to access all functions on your Confluence server that the Confluence administrator can access.

This method of authentication relies on the connection between Confluence and the remote application being secure. We recommend that you use Trusted Applications authentication or OAuth authentication for your application link instead, if possible.

On this page:

- Before You Begin
- Configuring Basic HTTP Authentication for Outgoing Authentication
- Configuring Basic HTTP Authentication for Incoming Authentication
- Notes

The information on this page does not apply to Confluence OnDemand.

Before You Begin

- The instructions assume that **both of the applications that you are linking have the Application Links plugin installed**. If the remote application that you are linking to supports Basic HTTP authentication, but does not have the Application Links plugin installed, you will need to configure Basic HTTP authentication from within the remote application (see the relevant administrator's documentation for the application). This is in addition to configuring the outgoing/incoming authentication for the application link (as described below).
- You must be a Confluence administrator to configure Basic HTTP authentication for an application link.

Configuring Basic HTTP Authentication for Outgoing Authentication

Configuring **outgoing basic http authentication** will allow Confluence to trust a remote application (i.e. allow the remote application to access specified functions in Confluence).

To configure basic http authentication for an outgoing application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure authentication for.
3. Click the '**Outgoing Authentication**' tab. The outgoing authentication page will be displayed.
4. Click the '**Basic Access**' tab.
5. Click the '**Configure**' button and enter the credentials (username and password) that the remote application will use to log into your application .
6. Click the '**Apply**' button to save your changes.

Configuring Basic HTTP Authentication for Incoming Authentication

Configuring **incoming basic http authentication** will allow the remote application that you are linking to, to trust

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Confluence (i.e. allow Confluence to access specified functions on the remote application it is linked to).

To configure basic http authentication for an incoming application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure authentication for.
3. Click the '**Incoming Authentication**' tab. The incoming authentication page will be displayed.
4. Click the '**Basic Access**' tab.
5. Click the '**Configure**' button and enter the credentials (username and password) that the your application will use to log in to the remote application.
6. Click the '**Apply**' button to save your changes.

Notes

Related Topics

Configuring OAuth Authentication for an Application Link
Configuring Trusted Applications Authentication for an Application Link

Configuring OAuth Authentication for an Application Link

The instructions on this page describe how to configure **OAuth** for outgoing authentication and/or incoming authentication for an application link.

OAuth is a protocol that allows a web application to share data/resources with any other OAuth-compliant external application. These external applications could be another web application (such as a JIRA installation or an iGoogle home page), a desktop application or a mobile device application, provided that they are accessible from within your network or available on the Internet.

For example, you could set up an application link between Confluence and an iGoogle page using OAuth authentication. This would allow you to view data from your Confluence server in a Confluence gadget on the iGoogle page (see Configuring Confluence Gadgets for Use in Other Applications).

A typical scenario is setting up an application link between two applications which trust each other, do not share the same set of users but both applications have the Application Links plugin installed. In this case, you would configure OAuth for both outgoing authentication and incoming authentication. See Configuring Authentication for an Application Link for other configurations.

Key OAuth Terminology

- **Service provider** — An application that shares ('provides') its resources.
- **Consumer** — An application that accesses ('consumes') a service provider's resources.
- **User** — An individual who has an account with the Service Provider.

For more information about OAuth, see Configuring OAuth as well as the OAuth specification .

On this page:

- Before You Begin
- Configuring OAuth for Outgoing Authentication
- Configuring OAuth for Incoming Authentication

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Before You Begin

- Adding an OAuth consumer requires the transmission of sensitive data. To prevent 'man-in-the-middle' attacks, it is recommended that you **use SSL** for your applications while configuring OAuth authentication.
- Do not link to an application using OAuth authentication, unless you **trust all code in the application** to behave itself at all times. OAuth consumers are a potential security risk to the applications that they are linked to.
- The instructions assume that **both of the applications that you are linking have the Application Links plugin installed**. If the remote application that you are linking to supports OAuth, but does not have the Application Links plugin installed, you will need to configure OAuth from within the remote application (see the relevant administrator's documentation for the application) in addition to configuring the outgoing/incoming authentication for the application link (as described below).
- You must be a Confluence administrator to configure OAuth authentication for an application link.

Configuring OAuth for Outgoing Authentication

Configuring **outgoing OAuth authentication** will allow Confluence to access data in a remote application on behalf of a user (i.e. allow Confluence to access specified functions in the remote application).

To configure OAuth authentication for an outgoing application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure OAuth for.
3. Click the '**Outgoing Authentication**' tab. The outgoing authentication page will be displayed.
4. Click the '**OAuth**' tab.
5. If you are not currently logged in to the remote application (or you logged in to the remote application under a variant of the application's hostname, such as the IP address), a login dialogue will display.
    - Enter the '**Username**' and '**Password**' for the remote server, not your local server, and click the '**Login**' button. The remote server needs to learn the identity of your local server for the OAuth protocol to work and your admin credentials are used to store your local server's public key on the remote server. If you are already logged into your remote server, then the appropriate changes can be made without having to log in again.
6. Click the '**Enable**' button to enable OAuth authentication for the outgoing link. Your application will be automatically set up to be the 'consumer' and the remote application as a 'service provider'.

Configuring OAuth for Incoming Authentication

Configuring **incoming OAuth authentication** will allow the remote application that you are linking to, to access data in Confluence.

To configure OAuth authentication for an incoming application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure OAuth for.
3. Click the '**Incoming Authentication**' tab. The incoming authentication page will be displayed.
4. Click the '**OAuth**' tab.
5. Click the '**Enable**' button to enable OAuth authentication for the incoming link. The remote application will be automatically set up to be the 'consumer' and your local application as a 'service provider'.

Related Topics

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Configuring Basic HTTP Authentication for an Application Link
Configuring Trusted Applications Authentication for an Application Link
Configuring Confluence Gadgets for Use in Other Applications

Configuring Trusted Applications Authentication for an Application Link

The instructions on this page describe how to configure **Trusted Applications** for outgoing authentication and/or incoming authentication for an application link.

Trusted Applications authentication allows one application to allow access to specified functions on another application on behalf of any user, without the user having to log into the second application. For example, if you configure a JIRA server to trust a Confluence server, every Confluence user will see exactly the same list of issues when they view the Confluence 'JIRA Issues' macro as they see when they use the JIRA Issue Navigator as a logged-in JIRA user.

A typical scenario is setting up an application link between two applications which trust each other, have the same set of users and both have the application links plugin installed. In this case, you would configure Trusted Applications for both outgoing authentication and incoming authentication. See Configuring Authentication for an Application Link for other configurations.

On this page:

- Before You Begin
- Configuring Trusted Applications for Outgoing Authentication
- Configuring Trusted Applications for Incoming Authentication
- Notes

The information on this page does not apply to Confluence OnDemand.

Before You Begin

- Trusted applications are a **potential security risk**. When you configure Trusted Applications authentication, you are allowing one application to access another as any user. This allows all of the built-in security measures to be bypassed. Do not configure a trusted application unless you know that all code in the application you are trusting will behave itself at all times, and you are sure that the application will maintain the security of its private key.
- The instructions below assume that **both of the applications that you are linking have the Application Links plugin installed**. If the remote application that you are linking to supports Trusted Applications, but does not have the Application Links plugin installed, you will need to configure Trusted Applications from within the remote application (see the relevant administrator's documentation for the application) in addition to configuring the outgoing/incoming authentication for the application link (as described below).
- You must be a Confluence administrator to configure Trusted Applications authentication for an application link.

Configuring Trusted Applications for Outgoing Authentication

Configuring **outgoing Trusted Applications authentication** will allow the remote application to trust Confluence (i.e. allow Confluence to access specified functions and data on the remote application).

To configure Trusted Applications authentication for an outgoing application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure Trusted Applications

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authentication for.

3. Click the '**Outgoing Authentication**' tab. The outgoing authentication page will show, with the '**Trusted Applications**' tab displayed.
4. If you are not currently logged into the remote application (or you logged into the remote application under a variant of the application's hostname, e.g. the IP address), a login dialogue will display.
    - Enter the '**Username**' and '**Password**' for the remote server, (not your local server), and click the '**Login**' button. You need to enter the credentials for the remote server, as the remote server needs to be instructed to trust your local server for the Trusted Applications protocol to work. If you are already logged into your remote server, then the appropriate changes can be made without having to log in again.
5. Configure the settings for the Trusted Applications authentication:
    - '**IP Patterns**' — Enter the IP addresses (IPv4 only) from which the remote application will accept requests (this effectively is the IP address your local server). You can specify wildcard matches by using an asterisk (*), e.g. '`192.111.*.*`' (note, you cannot use netmasks to specify network ranges). If you are entering multiple IP addresses, separate them with commas or spaces.
      ⚠️ *Please note, if you are setting up Trusted Applications between two applications that both have the Application Links plugin installed, you can leave this field blank (or explicitly use `*.*.*.*`). However, if your remote application does not have the Application Links plugin installed and you are configuring the IP Patterns in the remote application (not the Application Links plugin), **you must not leave this field blank nor use `*.*.*.*`**. Failure to configure IP address restrictions in this scenario is a security vulnerability, allowing an unknown site to log into your site under a user's login ID.*
      Consider the following scenarios, if you want to limit access by using this field:
        - If your local application is using a proxy server, you need to add the proxy server's IP address to this field.
        - If your local application is a clustered instance of Confluence, you need to configure the remote server to accept requests from each cluster node. If you do not set up each node appropriately, your Confluence users may not be able to view any information from the remote server. You can set this up by either specifying each individual IP address for each node of the cluster (e.g. `172.16.0.10, 172.16.0.11, 172.16.0.12`), or specifying the IP address for the clustered Confluence instance using wildcards (e.g. `172.16.0.*`).
    - **'URL Patterns'** — Enter the URLs in the remote application that your local application will be allowed to access. Each URL corresponds to a particular application function. Enter one URL per line, as follows:
        - If your remote application is JIRA, enter the following URL Patterns: `/plugins/servlet/streams`, `/sr/jira.issueviews:searchrequest`, `/secure/RunPortlet`, `/rest`, `/rpc/soap`
        - If your remote application is Confluence, enter the following URL Patterns: `/plugins/servlet/streams`, `/plugins/servlet/applinks/whoami`
    - '**Certificate Timeout (ms)**' — Enter the certificate timeout. The default is 10 seconds. The certificate timeout is used to prevent replay attacks. For example, if a Trusted Applications request is intercepted and (maliciously) re-sent, the application will be able to check when the request was first sent. If the second request is sent more than 10 seconds (or whatever the certificate timeout is set to) after the initial request, it will be rejected. Please note, you should not have to change the default value of this field for most application links. Note that the certificate timeout relies on the clocks on both servers being synchronised.
6. Click the '**Apply**' button to save your changes.

Configuring Trusted Applications for Incoming Authentication

Configuring **incoming Trusted Applications authentication** will allow Confluence to trust the remote application that you are linking it to (i.e. allow your 'trusted' remote application to access specified functions and data on Confluence).

To configure Trusted Applications authentication for an incoming application link:

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1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to configure Trusted Applications authentication for.
3. Click the '**Incoming Authentication**' tab. The imconing authentication page will show, with the '**Trusted Applications**' tab displayed.
4. The tab will show whether Trusted Applications is currently enabled or not. Use the '**Modify**' or '**Configure**' button to configure Trusted Applications. The Trusted Applications configuration settings will be displayed:
    - '**IP Patterns**' — Enter the IP addresses (IPv4 only) from which our application will accept requests. You can specify wildcard matches by using an asterisk (*), e.g. '`192.111.*.*`' (note, you cannot use netmasks to specify network ranges). If you are entering multiple IP addresses, separate them with commas or spaces.
      ⚠️ *Please note, if you are setting up Trusted Applications between two applications that both have the Application Links plugin installed, you can leave this field blank (or explicitly use `*.*.*.*`). However, if your remote application does not have the Application Links plugin installed and you are configuring the IP Patterns in the remote application (not the Application Links plugin),* ***you must not leave this field blank nor use `*.*.*.*`****. Failure to configure IP address restrictions in this scenario is a security vulnerability, allowing an unknown site to log into your site under a user's login ID.*
      Consider the following scenarios, if you want to limit access by using this field:
        - If the remote application is using a proxy server, you need to add the proxy server's IP address to this field.
        - If the remote application is a clustered instance of Confluence, you need to accept requests from each cluster node. If you do not specify each node's address, Confluence users may not be able to view any data from your application. You can set this up by either specifying each individual IP address for each node of the cluster (e.g. 172.16.0.10, 172.16.0.11, 172.16.0.12), or specifying the IP address for your clustered Confluence instance using wildcards (e.g. 172.16.0.*).
    - **'URL Patterns'** — Enter the local URLs that the remote application will be allowed to access. Each URL corresponds to a particular application function. Enter one URL per line, as follows:
        - If your local application is JIRA, enter the following URL Patterns — `/plugins/servlet/streams`, `/sr/jira.issueviews:searchrequest`, `/secure/RunPortlet`, `/rest`, `/rpc/soap`
        - If your local application is Confluence, enter the following URL Patterns — `/plugins/servlet/streams`, `/plugins/servlet/applinks/whoami`
    - '**Certificate Timeout (ms)**' — Enter the certificate timeout. The default is 10 seconds. The certificate timeout is used to prevent replay attacks. For example, if a Trusted Applications request is intercepted and (maliciously) re-sent, the application will be able to check when the request was first sent. If the second request is sent more than 10 seconds (or whatever the certificate timeout is set to) after the initial request, it will be rejected. Please note, you should not have to change the default value of this field for most application links. Note that the certificate timeout relies on the clocks on both servers being synchronised.
5. Click the '**Apply**' button to save your changes.

Notes

Related Topics

Configuring Basic HTTP Authentication for an Application Link
Configuring OAuth Authentication for an Application Link

Incoming and Outgoing Authentication

When you configure authentication for an application link, you are defining the level of trust between the two linked servers. When configuring a link from one application to another, you can set up:

- **Incoming authentication** (authentication of requests coming from a linked application into this

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application).
- **Outgoing authentication** (authentication of requests sent from this application to a linked application).

See Configuring Authentication for an Application Link.

> *The information on this page does not apply to Confluence OnDemand.*

Editing an Application Link

You can change the details, such as the application name and display URL, for an existing application link.

On this page:

- Editing an Application Link
- Notes

> *The information on this page does not apply to Confluence OnDemand.*

Editing an Application Link

To edit an application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Configure**' link next to the application link that you want to edit the details for. The application details for the application link will be displayed.
3. Update the application details as desired. Please note, you cannot update the Application Type nor the Application URL.
   - '**Application Name**' — Update this field to change the display name for the application that you are linking to.
   - '**Display URL**' — This URL is used when displaying links to the application in the browser. When creating the application link, you may have used a URL that is not accessible to other users, such as an internal IP address. If so, you can change the display URL to an address in a domain that is accessible to other users.
4. Click the '**Update**' button to save your changes.

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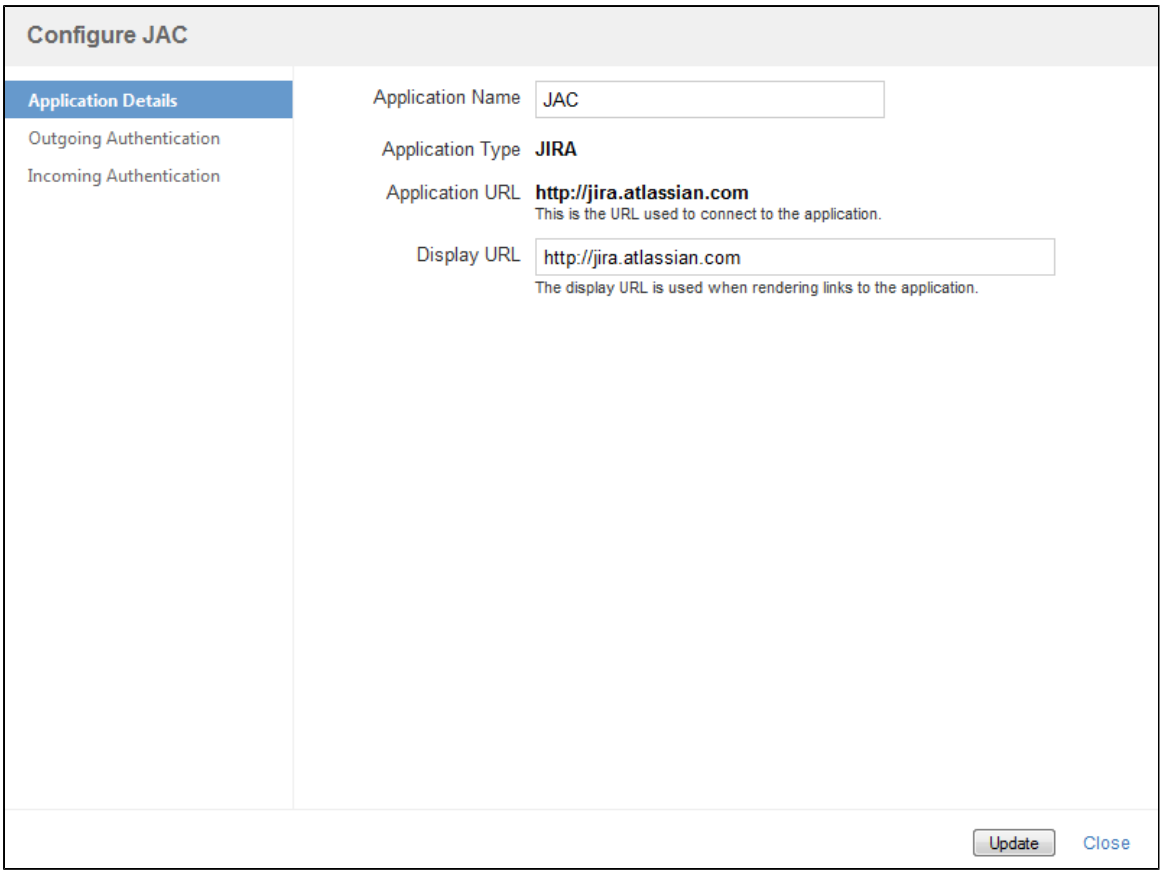

Screenshot above: Editing an application link

Notes

Related Topics

Configuring Authentication for an Application Link
Making an Application Link the Primary Link
Relocating an Application Link

Making an Application Link the Primary Link

If you have set up application links to more than one of the same application type, e.g. you have linked your application to two JIRA servers, then one of the servers will be marked as the 'Primary' link. This means that any outgoing requests will be directed to the primary link's application.

For example, if you have set up a Confluence server that is linked to two JIRA servers with two-way authentication for both links, you can nominate an application link to one of the JIRA servers as the primary link. Every time Confluence requests JIRA information (e.g. for a JIRA issues macro), it will request it from the primary link's JIRA server. Note, both JIRA servers can still make requests of the Confluence server (e.g. a Confluence page gadget on the dashboards of each JIRA instance).

On this page:

- Making an Application Link the Primary Link
- Notes

The information on this page does not apply to Confluence OnDemand.

Making an Application Link the Primary Link

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To make an application link the primary link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Make Primary**' link next to the application link that you want to make the primary link. A '✅' symbol will display in the 'Primary' column next to the application link.
   The 'Primary' column and 'Make Primary' link will only display if you have set up application links to more than one of the same application type, e.g. you have linked your application to two JIRA servers.

Notes

Please read Making a Project Link the Primary Link for information on how primary project links also influence the information shared between servers.

Related Topics

Making a Project Link the Primary Link

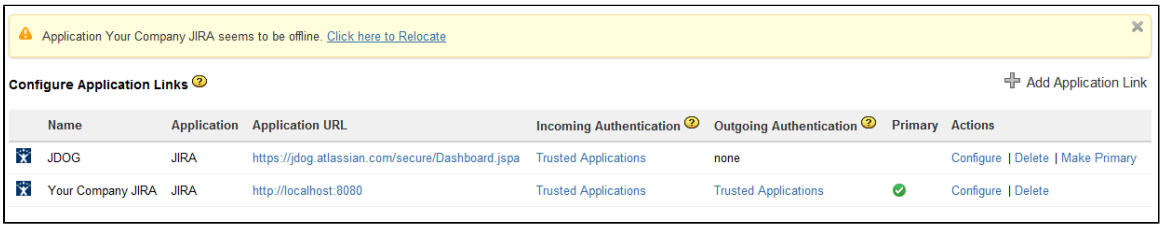
Relocating an Application Link

This page describes how to change the location of an application link. You will need to relocate an application link if the target application has been moved to a new address.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

To relocate an application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. If the remote application for an application link cannot be reached by your application, the '**List Application Links**' page will display a warning message (see 'Relocate Link - Warning Message' screenshot below).
3. If your remote application has been moved to a different address (rather than just being offline temporarily), click the '**Relocate**' link in the warning message (see 'Relocate Link - Updating URL' screenshot below).
4. Enter the new URL for the remote application of your application link and click '**Relocate**'.
5. You will need to confirm the relocation, if the new URL cannot be contacted. Otherwise, the application link will be updated.



Screenshot above: Relocate link – The warning message

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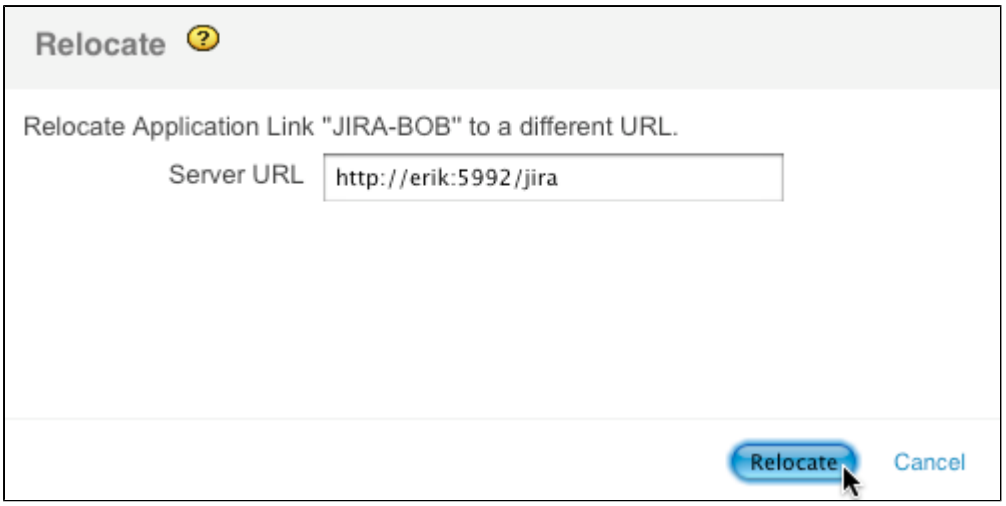

Screenshot above: Relocate link – Updating the URL

Related Topics

Making an Application Link the Primary Link

Upgrading an Application Link

The instructions on this page describe how to upgrade an existing application link. You may want to upgrade an application link in either of the two situations below:

- Your Confluence instance has been upgraded from a version that does not include Application Links to a version that does. For example, you may have configured Trusted Applications or OAuth in a Confluence 3.4 instance (does not include Application Links) and then upgraded to Confluence 3.5 (includes Application Links).
- Your remote application has been upgraded to a version that includes Application Links. For example, you had set up an application link in a Confluence 3.5 instance (includes Application Links) to JIRA 4.2 instance (does not include Application Links), and then upgrade to JIRA 4.3 (includes Application Links).

On this page:

- Upgrading an Application Link (Local App Upgraded to Include Application Links)
- Upgrading an Application Link (Remote App Upgraded to Include Application Links)
- Notes

The information on this page does not apply to Confluence OnDemand.

Upgrading an Application Link (Local App Upgraded to Include Application Links)

When you upgrade from a Confluence version that does not include Application Links to version that does, you will have the option of converting any Trusted Applications or OAuth links to Application Links. The advantage of converting your links to Application Links is that link configuration will be simplified in future.

To upgrade an application link when your local application has been upgraded to include Application Links:

1. After your application upgrade, navigate to the administration console.
2. Click '**Application Links**'. The 'Configure Application Links' screen will be displayed with the following message:
   *"There are existing Trusted Applications or OAuth relationships that should be upgraded to Application Links. **Click here to upgrade.**"*
3. Click the '**Click here to upgrade**' link. The 'Existing Trust Relationships' screen will be displayed showing

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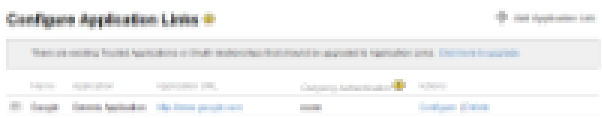
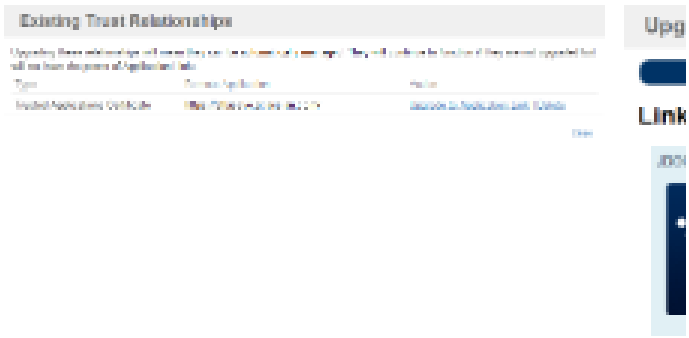
all Trusted Applications and OAuth relationships that can be upgraded to Application Links.
4. Click the '**Upgrade to Application Link**' link next to the desired trust relationship. The 'Upgrade to Application Link' wizard will be displayed.
5. Complete the wizard. The process will be similar to adding a new link (described on Adding an Application Link), except that most fields should be pre-filled.



Step 1



Step 2

Screenshots above: Upgrading an application link for local application

Upgrading an Application Link (Remote App Upgraded to Include Application Links)

When an application link is created between a version of Confluence that supports Application Links, and a remote legacy application (either a non-Atlassian product, or an older version of an Atlassian product that did not ship with Application Links), this link is configured to run in "legacy mode". While there is no distinguishable difference to a user, connection and configuration without Application Links is a little different. For example:

- Setting up OAuth requires manual configuration by the administrator. In OAuth authentication for between applications that support Application Links, exchange of the consumer keys and public keys is done automatically.
- The Trusted Applications protocol (Atlassian-specific) will not be available for authentication.

If you upgrade your remote application to a version that does include Application Links, the application link will continue to work. However, upgrading your link may simplify link configuration and make additional authentication protocols available (as mentioned above).

To upgrade an application link when your remote application has been upgraded to include Application Links:

1. After you have upgraded your remote application to a version that includes Application Links, go to the administration console of your local application. A warning will be displayed, requesting that you upgrade the link to full Application Links mode.
2. Click '**Upgrade**' in the warning message to start the upgrade wizard. Note the following:
    - You will be prompted to make your application link a reciprocal link. You will need to provide administrator credentials for your remote application, if you choose to do so.
    - If you make your application link a reciprocal link, you will also be able to make reciprocal links for your project links. For example, you may be able to link your JIRA project to a FishEye repository and also make a link from your FishEye repository back to the JIRA project.

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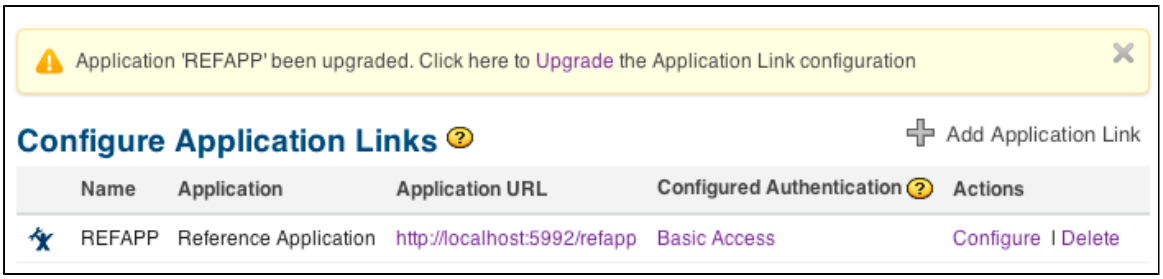
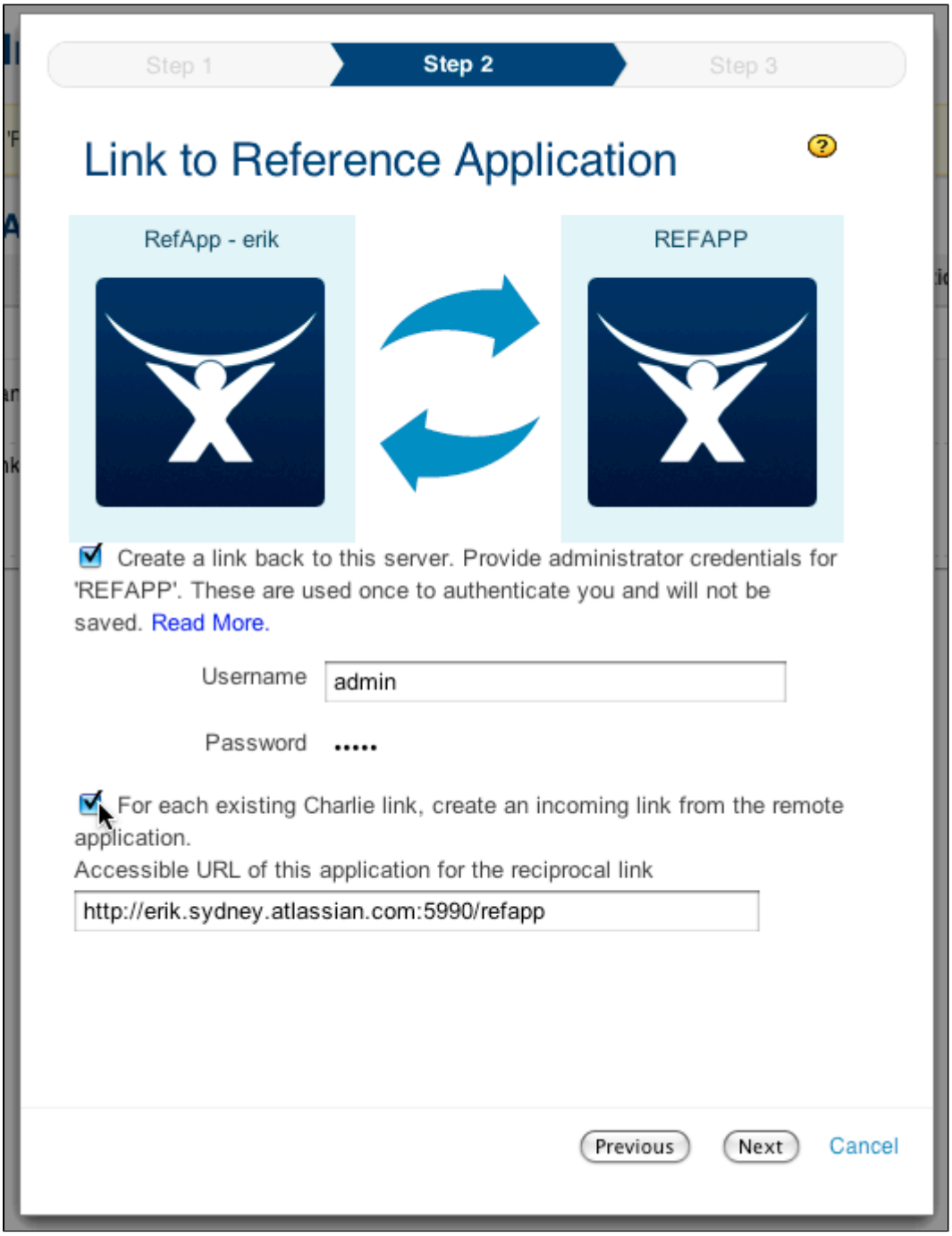


Screenshot above: Upgrading an application link for remote application



Screenshot above: Upgrading an application link wizard

Notes

Related Topics

Adding an Application Link

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Configuring Authentication for an Application Link

Deleting an Application Link

Deleting an application link stops the two applications from sharing information. You will no longer be able to make requests from one application to the other. This means that certain features may not work, e.g. JIRA issues macro in Confluence, Confluence Page Gadget in JIRA, etc.

If you have set up application links to multiple servers of the same application type, e.g. you have linked your application to multiple JIRA servers, deleting the primary link will mean that another of the links will be made the primary link.

Deleting an application link will also delete all project links set up for that application link.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

To delete an application link:

1. Log in as a system administrator and go to the administration page. Click 'Application Links' in the administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
2. Click the '**Delete**' link next to the application link that you want to delete. A confirmation screen will be displayed.
3. Click the '**Confirm**' button to delete the application link.

RELATED TOPICS

Editing an Application Link
Relocating an Application Link

Configuring Project Links across Applications

Let's assume that you are managing a project or team. You would like to connect your project's Confluence space with your JIRA project, and link up your team's source repository too.
When you have connected your applications via Application Links, you can also connect the areas of those applications that contain information relating to your project or team. Using **project links** (also called **entity links**) you can associate one or more projects, spaces and repositories across the linked applications.

To connect all the information relating to the project or team that you are managing, you can link one or more of the following:

- JIRA projects.
- Confluence spaces.
- FishEye repositories.
- FishEye projects. A FishEye 'project' is the Crucible project if you have installed FishEye and Crucible, otherwise it is the paths associated via the 'FishEye Project Content' function in FishEye.
- Crucible projects.
- Bamboo projects.

On this page:

- Uses for Project Links
- Managing Project Links

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Uses for Project Links

The following integration features use project links:

- Activity streams. For example, the project links determine the activity retrieved from JIRA to display in the activity stream of a FishEye repository or a Crucible project.
- The JIRA FishEye plugin. For example:
  - The link between a JIRA project and a FishEye repository determines the repository searched for a particular issue key when displaying the FishEye source tab in JIRA.
  - The link between a JIRA project and a Crucible project determines the Crucible project scanned for review activity when displaying the Crucible reviews tab in JIRA.
  - When you create a defect in Crucible, Crucible will know which JIRA project to put it in.
- Third-party plugins may make use of project links to enrich their functionality too.

Managing Project Links

- Adding Project Links between Applications
- Making a Project Link the Primary Link
- Deleting a Project Link

RELATED TOPICS

Adding an Application Link

Adding Project Links between Applications

Let's assume that you are managing a project or team. You would like to connect your project's Confluence space with your JIRA project, and link up your team's source repository too.
When you have connected your applications via Application Links, you can also connect the areas of those applications that contain information relating to your project or team. Using **project links** (also called **entity links**) you can associate one or more projects, spaces and repositories across the linked applications.

To connect all the information relating to the project or team that you are managing, you can link one or more of the following:

- JIRA projects.
- Confluence spaces.
- FishEye repositories.
- FishEye projects. A FishEye 'project' is the Crucible project if you have installed FishEye and Crucible, otherwise it is the paths associated via the 'FishEye Project Content' function in FishEye.
- Crucible projects.
- Bamboo projects.

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

To link a Confluence space to a project in another application:

1. Choose **Browse** > **Space Admin**.
   Note: 'Space Admin' is displayed only if you are a space administrator for that space, or you are a super user (a member of the `confluence-administrators` group).
2. Click '**Application Links**' in the left-hand panel.
3. Choose the Confluence space that you want to link from.
4. The instructions for adding a project link will vary depending on whether the target application has the Application Links functionality installed:
   - If the target application has Application Links:
     a. Click '**Add Link**'. A dropdown menu will appear listing the applications you have already linked to.
     b. In the dropdown menu, click the application that contains the project you want to link to. For

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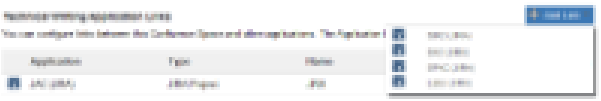
example, if you want to link to a specific JIRA project, click the JIRA site that contains that project. If you want to link to a Confluence space, click the Confluence site that contains that space.

c. Click one of the options on the 'Authorization required' screen:
   - '**Authorize**' — Click this option if you want to grant your project authorised access to the target project. The target application will open in a new window, so that you can log in and authorise access.
   - '**Skip – your access is anonymous**' — Click this option if you only want to allow anonymous access to the target project.

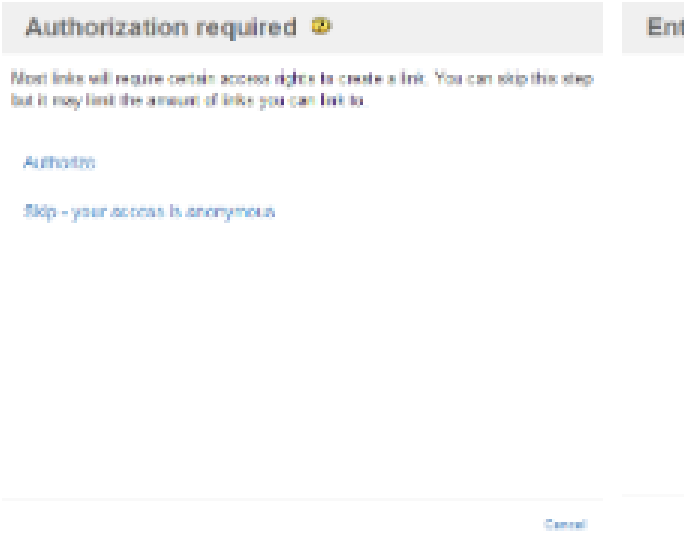
d. In the '**Name or Key**' field, enter the name/key of the project in the remote application that you want to link to. For example, if you want to link to a JIRA project, enter the project key. If you want to link to a Confluence space, enter the space key.

e. Click the '**Create**' button to create the project link.

- If the target application does not have Application Links:
  a. Click '**Add Link**'. A dropdown menu will display listing the applications you have already linked to.
  b. In the dropdown menu, click the application that contains the project you want to link to. For example, if you want to link to a specific JIRA project, click the JIRA site that contains that project. If you want to link to a Confluence space, click the Confluence site that contains that space.
  c. In the '**Key**' field, enter the name/key of the project in the remote application that you want to link to. For example, if you want to link to a JIRA project, enter the project key. If you want to link to a Confluence space, enter the space key.
  d. *(optional)* Enter the alias for the project in the '**Alias**' field. This is the display name for the project in your administration console.
  e. Click the '**Create**' button to create the project link.



Step 1



Step 2

Screenshots above: Linking to a JIRA project (where the target JIRA server supports Application Links)

RELATED TOPICS

Making a Project Link the Primary Link
Deleting a Project Link

Making a Project Link the Primary Link

If you have set up project links to more than one project in the same application, for example you have linked your Confluence space to two JIRA projects, then one of the project links will be marked as the primary link. All outgoing requests will be directed to the primary link.

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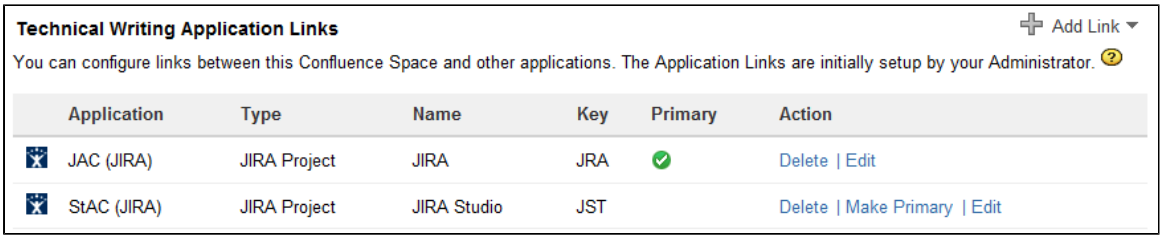
For example, if you have a Confluence space that is linked to two JIRA projects, you can nominate the link to one of the JIRA projects as the primary link. Every time Confluence requests JIRA information (for example, in a JIRA issues macro) it will request it from the primary link's JIRA project. Note, both JIRA projects can still request information from the Confluence space (for example, a Confluence page gadget on the dashboards of each JIRA instance).

> *The information on this page does not apply to Confluence OnDemand.*

To make a project link the primary link:

1. Choose **Browse** > **Space Admin**.
   Note: 'Space Admin' is displayed only if you are a space administrator for that space, or you are a super user (a member of the `confluence-administrators` group).
2. Click '**Application Links**' in the left-hand panel.
3. Click the '**Make Primary**' link in the '**Action**' column for the project link that you want to make the primary link. A symbol will display in the 'Primary' column next to the link.
   Note: The 'Primary' column and 'Make Primary' link will appear only if you have set up multiple project links to the same application, for example you have linked a Confluence space to a number of JIRA projects.



Screenshot above: Viewing the project links for a Confluence space

RELATED TOPICS

Adding Project Links between Applications
Deleting a Project Link

Deleting a Project Link

Deleting a project link stops the two projects from sharing information.

If you have set up multiple project links to the same application, for example you have linked a Confluence space to multiple JIRA projects, deleting the primary link will mean that another of the links will be made the primary link.

> *The information on this page does not apply to Confluence OnDemand.*

To delete a project link:

1. Choose **Browse** > **Space Admin**.
   Note: 'Space Admin' is displayed only if you are a space administrator for that space, or you are a super user (a member of the `confluence-administrators` group).
2. Click '**Application Links**' in the left-hand panel.
3. Click the '**Delete**' link next to the link that you want to delete.
4. A confirmation screen will appear. Click the '**Confirm**' button to delete the link.

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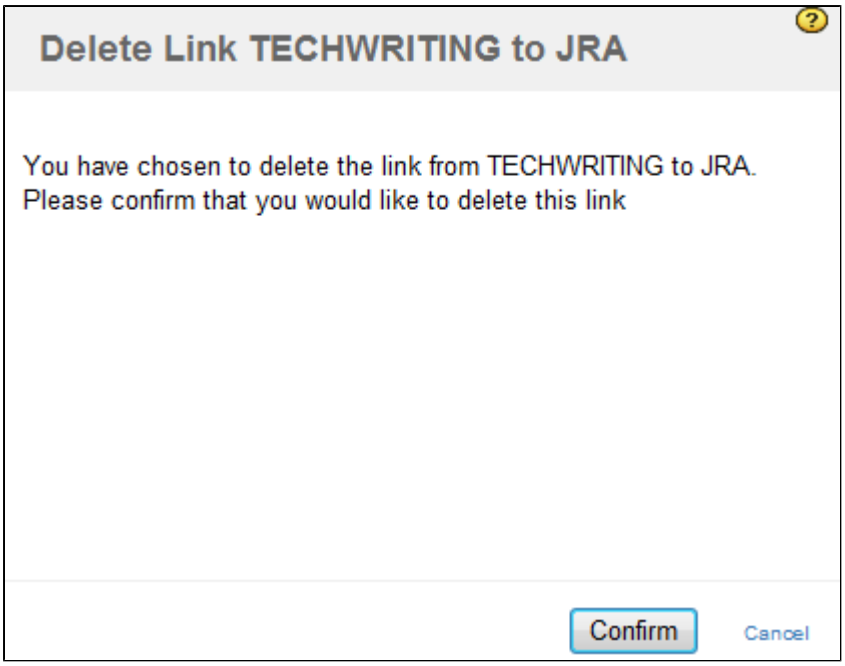

Screenshot above: Confirming the deletion of a project link

Related Topics

Adding Project Links between Applications
Making a Project Link the Primary Link

Confluence and JIRA

- Installing Confluence and JIRA Together
- Integrating JIRA and Confluence
- Setting Up Trusted Communication between JIRA and Confluence

RELATED TOPICS

Connecting to Crowd or JIRA for User Management
JIRA Issues Macro

> ⚠ *The information on this page does not apply to Confluence OnDemand.*

Installing Confluence and JIRA Together

This page describes Atlassian's recommendation for installing JIRA and Confluence on the same server. Refer to Here Be Dragons for instructions on integrating all Atlassian applications.

⚠ **Do not deploy multiple Atlassian applications in a single Tomcat container** —
Deploying multiple Atlassian applications in a single Tomcat container is **not supported.** We do not test this configuration and upgrading any of the applications (even for point releases) is likely to break it. There are also a number of known issues with this configuration (see this FAQ for more information).

We also do not support deploying multiple Atlassian applications to a single Tomcat container for a number of practical reasons. Firstly, you must shut down Tomcat to upgrade any application and secondly, if one application crashes, the other applications running in that Tomcat container will be inaccessible.

Finally, we recommend not deploying *any other applications* to the same Tomcat container that runs Confluence, especially if these other applications have large memory requirements or require additional libraries in Tomcat's `lib` subdirectory.

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> *The information on this page does not apply to Confluence OnDemand.*

Recommended Setup - Separate Stand-Alone Installations

Atlassian recommends running JIRA and Confluence in separate stand-alone instances running behind an Apache Web Server. See the guides for:

- Installing Confluence
- Running Confluence behind Apache
- Installing JIRA
- Integrating JIRA with Apache

Advantages

- Each application can be restarted without affecting the other.
- If one webapp hangs for any reason (eg. running out of memory), it doesn't affect the other.
- Any problems can be debugged more easily. Logs are separate and product-specific, rather than everything going to catalina.out. Thread and heap dumps are smaller and more relevant.
- It reduces the likelihood of jar conflicts (eg. jars that must be installed in `common/lib` or `lib` for Confluence running off Apache Tomcat version 6 or above), particularly if you later want to install a third webapp not from Atlassian.
- Apache HTTP Web Server is well suited for running publicly available sites, with extensive modules for security and efficiency. It also allows for flexibility with URLs (ie http://confluence.atlassian.com, http://confluence, and so on).

> Apache Web Server is recommended and reliable. It is also a third-party product, and therefore not developed nor supported by Atlassian. See Atlassian Support Offerings for details.

Integrating JIRA and Confluence

Please refer to the guide to Installing Confluence and JIRA Together.

JIRA and Confluence are designed to complement each other. Collect your team's thoughts, plans and knowledge in Confluence, track your issues in JIRA, and let the two applications work together to help you get your job done.

Below are some ways you can get JIRA and Confluence working together.

On this page:

- Setting Up Trusted Communication between JIRA and Confluence
- Inserting JIRA issues
- Combining Confluence Shortcuts and JIRA Quick Search
- Viewing Confluence Content in JIRA or JIRA Content in Confluence
- Integrating JIRA and Confluence User Management
- Useful Plugins

> *The information on this page does not apply to Confluence OnDemand.*

Setting Up Trusted Communication between JIRA and Confluence

An administrator can configure JIRA (3.12.0 or later) and Confluence to communicate in a trusted way, so that Confluence can request information from JIRA on behalf of the currently logged-in user. JIRA will not ask the

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user to log in again or to supply a password.

Trusted communication is used when embedding information from one application (for example, a list of JIRA issues) into another application (for example, a Confluence page).

Read more about trusted communication.

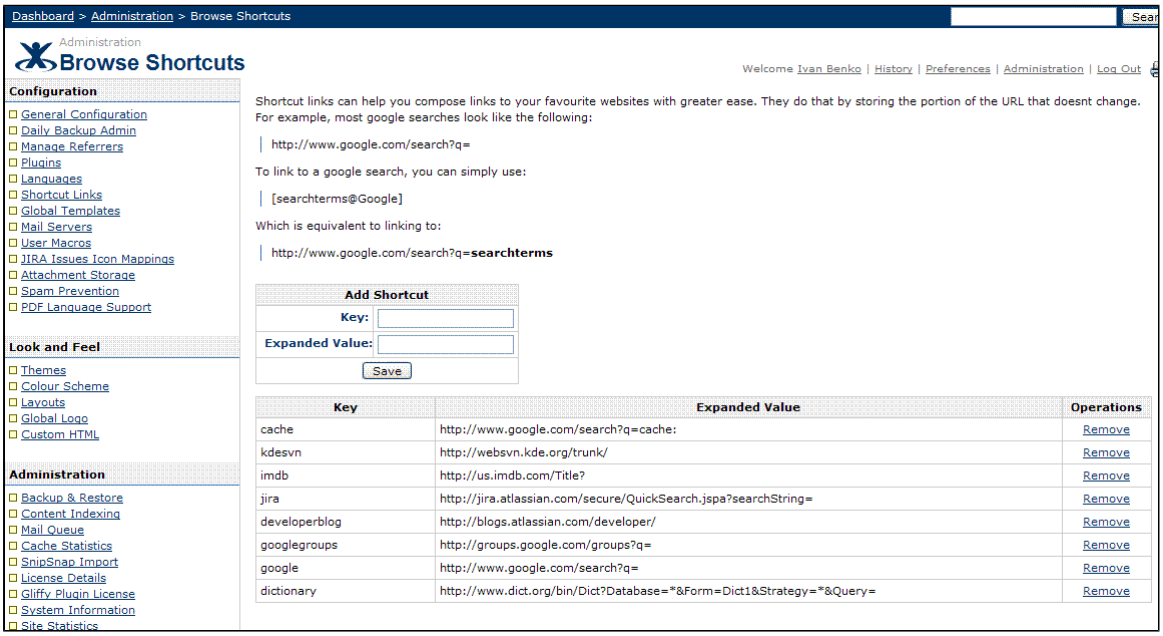
Inserting JIRA issues

You can insert issues from a JIRA site onto your Confluence page using the 'Insert JIRA Issue' dialogue box. You can also use this dialogue box to create a new issue on the JIRA site. See Inserting JIRA Issues.

Combining Confluence Shortcuts and JIRA Quick Search

In our Confluence site's global configuration (`Administration > Shorcut Links`) we have the following shortcut defined:

```
JIRA: http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=
```



Use the above option to create links using Confluence's shortcut notation.

- Link directly to JIRA issues like this: CONF-1000
- Use JIRA's quick-search functionality to create links to particular groups of issues. The following link will display a list of all open issues in the Confluence project of type 'Improvement': CONF open improvements

Viewing Confluence Content in JIRA or JIRA Content in Confluence

Using Gadgets

You can embed a Confluence activity stream or a Confluence page in JIRA's dashboard. Likewise, JIRA gadgets can be rendered on a Confluence page. See Adding a Confluence Gadget to a JIRA Dashboard and Gadget Macro for information on how to set up gadgets.

Using the JIRA Issues macro

For versions earlier than Confluence 3.1 and JIRA 4.0, use the {jiraissues} macros to embed JIRA reports and

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portlets into your Confluence site

Any JIRA search result can be embedded in a Confluence page using the JIRA Issues macro with your choice of included fields and field ordering, and any JIRA gadgets can be embedded in a Confluence page by Registering External Gadgets.

Integrating JIRA and Confluence User Management

To save you having to enter users into both JIRA and Confluence, you may benefit from using Atlassian Crowd a s the user repository for both applications. Alternatively you can configure Confluence to use JIRA's user database. See Connecting to Crowd or JIRA for User Management.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- The JIRA Linker plugin provides a custom field that helps you find an URL, particularly a Confluence page, so you can add a page link into a JIRA issue.

Setting Up Trusted Communication between JIRA and Confluence

An administrator can configure JIRA and Confluence to communicate in a trusted way, so that Confluence can request information from JIRA on behalf of the currently logged-in user. JIRA will not ask the user to log in again or to supply a password.

When JIRA is configured to trust Confluence in this way, we call Confluence the '**trusted application**' and JIRA the '**trusting application**'.

Trusted communication is used when embedding information from one application (e.g. a list of JIRA issues) into another application (e.g. a Confluence page). Currently only JIRA can be configured to trust Confluence, and only the following macro has been enhanced to use trusted communication:

- JIRA Issues macro

Further implementations will follow, especially as we roll out the tight integration required between Atlassian products for JIRA Studio.

Potential security risk

Do not configure a trusted application unless you trust all code in that application to behave itself at all times. Trusted communication uses public/private key cryptography to establish the identity of the trusted server, so you must also be sure that the trusted application will maintain the security of its private key. Read the details of the security risks below.

On this page:

- Prerequisites
- Why do we need Trusted Communication?
- Overview
- Configuring JIRA to Trust Confluence Using Trusted Applications
- Configuring the Macro Plugin in Confluence
- Adding the Macro to a Confluence Page
- Viewing the Confluence Page
- Security Risks
- Troubleshooting
- Technical Overview of the Trusted Applications Authentication (TAA) Protocol

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The information on this page does not apply to Confluence OnDemand.

Prerequisites

- JIRA 4.2.0 or later.
- Confluence 3.5.0 or later.
- In order to authenticate successfully against JIRA, the Confluence user must also be registered as a JIRA user with the same username.

Common user base recommended

It is **highly recommended** that your JIRA and Confluence instances share a common user base, rather than two separate user bases with duplicated usernames. You will receive an error if Confluence passes JIRA a username which JIRA cannot recognise. Also, with separate user bases you run the risk that the same username may be used by two different people. The trusted application does not supply the user's password, so the trusting application will assume the username belongs to the user registered in the trusting application's own user base.

Tip: Try Atlassian Crowd for a tidy user management solution.

Why do we need Trusted Communication?

The JIRA Issues macro allows you to embed a list of JIRA issues into a Confluence page. Prior to Confluence 2.7, if you wanted to display JIRA issues that had restricted viewing, then you needed to store the JIRA user's credentials (username and password) in the macro code directly on the Confluence page. This was not very secure.

The reasons we require the user credentials are:

- Your JIRA instance might not be public, and you might not want to allow anonymous access to your issues.
- You might have security restrictions on some of your issues. So you don't want to allow someone to leak data from your JIRA project by using the JIRA Issues Macro on a Confluence page.

Overview

Here is a summary of the integration points in a trusted communications relationship. Each of the following points is described in more detail in the sections below.

- A JIRA System Administrator configures JIRA to trust Confluence.
- A Confluence System Administrator configures the macro plugin to use (or not use) trusted communication.
- A Confluence user adds one of the macros to a Confluence page.
- A Confluence user or anonymous user views the Confluence page.

Configuring JIRA to Trust Confluence Using Trusted Applications

Trust only has to be established once between the two applications. Once trust has been established, it is entirely transparent to the Confluence users.

Application links are used to enable trust relationships between two applications. Linking two applications allows you to share information and access one application's functions from within the other.

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You can configure an application link to use Trusted Applications as the authentication mechanism. For instructions, see Configuring Trusted Applications Authentication for an Application Link.

Configuring the Macro Plugin in Confluence

By default, Confluence ships with trusted communication enabled for the following macro:

- JIRA Issues macro

A Confluence System Administrator can decide on the level of trusted communication used by the macros. The different levels are:

- Ignore trusted communications altogether. Trusted communication is turned off at the global level.
- Perform trusted communications whenever the macro is used on a Confluence page, but do not show certain warning messages.
- Perform trusted communications whenever the macro is used on a Confluence page, and show all warning messages. **This is the default configuration.**

To change the default trusted communication level for the JIRA Macros plugin,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Plugins**' in the left-hand panel.
3. The '**Plugin Manager**' screen appears, showing a list of installed plugins. Scroll down and click the '**JIRA Macros**' link.
4. The '**JIRA Macros**' panel appears in the top middle of the screen, as shown below. Click '**Enable**' or '**Disable**' next to the following options:
   - '**JIRA application trust support**' – With this option enabled, Confluence will attempt trusted communication with JIRA whenever a user views a page containing the JIRA Issues macro, provided criteria are met as described below. With this option disabled, Confluence will never attempt trusted communication with JIRA for these macros.
     ✅ Disable the above option if you do not intend to configure trusted communication between JIRA and Confluence.
   - '**JIRA application trust warnings**' – With this option enabled, Confluence will display all error and warning messages that may arise from a problem during trusted communication (assuming that trusted communication is enabled). With this option disabled, Confluence will suppress certain warnings. See troubleshooting below.
     ✅ Disable the above option if you have a large number of existing JIRA macros already on your Confluence instance, pointing at a diverse range of JIRA servers. Some of those JIRA servers may have a trusted communication link established (requiring the functionality to be enabled) while other JIRA servers may have no trusted communication link. In this case, you may want to turn off the warning messages so they do not appear on your Confluence pages where the JIRA macros point to non-trusting JIRA servers.

Screenshot: JIRA Macros panel in Plugin Manager

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Adding the Macro to a Confluence Page

The Confluence user can add and edit the macros as described on the following page:

- Using the JIRA Issues macro

> **Remove the username and password from your macro markup code**
>
> Prior to Confluence 2.7, you needed to include a username and password in the macro markup code if you wanted to display JIRA issues which had restricted viewing. Once your administrator has set up trusted communication between Confluence and JIRA, you no longer need to include a username and password in the markup code for your JIRA macros.

The following options are available for determining the issues which will be retrieved from JIRA and displayed on the Confluence page:

What you want to do	Macro parameter	URL parameter	Comments

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Display the JIRA issues which the logged-in user is authorised to see. And if the user is not logged in, display only issues which allow unrestricted viewing.			Do not specify any authentication parameters. In this case, the behaviour depends on the way your administrator has set up trusted communication between JIRA and Confluence. Here is a summary of the behaviour. If trusted communication is **enabled**, the authorisation will work seamlessly. When a logged-in user views your page, they will see only the JIRA issues they are allowed to see. And if they are not logged in, they will see only the issues which allow unrestricted viewing. If trusted communication is **disabled**, the Confluence page will show only the JIRA issues which allow unrestricted viewing.
Ensure that Confluence will display only the JIRA issues which allow unrestricted viewing.	`anonymous`		Regardless of who the user is (logged in or not), the Confluence page will show only anonymously-visible issues. Confluence will not attempt to set up a trusted communication link with JIRA in this case.
Use a pre-determined username and password to access the JIRA issues.		`&os_username=MYNAME&os_password=MYPASSWORD`	**Not recommended**. Prior to Confluence 2.7, this was the only way of displaying issues with restricted viewing. For Confluence 2.7 and later, this method will still work. Confluence will not attempt to set up a trusted communication link with JIRA in this case.

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Refer to the section below for details of what happens when a user views a Confluence page containing a JIRA macro.

Viewing the Confluence Page

When a user views a Confluence page which contains a JIRA Issues macro, this is what happens:

- If the macro markup contains an explicit username and password in the URL parameter, Confluence will not request trusted communication with JIRA. Confluence will retrieve the JIRA issues which the specified username is authorised to see. This behaviour is the same as Confluence versions prior to 2.7.
- If the macro markup contains the `anonymous` parameter, Confluence will retrieve only the JIRA issues which allow unrestricted viewing. Confluence will not attempt to set up a trusted communication link with JIRA in this case.
- If the user is anonymous (not logged in), Confluence will retrieve only the JIRA issues which allow unrestricted viewing. Confluence will not attempt to set up a trusted communication link with JIRA in this case.
- If trusted communication is disabled via the Plugin Manager in Confluence, then Confluence will not request trusted communication with JIRA. So if there is no explicit username and password in the markup code, Confluence will retrieve only the JIRA issues which allow unrestricted viewing. This behaviour is the same as Confluence versions prior to 2.7.
- If trusted communication is enabledvia the Plugin Manager in Confluence:
  - If the user is logged in, then Confluence attempts trusted communication with JIRA. Confluence sends the username to JIRA. JIRA returns a set of issues which that username is authorised to access, based on the JIRA user base and the JIRA groups and permissions. Confluence displays those issues on the page.
  - If JIRA or Confluence encounters a problem during the trusted communication process, an error message may appear on the Confluence page above the macro output – see troubleshooting belo w.

Security Risks

Please take the following considerations into account when setting up trusted communication:

- When you configure JIRA to trust an application, you are allowing the application to access JIRA in the name of a particular user. The trusted application passes JIRA the user's login name, but no other authentication information. JIRA does not request the user's password. By doing this, you are **bypassing JIRA's authentication mechanism**.
- Do not configure a trusted application unless you **trust all code in that application** to behave itself at all times.
- Trusted communication uses public/private key cryptography to establish the identity of the trusted server. The trusted application needs to maintain the security of its private key. Confluence stores its private key in the database. **So you must be sure that the Confluence database is secure, and also any full backups of the database.**
- Ensure that you **specify an IP address** for your Confluence site when configuring trusted applications in JIRA. Do not use the wild card `*.*.*.*` as the IP address. Failure to configure IP address restrictions is a security vulnerability, allowing an unknown site to log into your JIRA site under a user's login ID.
- Be aware of the risks associated with using separate user bases, as explained above. **We strongly recommend a common user base between the trusted and trusting applications.**
- When configuring an application to trust another application, you should use a trusted network or SSL to **protect the sensitive information passed between the applications during the configuration procedure**. This will help to prevent man-in-the-middle attacks.

Troubleshooting

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Below are the warning messages which may appear on your Confluence page, above the output of the JIRA Issues macro.

Warning Message	Cause	Solution	Warning Message Can be Turned Off?
`javax.net.ssl.SSLHandshakeException: sun.security.validator.ValidatorException: PKIX path building failed: sun.security.provider.certpath.SunCertPathBuilderException: unable to find valid certification path to requested target`	JIRA is running over SSL	Add JIRA's SSL Certificate to the Java Keystore	**No**
`The JIRA server does not recognise your user name. Issues have been retrieved anonymously.`	The logged-in Confluence user is not registered in the JIRA user base.	Add the username to your JIRA user base. It is **highly recommended** th at your JIRA and Confluence instances share a common user base.	**No**
`The JIRA server does not trust this Confluence instance for user authentication. Issues have been retrieved anonymously. You can set the macro to always use an anonymous request by setting the 'anonymous' parameter to 'true'.`	Your JIRA instance has not been configured to trust your Confluence instance.	One of the following solutions: • Configure JIRA to trust Confluence. • Disable trusted communications for the JIRA macros in Confluence. • Use the `anonymous parameter` in all your JIRA Issues macros.	Yes

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`The JIRA server does not support trust requests. Issues have been retrieved anonymously. You can set the macro to always use an anonymous request by setting the 'anonymous' parameter to 'true'.`	Your JIRA instance is not able to handle trusted communications (i.e. the JIRA version is earlier than 3.12.0).	One of the following solutions: • Download the latest version of JIRA and then configure JIRA to trust Confluence. • Disable trusted communications for the JIRA macros in Confluence. • Use the `anonymous parameter` in all your JIRA Issues macros.	Yes
`Failed to login trusted application: confluence:14159892 due to: com.atlassian.security.auth.trustedapps.CertificateTooOldException: OLD_CERT; Certificate too old.`	There is a date/time difference between the JIRA server and Confluence server.	• Certificate Too Old KnowledgeBase Entry	-

Consult Troubleshooting the JIRA Issues Macro and Trusted Applications for further troubleshooting.

Technical Overview of the Trusted Applications Authentication (TAA) Protocol

✅ Read this section if you want a bit more information on the technical side of things.

Atlassian has developed its own protocol to set up trust between JIRA and Confluence. Below is a technical overview of the process.

Configuring JIRA to trust Confluence:

1. When the JIRA System Administrator provides the base URL of the Confluence instance, JIRA requests a trusted application authentication certificate from Confluence. The certificate contains Confluence's trusted application ID and public key (generated specifically for use with the TAA protocol).
2. JIRA validates the certificate and asks the System Administrator for a few extra details about the trust relationship, such as a name for the Confluence instance, timeout, allowed IP addresses and allowed request URLs.
3. JIRA stores all this information in the database.

Making a trusted request from Confluence to JIRA:

1. Confluence sends a web request to JIRA, appending additional headers to the request, including:
    - Timestamp (nonce) of the request + user name of the currently logged-in Confluence user, encrypted with a symmetric key (generated on the fly).
    - The symmetric key, encrypted with Confluence's private key.
    - Confluence's application ID (as displayed when trusted communication was established).
2. JIRA attempts to decode the encrypted headers, using the stored information about the relationship. It conducts the following checks to validate the request:
    - The trusted application ID refers to a valid trusted application.

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    - The given username exists in the JIRA user base.
    - The agreed timeout has not expired.
    - The request originated from a trusted IP address.
    - The resource being requested matches those specified in the URL match list.
3. If any of these checks fails, a response is sent to Confluence indicating the reason for failure. Otherwise, JIRA will authenticate the specified user for the duration of the single request, and respond with the resources (i.e. the JIRA issues).

RELATED TOPICS

JIRA Issues Macro
Connecting to LDAP or JIRA or Other Services via SSL
Single Sign-on Integration with JIRA and Confluence
Troubleshooting the JIRA Issues Macro and Trusted Applications

Confluence Installation and Upgrade Guide

The pages listed below contain information on installing and upgrading Confluence:

- System Requirements
    - Server Hardware Requirements Guide
    - Example Size and Hardware Specifications From Customer Survey
- Confluence Installation Guide
    - Installing Confluence
    - Installing the Confluence EAR-WAR Edition
    - Confluence Cluster Installation
    - Creating a Dedicated User Account on the Operating System to Run Confluence
    - Getting a Confluence License
    - Running Confluence in a Virtualised Environment
- Confluence Setup Guide
    - External Database
    - Load Content for the Site
    - Restoring from Backup During Setup
    - Configuring JIRA Integration in the Setup Wizard
- Upgrading Confluence
    - Upgrading Beyond Current Licensed Period
    - Confluence Post-Upgrade Checks
    - Upgrading Confluence EAR-WAR Distribution
    - Migration from Wiki Markup to XHTML-Based Storage Format
    - Migration of Templates from Wiki Markup to XHTML-Based Storage Format
    - Upgrading Confluence Manually
- Supported Platforms
    - End of Support Announcements for Confluence
    - Supported Platforms FAQ
- Migrating Confluence Between Servers
    - Migrating from Confluence OnDemand to a Confluence Installed Site

System Requirements

Confluence works with a broad range of operating systems, database systems and application servers. Provided you have the technical knowledge, it is very likely that you will be able to run Confluence with an 8-year-old database or even on some 8-year-old hardware. Realistically, it is not technically feasible for us to provide our legendary support service on all environments available. There can only be a finite number of platforms and release versions of those that we support.

Our rule of thumb when releasing a new version of Confluence is that we will officially support platforms that have been released within the last one to two years (or the latest version of that platform if no new version of it was released in that period). This does not necessarily mean that you will need to upgrade your database or

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application server every time you upgrade Confluence. However, if you do run into problems with an unsupported version of a database or application server, we may have to ask you to upgrade to something newer.

Please refer to our Supported Platforms topic for details on platforms that we currently support in this version of Confluence and our Supported Platforms FAQ topic for details on our support handling procedures.

On this page:

- Confluence Software Requirements
  - Operating Systems
  - Application Servers
  - Databases
  - Java
  - Please Note: Impact of Antivirus Software
- Confluence Hardware Requirements
- Atlassian Hosted Solutions

Confluence Software Requirements

Please read the Supported Platforms page for Confluence. That page contains a list of specific software that Confluence will work with.

Operating Systems

Atlassian supports the operating systems listed on the Supported Platforms page.

If you would like to run Confluence on VMware, please read our Running Confluence in a Virtualised Environment document first.

Confluence on Virtualised Environments

Atlassian officially supports non-clustered installations of Confluence 3.0 and later on VMware. Although possible, we do not recommend (nor support) running versions of Confluence prior to 3.0 on VMware, since Confluence 3.0 resolved many performance issues that were present in earlier versions. Be aware that we also do not support clustered installations of Confluence on VMware. Please comment or vote on the feature request at CONF-19559.

Application Servers

An application server is required to run Confluence. Apache Tomcat is bundled with the distribution.

Atlassian only supports the application servers listed on the Supported Platforms page, provided they are running on Windows, Linux, or Solaris. If you are using a different application server or earlier version, we may ask you to migrate to one of the supported application servers before we can provide you with further support.

Databases

A database is required to run Confluence. Atlassian supports the databases listed on the Supported Platforms page.

If you have no preference for a particular database and wish to set up Confluence for production purposes, we highly recommend using PostgreSQL. This is a scalable, robust and free database server that is also easy to set

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up. For database setup information, please refer to Database Setup For Any External Database.

Confluence should work with the database versions listed below. However, we do not test these versions regularly and we may ask you to migrate to one of the supported databases before we can provide you with further support.

- **PostgreSQL** — 8.2, 8.3, 8.4, 9.0
- **MySQL** — 5.1 (using the InnoDB storage engine, not MyISAM)
- **Oracle** — 11.1, 11.2
- **Microsoft SQL Server** — 2005, 2008, 2008 R2
- **DB2** — 9.7

Java

Confluence requires the Java Runtime Environment (JRE) installed.

If using the Zip or archive distribution of Confluence, you will need to install a supported JRE. The automated installer bundles Java and will install this for you.
For instructions on installing the JRE for Windows and Linux/Solaris, please refer to Installing Java for Confluence.

Please Note: Impact of Antivirus Software

The presence of antivirus software on your operating system running Confluence greatly decreases the performance of Confluence. Antivirus software that intercepts access to the hard disk is particularly detrimental and may even cause errors in Confluence.

You should configure your antivirus software to ignore the following directories:

- Confluence home directory
- Confluence's index directory
- All database-related directories

⚠️ This recommendation above is particularly important if you are running Confluence on Windows. No matter how fast your hardware is, antivirus software will almost always have a negative impact on Confluence's performance and may render Confluence impossible to use.

Confluence Hardware Requirements

Please be aware that while some of our customers run Confluence on SPARC-based hardware, Atlassian only officially supports Confluence running on x86 hardware and 64-bit derivatives of x86 hardware.

See Server Hardware Requirements Guide for details.

Refer also to the tips on reducing out of memory errors, in particular the section on Permanent Generation Size.

Atlassian Hosted Solutions

If you do not have the resources to set up and maintain a Confluence installation locally, consider Atlassian hosted solutions. Atlassian can run and maintain your own installation of Confluence, handling all the testing, monitoring and upgrading processes for you. For more information, please refer to our Confluence Hosted and our integrated JIRA Studio solutions on our website.

Related Topics

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End of Support Announcements for Confluence
Confluence Installation Guide
Confluence Setup Guide
Installing Confluence on Windows
Installing the Confluence EAR-WAR Edition
Confluence Cluster Installation
Example Size and Hardware Specifications From Customer Survey
Installing Confluence and JIRA Together
Confluence Documentation Home
Server Hardware Requirements Guide
Supported Platforms FAQ

Server Hardware Requirements Guide

Server administrators can use this guide in combination with the free Confluence trial period to evaluate their server hardware requirements. Because server load is difficult to predict, live testing is the best way to determine what hardware a Confluence instance will require in production.

Peak visitors are the maximum number of browsers simultaneously making requests to access or update pages in Confluence. Visitors are counted from their first page request until the connection is closed and if public access is enabled, this includes internet visitors as well as logged in users. Storage requirements will vary depending on how many pages and attachments you wish to store inside Confluence.

Minimum Hardware Requirements

> The values below refer to the minimum available hardware required to run Confluence only, eg the minimum heap size to allocate to Confluence is 512mb. You will need additional physical hardware, of at least the minimum amount required by your Operating System, and any other applications that run on the server. Also please note that these are a guide only, and your configuration may require more.

On small instances, server load is primarily driven by peak visitors.

5 Concurrent Users

- 2GHz+ CPU
- 512MB RAM
- 5GB database space

25 Concurrent Users

- Quad 2GHz+ CPU
- 2GB+ RAM
- 10GB database space

> Please be aware that while some of our customers run Confluence on SPARC-based hardware, Atlassian only officially supports Confluence running on x86 hardware and 64-bit derivatives of x86 hardware.

Example Hardware Specifications

These are example hardware specifications for non-clustered Confluence instances. It is not recorded whether the RAM refers to either total server memory or memory allocated to the JVM, while blank settings indicate that the information was not provided.

Accounts	Spaces	Pages	CPUs	CPU (GHz)	RAM (Meg)	Notes

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150	30	1,000	1	2.6	1,024	
350	100	15,000	2	2.8	700	
5,000	500		4	3	2,024	
10,000	350	16,000	2	3.8	2,024	
10,000	60	3,500	2	3.6	4,048	
21,000	950		2	3.6	4,048	
85,000	100	12,500	4	2.6	4,048	3 machines total: application server, database server, Apache HTTPD + LDAP tunnel server. See Accenture's slides and video for full details (That link isn't working, but the slides can be found here)

Server Load & Scalability

When planning server hardware requirements for your Confluence deployment, you will need to estimate the server scalability based on peak visitors, the editor to viewer ratio and total content.

- The editor to viewer ratio is how many visitors are performing updates versus those only viewing content
- Total content is best estimated by a count of total spaces

Confluence scales best with a steady flow of visitors rather than defined peak visitor times, few editors and few spaces. Users should also take into account:

- Total pages is not a major consideration for performance. For example, instances hosting 80K of pages can consume under 512 meg of memory
- Always use an external database, and check out the performance tuning guides.

As mentioned on the documentation for Operating Large or Mission-Critical Confluence Installations, some important steps are loadtesting your usecase and monitoring the system continuously to find out where your system could do better and what might need to improve in order to scale further.

Maximum Reported Usages

These values are largest customer instances reported to Atlassian or used for performance testing. Clustering for load balancing, database tuning and other performance tuning is recommended for instances exceeding

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these values.

Most Spaces	1700
Most Internal Users	15K
Most LDAP Users	100K
Most Pages	80K

Hard Disk Requirements

All wiki content is stored in the database, while attachments use either the database or filesystem. For example, the wiki instance you are reading now uses approximately 1 GB of database space and 9.4 GB of disk space.

Here is a breakdown of the disk usage requirements for this wiki, as at December 2008:

Database size	1003 MB
Home directory size	9.4 GB

Size of selected database tables

Data	Rows	Size
Content bodies (incl. all versions of blogs, pages and comments)	170462	145 MB
Content metadata (incl. title, author)	188697	48 MB
Content and user properties	193652	42 MB
Users	20679	5.8 MB
Attachment metadata	25718	5.0 MB
Labels	43235	4.5 MB

Note: not all database tables or indexes are shown, and average row size may vary between instances.

Size of selected home directory components

Data	Files	Size
Attachments (incl. all versions)	27484	5.9 GB
Usage index (now disabled)	240	2.6 GB
Search index	10	236 MB
Office Connector cache	44	222 MB

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Temporary files	7269	201 MB
Plugin files	1508	139 MB
Thumbnails	10154	84 M
Did-you-mean search index	3	9.9 MB

Note: not all files are shown, and average file size may vary between instances.

Private & Online Comparison

Private instances manage their users either internally or through a user repository such as LDAP, while online instances have public signup enabled and must handle the additional load of anonymous internet visitors. Please keep in mind that these are examples only, not recommendations:

Use Case	Spaces	User Accounts	Editors	Editor To Viewer Ratio	Pages	Page Revisions	Attachments	Comments	Total Data Size (GB)	Notes
Online Documentation	140	11,500	1,000	9%	8,800	65,000	7,300	11,500	10.4	
Private Intranet	130	180	140	78%	8,000	84,000	3,800	500	4.5	
Company-Wide Collaboration	100	85,000	1,000+	1%+	12,500	120,000	15,000			Accenture - see slides and video for full details (That link isn't working, but the slides can be found here.)

Professional Assistance

For large instances, it may be worthwhile contacting an Atlassian Expert for expertise on hardware sizing, testing and performance tuning. Simply contact a local Expert directly or email our Experts team for a recommendation.

Related Pages

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No content found for label(s) sizing-guide.

Example Size and Hardware Specifications From Customer Survey

Below are the results of a survey conducted by Atlassian in July 2007, showing some capacity statistics for Confluence users. The figures are broken down by industry and number of users.

Num Users	Length of time in production	Database	Application Server	Num CPUs/Cores	Physical Memory/RAM	Operating System	Satisfaction with Confluence Performance
Banking/Finance							
26 - 50	3-6 Months Ago	Microsoft SQL Server	Confluence distribution /Apache Tomcat	2	2G	Windows	Neutral
26 - 50	2 Years Ago	Sybase ASE	Weblogic	>8	>16G	Unix	Satisfied
51 - 250	3-6 Months Ago	Oracle	Confluence distribution /Apache Tomcat	2	4G	Unix	Neutral
501 - 1,000	3-6 Months Ago	Microsoft SQL Server	Websphere	2	2G	AIX	Satisfied
1,001 - 5,000	3-6 Months Ago	Oracle	Confluence distribution /Apache Tomcat	2	4G	Windows	Satisfied
1,001 - 5,000	2 Years Ago	Oracle	Websphere	4	>16G	Solaris	Extremely Satisfied
5,001 - 10,000	10-12 Months Ago	Microsoft SQL Server	Confluence distribution /Apache Tomcat	4	16G	Linux	Satisfied
Education							
1-25	2 Years Ago	DB2	Confluence distribution /Apache Tomcat	2	2G	Linux	Satisfied

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26 - 50	10-12 Months Ago	MySQL	Confluence distribution /Apache Tomcat	2	2G	Linux	Extremely Satisfied
51 - 250	<3 Months Ago	Oracle	Confluence distribution /Apache Tomcat		1G	Windows	Unsatisfied
51 - 250	10-12 Months Ago	Oracle	Confluence distribution /Apache Tomcat	1	2G	Unix	Extremely Satisfied
Engineering/Aerospace							
251 - 500	7-9 Months Ago	Oracle	Confluence distribution /Apache Tomcat	1	1G	Mac OS X	Satisfied
1,001 - 5,000	7-9 Months Ago	Microsoft SQL Server	JBoss	2	4G	Linux	Satisfied
Entertainment							
1,001 - 5,000	10-12 Months Ago	PostgreSQL	Confluence distribution /Apache Tomcat	2	8G	Linux	Extremely Satisfied
Government							
51 - 250	2 Years Ago	MySQL	Confluence distribution /Apache Tomcat	2	2G	Mac OS X	Extremely Satisfied
Technology							
501 - 1,000	7-9 Months Ago	MySQL	Confluence distribution /Apache Tomcat	1	2G	Linux	Satisfied

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Telecommunications & Media							
1-25	3-6 Months Ago	Confluence distribution /HSQL	Confluence distribution /Apache Tomcat	1		Linux	Satisfied
1-25	7-9 Months Ago	MySQL	Confluence distribution /Apache Tomcat	1	2G	Linux	Satisfied
26 - 50	10-12 Months Ago	MySQL	Confluence distribution /Apache Tomcat	2	2G	Linux	Satisfied

Confluence Installation Guide

Prerequisites

Before beginning to install Confluence, please check that:

- Your system meets the minimum system requirements to run Confluence.
- This version of the Confluence documentation matches the version of Confluence that you are installing. The Confluence documentation version you are currently viewing is indicated toward the top of the page tree on the left or in the 'breadcrumb trail' in the top banner of this page. If you need to access a different version of the Confluence documentation, use the control at the top of the page tree on the left or you can access it from the documentation home page.

Choose the Confluence Installation Type

Choose the type of Confluence installation you'd like from the table below, and follow the link(s) to the installation instructions.

Installation Type	Description
• Installing Confluence on Windows • Installing Confluence on Linux	Install Confluence via the Atlassian installer. This is the easiest method of installing Confluence. This is the best option for evaluators.
• Installing from a Zip File on Windows • Installing From an Archive File on Linux	This option requires you to manually carry out installing the files and configuring system properties. Use this option if there is no specific installer for your operating system.
EAR/WAR distribution (Zip Archive)	This distribution allows you to deploy Confluence onto your own existing application server, instead of the Apache Tomcat server bundled with the regular distribution.

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Confluence Clusters (Zip Archive)	Install Confluence as a series of clusters, to improve performance or availability. Please read the Confluence Clustering Overview and the Cluster Checklist before you consider installing Confluence in a cluster.

Please read Running Confluence in a Virtualised Environment if you are interested in running Confluence in a virtual machine.
If you wish to upgrade Confluence, see Upgrading Confluence.

Related Topics

Upgrading Confluence
System Requirements

Installing Confluence

Choose the type of Confluence installion you'd like from the table below and follow the link to the installation instructions. When you have finished the installation phase, you will be prompted to start the setup phase.

Installation Type	Description
• Installing Confluence on Windows • Installing Confluence on Linux	Install Confluence via the Atlassian installer. This is the easiest method of installing Confluence. This is the best option for evaluators.
• Installing from a Zip File on Windows • Installing From an Archive File on Linux	This option requires you to manually carry out installing the files and configuring system properties. Use this option if there is no specific installer for your operating system.

If you have not already done so, please verify that this version of the Confluence documentation matches that of the Confluence version you are installing. The Confluence documentation version you are currently viewing is indicated toward the top of the page tree on the left or in the 'breadcrumb trail' in the top banner of this page. If you need to access a different version of the Confluence documentation, use the control at the top of the page tree on the left or you can access it from the documentation home page.

Take me back to the Confluence Installation Guide.

Installing Confluence on Windows

This guide describes how to install a new Confluence installation on Windows using the automated 'Windows Installer'. You can also install Confluence from a 'zip' archive — see Installing Confluence on Windows from Zip File for details.
If you are upgrading Confluence, please refer to the Upgrading Confluence guide.

Please Note:

- Some anti-virus or other Internet security tools may interfere with the Confluence installation process and prevent the process from completing successfully. If you experience or anticipate experiencing such an issue with your anti-virus/Internet security tool, disable this tool first before proceeding with the Confluence installation.
- Before you begin installing Confluence, please read the System Requirements page.

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On this page:

- Using the Installation Wizard
  - 1. Download and Run the Confluence 'Windows Installer'
  - 2. Starting Confluence
  - 3. Run the Setup Wizard
  - 4. Next Steps
- Performing an Unattended Installation
  - Download and Run the Confluence 'Windows Installer' in Unattended Mode

Using the Installation Wizard

Use the installation wizard if you are installing Confluence on your server for the first time or you wish to specify your installation options.

If you have previously installed Confluence using the installation wizard and wish to re-install Confluence again with the same installation options, you can re-install Confluence in 'unattended mode' without any user input required (see below for details).

1. Download and Run the Confluence 'Windows Installer'

✅ To install Confluence as a service, the Windows Installer must be run using a Windows administrator account. While you can run the Windows Installer with a non-administrator account, your installation options will be much more limited.

1. Download the **Confluence 'Windows Installer'** (.exe) file from the Confluence Download page.
2. Run the installer file to start the installation wizard.
   ℹ️ If a Windows 7 (or Vista) 'User Account Control' dialog box requests if you want to allow the installation wizard to make changes to your computer, click '**Yes**'. If you do not, the installation wizard will have restricted access to your operating system and any subsequent installation options will be limited.
3. Choose between the '**Express Install**' or '**Custom Install**' options:
   a. **Express Install** — If you choose this option, Confluence will be installed with default settings which are shown in the next step of the installation wizard. If you want to customise any of these options, click the '**Back**' button and choose the '**Custom Install**' option instead.
   b. **Custom Install** — If you choose this option, Confluence will prompt you to specify the following options (which are presented during subsequent steps of the installation wizard and pre-populated with default values):
      - The 'Destination Directory' in which to install Confluence.
      - The Confluence Home Directory (which must be unique for each Confluence installation).
      - The Windows 'Start' menu folder options.
      - The *TCP ports* (i.e. an HTTP connector port and a control port) that Confluence will operate on.
      - If you are running the installer using an administrator account, you will be prompted to 'Install Confluence as a service' (recommended). You can also do this manually later, as described in Start Confluence Automatically on Windows as a Service.
        ✅ If you installed Confluence as a service, you must start Confluence through the Windows 'Start' menu, since Confluence will not start if you run `start-confluence.bat` at the Windows Command Prompt.
4. The installation wizard will install Confluence onto your operating system and will start Confluence automatically when the wizard finishes. Confluence will also be launched automatically in your browser window if you chose this option.

ℹ️ **Please Note:**

- If you chose to install Confluence as a service, the Confluence service will be run as the Windows

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'SYSTEM' user account. To change this user account, see Changing the Windows user that the Confluence service uses.
- If you do not install Confluence as a service, then once started, Confluence will be run as the Windows user account under which Confluence was installed.
- If you use Confluence running on a Windows Server in production, we strongly recommend creating a dedicated user account (e.g. with username 'confluence') for running Confluence.
  - For more information about creating a dedicated user account and defining which directories this account should have write access to, refer to our guidelines.
    ✅ If your Windows Server is operating under Microsoft Active Directory, ask your Active Directory administrator to create a dedicated user account that you can use to run Confluence (with no prior privileges).
  - If Confluence is installed as a service, do not forget to change the user account that runs the Confluence service to your dedicated user account for running Confluence.

2. Starting Confluence

If Confluence is not already started, you can start Confluence using the appropriate Windows 'Start' menu shortcut or command prompt option.

Once Confluence is started, you can access Confluence from the appropriate Windows 'Start' menu shortcut or a browser on any computer with network access to your Confluence server.

2.1 Windows 'Start' Menu Shortcuts

The Installer will have created the following Windows 'Start' menu shortcuts:

- **Access Confluence** — opens a web browser window to access your Confluence application.
  ℹ️ Your Confluence server must have been started for this shortcut to work.
- **Start Confluence Service** — starts up the Apache Tomcat application server which runs your Confluence installation, so that you can access Confluence through your web browser.
- **Stop Confluence Service** — stops the Apache Tomcat application server which runs your Confluence installation. You will not be able to access Confluence through your web browser after choosing this shortcut.
- **Uninstall Confluence** — uninstalls Confluence from your Windows operating system.

2.2 Starting and Stopping Confluence from a Command Prompt

Enter the `bin` subdirectory of your Confluence installation directory and run the appropriate file:

- `start-confluence.bat` (to start Confluence)
- `stop-confluence.bat` (to stop Confluence)

ℹ️ If you followed our guidelines for running Confluence with a dedicated user account, then to run Confluence as this user account (e.g. 'confluence'), use the `runas` command to execute `start-confluence.bat`. For example:

- `> runas /env /user:<DOMAIN>\confluence start-confluence.bat`
  (where `<DOMAIN>` is your Windows domain or computer name.)

2.3 Accessing Confluence from a Browser

You can access Confluence from any computer with network access to your Confluence server by opening a supported web browser on the computer and visiting this URL:

- `http://<computer_name_or_IP_address>:<HTTP_port_number>`

where:

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- `<computer_name_or_IP_address>` is the name or IP address of the computer on which Confluence is installed and
- `<HTTP_port_number>` is the HTTP port number specified when you installed Confluence (above).

If Confluence does not appear in your web browser, you may need to change the port that Confluence runs on.

3. Run the Setup Wizard

See the Confluence Setup Guide.

4. Next Steps

- See Confluence 101.
- If you did not install Confluence as a service, you will need to start Confluence manually every time you restart your computer. To change your Confluence installation to run as a service, please see Start Confluence Automatically on Windows as a Service.
- To get the most out of Confluence, please see Performance Tuning.

Performing an Unattended Installation

If you have previously installed Confluence using the installation wizard (above), you can use a configuration file from this Confluence installation (called `response.varfile`) to re-install 'unattended mode' without any user input required.

Installing Confluence in unattended mode saves you time if your previous Confluence installation was used for testing purposes and you need to install Confluence on multiple server machines based on the same configuration.

Please Note:

- The `response.varfile` file contains the options specified during the installation wizard steps of your previous Confluence installation. Hence, do not uninstall your previous Confluence installation just yet.
- If you intend to modify the `response.varfile` file, please ensure all directory paths specified are absolute, for example, `sys.installationDir=C\:\\Program Files\\Atlassian\\Confluence` Unattended installations will fail if any relative directory paths have been specified in this file.

Download and Run the Confluence 'Windows Installer' in Unattended Mode

1. Download the **Confluence 'Windows Installer'** (.exe) file from the Confluence Download Center to a suitable location.
2. Open the Windows command prompt and perform the remaining steps in the command prompt.
3. copy the `response.varfile` file located in the `.install4j` subdirectory of your previous Confluence installation directory, to the same location as the downloaded 'Windows Installer' file.
   You can uninstall your previous Confluence installation after this step. Save your `response.varfile` if you need to install Confluence on multiple machines.
4. Change directory (cd) to the location of the 'Windows Installer' file and run the following command:

   ```
   atlassian-confluence-X.Y.exe -q -varfile response.varfile
   ```

   Where:

   - `X.Y` — refers to the version of Confluence you are about to install.
   - `-q` — instructs the installer to operate in unattended mode (i.e. 'quietly').
   - `-varfile response.varfile` — specifies the configuration file containing the configuration options used by the installer. The location and name of the configuration file should be specified

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after the `-varfile`option.

5. Confluence will start automatically when the silent installation finishes. Continue from step 2 Starting Confluence (above).

Installing Confluence on Windows from Zip File

These instructions apply to:

- Confluence distributed as an archive file. This distribution includes Apache Tomcat as the application server.
- **Windows** systems. For other operating systems please refer to the Confluence Installation Guide.
- Manual installation and configuration using a **zipped download file**. For a simpler installation process, please use the Confluence Installer instead.

Also, please check that the version of Confluence which you are installing coincides with the version that this documentation is written for.

On this page:

1. Before you Start

Please check the following points:

1. Ensure that your system meets the minimum requirements to run Confluence. For more information, please refer to our Supported Platforms topic and for further details, our System Requirements topic.
2. Have your Confluence license key ready. You can obtain a trial, free or commercial license now, or retrieve your existing license key.

2. Install Java

Please refer to Installing Java for Confluence. If you are certain that this has already been installed and that the `JAVA_HOME` environment variable has been correctly configured, then proceed to the next step.

3. Download the Confluence Installation File

1. If you have not downloaded Confluence already, download the zip file.
2. Please check your unzip program before extracting the downloaded zip file. You should use a third-party unzip program like 7Zip or Winzip. If you do not have one, please download and install one of these before continuing:
   - 7Zip (recommended). If in doubt, download the '32-bit.exe' version.
   - Winzip.
3. Use your unzip program to unzip the installation file to a directory such as `c:\confluence`.
   - Do not use spaces in your directory path.

The directory into which you unzipped the Confluence installation is called the Confluence Installation directory. Next, you will define the Confluence Home directory.

4. Define your Confluence Home Directory

Now you need to define the Confluence Home directory. This is where Confluence will store its configuration information, indexes and attachments.
✅ Tip: Another term for 'home directory' would be 'data directory'.

We suggest using different paths for your installation and home directories. This will facilitate easier upgrades.

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Examples of Installation and Home Directories

Installation directory: `c:\confluence\confluence-vX.X`
Home directory: `c:\confluence\data`

1. Open your Confluence Installation directory (created when you unzipped Confluence — see above).
2. Under the Installation directory, open this file: `confluence\WEB-INF\classes\confluence-init.properties` in a text editor such as Notepad.
3. Scroll to the bottom of the text and find this line:

```
# confluence.home=c:/confluence/data
```

4. Remove the '#' and the space at the beginning of this line, so that Confluence no longer regards the line as a comment. The line should now begin with `confluence.home`
5. If you decide to change the Confluence Home directory from the default, please note the following:
   - Avoid spaces in the directory path or file name.
   - Use forward slashes '/' to define the path.

For example:

```
confluence.home=c:/data/confluence-home
```

5. Check the Ports

If you have another application running on your machine which is using the same ports that Confluence uses by default, you may need to change the port which Confluence will use. For example, if you have an installation of JIRA running on this machine, JIRA might be already using the port which Confluence requests by default.

By default, Confluence listens on port '8090'. If this port is already in use in your installation, follow these instructions to change the ports:

- To change the ports for Confluence, open the file `conf/server.xml` under your Confluence Installation directory. The first four lines of the file look like this:

Default conf/server.xml

```
<Server port="8000" shutdown="SHUTDOWN" debug="0">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8090" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10"
debug="0" connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

You need to modify both the **server** port (default is 8000) and the **connector** port (default is 8090) to ports that are free on your machine.
✅ Hint: You can use netstat to identify free ports on your machine. See more information on using netstat on Windows or on Linux.

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For example, here are the first four lines of a modified `server.xml` file, using ports '8020' and '8099':

Modified conf/server.xml using ports 8020 and 8099

```
<Server debug="0" shutdown="SHUTDOWN" port="8020">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8099" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10"
debug="0" connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

To access Confluence in this configuration, point your web browser to http://localhost:8099/.

You will find more information on this page.

6. Select an External Database

This step is optional for users evaluating Confluence. However, if you are installing Confluence for production purposes, this step is mandatory. Please refer to the database requirements listed on our System Requirements topic for help in choosing an external database.

External databases are those listed on our Supported Platforms topic, excluding HSQLDB, which is bundled with Confluence and should not be used in production.

When you have chosen your external database, follow the database setup guide for setting up your database to work with Confluence.

You can learn more about migration from an existing installation or use of the evaluation database here. You will continue to use the Database Setup Guide during the Confluence Setup Wizard. (See step 8 below.)

7. Start Confluence

1. Go to your Confluence Installation directory (created when you unzipped Confluence — see above).
2. Under your Confluence Installation directory, open the `bin` directory and run the startup script: `startup.bat`. A command prompt window should appear.
   Please do not close this command prompt window. If you do so, Confluence will stop running.

   Troubleshooting

   If the window closes immediately when started, this means that an error is preventing Confluence from starting. To view this error:

   a. Open a command prompt: Click on your 'Start' menu, then click 'Run'. In the Run box, type `cmd` and click 'OK'.
   b. From the command prompt, go to your Confluence Installation directory.
   c. Go into the `bin` subdirectory.
   d. Run `catalina.bat run`.
      You should not run `startup.bat` at this point, because that would still produce a popup window that would close straight away.
   e. Read the error message.
   f. Find the solution to that error in the Installation FAQ.

3. Once Confluence is running, open a web browser and visit http://localhost:8090/.
   If you changed the port earlier, use the port you specified in step 5 above.
   If your web browser window shows an error, try waiting for 30 seconds or so and then refresh the browser page.

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8. Next Step is the Confluence Setup Wizard

The Confluence Setup Wizard should appear in your web browser, prompting you to enter your license key. Follow the instructions on the screens, and read more guidelines on the Confluence Setup Wizard.

If the web browser shows an error instead of the Setup Wizard, check the Installation FAQ.

9. Start Confluence automatically on Windows as a Service

Confluence should be run as a service.

Related Topics

Change listen port for Confluence
Running Confluence Over SSL or HTTPS
Confluence Setup Guide
Configuring Confluence
Confluence Documentation Home

Uninstalling Confluence from Windows

This page describes the procedure for uninstalling an instance of Confluence which has been installed using the Windows Installer.

To uninstall Confluence from Windows:

1. Log in to Windows as the same user that was used to install Confluence with the Windows Installer.
2. Start the uninstaller by doing either of the following:
   - Click the Windows **Start Menu** > **All Programs** > **Confluence** > **Uninstall Confluence**
     OR
   - Open the Windows Control Panel, choose **Add or Remove Programs** (on Windows XP) or **Progr ams and Features** on (Windows 7, Vista) and then select **Confluence X.Y** from the list of applications and click **Uninstall/Change**.
     OR
   - Open the Windows command prompt and do the following:
     a. Change directory to your Confluence installation directory
     b. Run the `uninstall.exe` file
3. Follow the prompts to uninstall Confluence from your computer.

Please note:

- The uninstaller will not delete the Confluence Home Directory.
- All log files that were generated while Confluence was running will not be deleted.
- All files within the Confluence Installation Directory will be deleted (with the exception of the Tomcat `log` f older located in the Confluence Installation Directory).
- The uninstaller can be made to operate in unattended mode by specifying the `-q` option at the Windows command prompt — i.e. `uninstall -q`
- If you wish to re-install Confluence in 'unattended mode', do not uninstall your previous installation of Confluence just yet. See Using the Silent Installation Feature for more information.

Installing Confluence on Linux

This guide describes how to install a new Confluence installation on Linux using the automated 'Linux Installer'. You can also install from a 'zip' archive — see Installing Confluence on Linux from Archive File for details.
If you are upgrading Confluence, please see Upgrading Confluence.

Please Note:

- It is possible that any anti-virus or other Internet security tools installed on your Linux operating system may interfere with the Confluence installation process and prevent the process from completing

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successfully. If you experience or anticipate experiencing such an issue with your anti-virus/Internet security tool, disable this tool first before proceeding with the Confluence installation.
- Before you begin installing Confluence, please read the System Requirements page.

Using the Console Wizard

Use the console wizard if you are installing Confluence on your server for the first time or you wish to specify your installation options.

If you have previously installed Confluence using the installation wizard and wish to re-install Confluence again with the same installation options, you can re-install Confluence in 'unattended mode' without any user input required (see below for details).

1. Download and Install the Confluence 'Linux Installer'

✅ If you execute the Linux Installer with 'root' user privileges, the installer will create and run Confluence using a dedicated user account. You can also execute the Linux Installer without 'root' user privileges, although your installation options will be much more limited and a dedicated user account (to run Confluence) will not be created. To run Confluence as a service, the Linux Installer must be executed with 'root' user privileges.

1. Download the appropriate **Confluence 'Linux 64-bit / 32-bit Installer'** (.bin) file from the Confluence Download page.
   ℹ️ **Please Note:**
   - To access the 32-bit installer, you may need to click the '**Show all**' link on the 'Confluence Download' page to access the other installation packages.
   - The difference between the 64-bit / 32-bit .bin installers relates to their bundled Java platforms that run Confluence. Bear in mind that a Confluence installation installed using the 64-bit installer may require additional memory (to run at a similar level of performance) to a Confluence installation installed using the 32-bit installer. This is because a 64-bit Java platform's object references are twice the size as those for a 32-bit Java platform.
2. Open a Linux console and change directory (`cd`) to the '.bin' file's directory.
   ⚠️ If the '.bin' file is not executable after downloading it, make it executable, for example:
   `chmod a+x atlassian-confluence-X.Y.bin`
   (where X.Y represents your version of Confluence)
3. Execute the '.bin' file to start the console wizard.
4. When prompted to choose between '**Express Install**', '**Custom Install**' or '**Upgrade an existing Confluence installation**', choose either the '**Express Install**' or '**Custom Install**' options:
   - **Express Install** — If you choose this option, Confluence will be installed with default settings which are shown in the next step of the console wizard.
     ℹ️ **Please Note:**
     - If you are running the installer with 'root' user privileges, Confluence will be installed as a service.
     - If you want to customise any of these options:
       i. Enter '**e**' to exit the console wizard.
       ii. Execute the console wizard again (step 3 above).
       iii. Choose the '**Custom Install**' option instead.
   - **Custom Install** — If you choose this option, Confluence will prompt you to specify the following options (which are presented during subsequent steps of the console wizard and pre-populated with default values):
     - The 'Destination Directory' in which to install Confluence.
     - The Confluence Home directory (which must be unique for each Confluence installation).
     - The *TCP ports* (i.e. an HTTP and a Control port) that Confluence will run through.
     - If you are running the installer with 'root' user privileges, you will be prompted to 'Run Confluence as a service' (recommended). You can also do this manually later, as described in Start Confluence Automatically on Linux.
5. The console wizard will install Confluence onto your operating system and will start Confluence

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automatically when the wizard finishes.

Please Note:

If you executed the Linux Installer with 'root' user privileges, the Linux Installer creates a dedicated Linux user account with username 'confluence', which is used to run Confluence. This account has only:

- Full write access to your Confluence Home Directory.
- Limited write access to your Confluence Installation Directory.

If you executed the Linux Installer without 'root' user privileges, be aware that Confluence can still be run with 'root' privileges. However, to protect the security of your operating system, *this is not recommended*.

2. Start Confluence

If Confluence is not already started, you can start Confluence using the appropriate command at the Linux console.

Once Confluence is started, you can access Confluence from a browser on any computer with network access to your Confluence server.

2.1 Starting and Stopping Confluence manually

In the Linux console, enter the `bin` subdirectory of your Confluence installation directory and execute the appropriate file:

- `start-confluence.sh` (to start Confluence)
- `stop-confluence.sh` (to stop Confluence)

Confluence will be ready to access (from a browser window) when the following message appears in the application's log file:

```
*******************************************************
 ... You can now access Confluence through your web browser.
*******************************************************
```

2.2 Accessing Confluence from a Browser

You can access Confluence from any computer with network access to your Confluence server by opening a supported web browser on the computer and visiting this URL:

- `http://<computer_name_or_IP_address>:<HTTP_port_number>`

where:

- `<computer_name_or_IP_address>` is the name or IP address of the computer on which Confluence is installed and
- `<HTTP_port_number>` is the HTTP port number specified when you installed Confluence (above).

If Confluence does not appear, you may need to change the port that Confluence runs on.

Note: Application server logs (i.e. for Apache Tomcat) will be written to `logs/catalina.out`.

3. Run the Setup Wizard

See the Confluence Setup Guide.

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4. Next Steps

- See Confluence 101.
- If you did not install Confluence to run as a service, you will need to start Confluence manually every time you restart your computer. To change your Confluence installation to run as a service, please see Start Confluence Automatically on Linux.
- To get the most out of Confluence, please see Performance Tuning.

Performing an Unattended Installation

If you have previously installed Confluence using the console wizard (above), you can use a configuration file from this Confluence installation (called `response.varfile`) to re-install Confluence in 'unattended mode' without any user input required.

Installing Confluence in unattended mode saves you time if your previous Confluence installation was used for testing purposes and you need to install Confluence on multiple server machines based on the same configuration.

Please Note:

- The `response.varfile` file contains the options specified during the installation wizard steps of your previous Confluence installation. Hence, do not uninstall your previous Confluence installation just yet.
- If you intend to modify the `response.varfile` file, please ensure all directory paths specified are absolute, for example, `sys.installationDir=/opt/atlassian/confluence`
  Unattended installations will fail if any relative directory paths have been specified in this file.

Download and Run the Confluence 'Linux Installer' in Unattended Mode

1. Download the **Confluence 'Linux Installer'** (.bin) file from the Confluence Download Center to a suitable location.
2. Open a Linux console.
3. Copy (`cp`) the file `.install4j/response.varfile` located in your previous Confluence installation directory, to the same location as the downloaded 'Linux Installer' file.
   You can uninstall your previous Confluence installation after this step. Save your `response.varfile` if you need to install Confluence on multiple machines.
4. Change directory (`cd`) to the location of the 'Linux Installer' file and execute the following command:

   ```
   atlassian-confluence-X.Y.bin -q -varfile response.varfile
   ```

   Where:

   - `X.Y` — refers to the version of Confluence you are about to install.
   - `-q` — instructs the installer to operate in unattended mode (i.e. 'quietly').
   - `-varfile response.varfile` — specifies the configuration file containing the configuration options used by the installer. The location and name of the configuration file should be specified after the `-varfile`option.

5. Confluence will start automatically when the silent installation finishes. Continue from the step above, Starting Confluence.

Installing Confluence on Linux from Archive File

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These instructions apply to:

- Confluence distributed as an archive file. The distribution includes Apache Tomcat as the application server.
- **Linux or Solaris** systems. If you are installing Confluence on a different system, please refer to Installing Confluence.

Also, please check the version of Confluence which you are installing. Refer to the documentation home page to verify the latest Confluence version and to find documentation for older versions.

Hint: If you are evaluating Confluence on Solaris or you are unsure which version to install, this is the one to use.

On this page:

- 1. Before you Start
- 2. Install Java
- 3. Download and Extract the Confluence Installation File
- 4. Define your Confluence Home Directory
- 5. Check the Ports
- 6. Select an External Database
- 7. Start Confluence
- 8. Confluence Setup Wizard

1. Before you Start

Please check the following points:

1. Ensure that your system meets the minimum requirements to run Confluence. For more information, please read the detailed System Requirements.
2. Have your Confluence license key ready. You can obtain a trial, free or commercial license now, or retrieve your existing license key.
3. You must be able to use a command prompt and install Java to continue. If not, please contact your system administrator to assist you or consider the Confluence Hosted evaluation option.
4. Make sure that you use a Gnu version of zip application - Solaris and AIX are known to have problems with zip, because they use their own (old) versions instead of the Gnu version.

2. Install Java

Please refer to the Supported Platforms for the required version of Java. (OpenJDK is currently **not** supported. A JIRA issue to request support for this JDK has been created.)

1. If you are not sure whether you have Java installed correctly, please confirm by doing the following:
   a. Open a shell console.
   b. Type `echo $JAVA_HOME` in the shell console and then press Enter
   c. View the result:
      - If a line is displayed such as `/opt/jdk1.6.0_12` or `/usr/lib/jvm/java-6-sun`, then Java is installed and properly configured.
      - If nothing is displayed, then you either need to install Java or set the `$JAVA_HOME` environment variable. You can set this environment variable in your user account's 'profile' file. Alternatively, you can set this after installing Confluence (in step 4 below) by defining this path in your Confluence installation's `setenv.sh` file, usually located in the Confluence `bin` directory.
      - If you have installed an unsupported JDK and you want to use SSL then you need to install the Sun JSSE package.

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2. If you need to install Java, follow these instructions:
   - Go to the Java download page.
   - Download the latest JRE or JDK that is listed on the Confluence Supported Platforms page. (Confluence works with either the JDK or the JRE.)
   - When the download has finished, run the Java installer. Detailed installation instructions are provided on Oracle's website.
     Note: you will be asked to choose an installation directory. Make a note of this directory for use later.

3. Download and Extract the Confluence Installation File

1. If you have not downloaded Confluence already, download the TAR.GZ file.

Use your unzip program to unzip the installation file to a directory such as `/home/jsmith/confluence-2.7.0-std/`.

Most Linux/Solaris users can use any unzip program (such as GNU Tar) to extract the Confluence installer. However, Solaris users should not use the Solaris Tar program due to a known issue associated with its use in extracting Confluence. Use another application such as GNU Tar instead.

For example, change directory to your home directory in Linux and enter the following commands in the shell console:

- `gunzip confluence-<version>-std.tar.gz`
- `tar -xf confluence-<version>-std.tar`
  (where `<version>` refers to the Confluence version you downloaded.)

As usual on Linux/Solaris-based operating systems, avoid using spaces in your directory path. The directory into which you unzipped the Confluence installation is called the Confluence Installation directory. Next you will define the Confluence Home directory.

4. Define your Confluence Home Directory

Now you need to define the Confluence Home directory. This is where Confluence will store its configuration information, indexes and attachments.
Tip: Another term for 'Home directory' would be 'data directory'.

We suggest using different paths for your installation and home directories. This will facilitate upgrades. Examples of Installation and Home Directories:

- Installation directory: `/usr/local/confluence/`

  If you wish to install or maintain multiple versions of Confluence, you can add a version number to the Confluence installation directory name like `/usr/local/confluence-3.1-std/` and optionally, create the symbolic link `/usr/local/confluence/` that points to `/usr/local/confluence-3.1-std/`

- Home directory: `/usr/local/confluence-data/`

1. Open your Confluence Installation directory (created when you unzipped Confluence — see above).
2. Under the Installation directory, find this file: `confluence/WEB-INF/classes/confluence-init.properties`
3. Open the `confluence-init.properties` file in a text editor.
4. Scroll to the bottom and find this line:

```
# confluence.home=c:/confluence/data
```

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5. Remove the '#' and the space at the beginning of this line, so that Confluence no longer regards the line as a comment. The line should now begin with `confluence.home`
6. If you decide to change the Confluence Home directory from the default, use an absolute path rather than a symbolic link to specify the path and file name. For example:

```
confluence.home=/home/jsmith/confluence-data/
```

5. Check the Ports

If you have another application running on your machine which is using the same ports that Confluence uses by default, you may need to change the port which Confluence will use. For example, if you have a installation of JIRA running on this machine, JIRA might be already using the port which Confluence requests by default.

By default, Confluence listens on port '8090'. If this port is already in use in your installation, follow these instructions to change the ports:

- To change the ports for Confluence, open the file `conf/server.xml` under your Confluence Installation directory. The first four lines of the file look like this:

Default conf/server.xml

```
<Server port="8000" shutdown="SHUTDOWN" debug="0">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8090" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10"
debug="0" connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

You need to modify both the **server** port (default is 8000) and the **connector** port (default is 8090) to ports that are free on your machine.
✅ Hint: You can use netstat to identify free ports on your machine. See more information on using netstat on Windows or on Linux.

For example, here are the first four lines of a modified `server.xml` file, using ports '8020' and '8099':

Modified conf/server.xml using ports 8020 and 8099

```
<Server debug="0" shutdown="SHUTDOWN" port="8020">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8099" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10"
debug="0" connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

To access Confluence in this configuration, point your web browser to http://localhost:8099/.

You will find more information on this page.

6. Select an External Database

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This step is optional for users evaluating Confluence. However, if you are installing Confluence for production purposes, this step is mandatory. Please refer to the database requirements listed on our System Requirements topic for help in choosing an external database.

External databases are those listed on our Supported Platforms topic, excluding HSQLDB, which is bundled with Confluence and should not be used in production.

When you have chosen your external database, follow the database setup guide for setting up your database to work with Confluence.

You can learn more about migration from an existing installation or use of the evaluation database here. You will continue to use the Database Setup Guide during the Confluence Setup Wizard. (See step 8 below.)

7. Start Confluence

1. Go to your Confluence Installation directory (created when you unzipped Confluence — see above).
2. Under your Confluence Installation directory, open the `bin` directory and run the startup script: `start-confluence.sh`.
3. Once Confluence is running, open a web browser and visit http://localhost:8090/.
   Hint: If you changed the port earlier, use the port you specified in step 6 above.

8. Confluence Setup Wizard

The Confluence Setup Wizard should appear in your web browser, prompting you to enter your license key. Follow the instructions on the screens, and read more guidelines on the Confluence Setup Wizard.

If the web browser shows an error instead of the Setup Wizard, check the Installation FAQ.

Related Topics

Change listen port for Confluence
Running Confluence Over SSL or HTTPS
Confluence Setup Guide
Configuring Confluence
Documentation Home

Uninstalling Confluence from Linux

This page describes the procedure for uninstalling Confluence, which had been installed using the Linux Installer .

To uninstall Confluence from Linux:

1. Open a Linux console.
2. Change directory (`cd`) to your Confluence installation directory.
3. Execute the command `uninstall`. This command must be executed as the same user account that was used to install Confluence with the Linux Installer.
4. Follow the prompts to uninstall Confluence from your computer.

Please note:

- The uninstaller will not delete the Confluence Home Directory.
- All log files that were generated while Confluence was running will not be deleted.
- All files within the Confluence Installation Directory will be deleted (with the exception of the Tomcat `log` folder located in the Confluence Installation Directory).
- The uninstaller can be made to operate in unattended mode by specifying the `-q` option — i.e. `uninstall -q`
- If you wish to re-install Confluence in 'unattended mode', do not uninstall your previous installation of

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Confluence just yet. See Using the Silent Installation Feature for more information.

Change listen port for Confluence

Problem

This page tells you what to do if you get errors like the following when starting Confluence, when you can't access Confluence on port **8090**.

If you see this error:

```
java.net.BindException: Address already in use: JVM_Bind:8090
```

This means you are running other software on Confluence's default port of **8090**. This may be another other process running on the same port. It may also be a previous instance of Confluence that hasn't been shut down cleanly.

To find out what process is listening on that port, load a command prompt and type: **`netstat -an`**

```
-a : Displays all active TCP connections and the TCP and UDP ports on
which the computer is listening.
 -n : Displays active TCP connections, however, addresses and port
numbers are expressed numerically and no attempt is made to determine
names.
```

There is also Process Explorer tool available to determine what is binding port **8090**.

Solution: Change the Ports which Confluence Listens On

To change the ports for Confluence, open the file `conf/server.xml` under your Confluence Installation directory. The first four lines of the file look like this:

Default conf/server.xml

```
<Server port="8000" shutdown="SHUTDOWN" debug="0">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8090" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

You need to modify both the **server** port (default is 8000) and the **connector** port (default is 8090) to ports that are free on your machine.
✅ Hint: You can use netstat to identify free ports on your machine. See more information on using netstat on Windows or on Linux.

For example, here are the first four lines of a modified `server.xml` file, using ports '8020' and '8099':

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Modified conf/server.xml using ports 8020 and 8099

```
<Server debug="0" shutdown="SHUTDOWN" port="8020">
    <Service name="Tomcat-Standalone">
        <Connector className="org.apache.coyote.tomcat4.CoyoteConnector"
port="8099" minProcessors="5" maxProcessors="75"
            enableLookups="true" redirectPort="8443" acceptCount="10" debug="0"
connectionTimeout="20000" useURIValidationHack="false"/>
        ...
```

To access Confluence in this configuration, point your web browser to http://localhost:8099/.

NOTES

[1] For more information on netstat, see using netstat on Windows, or netstat man page (Linux).

[2] The JIRA distribution runs on port **8080** by default. If you're looking to change the port of the JIRA distribution, see Changing JIRA Standalone's port.

RELATED PAGES

Installing Confluence
Documentation Home

Installing the Confluence EAR-WAR Edition

The Confluence EAR-WAR distribution is intended for deployment into an existing J2EE application server.

To use this method of installation, you need to know how to deploy a web application on an existing application server. If not, please use the Confluence distribution instead.

On this page:

- Step 1. Check the System Requirements and Known Issues
- Step 2. Download and Extract EAR-WAR Installation File
- Step 3. Review Application Server Memory Allocation
- Step 4. Configure `confluence-init.properties`
- Step 5. Edit Tomcat Context Descriptors
- Step 6. Add UTF-8 Encoding
- Step 7. (Optional) Configure Tomcat to Run on a Different Port
- Step 8. (Optional) Configure Confluence to Run as a Windows Service
- Step 8. Run the Confluence Setup Wizard
- Notes

Step 1. Check the System Requirements and Known Issues

1. Please check the Confluence system requirements.
2. In addition to the above requirements, the EAR-WAR distribution requires the Apache Tomcat application server. For more information on Confluence's supported application servers, please refer to our Supported Platforms page.
3. If deploying as an unexploded WAR, Ant 1.3 or later is required. This is bundled with the WAR download.
4. Confluence, the database and application server must use the same character encoding. UTF-8 is recommended.
5. Deploying multiple Atlassian applications in a single Tomcat container is **not supported.** We do not test this configuration and upgrading any of the applications (even for point releases) is likely to break it. There are also a number of known issues with this configuration (see this FAQ for more information).

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We also do not support deploying multiple Atlassian applications to a single Tomcat container for a number of practical reasons. Firstly, you must shut down Tomcat to upgrade any application and secondly, if one application crashes, the other applications running in that Tomcat container will be inaccessible.

Finally, we recommend not deploying *any other applications* to the same Tomcat container that runs Confluence, especially if these other applications have large memory requirements or require additional libraries in Tomcat's `lib` subdirectory.

6. Read through the Known Issues for Apache Tomcat.

Step 2. Download and Extract EAR-WAR Installation File

This section gives detailed instructions for installing Confluence EAR-WAR edition on an **Apache Tomcat 5.5, or 6** server.

1. Download the Confluence EAR/WAR zip file. (You need to click the '**Show all**' link to see the EAR/WAR zip file.)
2. Please check your unzip program before extracting the downloaded zip file. Some archive-extract programs cause errors when unzipping the Confluence zip file:
   - Windows users must avoid the Windows built-in unzip utility, as it doesn't extract all the files. Use a third-party unzip program like 7Zip or Winzip.
   - Solaris users will need to use GNU tar to handle the long file names.
3. Extract the downloaded zip file.
4. You have now unzipped your *Confluence installation directory*, which should contain the version number e.g. `confluence-4.0.1` or `confluence-4.0.2`. This directory will be later referred to as the *Confluence installation directory*. Inside is a `confluence` subdirectory, referred to later as the *(Exploded) Confluence WAR directory*. Record the absolute path to the *Confluence WAR directory*.

Step 3. Review Application Server Memory Allocation

Confluence requires a maximum heap allocation (Xmx) of at least 256 MB for normal operation. Also, remember to set the maximum PermGen memory allocation (XX:MaxPermSize). See Increasing Application Server Memory.

⚠️ Do not configure a heap allocation so large that it does not allow enough remaining physical memory for your operating system and other applications on the server. The heap allocation should be large enough for Confluence, but not so large that the memory would be paged to disk during normal operation.

Step 4. Configure `confluence-init.properties`

1. Inside the *Confluence installation directory*, edit `...confluence/WEB-INF/classes/confluence-init.properties` in a text editor.
2. Now define your Confluence Home directory, by setting the `confluence.home` property to a directory of your choosing.
   We suggest using different paths for your installation and home directories. This will facilitate upgrades. This is the directory that will contain all of Confluence's configuration, backup and attachment files.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'.

Step 5. Edit Tomcat Context Descriptors

1. Create a file called `confluence.xml` and save in the conf/`Catalina/localhost` sub-directory of Tomcat. If these directories don't exist you can create them manually.
2. Open your new `confluence.xml` file and add these lines:

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```
<Context path="/confluence"
docBase="<CONFLUENCE_INSTALLATION_DIRECTORY_PATH>/confluence" debug="0"
reloadable="true">
</Context>
```

More on Context Path

To run Confluence *without* a context path, change the path in the `Context` tag to an empty string ("""). **If not using a context path, your config will need to be saved as `ROOT.xml` rather than `confluence.xml`.**

In Tomcat, a context path name follows the name of its xml file (except for `ROOT.xml` where no context path is used. Hence if you wish to change the context path to a different name, change both the context path and the name of the xml file. eg. "/wiki" context path should be saved in file `wiki.xml`.

3. For *docBase*, specify the value you noted down earlier.
4. Restart Tomcat, and Confluence should be accessible under `/confluence/` on your Tomcat server.
5. Follow the link below to proceed with the setup wizard.

Step 6. Add UTF-8 Encoding

1. Edit `conf/server.xml` and find the line where the `Coyote HTTP Connector`is defined. It will look something like this, possibly with more parameters:

```
<Connector port="8080"/>
```

2. Add a `URIEncoding="UTF-8"`property to the connector:

```
<Connector port="8080" URIEncoding="UTF-8"/>
```

Step 7. (Optional) Configure Tomcat to Run on a Different Port

See Switching to Apache Tomcat.

Step 8. (Optional) Configure Confluence to Run as a Windows Service

Confluence can be run as a service.

Step 8. Run the Confluence Setup Wizard

Once Confluence is running, open a web browser and visit http://localhost:8080/ (Tomcat default port).

If you changed the port earlier, use the port you specified. Note that the Confluence installer normally uses port 8090 as the default, to avoid conflicts with JIRA (using port 8080).

The Confluence Setup Wizard should appear in your web browser, prompting you to enter your license key. Follow the instructions on screen, and read more guidelines on the Confluence Setup Wizard.

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Notes

- Tomcat users, take care not to unzip the Confluence installation into your Tomcat `webapps` folder, as this may cause Confluence to be deployed more than once. It may cause a Cluster Panic error.
- If you deploy Confluence on an unsupported server, server-related issues cannot be covered by Atlassian technical support. You can try Atlassian Answers for assistance instead.

Known Issues for Apache Tomcat

On this page:

- Supported Application Servers
- Tomcat Documentation
- Known Issues

Supported Application Servers

Check the list of supported application servers on the Supported Platforms topic.

Tomcat Documentation

An excellent resource for Tomcat configuration is the Apache documentation.

Known Issues

No content found for label(s) tomcat.

RELATED TOPICS

Running Confluence behind Apache
Configuring a MySQL Datasource in Apache Tomcat

Installing Java for Confluence

This page contains instructions for installing a Java Runtime Environment (JRE). This is a manual step that is only required for Confluence installations where you are installing from a zip or archive file.

If you are using the automated installer, the required Java files are bundled and will be automatically put in place, hence you will not need to follow the instructions on this page.

Please refer to our Supported Platforms topic for details of the Java versions that are supported for Confluence.

Installing the JRE

A JRE (Java Runtime Environment) needs to be installed on the same server machine that will have Confluence installed.

For Windows: (click to expand)

Installing the JRE on Windows

1. If you are not sure whether you have a JRE installed, please confirm by doing the following:
    - Check **Control Panel > Programs and Features** in Windows 7 (just Programs on older version of Windows).
    - Java should appear as a line item in the list. If not, you do not have Java installed.
2. To install the JRE, follow these instructions:
    - Go to the Java download page.
    - Download the version entitled 'Java SE Update XX (JRE)', where 'XX' stands for some number. (The latest version will be available on that page.)
    - When the download has finished, run the Java installer. At one point, you will be asked to choose a directory to install to. Copy or write this directory down for use later.

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3. Check that the `JAVA_HOME` environment variable has been set correctly.
   - Open the **Start** menu, choose **Run**, type `cmd` in the **Run** dialog box and click **OK**.
   - In the command prompt window, type `echo %JAVA_HOME%` and then press *Enter*.
   - View the result:
     - If a directory path is displayed that looks similar to one of the following examples, with the letters 'jre' immediately preceding a series of version numbers, and this path matches the location where you installed the JRE in step 2, then your JRE has been successfully installed and your `JAVA_HOME` environment variable has been set correctly.
       Examples of typical `JAVA_HOME` environment variable values:
       - `C:\Program Files\Java\jre6`
       - `C:\Progra~1\Java\jre6`
       - `C:\Java\jre6`
       - `C:\jre6`
     - If nothing is displayed or you do not see 'jre' immediately followed by a series of version numbers (like one of the examples above), then you need to set the `JAVA_HOME` environment variable. Please follow these instructions to set your `JAVA_HOME` environment variable to the directory you where you have just installed the Jre. By default, this directory is under `C:\Program Files\Java`.

For Linux: (click to expand)

Installing the JRE on Linux

1. If you are not sure whether you have JRE installed correctly, please confirm by doing the following:
   a. Open a shell console.
   b. Type `echo $JAVA_HOME` in the shell console and then press Enter
   c. View the result:
      - If a line is displayed such as `/opt/jre6` or `/usr/lib/jvm/java-6`, then your JRE is installed and properly configured.
      - If nothing is displayed, then you either need to install the JRE or set the `$JAVA_HOME` environment variable. You can set this environment variable in your user account's 'profile' file. Alternatively, you can set this after installing Confluence (in step 4 below) by defining this path in your Confluence installation's `setenv.sh` file, usually located in the Confluence `bin` directory.
      - If you have installed an unsupported JRE and you want to use SSL then you need to install the Sun JSSE package.
2. If you need to install the JRE, follow these instructions:
   - Go to the Java download page.
   - Download the version entitled 'Java SE Update XX (JRE)', where 'XX' stands for some number. (The latest version is available on that page.)
   - When the download has finished, run the Java installer. Detailed installation instructions are provided on Oracle's website.

Setting the JAVA_HOME Variable in Windows

This information is only relevant if you are installing Confluence on a Windows server.

After you have installed the Java Runtime Environment (JRE) in Windows, you must set the `JAVA_HOME` environment variable to point to the JRE installation directory.

Stage 1. Locate the JRE Installation Directory

If you already know the installation path for the Java Runtime Environment, go to *Stage 2* below. Otherwise, find the installation path by following these instructions:

1. If you didn't change the installation path for the Java Runtime Environment during installation, it will be in a directory under `C:\Program Files\Java`. Using Explorer, open the directory `C:\Program Files\Java`.

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2. Inside that path will be one or more subdirectories such as `C:\Program Files\Java\jre6`.

Stage 2. Set the JAVA_HOME Variable

Once you have identified the JRE installation path:

1. Right-click the **My Computer** icon on your desktop and select **Properties**.
2. Click the **Advanced** tab.
3. Click the **Environment Variables** button.
4. Under **System Variables**, click **New**.
5. Enter the variable name as `JAVA_HOME`.
6. Enter the variable value as the installation path for the Java Development Kit.
   - If your Java installation directory has a space in its path name, you should use the shortened path name (e.g. `C:\Progra~1\Java\jre6`) in the environment variable instead.

> **Note for Windows users on 64-bit systems**
>
> Progra~1 = 'Program Files'
> Progra~2 = 'Program Files(x86)'

7. Click **OK**.
8. Click **Apply Changes**.
9. Close any command window which was open before you made these changes, and open a new command window. There is no way to reload environment variables from an active command prompt. If the changes do not take effect even after reopening the command window, restart Windows.
10. If you are running the Confluence EAR/WAR distribution, rather than the regular Confluence distribution, you may need to restart your application server.

Related Topics

Starting Tomcat as a Windows Service
Installing Confluence in Linux

Confluence Cluster Installation

Overview

There are two methods of installing Confluence in a cluster, depending on whether you have existing data. **This page describes a fresh installation with no existing data.**

See also Confluence Cluster Installation with Existing Data.

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Oracle Coherence Licensing Change:

- Due to a license agreement change,Confluence is now available in two editions:
  - **Standard Edition** — Confluence with Ehcache's caching technology (available to customers with non-clustered Confluence licenses).
    If you are currently running a clustered installation of Confluence, please do not upgrade it with a standard edition of Confluence.
  - **Clustered Edition** — Confluence with Oracle's Coherence clustering and distributed caching technology (available to customers with Confluence clustered licenses only).
- For more information about these changes, please refer to the Coherence License Changes document.
- If you have a Confluence clustered license, are running a clustered installation of Confluence and wish to upgrade to Confluence version 2.6 or later, please ensure that you download only a clustered edition of Confluence and please refer to the Confluence 3.0.1 Upgrade Notes for additional upgrade information.

Installation with no existing data

To get Confluence running in a two-node cluster, you must do the following:

1. Ensure you meet the clustering requirements, including obtaining a clustered license key from Atlassian for each node.
2. Install Confluence on a single node, configuring an external database and a cluster name.
3. Load test the single node installation, see whether clustering is required.
4. Shut down the first node, copy the Confluence application and Confluence home directory to the second node.
5. Start the first node, wait until it is running, then bring up the second node and it will automatically join the cluster.
6. Test the cluster is working correctly.
7. Configure a load balancer in front of the two clustered nodes.

Each of these steps will be described in detail below.

1. Clustering requirements

Your Confluence cluster installation must meet *all* the following criteria for clustering:

- You must have a clustered license.
- You must use an external database.
- You must use a load balancer with session affinity in front of the cluster.

Clustered commercial licenses may be purchased through Confluence website. Clustered evaluation licenses may be obtained by emailing sales@atlassian.com.

A cluster can run using two copies of Confluence. However, cluster administrators must understand how to configure an application server and web server with load balancing, so we recommend you are comfortable installing Confluence as a EAR/WAR in your application server before proceeding with a clustered installation.

2. Installation on first node

Cluster administrators should already be comfortable with the normal installation method, so it won't be repeated here. There are two differences in the Confluence Setup Wizard from a normal installation:

- You must use an external database.
- You must enter a cluster name.

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Enter a cluster name to create a new cluster

> **Technical note**
>
> The cluster name will be converted into a unique multicast IP address and port for your Confluence cluster. UDP multicast traffic is used for Confluence to automatically discover other nodes in the cluster when they start up.

3. Load test the single node

Most Confluence installations do not need to be clustered. Ensure you have tested your single node installation with the number of users you expect to host before going ahead with the additional complexity of clustering.

Check out our performance tuning tips for ways to improve the performance of a single instance of Confluence.

You can upgrade your single node to a multi-node cluster at any time by resuming this guide from step 4 below.

4. Copy Confluence to second node

Confluence clusters must use the same JDK, application server and application. The easiest way to ensure this is to shut down Confluence on the first node, then copy its web application and home directory to the second node:

1. Shut down Confluence on node #1.
2. Shut down your application server on node #2, or stop it automatically loading web applications.
3. Copy the Confluence web application from node #1 to node #2.
4. Copy the Confluence home directory from node #1 to node #2.

Copying the web application ensures any modifications you have made to the application itself, custom LDAP settings (`atlassian-user.xml`), and any other advanced configuration are copied to node #2.

Copying the home directory ensures the Confluence search index (the `index/` directory), the database and cluster configuration (`confluence.cfg.xml`), and any other home directory settings are copied to node #2.

5. Start Confluence on the first node, wait, then start Confluence on second node

For the most stable start-up process, it is important to start Confluence one server at a time.

1. Start Confluence on node #1.
2. Wait for Confluence to become available on node #1.
3. Start Confluence on node #2.
4. Wait for Confluence to become available on node #2.

6. Test cluster connectivity

The Cluster Administration page (Administration, Cluster Configuration) includes information about the active cluster. When the cluster is running properly, this page displays:

- a correct count of the nodes in the cluster
- a status display for each node in the cluster
- an uptime for each node that is accurate.

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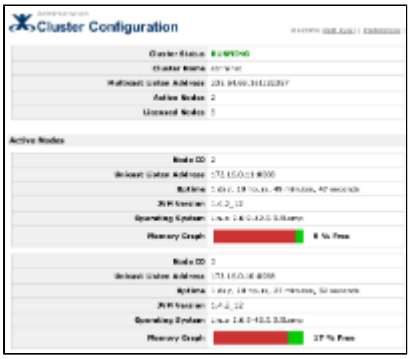

Cluster Administration page

A simple process to ensure your cluster is working correctly is:

1. Create a new document on node #1.
2. Ensure the new document is visible by accessing it directly on node #2.
3. Wait one minute (Confluence does batch indexing once per minute).
4. Search for the new document on node #1, ensure it appears.
5. Search for the new document on node #2, ensure it appears.

> **Technical note**
>
> If Confluence detects more than one instance accessing the database but not in a working cluster, it will shut itself down in a *cluster panic*. This can be fixed by troubleshooting the network connectivity of the cluster.

7. Configure load balancer

For the moment, configuring the load balancer is outside the scope of this document.

However, a simple Apache and Tomcat load-balancing configuration is available, which includes sample configuration for the Apache Tomcat and the Apache web server, using its load-balancing JK connector.

Troubleshooting

If you have problems with the above procedure, please see our Cluster Troubleshooting guide.

Upgrading a cluster

It is important that upgrades follow the procedure for Upgrading a Confluence Cluster.

Related documentation

Overview of Confluence Clusters
Clustering in Confluence
Confluence Cluster Installation with Existing Data
Confluence Installation Guide
Upgrading a Confluence Cluster
Cluster Administration page

Confluence Cluster Installation with Existing Data

Overview

There are two methods of installing Confluence in a cluster, depending on whether you have existing data. **This page describes how to upgrade an existing Confluence instance into a cluster.**

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See also Cluster installation without existing data.

> **Oracle Coherence Licensing Change:**
> - Due to a license agreement change,Confluence is now available in two editions:
> - **Standard Edition** — Confluence with Ehcache's caching technology (available to customers with non-clustered Confluence licenses).
> ⚠ **If you are currently running a clustered installation of Confluence, please do not upgrade it with a standard edition of Confluence.**
> - **Clustered Edition** — Confluence with Oracle's Coherence clustering and distributed caching technology (available to customers with Confluence clustered licenses only).
> - For more information about these changes, please refer to the Coherence License Changes document.
> - If you have a Confluence clustered license, are running a clustered installation of Confluence and wish to upgrade to Confluence version 2.6 or later, please ensure that you download only a clustered edition of Confluence and please refer to the Confluence 3.0.1 Upgrade Notes for additional upgrade information.

Cluster installation from an existing copy of Confluence

BEFORE ATTEMPTING THIS, PLEASE MAKE A BACKUP. To upgrade an existing copy of Confluence to run in a two-node cluster, you must do the following:

1. Ensure that your version of the Confluence distribution has been upgraded to the version you want to run the Cluster on. **Do not upgrade your version of Confluence and switch to the clustered version at the same time**. First upgrade your system (e.g. from Confluence 2.5.8 to 2.7.1) and make sure everything works fine (e.g. for a week) before switching (e.g. from Confluence 2.7.1 to 2.7.1 Clustered)
2. Ensure you meet the clustering requirements, including obtaining a clustered license key from Atlassian for each node
3. Due to CONF-8959, you need to perform attachment migration to the database before you change your license to a clustered license
4. Upgrade the existing Confluence instance to a clustered license. Do this by going to Admin> Licence Details. Confluence should warn you that this version of Confluence is not capable of clustering.
5. Shutdown Confluence. Deploy a clustered version of Confluence (Do not attempt to install any version of Confluence that is not the Clustered equivalent to your current release). Edit confluence-init.properties (confluence-ver-clustered/confluence/WEB-INF/classes/confluence-init.properties) to set confluence.home to the same path as the old home. Start the first node, and verify that things are working correctly.
6. Shut down the first node, copy the Confluence application and Confluence home directory to the second node
7. Start the first node, wait until it is running, then bring up the second node and it will automatically join the cluster
8. Test the cluster is working correctly
9. Configure a load balancer in front of the two clustered nodes.

Each of these steps will be described in detail below.

1. Clustering requirements

Your Confluence cluster installation must meet *all* the following criteria for clustering:

- you must be running Confluence 2.3 or later
- you must have a clustered license
- you must use an external database
- you must use a load balancer with session affinity in front of the cluster.

Clustered commercial licenses may be purchased through Confluence website. Clustered evaluation licenses

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may be obtained by emailing sales@atlassian.com.

A cluster can run using two copies of the Confluence distribution. However, cluster administrators must understand how to configure an application server and web server with load balancing, so we recommend you are comfortable installing Confluence as a EAR/WAR in your application server before proceeding with a clustered installation.

You can follow the instructions to Migrate Confluence to an external database.

2. Upgrade existing instance to clustered license

Once you've obtained your clustered license from Atlassian, you can simply update the license in your running Confluence instance:

1. Go to 'Administration'.
2. Go to 'License Details', and paste in the new license.
3. Click 'Save'.

When you enter a clustered license, you will see a new line appear on this page: *Licensed Clustered Nodes*. This tells you how many nodes your Confluence license will allow.

Organisation	**Atlassian**
Date Purchased	**Aug 15, 2006**
License Type	**Confluence: Commercial Server**
Licensed Users	**Unlimited**
Licensed Clustered Nodes	**8 nodes** (2 nodes currently clustered).

License Details page shows the number of cluster nodes permitted

3. Migrate your attachments to the Database

You can do this by navigating to Admin> Attachment Storage > Edit, and changing it to "Database".

4. Copy Confluence to second node

For the remaining steps in setting up a cluster with existing data, please continue from step 4 in the normal Confluence cluster installation guide.

5. Start Confluence on the first node, wait, then start Confluence on second node

See comment in step 4.

6. Test cluster connectivity

See comment in step 4.

7. Configure load balancer

See comment in step 4.

Troubleshooting

If you have problems with the above procedure, please see our Cluster Troubleshooting guide.

Upgrading a cluster

It is important that upgrades follow the procedure for Upgrading a Confluence Cluster.

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Related documentation

Overview of Confluence Clusters
Confluence Cluster Installation
Confluence Installation Guide
Upgrading a Confluence Cluster
Confluence User Guide

Upgrading a Confluence Cluster

This page contains instructions for **upgrading an existing Confluence cluster** to a new version of Confluence. If you are not running a clustered instance of Confluence and wish to, see Confluence Cluster Installation with Existing Data.

> **Oracle Coherence Licensing Change:**
> - Due to a license agreement change,Confluence is now available in two editions:
> - **Standard Edition** — Confluence with Ehcache's caching technology (available to customers with non-clustered Confluence licenses).
> ⚠ **If you are currently running a clustered installation of Confluence, please do not upgrade it with a standard edition of Confluence.**
> - **Clustered Edition** — Confluence with Oracle's Coherence clustering and distributed caching technology (available to customers with Confluence clustered licenses only).
> - For more information about these changes, please refer to the Coherence License Changes document.
> - If you have a Confluence clustered license, are running a clustered installation of Confluence and wish to upgrade to Confluence version 2.6 or later, please ensure that you download only a clustered edition of Confluence and please refer to the Confluence 3.0.1 Upgrade Notes for additional upgrade information.

You can download the latest version of Confluence from here.

Overview

The steps involved in upgrading a multi-node Confluence cluster are:

1. Backup your confluence instance.
2. Read the Release Notes for this version and check you have the required expertise to perform the upgrade.
3. Stop each node in the cluster.
4. Install the new version into the application server on the first node.
5. Install the new version into the application server onto the remaining nodes.

Step One: Backing up

> We highly recommend that you backup your Confluence home and install directories and your database before proceeding.

For specific files to backup see Upgrading Confluence.

Step Two: Things you need to check ...

- Always check the release-notes for the version of Confluence you are installing for upgrade instructions specific to that version.
- To perform this upgrade you must be familiar with the usage of the application server running your Confluence Cluster, and the web server load balancing it.
- Check the Configuring Confluence for your application server and database, to make sure there isn't anything extra you need to do to get Confluence running.

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- Check that you know what configurations or customisations have been made to your Confluence instance. These may include specialised user management configurations and changes to Confluence's Java classes and Velocity templates.

Step Three: Stopping the cluster

> It is vital that all nodes in the cluster are running the same version of Confluence. That's why the first step is to stop all the nodes.

Stop the Confluence application on each node using your application server.

Step Four: Upgrading the first node

> We advise configuring your load balancing web server to redirect traffic away from Confluence until the upgrade is complete on multiple nodes.

Upgrading a cluster node uses the same process as Upgrading Confluence.

1. Unzip the new version.
2. Edit its `confluence-init.properties` to point to the existing home directory.
3. Port any immediately required customisations from the old version to the new one. Eg `atlassian-user.xml`.
4. Install the new version into the application server. Eg for Tomcat edit `confluence.xml` or `server.xml` to point to the new location, and restart Tomcat.
5. Wait for the Node to finish upgrading and confirm that you can log in and view pages before continuing to Step Five.
6. Port any additional customisations from the old version to the new version. Eg modifications to Java classes or Velocity templates.

Step Five: Upgrading other nodes

Copy the confluence installation, complete with customisations, to the next node.

1. Edit its confluence-init.properties to point to the existing home directory.
2. Install the new version into the application server. Eg for Tomcat 5 edit confluence.xml to point to the new location, and restart Tomcat.
3. Wait for the Node to finish upgrading and confirm that you can log in and view pages before continuing with the next node.

Troubleshooting

For suggested troubleshooting techniques, see our Cluster Troubleshooting page.

Related documentation

Overview of Confluence Clusters
Confluence Installation Guide
Cluster Troubleshooting
Confluence Cluster Installation
Confluence Cluster Installation with Existing Data
Confluence User Guide

Apache and Tomcat load balancing

Overview

The following is a description of how to set up a Confluence Cluster on a Windows machine using Apache and mod_jk to handle the load-balancing.

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The characteristics of this cluster are:

- Session affinity: sessions are associated with single servers.
- Failover: if a server dies, a connection will be directed to the nearest available server. (NOTE: sessions are not replicated)
- Failback: when a server comes back online, it will rejoin the cluster.
- Weighted load balancing: the load balancing can be controlled to take into account machine differences. (See the mod_jk documentation for details on this.)

What do you need?

1. Download and install one copy of Apache httpd. Do not install Apache as a service, but set it to listen on port 8080. (Tested with Apache httpd 2.0.55.)
2. Download the latest version of mod_jk. Copy this file into the Apache modules/ directory and rename it to `mod_jk.so`. (Tested with JK-1.2.19.)
3. Download and extract one copy of the ZIP distribution of Apache Tomcat. (Tested with Tomcat 5.5.)
4. Download JDBC drivers for the external database you will be using. Put the drivers in Tomcat's common/lib/ directory. (Tested with Postgresql 8.1, postgresql-8.1-404.jdbc3.jar).

Apache configuration

Edit the main Apache config file, conf/http.conf:

- add the following immediately after the other LoadModule directives:

```
LoadModule jk_module modules/mod_jk.so
```

- add the following just before the end of the file:

```
JkWorkersFile conf/workers.properties
JkLogFile logs/mod_jk.log
JkLogLevel info

JkMount /confluence loadbalancer
JkMount /confluence/* loadbalancer
```

Create a workers.properties file in the Apache conf/ directory. This version of the workers.properties file is configured to use 2 Tomcat instances: *tomcat1* and *tomcat2*.

```
worker.list=loadbalancer

worker.tomcat1.port=18081
worker.tomcat1.host=localhost
worker.tomcat1.type=ajp13
worker.tomcat1.lbfactor=1

worker.tomcat2.port=28081
worker.tomcat2.host=localhost
worker.tomcat2.type=ajp13
worker.tomcat2.lbfactor=1

worker.loadbalancer.type=lb
worker.loadbalancer.balance_workers=tomcat1, tomcat2
worker.loadbalancer.method=Busyness
```

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Tomcat configuration

The Tomcat configuration below will run multiple instances from the same binaries in the main Tomcat directory. For complete documentation of this configuration, see the `RUNNING.txt` file in the Tomcat distribution.

Create instance home directories

Create a directory for each instance of Tomcat, somewhere outside where you installed Tomcat. For example, if you extracted Tomcat to /opt/apache/tomcat-5.5, your instances could be in /var/tomcat-instances/tomcat1, /var/tomcat-instances/tomcat2. These folders will be referred to as the *instance home directories*.

Copy the following folders from the Tomcat installation directory into each instance home directory. Some of the folders may be empty, but copy them anyway.

- conf
- logs
- shared
- webapps

Configure server.xml in each instance

Edit conf/server.xml in the instance home directories to include the Confluence application and have distinct listen ports for Server, HTTP Connector and AJP13 Connector. All nodes can use the same Confluence webapp as long as you set confluence.home via a system property (see startup scripts below).

Attached are two sample configurations:

- tomcat1/conf/server.xml - listens on port 18080 (http) and 18081 (ajp13)
- tomcat2/conf/server.xml - listens on port 28080 (http) and 28081 (ajp13)

To use these sample config files, you will need to edit them to set the Confluence web-app location and the data source configuration.

If editing the configuration files yourself, the points to note are:

- 'Server' port must be distinct
- 'Connector' for HTTP must be uncommented and use a distinct port. Use this port for testing the node individually.
- 'Connector' for AJP13 must be uncommented and use a distinct port. This port must match the port of the worker in the Apache workers.properties.
- 'Engine' for localhost must have jvmRoute matching the name of the worker in Apache's workers.properties.
- 'Context' for Confluence must be added inside the 'Host' tag, and include a 'Resource' for the datasource, as per normal Confluence installation under Tomcat.

Create a startup script for each instance

The startup scripts for each instance must set the CATALINA_BASE environment variable and confluence.home system property. The variables in the sample scripts below should reference:

- CATALINA_HOME - Tomcat installation directorty
- CATALINA_BASE - Tomcat instance home directory (distinct for each node)
- JRE_HOME - Java runtime directory
- JAVA_OPTS - include a confluence-home system property (distinct for each node)

tomcat1/startup.bat:

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```
set CATALINA_HOME=C:\home\mryall\opt\apache\apache-tomcat-5.5.16
set CATALINA_BASE=C:\home\mryall\var\tomcat-instances\tomcat1
set JRE_HOME=C:\Java\jre1.5.0_06
set JAVA_OPTS=-Dconfluence.home=C:\home\mryall\data\confluence\cluster\tomcat1
-Xmx512m
%CATALINA_HOME%\bin\startup.bat
```

tomcat2/startup.bat:

```
set CATALINA_HOME=C:\home\mryall\opt\apache\apache-tomcat-5.5.16
set CATALINA_BASE=C:\home\mryall\var\tomcat-instances\tomcat2
set JRE_HOME=C:\Java\jre1.5.0_06
set JAVA_OPTS=-Dconfluence.home=C:\home\mryall\data\confluence\cluster\tomcat2
-Xmx512m
%CATALINA_HOME%\bin\startup.bat
```

Continue setting up Confluence

Follow the Confluence Cluster Installation procedure with the steps following the app server setup.

Troubleshooting

General advice

The above tomcat configurations enable HTTP connectors on each Tomcat instance so that you can connect to the nodes individually. To check whether the load balancer (Apache & mod_jk) is causing the problem, try connecting to the individual Tomcat instances. Please note that you should not allow users to directly access individual nodes in production mode: You don't want people to bookmark nodes since the node details might change, or single nodes may be taken out of the cluster for maintenance while the cluster itself is still available.

Session-affinity doesn't seem to be working?

Ensure the name you use for your worker in workers.properties (e.g. tomcat1) matches the jvmRoute attribute of the engine tag in your Tomcat server.xml. For an example, search for 'Engine' in the attached sample config.

For troubleshooting your Confluence cluster, see Cluster Troubleshooting.

References

General

http://raibledesigns.com/tomcat/ http://httpd.apache.org/

Tomcat Clustering support

http://tomcat.apache.org/tomcat-5.0-doc/cluster-howto.html http://tomcat.apache.org/tomcat-5.0-doc/balancer-howto.html http://tomcat.apache.org/tomcat-3.3-doc/mod_jk-howto.html
Clustering and Load Balancing in Tomcat 5, Part 1
Clustering and Load Balancing in Tomcat 5, Part 2

Creating a Dedicated User Account on the Operating System to Run Confluence

This step is optional if you are evaluating Confluence, but should be mandatory for Confluence installations

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used in production. If you have used the Confluence installer on Linux, this user will be created automatically.

A dedicated user should be created to run Confluence, because Confluence runs as the user it is invoked under and therefore can potentially be abused. For example:

- If your operating system is *nix-based (for example, Linux or Solaris), type the following in a console:
  ```
  $ sudo /usr/sbin/useradd --create-home --comment "Account for running Confluence" --shell /bin/bash confluence
  ```
- If your operating system is Windows:
  1. Create the dedicated user account by either:
     - Typing the following at the Windows command line:
       ```
       > net user confluence mypassword /add /comment:"Account for running Confluence"
       ```
       (This creates a user account with user name 'confluence' and password 'mypassword'. You should choose your own password.)
     - Opening the Windows 'Computer Management' console to add your 'confluence' user with its own password.
  2. *(Optional)* Use the Windows 'Computer Management' console to remove the 'confluence' user's membership of all unnecessary Windows groups, such as the default 'Users' group.
     ✅ If Windows is operating under Microsoft Active Directory, ask your Active Directory administrator to create your 'confluence' account (with no prior privileges).

Ensure that *only the following directories* can be written to by this dedicated user account (e.g. 'confluence'):

- The following subdirectories of your Confluence Installation Directory:
  - `logs`
  - `temp`
  - `work`
- Your Confluence Home Directory.

⚠️ Do not make the Confluence Installation Directory itself writeable by the dedicated user account.

ℹ️ See also Best Practices for Configuring Confluence Security.

Getting a Confluence License

Need a Confluence license or license key?

- If you do not yet have a license, you can get a free multi-user evaluation license or a 10-user starter license immediately.
- If you already have a Confluence license, you can retrieve your key or generate a new key from the license viewer.
- For enterprise, non-profit, open source and educational licenses, see Confluence licensing and pricing.
- If you cannot find your key or are having problems, contact sales@atlassian.com.

Related pages:

- Viewing and Editing License Details
- Reducing the User Count for your Confluence License
- Confluence Administrator's Guide

Running Confluence in a Virtualised Environment

This page provides some performance data and observations on running Confluence with VMware. The information on this page is intended to help you decide whether or not to run Confluence using a VMware product. It does not contain detailed instructions on how to set this up (please refer to the appropriate VMware product documentation instead).

On this page:

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- Summary
- Recommendations
  - General
  - VMware ESX 3.5
  - VMware ESX 4i
- Performance Testing Setup
  - Server Configuration
  - Installed Software
  - Testing Tool
- Test Results
  - Result Descriptions
  - Low-to-Medium-load Confluence
  - Medium-to-High-load Confluence

Summary

> **Confluence on Virtualised Environments**
>
> Atlassian officially supports non-clustered installations of Confluence 3.0 and later on VMwar e. Although possible, we do not recommend (nor support) running versions of Confluence prior to 3.0 on VMware, since Confluence 3.0 resolved many performance issues that were present in earlier versions. Be aware that we also do not support clustered installations of Confluence on VMware. Please comment or vote on the feature request at CONF-19559.

Confluence is generally slower in a virtualised environment. As can be seen in the test results below, the amou by which Confluence slows down varies based on the workload.

Under low load there are several operations which are in fact faster under VMware. This is probably due to the 4CPU VM instance running on 8 real CPUs as opposed to there being only 4 real CPUs on the baseline machine.

Please note, no performance tuning was applied to VMware for these tests. It may be possible to improve Confluence's performance by tuning VMWare. However, this may cause other applications to run more slowly the virtual environment. We recommend that you consult the VMware documentation before deciding whether do this.

Recommendations

General

- If you are a running a **medium-to-high-load** instance, your biggest performance gain will be to run the application and database on a real machine and not on virtual infrastructure.
- Under **medium-to-high-load**, moving the database onto another machine will help.
- Always ensure that there are enough virtual CPUs and memory allocated to the virtual instance. This ma not be possible under VMware ESX 3.5 due to limitations of 4 vCPUs per VM.
- Always ensure that there is enough CPU time and memory available on the physical host to service all VMs. Applications should not go into swap.
- Use modern CPUs with VT extensions — there is still a noticeable performance penalty for using a VM with these CPUs, but it will likely be much higher when using old CPUs.
- Carefully monitor your VMware hosts to ensure that there is no resource starvation.

VMware ESX 3.5

- If possible, upgrade to VMware ESX 4i.
- Under **low-to-medium-load**, using a non-virtualised database will generally result in better response times.

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VMware ESX 4i

- Under **low-to-medium-load**, keep the database inside the virtual machine if there is enough CPU time f both the database and application.
- Using VMware EX 4i and virtual machine version 7, you will be able to allocate up to 8 vCPUs to an instance.

Performance Testing Setup

Server Configuration

All testing was performed on the following hardware. In the case of virtual machines, one VM per machine was configured.

Platform	CPU	Real Ram	Disk	Virtualisation Software	Virtual machine version	Virtual CPU's	Virtual Ram
Dell R610	2 x Intel 'Nehalem' Xeon E5520 (Quad Core) [1]	32Gb (8x 4Gb DDR3)	2 x 15K 146Gb SAS, Raid 1 [4,5]	VMware ESX 3.5	4	4	32Gb
Dell R610	2 x Intel 'Nehalem' Xeon E5520 (Quad Core) [1]	32Gb (8x 4Gb DDR3)	2 x 15K 146Gb SAS, Raid 1 [4,5]	VMware ESXi 4	7	4	32Gb
Dell R610	2 x Intel 'Nehalem' Xeon E5520 (Quad Core) [2,3]	32Gb (8x 4Gb DDR3)	2 x 15K 146Gb SAS, Raid 1 [5]	N/A	N/A	N/A	N/A

Notes:

1. *VT extensions were enabled in the BIOS on the machines running VMWare.*
2. *VT extensions were disabled in the BIOS on the machines not running VMWare, as per Dell best practices.*
3. *In order to limit the CPUs in the baseline test to match the number in VMWare, the kernel boot paramete `maxcpus=4` was added to the startup.*
4. *The full disk was allocated to VMware.*
5. *The filesystem used in all machines was EXT3.*

Installed Software

Each server was set up with identical software, as follows:

Atlassian Product	Confluence 3.0.1-rc2

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Database	PostgreSQL 8.2.6
Application Server	Tomcat 6.0.14
Java	Java(TM) SE (build 1.6.0_07-b06), Java HotSpot(TM 64-Bit Server VM (build 10.0-b23, mixed mode)

Operating System	Redhat Enterprise Linux 5.3 (Tikanga) 64bit (Kernel 2.6.18-128.2.1.el5). The file system used for all tests was EXT3 with the default options.
	The following tuning was applied to the operating system, in order to allow for more memory usage by the database server and better network throughput:
	`net.ipv4.ip_forward = 0`
	`net.ipv4.conf.default.rp_filter = 1`
	`net.ipv4.conf.default.accept_source_route = 0`
	`kernel.sysrq = 0`
	`kernel.core_uses_pid = 1`
	`net.ipv4.tcp_syncookies = 1`
	`kernel.msgmnb = 65536`
	`kernel.msgmax = 65536`
	`kernel.shmmax = 1310720000`
	`kernel.shmall = 4294967296`
	`net.core.rmem_max = 16777216`
	`net.core.wmem_max = 16777216`
	`net.ipv4.tcp_rmem = 4096 87380 16777216`
	`net.ipv4.tcp_wmem = 4098 65536 16777216`
	`net.ipv4.tcp_no_metrics_save = 1`
	`net.ipv4.tcp_moderate_rcvbuf = 1`
	`net.core.netdev_max_backlog = 2500`

Testing Tool

Performance tests were conducted with **Apache Jakarta JMeter 2.3.4** using the standard Confluence performance tests.

Test Results

The following tests were performed for each application. In each case, the test was performed with a database local to the host instance (i.e. in the same operating system image) and also with the database residing on a separate, non-virtualised physical server of the same specifications as above.

Result Descriptions

The following descriptions relate to the result graphs below.

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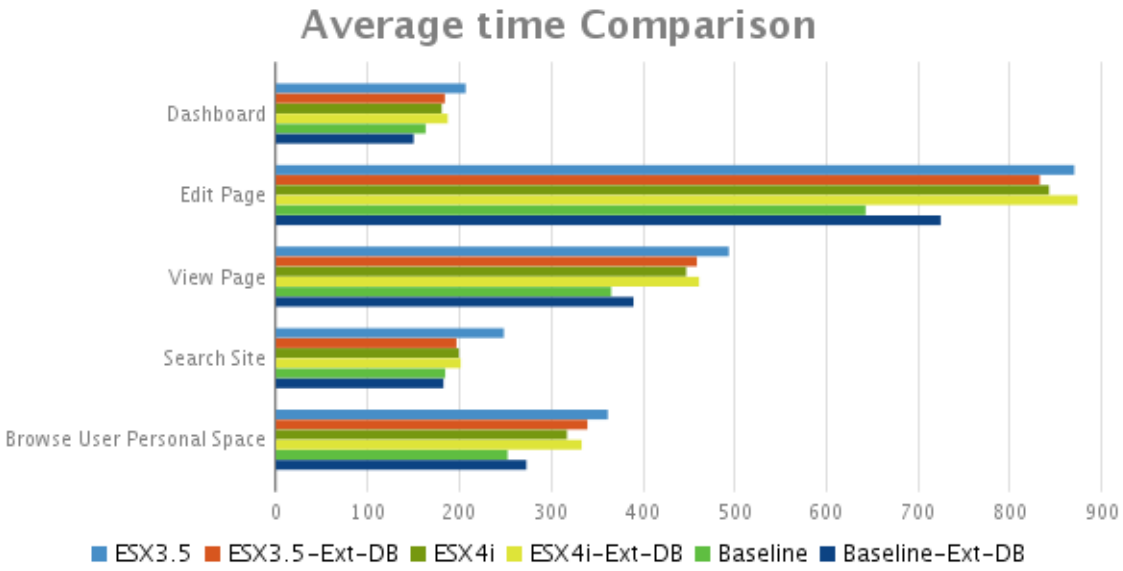
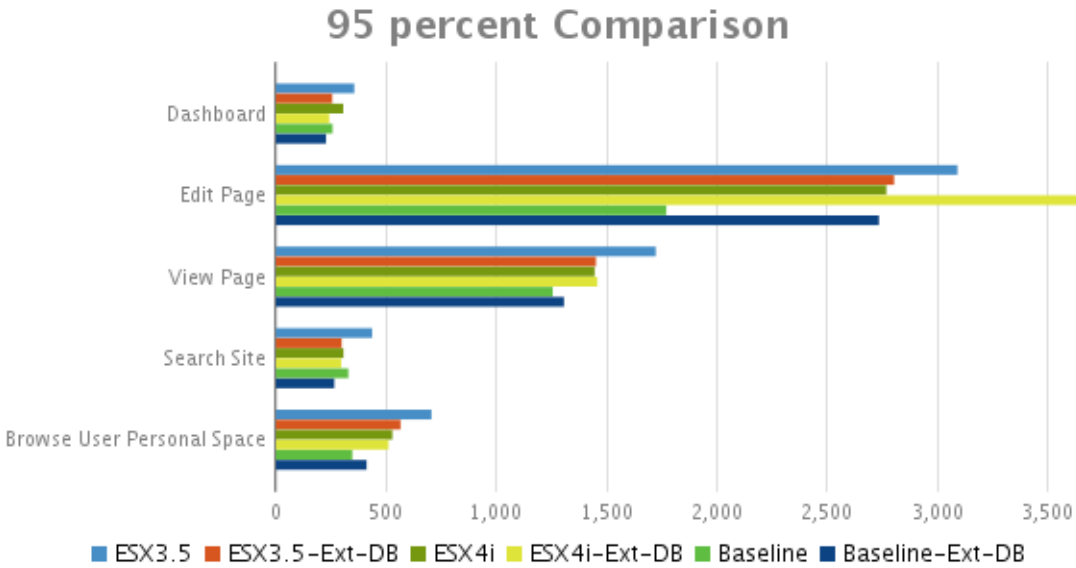
- **Average time Comparison** — The average response time of the requests in the scenario - the lower th better.
- **95 percent Comparison** — The time (in milliseconds) by which 95% of all requests in the scenario have completed. This is not an average value – rather, you can think of it as a 'how long the slowest requests (except the very worst 5% cases) take to complete' scenario.
- **Scenarios:**
  - **Dashboard** — Simulates visiting the Confluence dashboard.
  - **Edit Page** — Simulates saving a page back to Confluence and notifying all people who are watching this page.
  - **View Page** — Simulates loading one out of hundreds of different Confluence pages. Some are short, others are long. Some have many images, others have many comments. Some have many macros, others do not. The pages are accessed through their full URL, as if someone had clicked link within the application or a bookmark.
  - **Search Site** — Simulates a search across the whole system.
  - **Browse User Personal Space** — Simulates regular browsing of pages in a user's personal spac
- **Ext-DB** (In the legend of each graph) — Indicates scenarios in which the database resides on a separat non-virtualised physical server.

Low-to-Medium-load Confluence

This test performs around **18 requests/second** on the Confluence instance. This is not enough to saturate the host CPU time and during the test there is around **50-75% idle time**. You could expect to see similar results if your Confluence instance has enough resources available to it.





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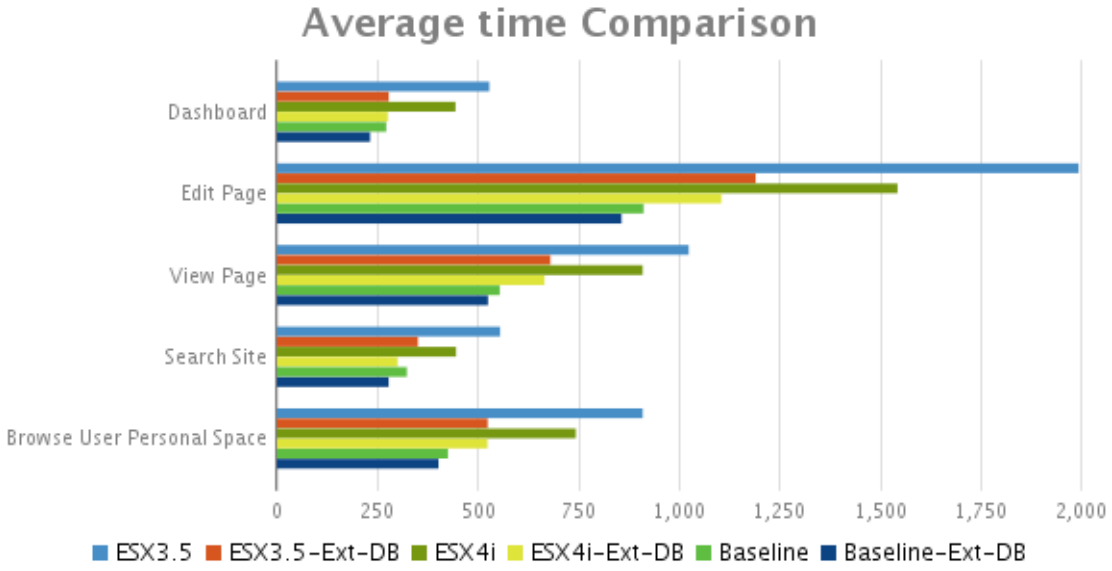
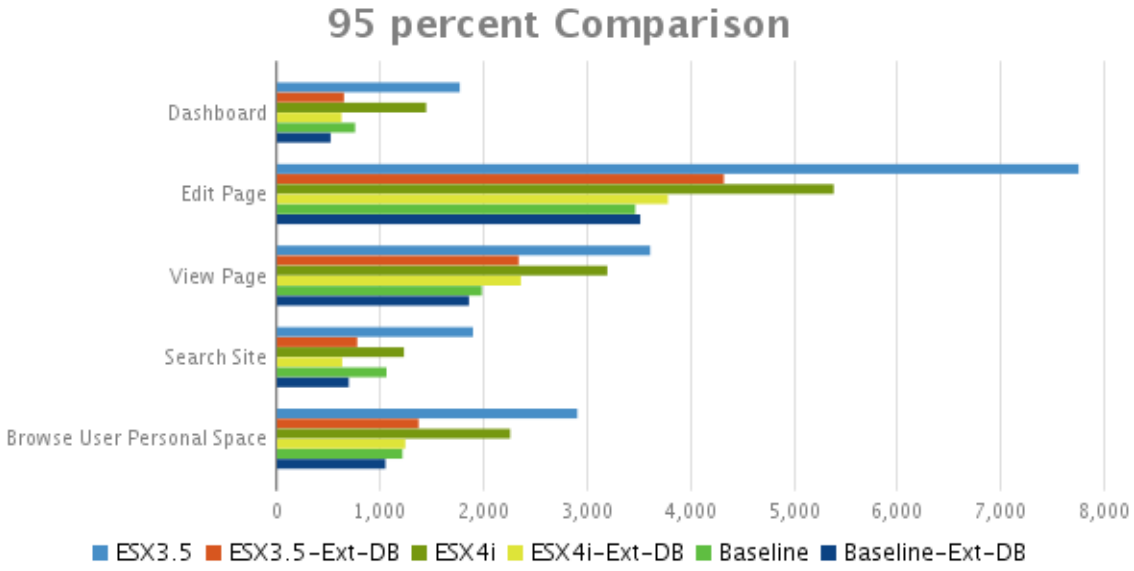
Medium-to-High-load Confluence

This test tries to perform double the requests/second of the lower load test (i.e. approximately **36 requests/second**) on the Confluence instance. This is enough load to saturate the available CPU time on a 4 CPU machine. This test is designed to simulate an instance which does not have enough resources to serve th number of requests being made to it.





Confluence Setup Guide

Before running the Confluence Setup Wizard, as described below, you should have already completed installing Confluence.

When you access Confluence in your web browser for the first time, you will see the **Confluence Setup Wizard**. This is a series of screens which will prompt you to supply some default values for your Confluence site. It will also offer some more advanced options for setting up data connections and restoring data from a previous installation.

1. Start the Setup Wizard

1. If Confluence is not already running, start it now:
    - If you are running the Confluence distribution on Windows, click **Start** > **Programs** > **Confluence** > **Start Confluence Server**.
    - Or, run the start-up script found in the `bin`folder of your installation directory:
        - `start-confluence.bat` for Windows.

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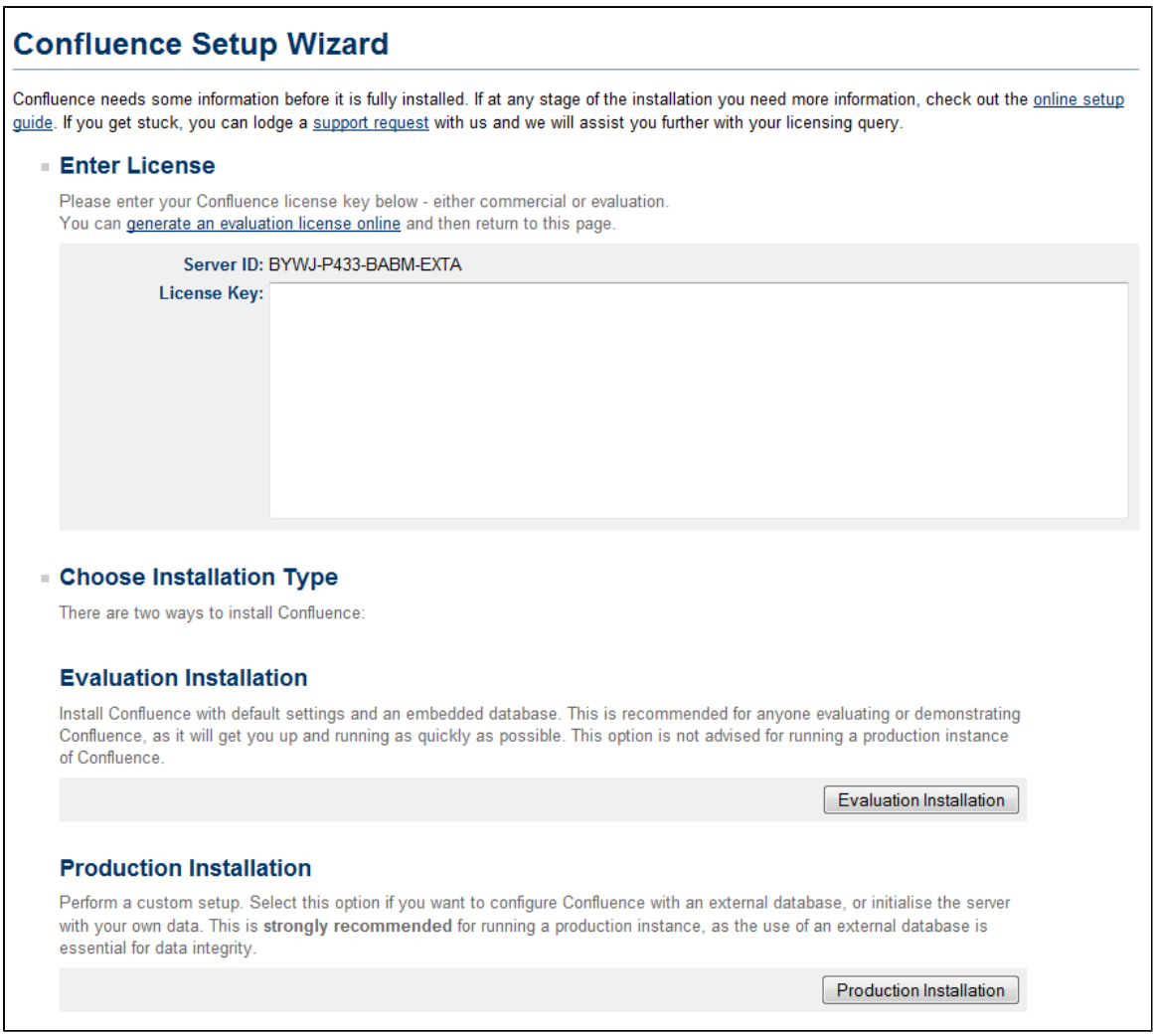
- `start-confluence.sh` for Linux-based systems.

2. Go to the following web address in your web browser: http://localhost:8090
   The above web address uses port '8090'. If you chose a different port during installation, change '8090' to the number you chose.
   - You should see the licensing screen described below.
   - If an error message appears, first check that you are using the port which you specified during installation. Then check the Installation FAQ.

On this page:

- 1. Start the Setup Wizard
- 2. Enter your License Key
- 3. Choose your Installation Type
- 4. Production Installation: Database Configuration
- 5. Production Installation: External Database
- 6. Production Installation: Load Content
- 7. Production Installation: Restore Data from Backup
- 8. Production Installation: Set Up User Management
- 9. Production Installation: Connect to JIRA
- 10. Set Up System Administrator
- 11. Setup is Complete

2. Enter your License Key



Screenshot above: Licensing and installation type

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> **Hint: The above image and all the images on this page are screenshots. Clicking an image will not configure Confluence.**

Find your Confluence license key and paste it into the **License Key** field, shown on the screenshot above.

If you already have a license key, you can retrieve it from the Atlassian website.

If you do not already have a Confluence license, you can obtain one now:

- To get a free evaluation license:
  1. Click **generate an evaluation license online** on the setup wizard, shown on the screenshot above.
  2. Follow the prompts to generate your license key and insert it into the setup wizard's licensing screen automatically.
- To get a commercial, academic, non-profit or open source license:
  1. Copy your **Server ID** from the setup wizard's licensing screen, shown on the screenshot above.
  2. Choose the license type you need from the list on the Atlassian website.
  3. Complete the online order form.

3. Choose your Installation Type

Refer to the screenshot above. In this step, you will choose whether you want an evaluation or a production installation.

Option 1: Evaluation Installation — Set up Confluence with the embedded HSQLDB database and default settings. This option will also install a Demonstration space with some example content to get you working with Confluence as quickly and easily as possible. You may upgrade to another type of database later on.

Who should choose this option?

- Choose the evaluation installation if you are evaluating Confluence or if you are new to Confluence.
- This option is not recommended for production instances of Confluence.

> **For production use, we strongly recommend that you connect to an external database rather than using the embedded database. The evaluation installation is therefore not suitable for production environments.**

Next, you will be asked for details of your system administrator. Go to step 10 below. Yes, you really can skip all the steps between.

Option 2: Production Installation — Customise your Confluence instance to use your own database and your own data.

The production installation offers the following options:

- Connect Confluence to an external database. **Recommended for Confluence used in production environments**.
- Restore data from an existing Confluence database.
- Install Confluence without the demonstration content.

4. Production Installation: Database Configuration

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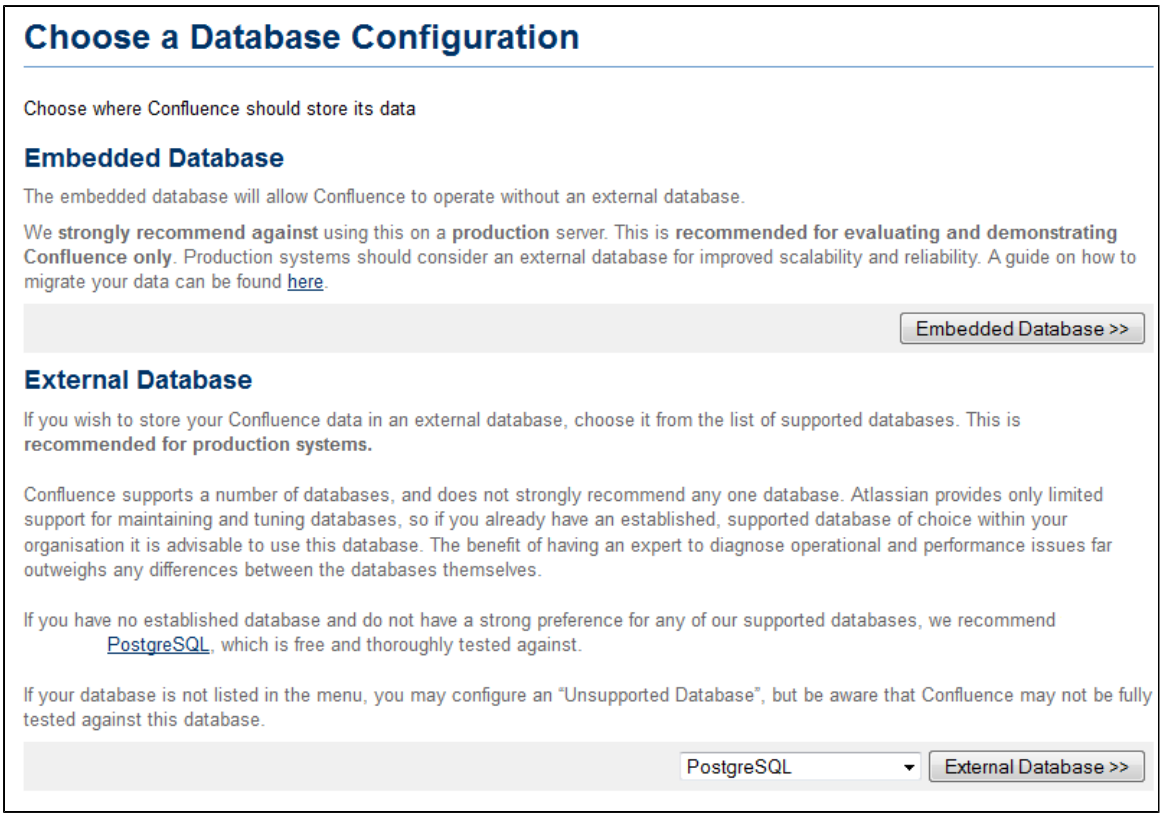

Screenshot above: Database configuration

The above screen appears if you have chosen a production installation of Confluence. You can choose to use the embedded database supplied with your Confluence installation, or to connect to an external database.

- **Option 1: Embedded Database** — If you select this option, Confluence will use an embedded HSQLDB database. You should only select this option for the purposes of ***evaluating*** or ***demonstrating*** the use of Confluence. You can migrate to an external database later on if you wish.
- **Option 2: External Database** — If you wish Confluence to use an external database, select your database type from the database dropdown list and then click the '**External Database**' button.
  - For production purposes, you ***should use an external database*** to ensure your data is kept safe and consistent.
  - If you choose **PostgreSQL**, please make sure that the version you install is supported by Atlassian. It is possible that we do not yet support the latest version of PostgreSQL.
  - Read the page about supported platforms for more information about which databases are supported. For details about choosing an external database, refer to the page on system requirements.

5. Production Installation: External Database

Before you Start

- **Character encoding:**
  - We strongly recommend that character encoding is consistent across your database, application server and web application, and that you use **UTF-8** enco ding.
  - Before setting up your database, please read about configuring character encoding.
- **Database name:** When creating a new external database, give it the name '**confluen ce**'.

You can choose to configure your database via a standard JDBC connection or via a server-managed

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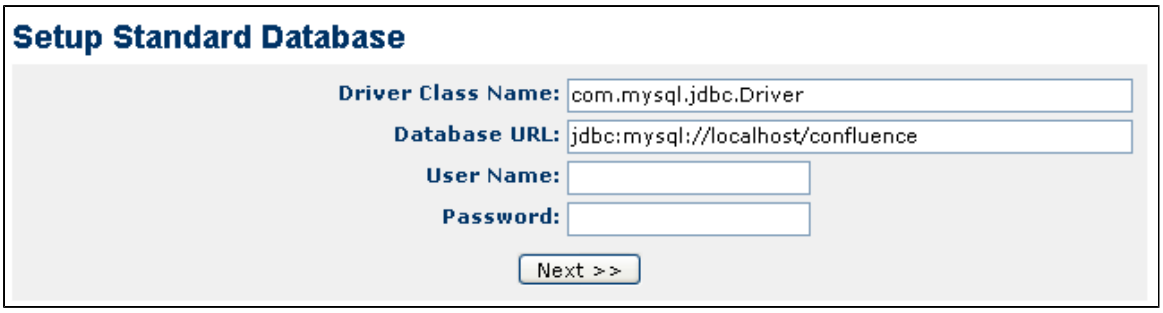
datasource connection. Choose one of the two options below.

Option 1: Standard Database Connection — This uses a standard JDBC database connection. Connection pooling is handled within Confluence.



Screenshot above: Standard (JDBC) connection

Supply the following information:

- **Driver Class Name** — The Java class name for the appropriate database driver. This will depend on the JDBC driver, and will be found in the documentation for your database. You will also need to put the appropriate database driver 'jar' file in the server's classpath. For the Confluence distribution, this means copying the jar file into the `<confluence-install>/lib` directory.
- **Database URL** — The JDBC URL for the database you will be connecting to. This will depend on the JDBC driver, and will be found in the documentation for your database.
- **User Name** — A valid username which Confluence will use to access your database.
- **Password** — The password corresponding to the above username.

You will also need to know:

- The size of the connection pool Confluence should maintain. If in doubt, just go with the default provided.
- What kind of database you're connecting to, so you can tell Confluence which dialect it needs to use.

Option 2: Datasource Connection — This asks the Java application server for a database connection. You will need to have configured a datasource into your application server.

Screenshot above: Datasource connection

Supply the following information:

- **Datasource Name** — The JNDI name of the datasource, as configured in the application server.
  Note: Some servers will have JNDI names like `jdbc/datasourcename`; others will be of the form `java:comp/env/jdbc/datasourcename`. Consult your application-server documentation.

You will also need to know:

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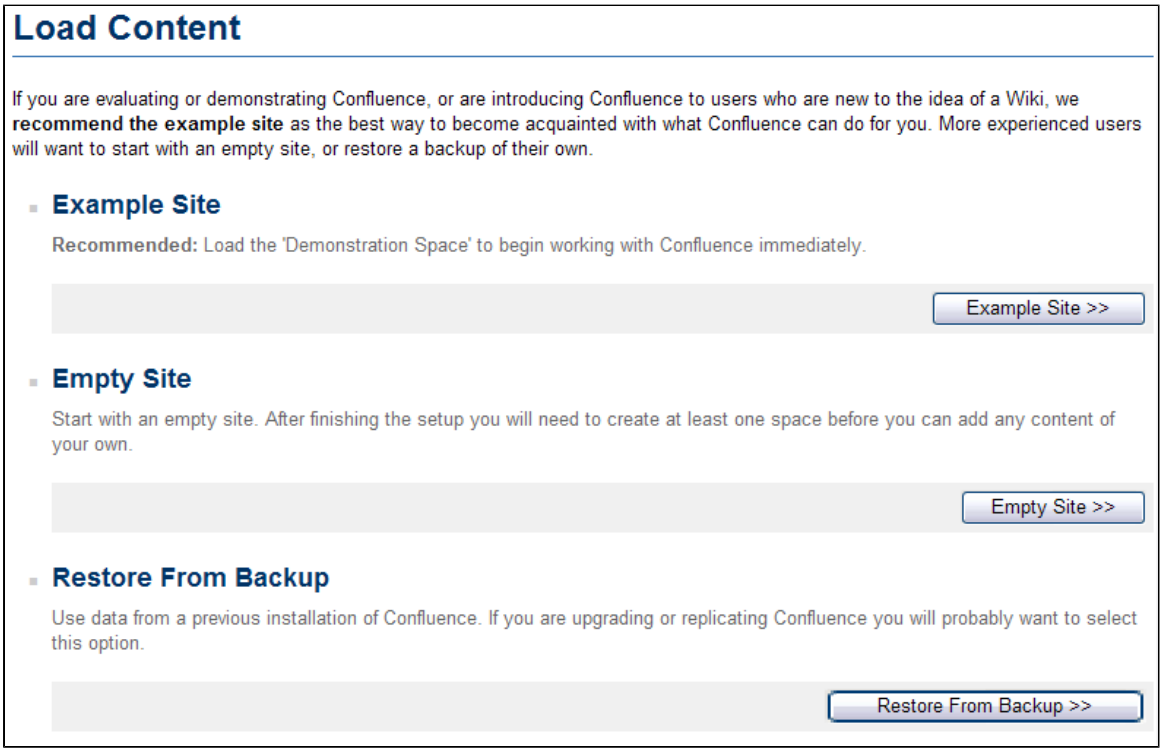
- What kind of database you're connecting to, so you can tell Confluence which dialect it needs to use.

6. Production Installation: Load Content



Screenshot above: Load content

Select one of the following options:

- **Example Site** — This option will load Confluence's 'Demonstration Space'. Select this if you are using Confluence for the first time, or if you want the Demonstration Space for your other Confluence users. The Demonstration Space helps to familiarise you with Confluence and what it can do for you. You can then continue using your Confluence deployment as normal — there's no need to reinstall later.
- **Empty Site** — Select this option if you are already familiar with Confluence. You will need to create at least one space before you can start adding content to the site.
- **Restore from Backup** — Select this option if you want to use Confluence data from a previous installation.

7. Production Installation: Restore Data from Backup

This option allows you to reload your data from an existing Confluence installation into your new Confluence site during the initial setup procedure. You can choose to upload data from a zipped backup file, or to restore from a backup file on your file system.

Option 1: Upload a zipped backup to Confluence — This option will load the data from a zipped backup file. ✅ To create a backup file from your existing version of Confluence, go to the '**Backup & Restore**' section of your **Administration Console**.

To restore from a zipped backup:

1. Browse for the relevant daily backup file or a file you have created via a manual backup.
2. Check '**Build Index'** to build the data index, used for the search.
3. Click the '**Upload and Restore**' button.

Option 2: Restore a backup from the filesystem — This option is recommended if you have a very large daily backup file (greater than 100MB), or a daily backup file that is already on the server and doesn't require

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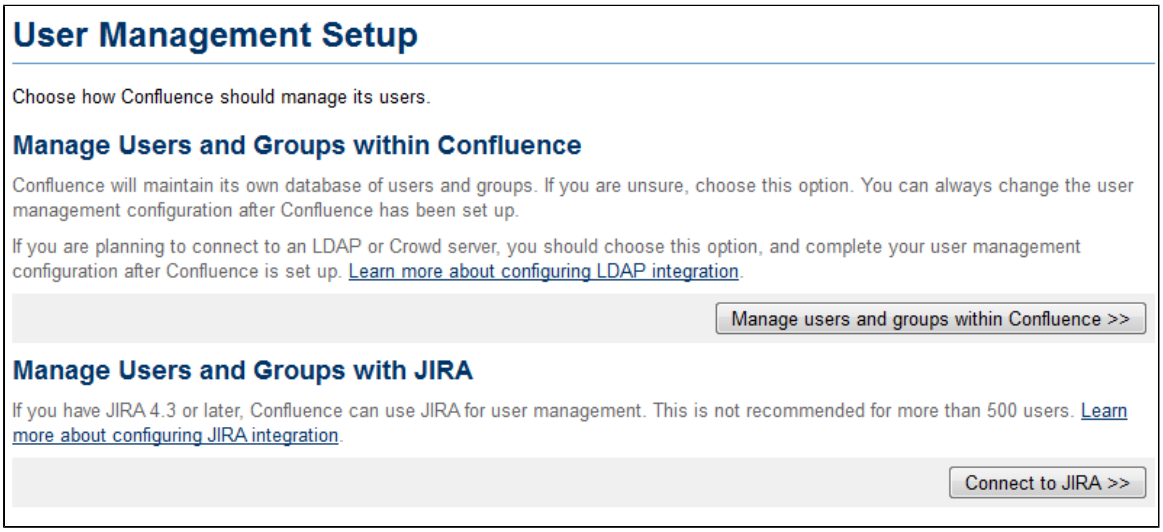
uploading.

1. Copy the XML backup file into the `restore` directory inside your confluence Home directory and then refresh the page. You should now see your backup file appear on the '**Restore Data**' screen (pictured above), in the box beneath the heading '**Restore a backup from the filesystem**'.
2. Check '**Build Index'** to build the data index, used for the search.
3. Click the '**Restore**' button.

When the restore process has finished, you are ready to log in to Confluence. The system administrator account and all other information has been transferred from your previous Confluence installation.

8. Production Installation: Set Up User Management



Screenshot above: User management

You can choose to manage Confluence's users and groups inside Confluence or in JIRA.

- If you do not have Atlassian JIRA installed, or if you would prefer to set up external user management later, choose **Manage users and groups within Confluence**.
- If you have JIRA installed, the setup wizard gives you the opportunity to configure the JIRA connection automatically. This is a quick way of setting up your JIRA integration with the most common options. It will configure a JIRA user directory for Confluence, and set up application links between JIRA and Confluence for easy sharing of data. Choose **Connect to JIRA**.

9. Production Installation: Connect to JIRA

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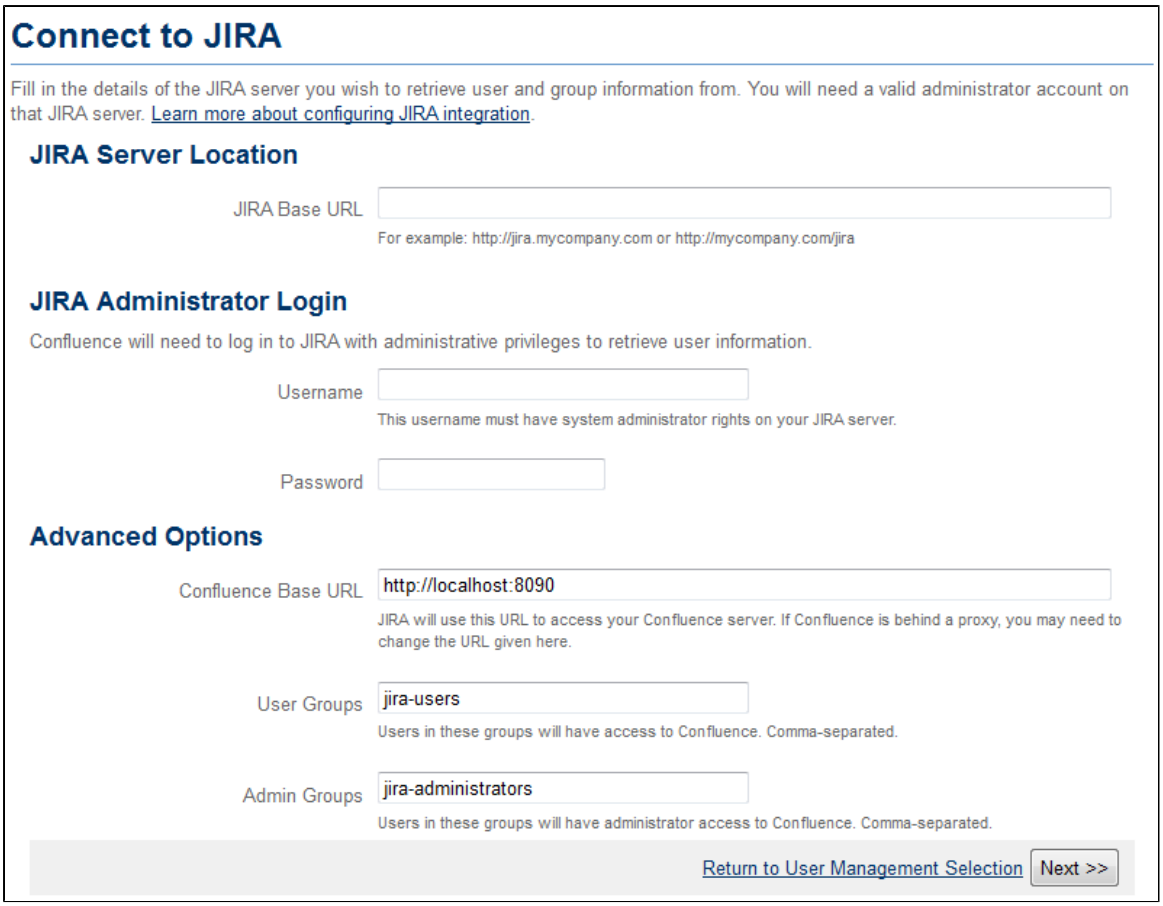

Screenshot above: Connecting to JIRA in the Confluence setup wizard

Enter the following information:

- **JIRA Base URL** – The web address of your JIRA server. Examples:

```
http://www.example.com:8080/jira/
http://jira.example.com
```

- **JIRA Administrator Login: Username** – Enter the username of a user with the 'JIRA System Administrators' global permission in JIRA.
- **JIRA Administrator Login: Password** – Enter the password that the above user uses to sign in to JIRA.
- **Confluence Base URL** – JIRA will use this URL to access your Confluence server. The URL you give here will override the base URL specified in your Confluence administration console, for the purposes of the JIRA connection.
- **User Groups** – Specify one or more JIRA groups whose members should be able to use Confluence. The default group is `jira-users`. (These groups will receive the 'can use' permission in Confluence.)
- **Admin Groups** – Specify one or more JIRA groups whose members should have administrative access to Confluence. The default group is `jira-administrators`. (These groups will receive the 'Confluence system administrator' and 'Confluence administrator' permissions in Confluence.)

For full details and a troubleshooting guide, see Configuring JIRA Integration in the Setup Wizard.

10. Set Up System Administrator

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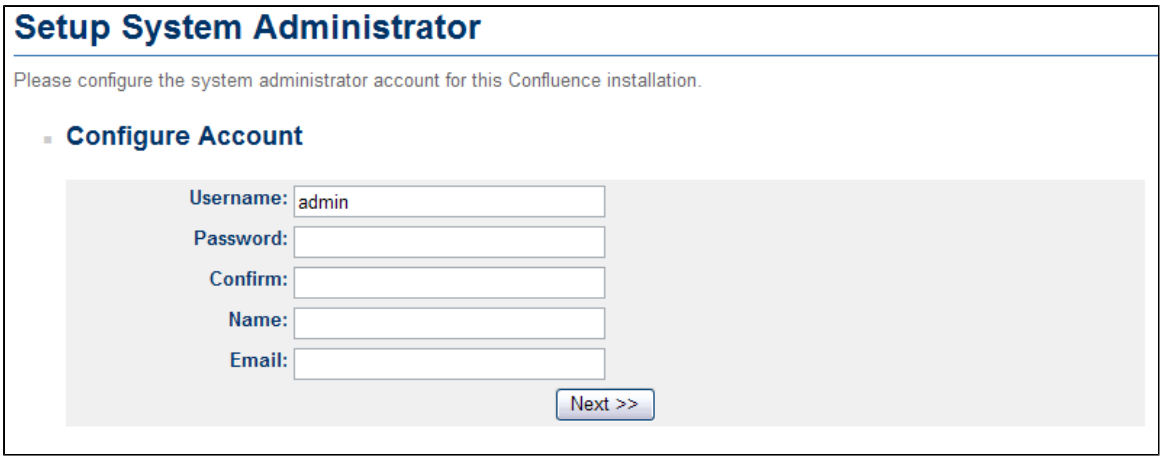


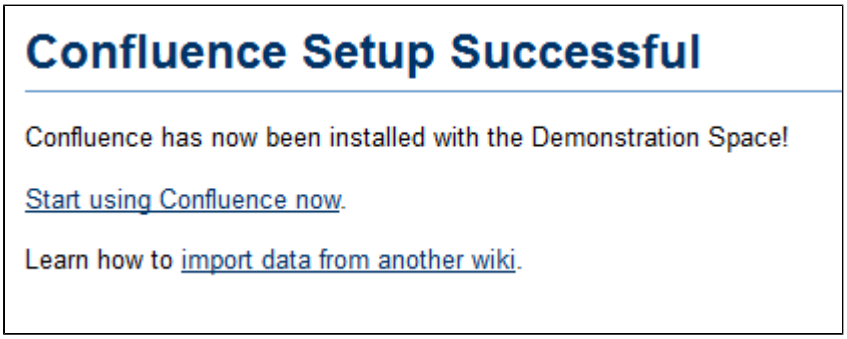
Screenshot above: System administrator

The system administrator has full administrative power over your Confluence instance. This person will be able to add more users, create spaces, and set further Confluence options. Please refer to the overview of global permissions for more information.

> **Hint: If you are evaluating Confluence, set yourself up as the administrator.**

1. Enter the following information to set up your system administrator's user account:
   - **Username** — The username under which the system administrator will log in to Confluence, e.g. 'jsmith'.
   - **Password** — The password which the system administrator will use to log in.
   - **Confirm** — Enter the same password again.
   - **Name** — The system administrator's full name, e.g. 'John Smith'.
   - **Email** — The system administrator's email address, e.g. 'jsmith@example.com'.
2. Click '**Next**'.

11. Setup is Complete



Screenshot above: Setup is complete

Congratulations! You have installed and set up Confluence. Click the **Start using Confluence now** link to open the **Demonstration space** in your Confluence wiki. This space contains some sample content and ideas, to help you get started quickly.

If you wish, you can click the link to learn how to **import data from another wiki**. This link leads to an overview page on your own Confluence server, containing information about the Universal Wiki Converter, an application that you can use to import data from other wiki types such as MediaWiki, DokuWiki and others.

RELATED TOPICS

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Confluence 101
Documentation Home

External Database

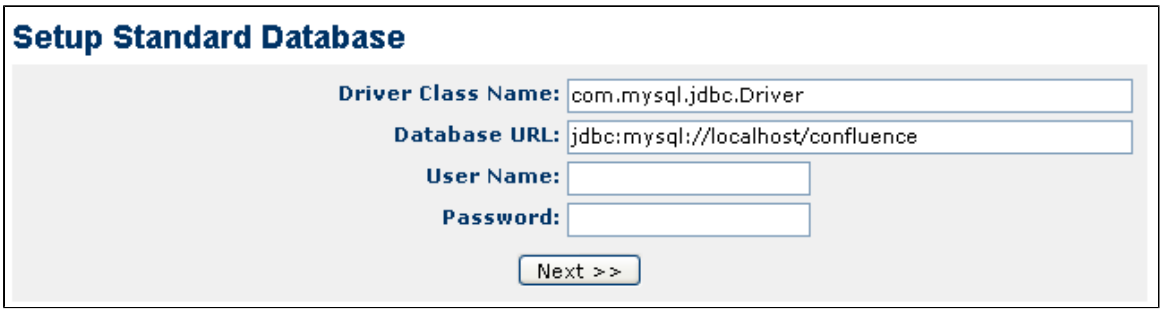
Custom Installation - Connecting to an External Database

This page is part of the Confluence Setup Guide.

> **Before you Start**
> - **Character encoding:**
  - We strongly recommend that character encoding is consistent across your database, application server and web application, and that you use **UTF-8** enco ding.
  - Before setting up your database, please read about configuring character encoding.
- **Database name:** When creating a new external database, give it the name '**confluen ce**'.

You can choose to configure your database via a standard JDBC connection or via a server-managed datasource connection. Choose one of the two options below.

Option 1: Standard Database Connection — This uses a standard JDBC database connection. Connection pooling is handled within Confluence.



Screenshot above: Standard (JDBC) connection

Supply the following information:

- **Driver Class Name** — The Java class name for the appropriate database driver. This will depend on the JDBC driver, and will be found in the documentation for your database. You will also need to put the appropriate database driver 'jar' file in the server's classpath. For the Confluence distribution, this means copying the jar file into the `<confluence-install>/lib` directory.
- **Database URL** — The JDBC URL for the database you will be connecting to. This will depend on the JDBC driver, and will be found in the documentation for your database.
- **User Name** — A valid username which Confluence will use to access your database.
- **Password** — The password corresponding to the above username.

You will also need to know:

- The size of the connection pool Confluence should maintain. If in doubt, just go with the default provided.
- What kind of database you're connecting to, so you can tell Confluence which dialect it needs to use.

Option 2: Datasource Connection — This asks the Java application server for a database connection. You will

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need to have configured a datasource into your application server.

Screenshot above: Datasource connection

Supply the following information:

- **Datasource Name** — The JNDI name of the datasource, as configured in the application server.
  Note: Some servers will have JNDI names like `jdbc/datasourcename`; others will be of the form `java:comp/env/jdbc/datasourcename`. Consult your application-server documentation.

You will also need to know:

- What kind of database you're connecting to, so you can tell Confluence which dialect it needs to use.

Next Step

Load content for the site

RELATED TOPICS

Database Configuration
Confluence Setup Guide
Confluence User's Guide
Confluence Documentation Home

Load Content for the Site

This page is part of the Confluence Setup Guide.

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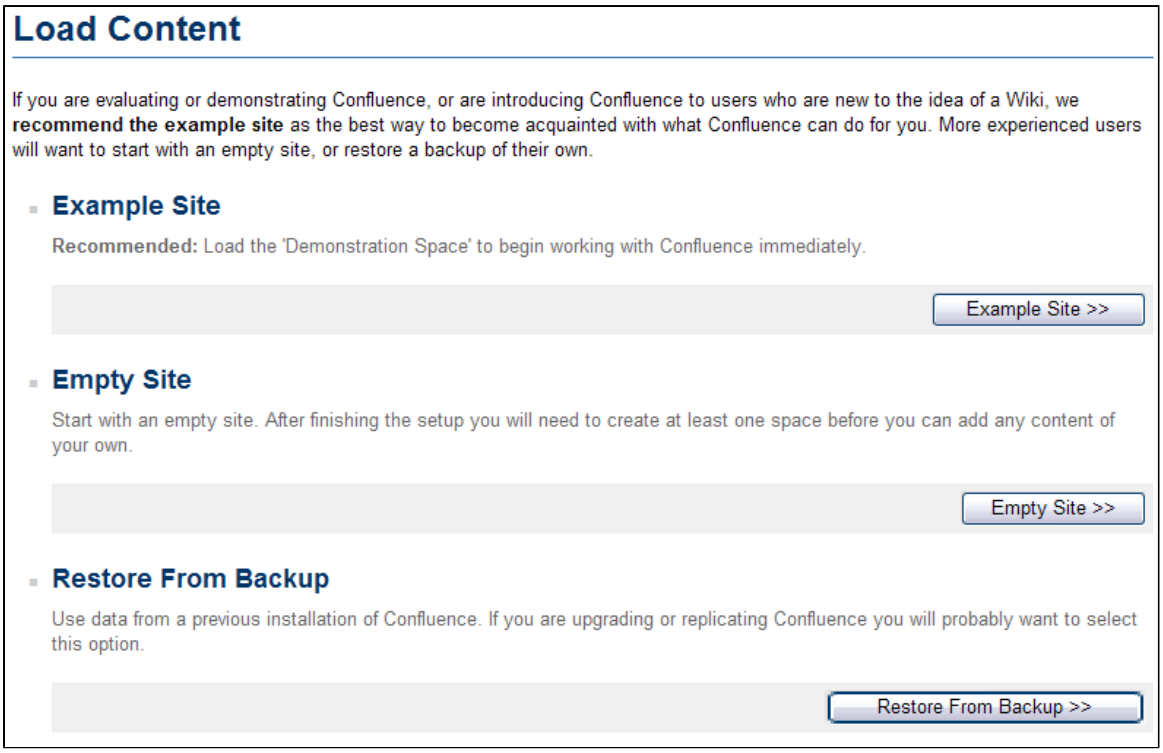

Screenshot above: Load content

Select one of the following options:

- **Example Site** — This option will load Confluence's 'Demonstration Space'. Select this if you are using Confluence for the first time, or if you want the Demonstration Space for your other Confluence users. The Demonstration Space helps to familiarise you with Confluence and what it can do for you. You can then continue using your Confluence deployment as normal — there's no need to reinstall later.
- **Empty Site** — Select this option if you are already familiar with Confluence. You will need to create at least one space before you can start adding content to the site.
- **Restore from Backup** — Select this option if you want to use Confluence data from a previous installation.

Next Steps

Restore your data from backup, if you have chosen that option.
Start using Confluence — see the Confluence User's Guide.

RELATED TOPICS

Confluence Setup Guide
Universal Wiki Converter
Confluence User's Guide
Confluence Documentation Home

Restoring from Backup During Setup

This page is part of the Confluence Setup Guide.

This option allows you to reload your data from an existing Confluence installation into your new Confluence

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site during the initial setup procedure. You can choose to upload data from a zipped backup file, or to restore from a backup file on your file system.

Option 1: Upload a zipped backup to Confluence — This option will load the data from a zipped backup file. ✅ To create a backup file from your existing version of Confluence, go to the '**Backup & Restore**' section of your **Administration Console**.

To restore from a zipped backup:

1. Browse for the relevant daily backup file or a file you have created via a manual backup.
2. Check '**Build Index'** to build the data index, used for the search.
3. Click the '**Upload and Restore**' button.

Option 2: Restore a backup from the filesystem — This option is recommended if you have a very large daily backup file (greater than 100MB), or a daily backup file that is already on the server and doesn't require uploading.

1. Copy the XML backup file into the `restore` directory inside your confluence Home directory and then refresh the page. You should now see your backup file appear on the '**Restore Data**' screen (pictured above), in the box beneath the heading '**Restore a backup from the filesystem**'.
2. Check '**Build Index'** to build the data index, used for the search.
3. Click the '**Restore**' button.

ℹ When the restore process has finished, you are ready to log in to Confluence. The system administrator account and all other information has been transferred from your previous Confluence installation.

RELATED TOPICS

Confluence Setup Guide
Confluence User's Guide
Confluence Documentation Home

Configuring JIRA Integration in the Setup Wizard

This page describes the **Connect to JIRA** step in the Confluence setup wizard.

Overview

You can connect your application to a JIRA server, to manage your users via JIRA and share information with JIRA. When you are installing the application, the setup wizard gives you the opportunity to configure the JIRA connection automatically. This is a quick way of setting up your JIRA integration with the most common options.

You can also configure the JIRA connections via the application administration screens. In that case, you will need to set up connections individually. There are two parts to the integration process:

- A peer-to-peer link between JIRA and the application for sharing information and facilitating integration features. This link is set up via Application Links.
- A client-server link between the application and JIRA for delegating user and group management to your JIRA server.

Requirements: You need JIRA 4.3 or later.

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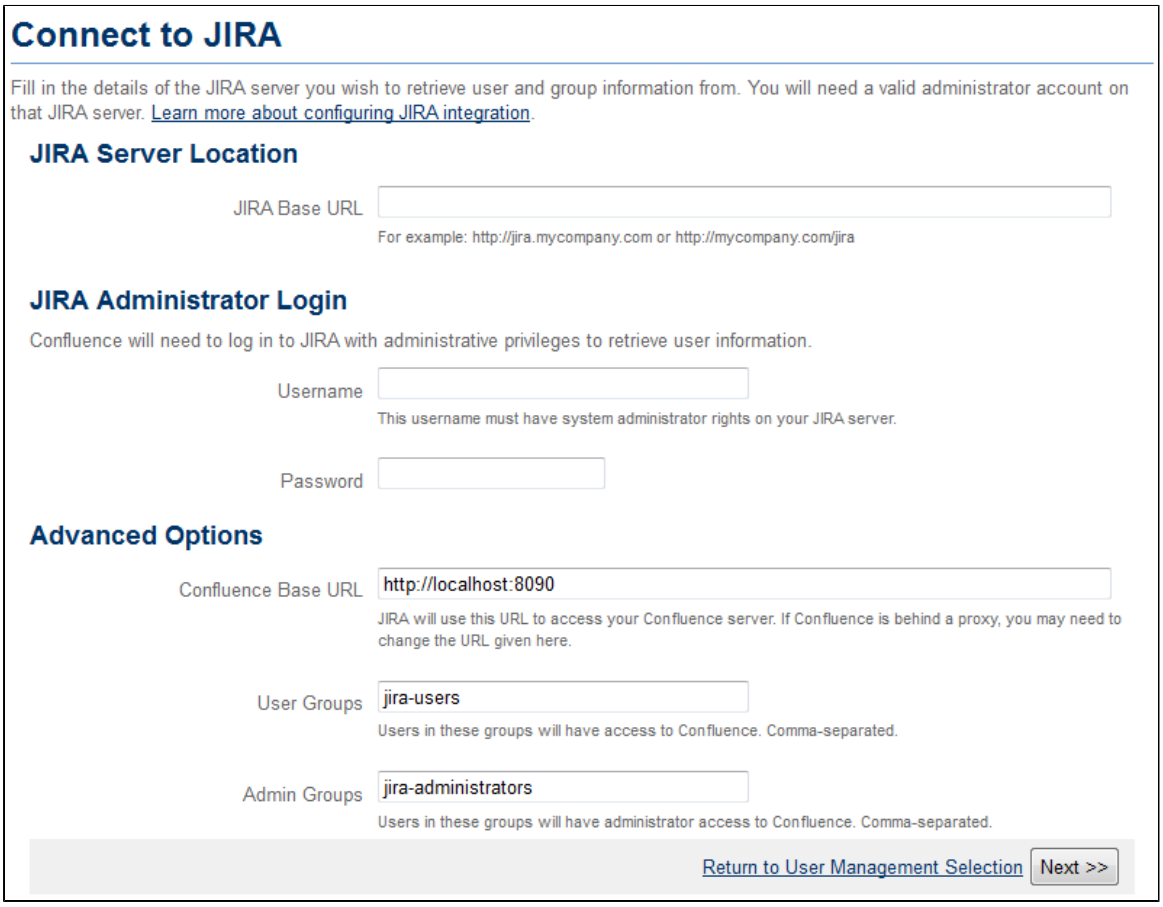
On this page:

- Overview
- Connecting to JIRA in the Setup Wizard
- Troubleshooting
  - Solution 1: Removing a Partial Configuration – The Easiest Way
  - Solution 2: Removing a Partial Configuration – The Longer Way
- Notes

Connecting to JIRA in the Setup Wizard



Screenshot above: Connecting to JIRA in the Confluence setup wizard

Enter the following information:

- **JIRA Base URL** – The web address of your JIRA server. Examples:

```
http://www.example.com:8080/jira/
http://jira.example.com
```

- **JIRA Administrator Login: Username** – Enter the username of a user with the 'JIRA System Administrators' global permission in JIRA.
- **JIRA Administrator Login: Password** – Enter the password that the above user uses to sign in to JIRA.
- **Confluence Base URL** – JIRA will use this URL to access your Confluence server. The URL you give here will override the base URL specified in your Confluence administration console, for the purposes of the JIRA connection.
- **User Groups** – Specify one or more JIRA groups whose members should be able to use Confluence.

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The default group is `jira-users`. (These groups will receive the 'can use' permission in Confluence.)
- **Admin Groups** – Specify one or more JIRA groups whose members should have administrative access to Confluence. The default group is `jira-administrators`. (These groups will receive the 'Confluence system administrator' and 'Confluence administrator' permissions in Confluence.)

Troubleshooting

This section describes the possible problems that may occur when integrating your application with JIRA via the setup wizard, and the solutions for each problem.

Symptom	Cause	Solution
The setup wizard displays one of the following error messages: • Failed to create application link from JIRA server at <URL> to this <application> server at <URL>. • Failed to create application link from this <application> server at <URL> to JIRA server at <URL>. • Failed to authenticate application link from JIRA server at <URL> to this <application> server at <URL>. • Failed to authenticate application link from <application> server at <URL> to this JIRA server at <URL>.	The setup wizard failed to complete registration of the peer-to-peer application link with JIRA. JIRA integration is only partially configured.	Remove the partial configuration if it exists, try the 'Connect to JIRA' step again, and then continue with the setup. Detailed instructions are below.
The setup wizard displays one of the following error messages: • Failed to register <application> configuration in JIRA for shared user management. Received invalid response from JIRA: <response> • Failed to register <application> configuration in JIRA for shared user management. Received: <response>	The setup wizard failed to complete registration of the client-server link with JIRA for user management. The peer-to-peer link was successfully created, but integration is only partially configured.	Remove the partial configuration if it exists, try the 'Connect to JIRA' step again, and then continue with the setup. Detailed instructions are below.

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The setup wizard displays the following error message: • Error setting Crowd authentication	The setup wizard successfully established the peer-to-peer link with JIRA, but could not persist the client-server link for user management in your `config.xml` file. This may be caused by a problem in your environment, such as a full disk.	Please investigate and fix the problem that prevented the application from saving the configuration file to disk. Then remove the partial configuration if it exists, try the 'Connect to JIRA' step again, and then continue with the setup. Detailed instructions are below.
The setup wizard displays the following error message: • Error reloading Crowd authentication	The setup wizard has completed the integration of your application with JIRA, but is unable to start synchronizing the JIRA users with your application.	Restart your application. You should then be able to continue with the setup wizard. If this solution does not work, please contact Atlassian Support.
The setup wizard displays the following error message: • An error occurred: java.lang.IllegalStateException: Could not create the application in JIRA/Crowd (code: 500). Please refer to the logs for details.	The setup wizard has not completed the integration of your application with JIRA. The links are only partially configured. The problem occurred because there is already a user management configuration in JIRA for this <application> URL.	Remove the partial configuration if it exists, try the 'Connect to JIRA' step again, and then continue with the setup. Detailed instructions are below.
No users can log in after you have set up the application with JIRA integration.	Possible causes: • There are no users in the group that you specified on the 'Connect to JIRA' screen. • For FishEye: There are no groups specified in the 'groups to synchronize' section of your administration console. • For Stash: You may not have granted any JIRA groups or users permissions to log in to Stash.	Go to JIRA and add some usernames to the group. • For FishEye: Go to the FishEye administration screens and specify at least one group to synchronize. The default is '**jira-users**'. • For Stash: Grant the **Stash User** permission to the relevant JIRA groups on the Stash Global permissions page. If this solution does not work, please contact Atlassian Support.

Solution 1: Removing a Partial Configuration – The Easiest Way

If the application's setup wizard fails part-way through setting up the JIRA integration, you may need to remove the partial configuration from JIRA before continuing with your application setup. Please follow the steps below.

Remove the partial configuration if it exists, try the 'Connect to JIRA' step again, and then continue with the setup wizard:

1. Log in to JIRA as a user with the '**JIRA System Administrators**' global permission.
2. Click the '**Administration**' link on the JIRA top navigation bar.
3. Remove the application link from JIRA, if it exists:
    a. Click '**Application Links**' in the JIRA administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
    b. Look for a link to your application. It will have a base URL of the application linked to JIRA. For

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example:
- If you want to remove a link between JIRA and FishEye, look for the one where the '**Application URL**' matches the base URL of your FishEye server.
- If you want to remove a link between JIRA and Confluence, look for the one where the '**Application URL**' matches the base URL of your Confluence server.
- If you want to remove a link between JIRA and Stash, look for the one where the '**Application URL**' matches the base URL of your Stash server.

c. Click the '**Delete**' link next to the application link that you want to delete.
d. A confirmation screen will appear. Click the '**Confirm**' button to delete the application link.

4. Remove the user management configuration from JIRA, if it exists:
   a. Go to the JIRA administration screen for configuring the applications that have been set up to use JIRA for user management:
      - In JIRA 4.3: Click '**Other Applications**' in the '**Users, Groups & Roles**' section of the JIRA administration screen.
      - In JIRA 4.4: Select **'Administration' > 'Users' > 'JIRA User Server'**.
   b. Look for a link to your application. It will have a name matching this format:

```
<Type> - <HostName> - <Application ID>
```

For example:

```
FishEye / Crucible - localhost -
92004b08-5657-3048-b5dc-f886e662ba15
```

Or:

```
Confluence - localhost - 92004b08-5657-3048-b5dc-f886e662ba15
```

If you have multiple servers of the same type running on the same host, you will need to match the application ID of your application with the one shown in JIRA. To find the application ID:
- Go to the following URL in your browser:

```
<baseUrl>/rest/applinks/1.0/manifest
```

Replace `<baseUrl>` with the base URL of your application.
For example:

```
http://localhost:8060/rest/applinks/1.0/manifest
```

- The application links manifest will appear. Check the application ID in the `<id>` element.

   c. In JIRA, click '**Delete**' next to the application that you want to remove.
5. Go back to the setup wizard and try the 'Connect to JIRA' step again.

Solution 2: Removing a Partial Configuration – The Longer Way

If solution 1 above does not work, you may need to remove the partial configruration and then add the full integration manually. Please follow these steps:

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1. Skip the 'Connect to JIRA' step and continue with the setup wizard, to complete the initial configuration of the application.
2. Log in to JIRA as a user with the '**JIRA System Administrators**' global permission.
3. Click the '**Administration**' link on the JIRA top navigation bar.
4. Remove the application link from JIRA, if it exists:
   a. Click '**Application Links**' in the JIRA administration menu. The 'Configure Application Links' page will appear, showing the application links that have been set up.
   b. Look for a link to your application. It will have a base URL of the application linked to JIRA. For example:
      - If you want to remove a link between JIRA and FishEye, look for the one where the '**Application URL**' matches the base URL of your FishEye server.
      - If you want to remove a link between JIRA and Confluence, look for the one where the '**Application URL**' matches the base URL of your Confluence server.
      - If you want to remove a link between JIRA and Stash, look for the one where the '**Application URL**' matches the base URL of your Stash server.
   c. Click the '**Delete**' link next to the application link that you want to delete.
   d. A confirmation screen will appear. Click the '**Confirm**' button to delete the application link.
5. Remove the user management configuration from JIRA, if it exists:
   a. Go to the JIRA administration screen for configuring the applications that have been set up to use JIRA for user management:
      - In JIRA 4.3: Click '**Other Applications**' in the '**Users, Groups & Roles**' section of the JIRA administration screen.
      - In JIRA 4.4: Select **'Administration' > 'Users' > 'JIRA User Server'**.
   b. Look for a link to your application. It will have a name matching this format:

```
<Type> - <HostName> - <Application ID>
```

For example:

```
FishEye / Crucible - localhost -
92004b08-5657-3048-b5dc-f886e662ba15
```

Or:

```
Confluence - localhost - 92004b08-5657-3048-b5dc-f886e662ba15
```

If you have multiple servers of the same type running on the same host, you will need to match the application ID of your application with the one shown in JIRA. To find the application ID:

- Go to the following URL in your browser:

```
<baseUrl>/rest/applinks/1.0/manifest
```

Replace `<baseUrl>` with the base URL of your application.
For example:

```
http://localhost:8060/rest/applinks/1.0/manifest
```

- The application links manifest will appear. Check the application ID in the `<id>` element.

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   c. In JIRA, click '**Delete**' next to the application that you want to remove.
6. Add the application link in JIRA again, so that you now have a two-way trusted link between JIRA and your application:
   a. Click '**Add Application Link**'. Step 1 of the link wizard will appear.
   b. Enter the **server URL** of the application that you want to link to (the 'remote application').
   c. Click the '**Next**' button.
   d. Enter the following information:
      - '**Create a link back to this server**' – Tick this check box to add a two-way link between the two applications.
      - '**Username**' and '**Password**' – Enter the credentials for a username that has administrator access to the remote application.
        Note: These credentials are only used to authenticate you to the remote application, so that Application Links can make the changes required for the new link. The credentials are not saved.
      - '**Reciprocal Link URL**' – The URL you give here will override the base URL specified in your remote application's administration console, for the purposes of the application links connection. Application Links will use this URL to access the remote application.
   e. Click the '**Next**' button.
   f. Enter the information required to configure authentication for your application link:
      - '**The servers have the same set of users**' – Tick this check box, because the users are the same in both applications.
      - '**These servers fully trust each other**' – Tick this check box, because you trust the code in both applications and are sure both applications will maintain the security of their private keys.
        For more information about configuring authentication, see Configuring Authentication for an Application Link.
   g. Click the '**Create**' button to create the application link.
7. Configure a new connection for user management in JIRA:
   a. Go to the JIRA administration screen for configuring the applications that have been set up to use JIRA for user management:
      - In JIRA 4.3: Click '**Other Applications**' in the '**Users, Groups & Roles**' section of the JIRA administration screen.
      - In JIRA 4.4: Select **'Administration' > 'Users' > 'JIRA User Server'**.
   b. **Add** an application.
   c. Enter the **application name** and **password** that your application will use when accessing JIRA.
   d. Enter the **IP address** or addresses of your application. Valid values are:
      - A full IP address, e.g. `192.168.10.12`.
      - A wildcard IP range, using CIDR notation, e.g. `192.168.10.1/16`. For more information, see the introduction to CIDR notation on Wikipedia and RFC 4632.
      - **Save** the new application.
8. Set up the JIRA user directory in the application.
   - For Confluence:
     a. Go to the **Confluence Administration Console**.
     b. Click '**User Directories**' in the left-hand panel.
     c. **Add** a directory and select type '**Atlassian JIRA**'.
     d. Enter the following information:
        - **Name** – Enter the name of your JIRA server.
        - **Server URL** – Enter web address of your JIRA server. Examples:

```
http://www.example.com:8080/jira/
http://jira.example.com
```

        - **Application name** and **Application password** – Enter the values that you defined for Confluence in the settings on JIRA.

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    e. Save the directory settings.
    f. Define the **directory order** by clicking the blue up- and down-arrows next to each directory on the '**User Directories**' screen.
       For details see Connecting to Crowd or JIRA for User Management.
- For FishEye/Crucible:
    a. Click '**Authentication**' on the FishEye/Crucible '**Admin Menu**'.
    b. Click '**Edit**' in the section titled '**JIRA or Crowd Authentication**'.
    c. Enter the following information:
        - **Application name** and **Application password** – Enter the values that you defined for your application in the settings on JIRA.
        - **JIRA/Crowd URL**– The web address of your JIRA server. Examples:

```
http://www.example.com:8080/jira/
http://jira.example.com
```

        - **Auto-add** – Select '**Create a FishEye/Crucible user on successful login**' (default) to ensure that your JIRA users will be automatically enrolled into FishEye/Crucible when they first log in via JIRA.
        - **Synchronize users with JIRA/Crowd** – Select '**Yes**' (default) to ensure that JIRA will synchronize all changes in the user information on a regular basis. The **synchronization interval** is set to 60 minutes (1 hour) by default.
        - **Single sign on (SSO)** – Select '**Disabled**'. This option is not available when using JIRA for user management and if enabled will make the integration fail.
        - **Groups of users to synchronize** – Select at least one group to synchronize. The default is '**jira-users**'.
    d. Click '**Apply changes**'.
- For Stash:
    a. Go to the **Stash Administration Console**.
    b. Click '**User Directories**' in the left-hand panel.
    c. **Add** a directory and select type '**Atlassian JIRA**'.
    d. Enter the following information:
        - **Name** – Enter the name of your JIRA server.
        - **Server URL**– Enter web address of your JIRA server. Examples:

```
http://www.example.com:8080/jira/
http://jira.example.com
```

        - **Application name** and **Application password** – Enter the values that you defined for Stash in the settings on JIRA.
    e. Save the directory settings.
    f. Define the **directory order** by clicking the blue up- and down-arrows next to each directory on the '**User Directories**' screen.
       For details see Connecting to JIRA for user management.

Notes

- When you connect to JIRA in the setup wizard, the setup procedure will configure **Trusted Applications authentication** for your application. Please be aware of the following security implications:
    - Trusted applications are a **potential security risk**. When you configure Trusted Applications authentication, you are allowing one application to access another as any user. This allows all of the built-in security measures to be bypassed. Do not configure a trusted application unless you know that all code in the application you are trusting will behave itself at all times, and you are sure that the application will maintain the security of its private key.

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- In the next step, you will specify the username and password of your **Confluence system administrator**. If you have connected to JIRA, the setup wizard will add the Confluence administrator's username and password to both JIRA and Confluence. This is done so that you can still access Confluence even if JIRA is down. Please note that the password in Confluence is not linked to the password in JIRA. If you subsequently change the administrator's password, only the password in JIRA will change. This is because the JIRA user directory is placed first in the list of user directories. See Managing Multiple Directories.

Related Topics

User Management Limitations and Recommendations
Confluence Setup Guide
Configuring Application Links

Upgrading Confluence

This document describes the standard, recommended procedure for upgrading to **Confluence Latest** Use this procedure when upgrading from Confluence version 3.5 or later on Windows or Linux.

Notes:

- **Clustered Confluence.** The automatic installer/upgrader does not support upgrading clustered installatio ns of Confluence. See Upgrading a Confluence Cluster.
- **Upgrading from an early version of Confluence.** If you are upgrading from a version earlier than Confluence 3.5, you will need to use manual upgrade procedure. See Upgrading Confluence Manually.
- **Moving to a different OS, database or file location.** If you are changing the operating system that will run Confluence, the database it is using, or the location of its files, you will need to use manual upgrade procedure. See Upgrading Confluence Manually.

Upgrading to Confluence 4.3?

If so, please review the Confluence 4.3 Release Notes for important information about this version of Confluence. Ensure that you have read the Confluence 4.3 Known Issues in the Confluence Knowledge Base.

Also, we strongly recommend that you check the upgrade notes for every major version of Confluence that you are skipping, since there might be specific changes between Confluence versions that could affect your Confluence installation. The upgrade notes for recent major versions of Confluence are accessible from the Upgrade Notes Overview page.

Finally, please check the Supported Platforms page to ensure that your Java version, operating system, application server, database and browser are supported for this release of Confluence. The End of Support Announcements for Confluence page has important information regarding supported platforms.

On this page:

- Before you Start
- Backing Up
- Testing the Upgrade in a Test Environment
  - Upgrade Overview
  - Performing the Upgrade
    - Upgrading Confluence on Windows
    - Upgrading Confluence on Linux
  - Upgrade Check List
    - Back Up Your External Database

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- Check Plugin Compatibility

Before you Start

> **Changing your Database?**
>
> If you are planning to change to a different database, we recommend that you complete the Confluence upgrade first. Then follow the instructions on migrating to a different database.

1. Note that you need current software maintenance to perform the upgrade.
2. Confirm that your license support period is still valid before you try to upgrade.
3. If your current license has expired but you have a new license with you, please update your license in Confluence before performing the upgrade.
   ⚠ If you forget to do this and your license has expired, you will receive errors during the upgrade process. Refer to the instructions on upgrading beyond current license period.
4. Check the release notes for the new version of Confluence you are installing, plus the upgrade notes for any major versions you are skipping. It is important to read these upgrade notes as there might be specific changes between Confluence versions that could affect your Confluence instance. The upgrade notes pages for recent major versions of Confluence are accessible from the Upgrade Notes Overview page. (Each upgrade notes page is a 'child' of its respective release notes page.)
5. Make sure that your environment (e.g. the database system, the operating system, the application server and so on) still complies with the Confluence System Requirements. A newer version of Confluence may have different requirements than the previous version.
6. If you are using Confluence EAR-WAR edition, check Installing the Confluence EAR-WAR Edition to see if there is anything extra you will need to do to get Confluence running.
7. If you are using an external database, familiarise yourself with all known issues for your specific database. Also make sure the Confluence database connector principal (the database user account) has sufficient permissions to modify the database schema.
8. Note which plugins are installed and enabled on your current Confluence instance. Please verify whether a compatible version of the plugin is available in the version of Confluence you are upgrading to. This information is available via the '**Plugins**' menu in your **Administration** screens, and selecting **Confluence Upgrade Check**. This will tell you which plugins have an updated version which is compatible with your target upgrade version. You can also check the respective home pages for these plugins on the Atlassian Plugin Exchange. Once you have confirmed the availability of compatible versions, you should upgrade your plugins after successfully upgrading Confluence. Please test these first by applying them to the latest Confluence version in a test environment.
9. If you have made any customisations to Confluence, please verify their compatibility in the latest version. For example, if you have modified any layouts or are using your own custom theme, please test these first by applying them to the latest Confluence version in a test environment. You can see the customisations applied to your Confluence installation.
10. Some anti-virus or other Internet security tools may interfere with the Confluence upgrade process and prevent the process from completing successfully. If you experience or anticipate experiencing such an issue with your anti-virus/Internet security tool, disable this tool first before proceeding with the Confluence upgrade.
11. After upgrading, Confluence may need to rebuild its indexes. If this happens, there may be some extra load placed on the server following the upgrade. Make sure to schedule any upgrade of production Confluence outside of hours where people need to use it.

Backing Up

Before you begin the Confluence upgrade, you must back up the following:

1. **Back up your Confluence Home directory.** The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in

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this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'. The location of the Home directory is stored in a configuration file called `confluence-init.properties`, which is located inside the `confluence/WEB-INF/classes` directory in your Confluence Installation directory. ℹ The Confluence installer will automatically prompt you to run a backup, storing the files in a .zip archive at the same level as your Confluence Home directory.

2. **Back up your database.** Perform a manual backup of your external database before proceeding with the upgrade, and double check that the backup was actually created properly. If you are not a database expert, or unfamiliar with the backup-restore facilities of your database, simply restore the backup to a different system to ensure the backup worked before proceeding. This recommendation is generally a good best practice. Surprisingly, many companies get in trouble for broken database backups because they skip this basic but vital "smoke test" of the operation.
ℹ The 'embedded database' is the HSQLDB database supplied with Confluence for evaluation purposes. You don't need to back it up since it is stored in the Confluence home directory. You should not be using this database for production systems at all, so if you happen to be using HSQLDB in a production system, please migrate to a proper database **before** the upgrade. Read about the various shortcomings of HSQLDB.
3. **Back up your Confluence Installation directory or your Confluence webapp** (if you are using Confluence EAR-WAR edition). ℹ The Confluence installer will automatically back up these files, storing the files in a .zip archive at the same level as your Confluence installation directory. The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory is also sometimes called the 'Confluence Install directory'.

Testing the Upgrade in a Test Environment

⛔ **Be sure to test the upgrade in a test environment before proceeding on your production server.**

1. Create a snapshot of your current production Confluence environment on a test server, as described in the page on Moving Confluence Between Servers.

XML imports

⚠ Importing an old XML backup file to a new major version (i.e Confluence 3.5 to Confluence 4.0) **is not recommended**. Please recreate your production instance in a test environment first.

2. Perform the upgrade on your cloned environment.

3. Test all your unsupported plugins and any customisations with the new version before proceeding on your production server. You can read more about supported and unsupported plugins.

RELATED TOPICS

Upgrading Confluence

Upgrade Overview

The upgrade feature of the Linux and Windows Installers automates the following tasks for you:

1. Backs up the Installation and Home Directories of the existing Confluence installation to be upgraded.
2. Installs **Confluence Latest** whilst migrating the following from your existing Confluence installation to the new **Confluence Latest** installation:
    - TCP port values in your existing Confluence installation's `server.xml` file. ⚠ Be aware that other

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configurations or customisations in this file are not migrated during upgrade, and will need to be re-applied.
- Custom values in your existing Confluence installation's `confluence-init.properties` (confluence.home property) and `setenv.sh` / `setenv.bat` files (JAVA_OPTS parameters)

The upgrade feature detects and notifies you of any files in the `confluence` subdirectory of your existing Confluence Installation Directory which have been deleted, added or modified from a 'default' Confluence installation. This informs you of any customisations you will need to migrate manually over to your upgraded Confluence installation directory. Note that modifications to files in directories other than `confluence` will not be detected when you upgrade to Confluence 4.0, for example any modifications to start-up scripts under the `bin` directory will not be detected. The next time you upgrade (e.g. to version 4.0.1) the the upgrade feature will cover modifications across the whole Confluence Installation Directory.

Please Note:

- The upgrade process requests that you conduct a backup of your database using your database's backup utilities. If your database does not support online backups, you can stop the upgrade process, shut down Confluence, perform your database backup and then restart the upgrade process to continue on.
- If you have made customisations to your `server.xml` file or any other files in your Confluence installation directory which are not handled by the upgrade wizard, these must be re-applied manually.
- If your attachments and index files are located outside your Confluence Home Directory, then backups of these directories must be performed manually.

Performing the Upgrade

Refer to the appropriate upgrade instructions below for your operating system:

Upgrading Confluence on Windows

1. Download the **Confluence 'Windows Installer'** (.exe) file (for the new version of Confluence) from the Confluence Download Center.
2. Run the '.exe' file to start the upgrade wizard.
   If a Windows 7 (or Vista) 'User Account Control' dialog box requests if you want to allow the upgrade wizard to make changes to your computer, specify '**Yes**'. If you do not, the installation wizard will have restricted access to your operating system and any subsequent installation options will be limited.
3. At the 'Upgrading Confluence?' step, choose the '**Upgrade an existing Confluence installation**' option.
4. In the 'Existing Confluence installation directory' field, specify the Confluence Installation Directory of your Confluence installation to be upgraded.
   The upgrade wizard will attempt to find an existing Confluence installation and use its location to pre-populate this field. However, always verify this location, particularly if you have multiple Confluence installations running on the same machine.
5. During subsequent steps of the upgrade wizard, you will be prompted to specify or do the following options:
   a. At the 'Back up Confluence directories' step, ensure the '**Back up Confluence home**' option is selected. This creates 'zip' archive file backups of your existing Confluence Installation and Confluence Home Directories in their respective parent directory locations.
      Please Note:
      - **Choosing this option is strongly recommended!**
   b. At this point, the upgrade wizard notes any customisations in your existing Confluence Installation Directory which it cannot automatically migrate to your upgraded Confluence installation. If you are notified by the installer about any files containing such customisations, please make a note of the locations of these files as you will need to manually migrate their customisations (which are not mentioned in the overview above) to your upgraded Confluence installation. One relatively common customisation that the upgrade wizard cannot automatically migrate is an SSL configuration defined in the `conf/server.xml` file of the Confluence Installation Directory. **Please Note:** when upgrading from the version that was not installed by the installer the customisations can only be detected in the `confluence` subdirectory of your existing Conflue

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nce Installation Directory. Modifications to files in directories other than `confluence` will not be detected when you upgrade, for example, modifications to `conf/server.xml`. However the next time you upgrade (e.g. to version 4.1.1) the upgrade feature will cover modifications across the whole Confluence Installation Directory.

c. At the 'Upgrade Check List' step, back up your external database and check that any non-bundled plugins will be compatible with your upgraded Confluence version. You may have already conducted the latter (in step 5 of the Before You Start section above).

d. Upon clicking '**Next**', your existing Confluence installation will be shut down if it is still running. The upgrade wizard will then:

   i. Back up your existing Confluence installation.
   ii. Delete the contents of the existing Confluence Installation Directory.
   iii. Install the new version of Confluence to the existing Confluence Installation Directory.
   iv. Starts your new (upgraded) Confluence installation.

   ⚠️ If you noted any files that contain customisations which must be migrated manually to your upgraded Confluence installation (above), then:

   1. Stop the upgraded Confluence installation.
   2. Migrate the customisations from these files into the upgraded Confluence Installation Directory.
   3. Restart the upgraded Confluence installation.

6. At the last step of the upgrade wizard, select the option to launch the upgraded Confluence installation in a browser so you can check the upgrade.

Congratulations, you have completed upgrading your Confluence installation on Windows!

Upgrading Confluence on Linux

1. Download the appropriate **Confluence 'Linux 64-bit / 32-bit Installer'** (.bin) file that suits your operating system (for the new version of Confluence) from the Confluence Download Center.
2. Open a Linux console and change directory (`cd`) to the '.bin' file's directory.
   ⚠️ If the '.bin' file is not executable after downloading it, make it executable, for example:
   `chmod a+x atlassian-confluence-X.Y.bin`
   (where X.Y represents your version of Confluence)
3. Execute the '.bin' file to start the upgrade wizard.
4. When prompted to choose between creating a new Confluence installation or upgrading an existing installation, choose the '**Upgrade an existing Confluence installation**' option.
5. Specify the Confluence Installation Directory of your Confluence installation to be upgraded.
   ℹ️ The upgrade wizard will attempt to find an existing Confluence installation and will provide its location as a choice. However, always verify this location, particularly if you have multiple Confluence installations running on the same machine.
6. During subsequent steps of the upgrade wizard, you will be prompted to specify or do the following options:

   a. Choose the option to back up Confluence's directories. This creates 'zip' archive file backups of your existing Confluence Installation and Confluence Home directories in their respective parent directory locations.

   ℹ️ **Please Note:**

   - **Choosing this option is strongly recommended!**
   - At this point, the upgrade wizard notes any customisations in your existing Confluence Installation Directory which it cannot automatically migrate to your upgraded Confluence installation. If you are notified of any files containing such customisations, please make a note of the locations of these files as you will need to manually migrate their customisations (which are not mentioned in the overview above) to your upgraded Confluence installation. One relatively common customisation that the upgrade wizard cannot automatically migrate is an SSL configuration defined in the `conf/server.xml` file of the Confluence Installation Directory. ℹ️**Please Note:** when upgrading from the version that was not installed by the installer the customisations can only be detected in the `confluence` subdirectory of your existing Confluence Installation Directory. Modifications to files in directories other than con

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`fluence` will not be detected when you upgrade, for example, modifications to `conf/server.xml`. However the next time you upgrade (e.g. to version 4.1.1) the upgrade feature will cover modifications across the whole Confluence Installation Directory.

b. At the 'Upgrade Check List' step, back up your external database and check that any non-bundled plugins will be compatible with your upgraded Confluence version. You may have already conducted the latter (in step 5 of the Before You Start section above).
c. Upon proceeding, your existing Confluence installation will be shut down if it is still running. The upgrade wizard will then:
   i. Back up your existing Confluence installation.
   ii. Delete the contents of the existing Confluence installation directory.
   iii. Install the new version of Confluence to the existing Confluence installation directory.
   iv. Starts your new (upgraded) Confluence installation.
   ⚠️ If you noted any files that contain customisations which must be migrated manually to your upgraded Confluence installation (above), then:
      1. Stop the upgraded Confluence installation.
      2. Migrate the customisations from these files into the upgraded Confluence Installation Directory.
      3. Restart the upgraded Confluence installation.

7. The last step of the upgrade wizard provides you with a link to launch the upgraded Confluence installation in a browser, so you can check the upgrade.

Congratulations, you have completed upgrading your Confluence installation on Linux!

Upgrade Check List

The upgrade wizard requests that you perform the following tasks before it actually commences the upgrade of your existing Confluence installation.

Back Up Your External Database

Perform a backup of your external database (using your database's native backup tools) and verify that the backup was created correctly.

- If your database's native backup tools support 'online backups' (i.e. which would typically create a 'snapshot' of your Confluence database while the database is still in use), you can leave the upgrade wizard running while you perform the database backup and then continue on with the wizard after verifying that the database backup was created correctly.
- If your database's native backup tools do not allow you to perform an 'online backup' of your Confluence database, you should:
  1. Quit the upgrade wizard now.
  2. Use your database's native backup tools to perform an 'offline backup' of your Confluence database and verify that this backup was created correctly.
  3. Re-run the Linux / Windows Installer to start the upgrade wizard again and continue from where you left off.
- If you are using HSQLDB as the Confluence internal database, please note that this should be used for evaluating Confluence only. If you happen to accidentally use the HSQLDB database for a production system, quit the upgrade wizard now and use the Migrating Confluence Between Servers procedure to upgrade Confluence.

⚠️ **Inconsistent database backups may not restore correctly!** If you are unfamiliar with your database's native backup/restore facilities, then test your database backup's integrity by doing the following:

1. Restoring the database backup to a different (test) system,
2. Connecting a test instance of your current Confluence version to this restored database.

Alternatively, use the Migrating Confluence Between Servers procedure to upgrade Confluence instead.

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Check Plugin Compatibility

If you have installed any 3rd-party Confluence plugins (i.e. not included in Confluence), please verify that they will be compatible with the version of Confluence you are upgrading to. You can find a plugin's compatibility information from the the plugin's home page on the Atlassian Plugin Exchange. Once you have confirmed the availability of compatible versions, you should upgrade your plugins after successfully upgrading Confluence. This can be done by navigating to **Browse > Confluence Admin > Configuration > Plugins**.

Upgrading Beyond Current Licensed Period

This page explains the recovery process should you mistakenly try to upgrade your Confluence installation to a version beyond your current license entitlement.

License warnings

During an upgrade an obvious indication that your license has expired can be found in your log file. You will see a 'WARN' level entry similar to this:

```
[confluence.upgrade.impl.DefaultUpgradeManager] isUpgradeAllowed
Your license is now outside of it's support period.
You need to renew the license before you can upgrade to this version of
Confluence.
```

Related pages:

- Upgrading Confluence
- Working with Confluence Logs
- Confluence Administrator's Guide

When you try to access the Confluence site in your browser, you will see the following warning screen:

You cannot access Confluence at present. Look at the table below to identify the reasons

Time	Level	Type	Description	Exception
2008-02-04 10:51:04	null	(EventType: upgrade)	Cannot proceed with upgrade. Your current license does not entitle you to upgrade to this version of Confluence. Please check that the support period of your license has not expired or that you have the correct partner license. If you wish to renew your license, please contact sales@atlassian.com. If you have a new license, please enter it on this page and **restart**.	`fatal`

Updating the Confluence license

1. Contact Atlassian Sales to arrange for a new license to be issued, as instructed on the warning screen illustrated above.
2. Once you have received a suitable license, supply the license key to Confluence:
    - Click link given on the license warning screen, illustrated above.
    - You will first be asked to log in as a Confluence administrator.
    - Then you will be presented with a simplified license administration screen. Enter the credentials of a Confluence system administrator.
    - Copy the license key into the **License** field and choose **Save**.

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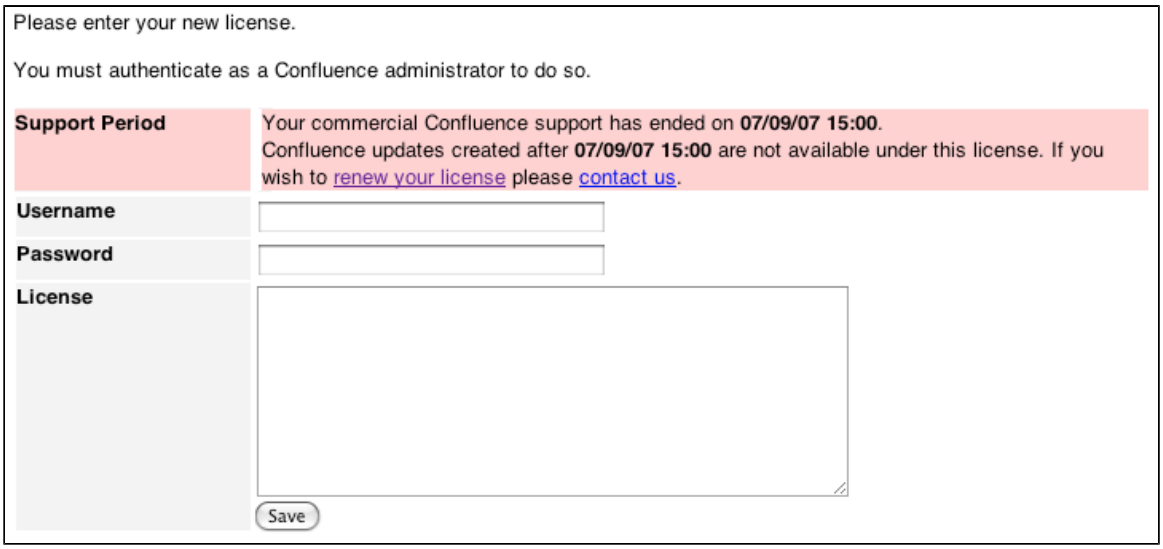

3. Restart Confluence to continue the upgrade.

Confluence Post-Upgrade Checks

This article provides a list of items for Confluence Administrators to check after a Confluence upgrade to ensure that it has completed successfully. This list is not exhaustive, but it does cover common upgrade mistakes.

On this page:

- Before You Begin
- Upgrade Checklist
  - 1. Layout and Menu
  - 2. Search
  - 3. Permissions
  - 4. Attachments
  - 5. Plugins

Before You Begin

After you have completed an upgrade, you should see the following message in the `atlassian-confluence.log` file:

```
2010-03-08 08:03:58,899 INFO [main]
[atlassian.confluence.upgrade.AbstractUpgradeManager] upgradeFinished
Upgrade completed successfully
```

If you do not see the line in your log similar to the one above, this means that your upgrade has not completed successfully. Please check our Troubleshooting Upgrades documentation to check for a suitable recommendation or fix. If there are no errors logged or if none of the errors are referenced in the the Troubleshooting Upgrades documentation, please contact Atlassian Support using the Support Utilities in your administration console.

Upgrade Checklist

Below is a recommended list of items to check after completing an upgrade.

1. Layout and Menu

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Visit the Confluence dashboard and check that it is accessible and displays as expected. Test the different Internet browsers that you have in use in your environment. In addition, confirm that the layout appears as expected and that the menus are clickable and functioning.

2. Search

Try searching for content, for example pages, attachments or user names. Check that the expected results are returned.

3. Permissions

Confirm that you can visit a page that has viewing restrictions, but you have permission to view. Confirm that y can edit a page that has edit restrictions but you have permission to edit. Make sure that the permissions of chi pages are functioning as well. Involve as many space administrators as possible to confirm they are working. Confirm that anonymous or forbidden users cannot access or modify restricted pages.

4. Attachments

Confirm that attachments are accessible and searchable.

5. Plugins

Outdated third-party plugins can cause upgrade failure. Quite often, they will just be incompatible and simply d not work anymore. If you discover that your plugin is no longer working, please check for the latest version for your plugin in the Atlassian Plugin Exchange.

> ✅ **Universal Plugin Manager**
>
> Use the Universal Plugin Manager to easily check for plugin compatibility.

RELATED TOPICS

Troubleshooting Upgrades
Upgrading Confluence

Upgrading Confluence EAR-WAR Distribution

This document tells you how to upgrade from one version of Confluence to a later version. These instructions apply to the **EAR-WAR Distribution** of Confluence, deployed on your own existing application server.

If you want to upgrade the regular Confluence distribution, which includes Apache Tomcat as the application server, please refer to Upgrading Confluence instead.

Please also check the following before you start using this guide:

- The **version of Confluence** that you will be upgrading to. Refer to the documentation home page to verify the latest Confluence version and to find documentation for older versions.
- The **supported platforms** for the version that you will be upgrading to. Please see the Supported Platforms page for the version of Confluence that you will be upgrading to, as well as the End of Support Announcements for Confluence.
- If you are running **Confluence on a cluster**, please see Upgrading a Confluence Cluster instead of this document.

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Upgrading to Confluence 4.3?

If so, please review the Confluence 4.3 Release Notes for important information about this version of Confluence. Ensure that you have read the Confluence 4.3 Known Issues in the Confluence Knowledge Base.

Also, we strongly recommend that you check the upgrade notes for every major version of Confluence that you are skipping, since there might be specific changes between Confluence versions that could affect your Confluence installation. The upgrade notes for recent major versions of Confluence are accessible from the Upgrade Notes Overview page.

Finally, please check the Supported Platforms page to ensure that your Java version, operating system, application server, database and browser are supported for this release of Confluence. The End of Support Announcements for Confluence page has important information regarding supported platforms.

On this page:

- Before you Start
- Backing Up
- Testing the Upgrade in a Test Environment
- Performing the Upgrade
- Reapplying Customisations to your New Confluence
- Checking for Known Issues and Troubleshooting the Confluence Upgrade

Before you Start

Changing your Database?

If you are planning to change to a different database, we recommend that you complete the Confluence upgrade first. Then follow the instructions on migrating to a different database.

1. Note that you need current software maintenance to perform the upgrade.
2. Confirm that your license support period is still valid before you try to upgrade.
3. If your current license has expired but you have a new license with you, please update your license in Confluence before performing the upgrade.
   ⚠️ If you forget to do this and your license has expired, you will receive errors during the upgrade process. Refer to the instructions on upgrading beyond current license period.
4. Check the release notes for the new version of Confluence you are installing, plus the upgrade notes for any major versions you are skipping. It is important to read these upgrade notes as there might be specific changes between Confluence versions that could affect your Confluence instance. The upgrade notes pages for recent major versions of Confluence are accessible from the Upgrade Notes Overview page. (Each upgrade notes page is a 'child' of its respective release notes page.)
5. Make sure that your environment (e.g. the database system, the operating system, the application server and so on) still complies with the Confluence System Requirements. A newer version of Confluence may have different requirements than the previous version.
6. If you are using Confluence EAR-WAR edition, check Installing the Confluence EAR-WAR Edition to see if there is anything extra you will need to do to get Confluence running.
7. If you are using an external database, familiarise yourself with all known issues for your specific database. Also make sure the Confluence database connector principal (the database user account) has sufficient permissions to modify the database schema.
8. Note which plugins are installed and enabled on your current Confluence instance. Please verify whether a compatible version of the plugin is available in the version of Confluence you are upgrading to. This information is available via the '**Plugins**' menu in your **Administration** screens, and selecting **Confluence Upgrade Check**. This will tell you which plugins have an updated version which is compatible with your

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target upgrade version. You can also check the respective home pages for these plugins on the Atlassian Plugin Exchange. Once you have confirmed the availability of compatible versions, you should upgrade your plugins after successfully upgrading Confluence. Please test these first by applying them to the latest Confluence version in a test environment.

9. If you have made any customisations to Confluence, please verify their compatibility in the latest version. For example, if you have modified any layouts or are using your own custom theme, please test these first by applying them to the latest Confluence version in a test environment. You can see the customisations applied to your Confluence installation.
10. Some anti-virus or other Internet security tools may interfere with the Confluence upgrade process and prevent the process from completing successfully. If you experience or anticipate experiencing such an issue with your anti-virus/Internet security tool, disable this tool first before proceeding with the Confluence upgrade.
11. After upgrading, Confluence may need to rebuild its indexes. If this happens, there may be some extra load placed on the server following the upgrade. Make sure to schedule any upgrade of production Confluence outside of hours where people need to use it.

Backing Up

Before you begin the Confluence upgrade, you must back up the following:

1. **Back up your Confluence Home directory.** The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. The location of the Home directory is stored in a configuration file called `confluence-init.properties`, which is located inside the `confluence/WEB-INF/classes` directory in your Confluence Installation directory. ℹ The Confluence installer will automatically prompt you to run a backup, storing the files in a .zip archive at the same level as your Confluence Home directory.
2. **Back up your database.** Perform a manual backup of your external database before proceeding with the upgrade, and double check that the backup was actually created properly. If you are not a database expert, or unfamiliar with the backup-restore facilities of your database, simply restore the backup to a different system to ensure the backup worked before proceeding. This recommendation is generally a good best practice. Surprisingly, many companies get in trouble for broken database backups because they skip this basic but vital "smoke test" of the operation.
   ℹ The 'embedded database' is the HSQLDB database supplied with Confluence for evaluation purposes. You don't need to back it up since it is stored in the Confluence home directory. You should not be using this database for production systems at all, so if you happen to be using HSQLDB in a production system, please migrate to a proper database **before** the upgrade. Read about the various shortcomings of HSQLDB.
3. **Back up your Confluence Installation directory or your Confluence webapp** (if you are using Confluence EAR-WAR edition). ℹ The Confluence installer will automatically back up these files, storing the files in a .zip archive at the same level as your Confluence installation directory. The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory is also sometimes called the 'Confluence Install directory'.

Testing the Upgrade in a Test Environment

> ⛔ **Be sure to test the upgrade in a test environment before proceeding on your production server.**

1. Create a snapshot of your current production Confluence environment on a test server, as described in the page on Moving Confluence Between Servers.

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XML imports

⚠ Importing an old XML backup file to a new major version (i.e Confluence 3.5 to Confluence 4.0) **is not recommended**. Please recreate your production instance in a test environment first.

2. Perform the upgrade on your cloned environment.

3. Test all your unsupported plugins and any customisations with the new version before proceeding on your production server. You can read more about supported and unsupported plugins.

Performing the Upgrade

If you are migrating servers or migrating databases, perform those operations in separate steps.

The upgrade process allows you to unzip the new Confluence installation into a directory of your choice and then edit the configuration files to point your new installation to your existing data files. Follow these instructions:

1. Shut down your existing Confluence instance.
2. Download the Confluence EAR-WAR zip file: Go to the Download Center, and click '**Show all**' to find the EAR-WAR zip file.
3. **If you are on Windows**, please check your unzip program before extracting the downloaded zip file. Some archive-extract programs cause errors when unzipping the Confluence zip file. You should use a third-party unzip program like 7Zip or Winzip. If you do not have one, please download and install one before continuing:
   - 7Zip — Recommended. If in doubt, download the '32-bit.exe' version
   - Winzip
4. Use your unzip program to unzip the installation file. You should now have a new directory called `confluence-<version>`.
   - In the rest of this document, we will refer to this as the `<Installation-Directory>`.
   - Do not use spaces in your directory path.
   - You can read more about the Confluence Installation directory.
5. Edit the `confluence-init.properties` file found at: `<Installation-Directory>\confluence\WEB-INF\classes\confluence-init.properties`
   and update '`confluence.home`' to point to your existing Confluence Home directory.
   - Make sure you have first backed up your Home directory.
   - Open the `confluence-init.properties` file in a text editor such as Notepad.
   - Scroll to the bottom and find this line:

     ```
     # confluence.home=c:/confluence/data
     ```

   - Remove the '#' and the space at the beginning of this line, so that Confluence no longer regards the line as a comment. The line should now begin with `confluence.home`.
   - Update the directory name after the = sign, to point to your existing Confluence Home directory.
6. If you are using Tomcat, you need to update either your `confluence.xml` or `server.xml` (depending on where you have defined the Confluence context descriptor) to point to the location of the new Confluence installation (also remember to copy over any customisations such as a **tomcat datasource** if you have one).
7. If you have delegated your user management to JIRA, LDAP or any other external user management system, copy the following files from your old Confluence installation to your new Confluence installation:
   - `<Installation-Directory>/confluence/WEB-INF/classes/osuser.xml.`
   - `<Installation-Directory>/confluence/WEB-INF/classes/atlassian-user.xml`(if

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you are upgrading from Confluence 2.2 or later).

> **Upgrading to Confluence 3.5+ and using JIRA user management?**
>
> Please review our KB article first: Upgrade to Confluence 3.5 with JIRA User Management Fails

> If you are upgrading from an earlier version of Confluence (2.5.5 and earlier) and are copying your existing `atlassian-user.xml` file from your previous instance, please ensure that the hibernate cache parameter in this file has been enabled, to avoid performance related issues. (NOTE: If you use Crowd for your user management, you do not need to do this.):

```
<hibernate name="Hibernate Repository"
key="hibernateRepository"
description="Hibernate Repository" cache="true"
/>
```

8. If you have delegated your user management to Crowd, you will also need to copy the Crowd client library and configuration files from your old Confluence installation to your new Confluence installation: `<Installation-Directory>/confluence/WEB-INF/lib/crowd-integration-client-X.X.X.jar` and `<Installation-Directory>/confluence/WEB-INF/classes/crowd.properties`. If you need more information, please refer to the Crowd documentation.
9. Restart your application server and start Confluence.
   Please note that Confluence will need to re-index attachments and this can take 5-10 minutes. Please wait until Confluence has finished indexing the attachments before trying to access Confluence via your web browser. (There is no easy and quick way to determine if the indexing process is completed. Please wait for approximately 10 minutes after the server start up before accessing Confluence via a web browser.)
10. During the startup process Confluence will create any missing database indexes. If you created any database indexes on your own, please check those afterwards and remove those that duplicate the indexes added by Confluence. Just in case you run into any errors which prevent Confluence from starting up, you can set the system property `hibernate.hbm2ddl.skip_creating_missing_indexes` to `true` to skip automatic index creation.
11. Visit Confluence in your web browser and log in using a username from your previous Confluence installation. You should be able to log in immediately, without seeing the Setup Wizard.
12. Take a quick look around your Confluence site to confirm that all your spaces and pages are present and everything looks normal. You should see the new Confluence version number in the page footer.
13. Consider any adjustments you need to make to customisations and special configurations, as described below.

Reapplying Customisations to your New Confluence

> **Hint: The steps below are for advanced Confluence users, who have applied special settings to their Confluence server and/or Confluence look and feel**

After upgrading your Confluence installation to a later version of Confluence, you need to consider any customisations you have applied to your system and other special configurations:

- If you had previously installed **Confluence/Tomcat as a Windows service**, uninstall the service (to ensure that the old Confluence cannot start automatically when the server restarts) and reinstall the new

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one. For details please see Start Confluence Automatically on Windows as a Service.

- If you are using the Confluence distribution and you have previously defined a **CATALINA_HOME environment variable**, please check that it points to the correct path for the new Confluence Tomcat server.
- If you had previously connected your Confluence installation to an external database via a JNDI datasource or you implemented SSL, edit your new `web.xml` file and and copy over any relevant modifications from your old `web.xml` file, which relate to these customisations.
- If you were previously running **Confluence on a non-standard port**, edit your new `<Installation-Directory>\conf\server.xml` file as described in Change listen port for Confluence.
- If you had previously defined a **Tomcat datasource**, edit your new `<Installation-Directory>\conf\server.xml` and copy over the datasource definition from your old `server.xml`.
- If you were previously using any **plugins**, install the latest compatible version and disable any plugins that are incompatible with your new version of Confluence. The easiest way to do this is to use the Plugin Repository in the Confluence Administration Console.
- If you are using any **customised themes**, please check that they are displaying as expected. Some further customisation may be required to ensure compatibility with your new version of Confluence.
- If you had previously customised the **default site or space layouts**, you will need to reapply your changes to the new defaults as described here.
- If you had previously modified the Confluence **source code**, you will need to reapply your changes to the new version.
- If you were previously running **Confluence over SSL**, you will need to reapply your configuration as described in Running Confluence Over SSL or HTTPS.
- If you had previously modified the **memory flags** (`Xms` and `Xmx`) in either the `<Installation-Directory>\bin\setenv.sh` or the `<Installation-Directory>\bin\setenv.bat` file, you may want to make the modifications in your new installation. The parameters are specified in the `JAVA_OPTS` variable.
- If you had changed the Confluence interface text, you will need to pull over the ConfluenceActionSupport.properties file.
- If you were using a custom SSO authenticator, change seraph-config.xml to the correct authenticator.

Checking for Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

RELATED TOPICS

Upgrading Confluence
Upgrading Confluence
Confluence Installation Guide
Important Directories and Files
Site Backup and Restore
Database Configuration

Migration from Wiki Markup to XHTML-Based Storage Format

If you are upgrading **to Confluence 4.0 or later** from an older version (From Confluence 3.5.x or earler) then as part of the upgrade an automatic migration of your content will take place. This is a non-destructive process.

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Your existing content is not overwritten. Instead, the migration process will create a new version of each wiki markup page. The new version will use the new XHTML-based storage format, so that you can edit the page in the Confluence rich text editor.

In addition, if you are **upgrading to Confluence 4.3 or later** from an older version then as part of the upgrade an automatic migration of your page templates will take place. See Migration of Templates from Wiki Markup to XHTML-Based Storage Format.

Note: Even though the process is non-destructive, you must be sure to perform a backup of your database and home directory prior to starting the new version of Confluence, as we recommend for any Confluence upgrade.

Migration process

Depending on the size of your Confluence installation, the migration from wiki markup to the new XHTML-based storage format could prove time consuming. The duration of the migration is difficult to estimate; this is due to a number of site specific factors. As a rough guide, a test dataset we migrated was 130,000 pages, totalling approximately 700Mb, which took six minutes.

On this page:

- Migration process
- Watching the migration logs during the upgrade
- Re-running the migration – for content that completely failed the migration
- Re-attempting the migration – for content in 'unmigrated-wiki-markup' macro
- Notes

Related pages:

- Migration of Templates from Wiki Markup to XHTML-Based Storage Format
- Upgrading Confluence

The following properties that can be modified to allow finer control over the migration process:

Property	Purpose	Default
confluence.wiki.migration.threads	The number of concurrent worker threads migrating content	4
confluence.wiki.migration.batch.size	The number of items migrated in each batch of work	500
confluence.wiki.migration.versioncomment	The comment associated with the newly migrated version of each piece of content	"Migrated to Confluence 4.0"

(For instructions on setting Confluence system properties see this document.)

Again, due to the large variability in Confluence installations it is hard to give specific recommendations for the above settings. One point to note though that both increasing batch size and the number of threads (or both) will increase the peak memory required for migration. If memory is an issue then as you increase one of these settings consider decreasing the other.

Another factor to be aware of if modifying these defaults is that of the cache settings employed in your site. The migration will quickly populate certain Confluence caches so be sure that if you have customised caches as described here that there is enough memory on the server for these caches should they reach maximum capacity.

Watching the migration logs during the upgrade

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To monitor the progress of a site migration you should watch the output in the application log.

Typical logging progress will be shown by multiple log entries at the INFO level of the following format:

```
WikiToXhtmlMigrationThread-n - Migrated 2500 of 158432 pages, this batch
migrated 500/500 without error
```

There may be a wide array of messages logged from each individual page but any errors are also collected for display in a single migration report once all content has been processed. Here is a typical example of such a report:

```
Wiki to XHTML Exception Report:
Summary:
 0 settings values failed.
 0 PageTemplates failed.
 2 ContentEntityObjects failed.
Content Exceptions:
 1) Type: page, Id: 332, Title: Release Notes 1.0b3, Space: DOC -
Confluence 4.0 Beta. Cause:
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Unkno
wnMacroMigrationException: The macro link is unknown.. Message: The
macro link is unknown.
 2) Type: comment, Id: 6919, Title: null, Global Scope. Cause:
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Unkno
wnMacroMigrationException: The macro mymacro is unknown.. Message: The
macro mymacro is unknown.
```

Each entry in the report will identify the content that caused migration exceptions as well as displaying the exceptions themselves.

In almost all cases any content reported as errored will have been migrated to the new XHTML-based storage format, but will actually consist of wiki markup content wrapped within an XML 'unmigrated-wiki-markup' macro. This content will still be viewable in Confluence and editable within the new Confluence Editor.

However, in some cases a batch of content may actually have completely failed to migrated. This is most typically due to an unhandled exception causing a database transaction rollback. This would be reported in the log with a message like this:

```
Unable to start up Confluence. Fatal error during startup sequence:
confluence.lifecycle.core:pluginframeworkdependentupgrades (Run all the
upgrades that require the plugin framework to be available) -
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Migra
tionException: java.util.concurrent.ExecutionException:
org.springframework.transaction.UnexpectedRollbackException: Transaction
rolled back because it has been marked as rollback-only
```

Confluence provides no further report about this scenario and will also allow Confluence to restart as normal without retrying a migration. If a user tries to view any such unmigrated content they will see an exception similar to this:

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```
java.lang.UnsupportedOperationException: The body of this
ContentEntityObject ('Page Title') was 'WIKI' but was expected to be
'XHTML'
```

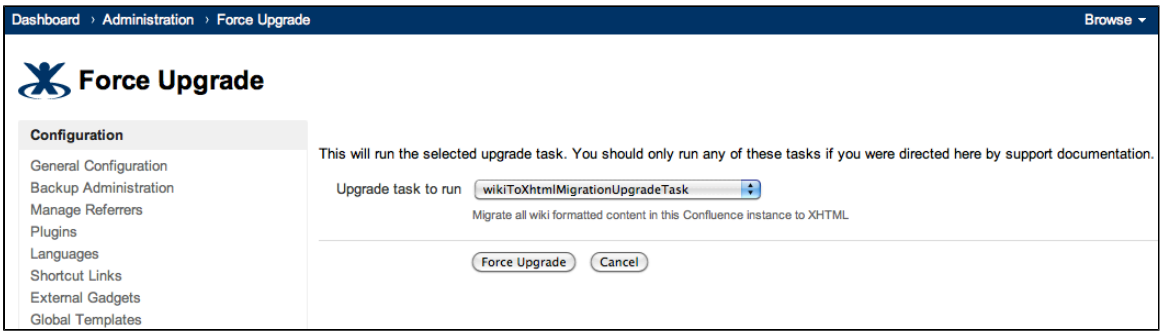
The solution is to ensure you manually re-run the site migration after the restart.

Re-running the migration – for content that completely failed the migration

A Confluence Administrator can restart the site migration if there was any content that failed migration (see previous section). Only the content that is still formatted in wiki markup will be migrated, so typically a re-migration will take less time than the original migration.

To manually re-run migration:

1. Open this URL in your browser: `<Confluence Address>/admin/force-upgrade.action`
2. Select **wikiToXhtmlMigrationUpgradeTask** in the **Upgrade task to run** dropdown list.
3. Choose **Force Upgrade**.



Re-attempting the migration – for content in 'unmigrated-wiki-markup' macro

The previous section was about dealing with the exceptional circumstance where certain content was left completely unmigrated. The most common migration problem is that the content was migrated but remains formatted as wiki markup on the page, within the body of an 'unmigrated-wiki-markup' macro. Any content which is referenced in the migration report will be found in this state. This content is still viewable and editable but since it is wiki markup it cannot be edited using the full feature set of the rich text editor.

he most common reason for content to be in this state is that the page contains an unknown macro, or a macro that is not compatible with Confluence 4.x.

There are two possible fixes for this situation:

1. Install a version of the macro that is compatible with Confluence 4.x. See Plugin Development Upgrade FAQ for 4.0.
2. Edit the page and remove the problematic macro.

Regardless of the solution you choose, you can then force a re-migration of all the content (including content in templates) that was left wrapped in an 'unmigrated-wiki-markup' macro. This feature is found at `<Confluence Address>/admin/unmigratedwikicontent.action`

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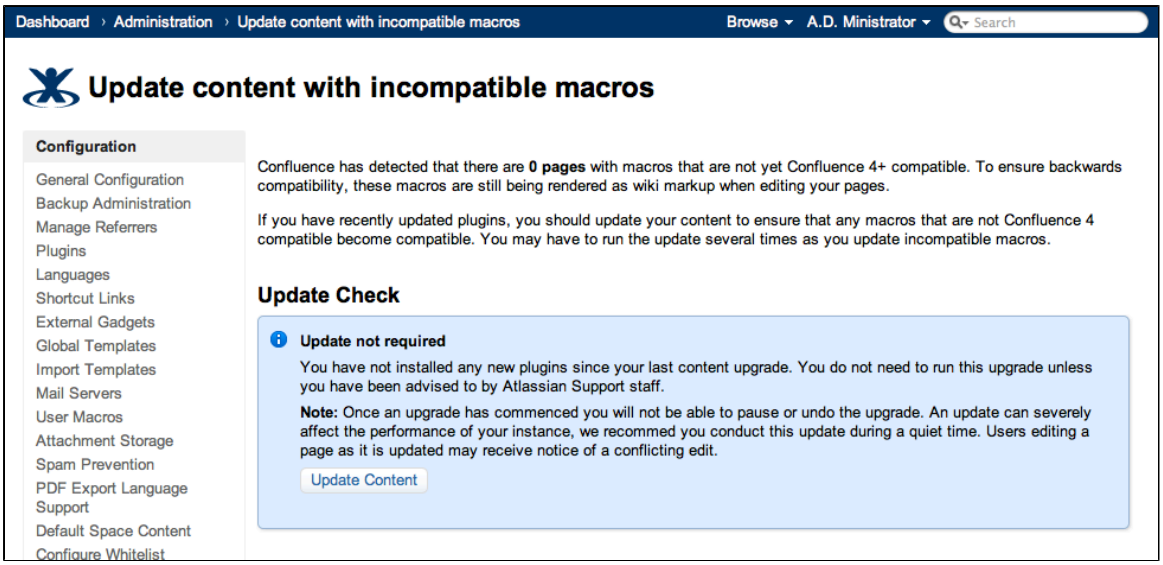

Notes

We refer to the Confluence storage format as 'XHTML-based'. To be correct, we should call it XML, because the Confluence storage format does not comply with the XHTML definition. In particular, Confluence includes custom elements for macros and more. We're using the term 'XHTML-based' to indicate that there is a large proportion of HTML in the storage format.

Migration of Templates from Wiki Markup to XHTML-Based Storage Format

If you are **upgrading to Confluence 4.3 or later from an older version** (from Confluence 4.2.x or earlier) then as part of the upgrade an automatic migration of your page templates will take place. This is a non-destructive process. Your existing content is not overwritten. Instead, the migration process will create a new version of each space template and each global template on your Confluence site. The new version will use the new XHTML-based storage format, so that you can edit the template in the Confluence rich text editor.

Note: Nevertheless, you must be sure to perform a backup of your database and home directory prior to starting the new version of Confluence, as we recommend for any Confluence upgrade.

Watching the migration logs during the upgrade

To monitor the progress of a site migration you should watch the output in the application log.

A typical logging progress will be shown by multiple log entries at the INFO level of the following format:

```
WikiToXhtmlMigrationThread-n - Migrated 22 of 29 PageTemplates.
```

On this page:

- Watching the migration logs during the upgrade
- Re-running the migration
- Notes

Related pages:

- Migration from Wiki Markup to XHTML-Based Storage Format
- Working with Templates
- Upgrading Confluence

There may be a wide array of messages logged from each individual template, but any errors are also collected

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for display in a single migration report once all content has been processed. Here is a typical example of such a report:

```
Wiki to XHTML Exception Report:
Summary:
 0 settings values failed.
 2 PageTemplates failed.
 0 ContentEntityObjects failed.
Content Exceptions:
 1) Type: page, Id: 332, Title: Release Notes 1.0b3, Space: DOC -
Confluence 4.0 Beta. Cause:
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Unkno
wnMacroMigrationException: The macro link is unknown.. Message: The
macro link is unknown.
 2) Type: comment, Id: 6919, Title: null, Global Scope. Cause:
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Unkno
wnMacroMigrationException: The macro mymacro is unknown.. Message: The
macro mymacro is unknown.
```

Each entry in the report will identify the content that caused migration exceptions as well as displaying the exceptions themselves.

In almost all cases any content reported as errored will have been migrated to the new XHTML-based storage format, but will actually consist of wiki markup content wrapped within an XML 'unmigrated-wiki-markup' macro. This content will still be viewable in Confluence and editable within the Confluence rich text editor.

However, in some cases a batch of content may actually have completely failed to migrate. This is most typically due to an unhandled exception causing a database transaction rollback. This would be reported in the log with a message like this:

```
Unable to start up Confluence. Fatal error during startup sequence:
confluence.lifecycle.core:pluginframeworkdependentupgrades (Run all the
upgrades that require the plugin framework to be available) -
com.atlassian.confluence.content.render.xhtml.migration.exceptions.Migra
tionException: java.util.concurrent.ExecutionException:
org.springframework.transaction.UnexpectedRollbackException: Transaction
rolled back because it has been marked as rollback-only
```

Confluence provides no further report about this scenario and will also allow Confluence to restart as normal without retrying a migration. If a user tries to view or edit an unmigrated template, the wiki template editor will be used.

The solution is to manually re-run the site migration after the restart, as described below.

Re-running the migration

A Confluence administrator can restart the template migration if any templates have failed the migration (see previous section). Only the templates that are still formatted in wiki markup will be migrated again. Typically, a re-migration will take less time than the original migration.

To manually re-run the migration:

1. Open this URL in your browser: `<Confluence Address>/admin/force-upgrade.action`

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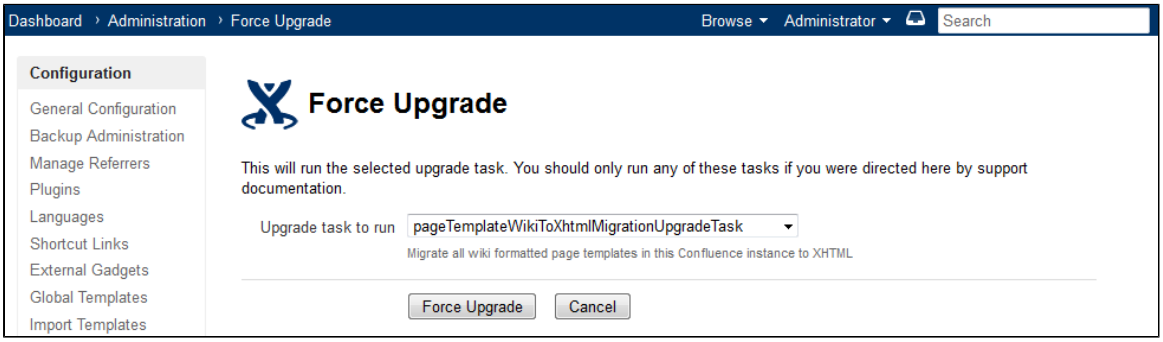
2. Select **pageTemplateWikiToXhtmlMigrationUpgradeTask** in the **Upgrade task to run** dropdown list.
3. Choose **Force Upgrade**.

Screenshot: The 'Force Upgrade' screen in the Confluence administration console



Notes

We refer to the Confluence storage format as 'XHTML-based'. To be correct, we should call it XML, because the Confluence storage format does not comply with the XHTML definition. In particular, Confluence includes custom elements for macros and more. We're using the term 'XHTML-based' to indicate that there is a large proportion of HTML in the storage format.

Upgrading Confluence Manually

This document tells you how to upgrade from one version of Confluence to a later version. This document refers to the Confluence distribution, which includes Apache Tomcat as the bundled application server.

If you want to upgrade an **EAR/WAR distribution** deployed on your own existing application server, please refer to Upgrading Confluence EAR-WAR Distribution instead.

Please also check the following before you start using this guide:

- The **version of Confluence** that you will be upgrading to. Refer to the documentation home page to verify the latest Confluence version and to find documentation for older versions.
- The **supported platforms** for the version that you will be upgrading to. Please see the Supported Platforms page for the version of Confluence that you will be upgrading to, as well as the End of Support Announcements for Confluence.
- If you are running **Confluence on a cluster**, please see Upgrading a Confluence Cluster instead of this document.

Upgrading to Confluence 4.3?

If so, please review the Confluence 4.3 Release Notes for important information about this version of Confluence. Ensure that you have read the Confluence 4.3 Known Issues in the Confluence Knowledge Base.

Also, we strongly recommend that you check the upgrade notes for every major version of Confluence that you are skipping, since there might be specific changes between Confluence versions that could affect your Confluence installation. The upgrade notes for recent major versions of Confluence are accessible from the Upgrade Notes Overview page.

Finally, please check the Supported Platforms page to ensure that your Java version, operating system, application server, database and browser are supported for this release of Confluence. The End of Support Announcements for Confluence page has important information regarding supported platforms.

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> **Upgrading from Confluence 3.4 or earlier?**
>
> Please upgrade to Confluence 3.5 before upgrading to Confluence 4.x.

On this page:

- Before you Start
- Backing Up
- Testing the Upgrade in a Test Environment
- Performing the Upgrade
- Reapplying Customisations to your New Confluence
- Checking for Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

Before you Start

> **Changing your Database?**
>
> If you are planning to change to a different database, we recommend that you complete the Confluence upgrade first. Then follow the instructions on migrating to a different database.

1. Note that you need current software maintenance to perform the upgrade.
2. Confirm that your license support period is still valid before you try to upgrade.
3. If your current license has expired but you have a new license with you, please update your license in Confluence before performing the upgrade.
   ⚠ If you forget to do this and your license has expired, you will receive errors during the upgrade process. Refer to the instructions on upgrading beyond current license period.
4. Check the release notes for the new version of Confluence you are installing, plus the upgrade notes for any major versions you are skipping. It is important to read these upgrade notes as there might be specific changes between Confluence versions that could affect your Confluence instance. The upgrade notes pages for recent major versions of Confluence are accessible from the Upgrade Notes Overview page. (Each upgrade notes page is a 'child' of its respective release notes page.)
5. Make sure that your environment (e.g. the database system, the operating system, the application server and so on) still complies with the Confluence System Requirements. A newer version of Confluence may have different requirements than the previous version.
6. If you are using Confluence EAR-WAR edition, check Installing the Confluence EAR-WAR Edition to see if there is anything extra you will need to do to get Confluence running.
7. If you are using an external database, familiarise yourself with all known issues for your specific database. Also make sure the Confluence database connector principal (the database user account) has sufficient permissions to modify the database schema.
8. Note which plugins are installed and enabled on your current Confluence instance. Please verify whether a compatible version of the plugin is available in the version of Confluence you are upgrading to. This information is available via the '**Plugins**' menu in your **Administration** screens, and selecting **Confluence Upgrade Check**. This will tell you which plugins have an updated version which is compatible with your target upgrade version. You can also check the respective home pages for these plugins on the Atlassian Plugin Exchange. Once you have confirmed the availability of compatible versions, you should upgrade your plugins after successfully upgrading Confluence. Please test these first by applying them to the latest Confluence version in a test environment.
9. If you have made any customisations to Confluence, please verify their compatibility in the latest version. For example, if you have modified any layouts or are using your own custom theme, please test these first by applying them to the latest Confluence version in a test environment. You can see the customisations applied to your Confluence installation.
10. Some anti-virus or other Internet security tools may interfere with the Confluence upgrade process and

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prevent the process from completing successfully. If you experience or anticipate experiencing such an issue with your anti-virus/Internet security tool, disable this tool first before proceeding with the Confluence upgrade.

11. After upgrading, Confluence may need to rebuild its indexes. If this happens, there may be some extra load placed on the server following the upgrade. Make sure to schedule any upgrade of production Confluence outside of hours where people need to use it.

Backing Up

Before you begin the Confluence upgrade, you must back up the following:

1. **Back up your Confluence Home directory.** The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. The location of the Home directory is stored in a configuration file called `confluence-init.properties`, which is located inside the `confluence/WEB-INF/classes` directory in your Confluence Installation directory. ℹ️ The Confluence installer will automatically prompt you to run a backup, storing the files in a .zip archive at the same level as your Confluence Home directory.
2. **Back up your database.** Perform a manual backup of your external database before proceeding with the upgrade, and double check that the backup was actually created properly. If you are not a database expert, or unfamiliar with the backup-restore facilities of your database, simply restore the backup to a different system to ensure the backup worked before proceeding. This recommendation is generally a good best practice. Surprisingly, many companies get in trouble for broken database backups because they skip this basic but vital "smoke test" of the operation.
   ℹ️ The 'embedded database' is the HSQLDB database supplied with Confluence for evaluation purposes. You don't need to back it up since it is stored in the Confluence home directory. You should not be using this database for production systems at all, so if you happen to be using HSQLDB in a production system, please migrate to a proper database **before** the upgrade. Read about the various shortcomings of HSQLDB.
3. **Back up your Confluence Installation directory or your Confluence webapp** (if you are using Confluence EAR-WAR edition). ℹ️ The Confluence installer will automatically back up these files, storing the files in a .zip archive at the same level as your Confluence installation directory. The 'Confluence Installation directory' is the directory into which the Confluence application files and libraries have been unpacked (unzipped) when Confluence was installed. Confluence does not modify or store any data in this directory. This directory is also sometimes called the 'Confluence Install directory'.

Testing the Upgrade in a Test Environment

> ⛔ **Be sure to test the upgrade in a test environment before proceeding on your production server.**

1. Create a snapshot of your current production Confluence environment on a test server, as described in the page on Moving Confluence Between Servers.

> **XML imports**
>
> ⚠️ Importing an old XML backup file to a new major version (i.e Confluence 3.5 to Confluence 4.0) **is not recommended**. Please recreate your production instance in a test environment first.

2. Perform the upgrade on your cloned environment.

3. Test all your unsupported plugins and any customisations with the new version before proceeding on your

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production server. You can read more about supported and unsupported plugins.

Performing the Upgrade

> If you are migrating servers or migrating databases, perform those operations in separate steps.

To install Confluence, unzip the new Confluence installation zip file into a directory of your choice and then edit the configuration files to point your new installation to your existing data files. Follow these instructions:

1. Shut down your existing Confluence instance.
2. Download the Confluence zip file.
3. **If you are on Windows**, please check your unzip program before extracting the downloaded zip file. Some archive-extract programs cause errors when unzipping the Confluence zip file. You should use a third-party unzip program like 7Zip or Winzip. If you do not have one, please download and install one before continuing:
   - 7Zip — Recommended. If in doubt, download the '32-bit.exe' version
   - Winzip
4. Use your unzip program to unzip the installation file. You should now have a new directory called `confluence-<version>`, e.g. `confluence-4.0.0-std`.
   - In the rest of this document, we will refer to this as the `<Installation-Directory>`.
   - If you decide to change the location from the default, make sure that you choose a different location from your existing Confluence installation, because legacy files may cause problems if you install the new Confluence version into an existing directory.
   - Do not use spaces in your directory path.
   - You can read more about the Confluence Installation directory.
5. Edit the `confluence-init.properties` file found at: `<Installation-Directory>\confluence\WEB-INF\classes\confluence-init.properties`
   and update '`confluence.home`' to point to your **existing**Confluence Home directory.
   - You can read more about the Confluence Home directory.
   - Make sure you have first backed up this directory, as instructed above.
   - Open the `confluence-init.properties` file in a text editor such as Notepad.
   - Scroll to the bottom and find this line:

     ```
     # confluence.home=c:/confluence/data
     ```

   - Remove the '#' and the space at the beginning of this line, so that Confluence no longer regards the line as a comment. The line should now begin with `confluence.home`.
   - Update the directory name after the = sign, to point to your existing Confluence Home directory.
6. If you are running Confluence as a Windows service, use the command prompt and type `<Installation-Directory>\bin\service.bat remove Confluence`.

   > It is vital that you stop and remove the existing service *prior to uninstalling* the old instance of Confluence! For more information on running Confluence as Windows service, please refer to the Start Confluence Automatically on Windows as a Service topic.

   To remove the service installed by the Confluence installer, you need to run the `<confluence auto installer installation folder>\UninstallService.bat`.

7. If you are using an external database (i.e. not the embedded HSQLDB database supplied for evaluation purposes), copy the jdbc driver jar file from your old Confluence installation to the new Confluence installation. The jdbc driver jar file in the old Confluence installation should be located in either the `<Install-Directory>/common/lib` or `<Installation-Directory>/confluence/WEB-INF/lib` dire

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ctories. Once you have identified this file, copy it to either the `<Install-Directory>/lib` or `<Installation-Directory>/confluence/WEB-INF/lib` directories of your Confluence installation.

8. If you have delegated your user management to JIRA, LDAP, Crowd, or any other external user management system, copy the following files from your old Confluence installation to your new Confluence installation:
   - `<Installation-Directory>/confluence/WEB-INF/classes/osuser.xml.`
   - `<Installation-Directory>/confluence/WEB-INF/classes/atlassian-user.xml`(if you are upgrading from Confluence 2.2 or later).

> If you are upgrading from an earlier version of Confluence (2.5.5 and earlier) and are copying your existing `atlassian-user.xml` file from your previous instance, please ensure that the hibernate cache parameter in this file has been enabled, to avoid performance related issues. (NOTE: If you use Crowd for your user management, you do not need to do this.):
>
> ```
> <hibernate name="Hibernate Repository"
> key="hibernateRepository" description="Hibernate
> Repository" cache="true" />
> ```

9. If you have delegated your user management to Crowd, you will also need to copy the Crowd configuration file from your old Confluence installation to your new Confluence installation: `<Installation-Directory>/confluence/WEB-INF/classes/crowd.properties`. If you need more information, please refer to the Crowd documentation.
10. Consider any adjustments you need to make to customisations and special configurations, as described below.
    ⚠ Your new version of Confluence may not function correctly or could encounter problems or errors if these are not implemented.
11. Start your new version of Confluence.
    Please note that Confluence will need to re-index attachments and this can take 5-10 minutes. Please wait until Confluence has finished indexing the attachments before trying to access Confluence via your web browser.
12. During the startup process Confluence will create any missing database indexes. If you created any database indexes on your own, please check those afterwards and remove those that duplicate the indexes added by Confluence. Just in case you run into any errors which prevent Confluence from starting up, you can set the system property `hibernate.hbm2ddl.skip_creating_missing_indexes` to `true` to skip automatic index creation.
13. Visit Confluence in your web browser and log in using a username from your previous Confluence installation. You should be able to log in immediately, without seeing the Setup Wizard.
14. Take a quick look around your Confluence site to confirm that all your spaces and pages are present and everything looks normal. You should see the new Confluence version number in the page footer.

Reapplying Customisations to your New Confluence

> **Hint: The steps below are for advanced Confluence users, who have applied special settings to their Confluence server and/or Confluence look and feel**

After upgrading your Confluence installation to a later version of Confluence, you need to consider any customisations you have applied to your system and other special configurations:

- If you had previously installed **Confluence/Tomcat as a Windows service**, uninstall the service (to

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ensure that the old Confluence cannot start automatically when the server restarts) and reinstall the new one. For details please see Start Confluence Automatically on Windows as a Service.
- If you are using the Confluence distribution and you have previously defined a **CATALINA_HOME environment variable**, please check that it points to the correct path for the new Confluence Tomcat server.
- If you had previously connected your Confluence installation to an external database via a JNDI datasource or you implemented SSL, edit your new `web.xml` file and and copy over any relevant modifications from your old `web.xml` file, which relate to these customisations.
- If you were previously running **Confluence on a non-standard port**, edit your new `<Installation-Directory>\conf\server.xml` file as described in Change listen port for Confluence.
- If you had previously defined a **Tomcat datasource**, edit your new `<Installation-Directory>\conf\server.xml` and copy over the datasource definition from your old `server.xml`.
- If you were previously using any **plugins**, install the latest compatible version and disable any plugins that are incompatible with your new version of Confluence. The easiest way to do this is to use the Plugin Repository in the Confluence Administration Console.
- If you are using any **customised themes**, please check that they are displaying as expected. Some further customisation may be required to ensure compatibility with your new version of Confluence.
- If you had previously customised the **default site or space layouts**, you will need to reapply your changes to the new defaults as described here.
- If you had previously modified the Confluence **source code**, you will need to reapply your changes to the new version.
- If you were previously running **Confluence over SSL**, you will need to reapply your configuration as described in Running Confluence Over SSL or HTTPS.
- If you had previously modified the **memory flags** (`Xms` and `Xmx`) in either the `<Installation-Directory>\bin\setenv.sh` or the `<Installation-Directory>\bin\setenv.bat` file, you may want to make the modifications in your new installation. The parameters are specified in the `JAVA_OPTS` variable.
- If you had changed the Confluence interface text, you will need to pull over the ConfluenceActionSupport.properties file.
- If you were using a custom SSO authenticator, change seraph-config.xml to the correct authenticator.

Checking for Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Upgrading Confluence
Upgrading Confluence EAR-WAR Distribution
Confluence Installation Guide

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Important Directories and Files
Site Backup and Restore
Database Configuration

Supported Platforms

This page describes the supported platforms for Confluence. Please review them before installing Confluence. The information on this page applies to **Confluence Latest**.

Further information:

- End of support for various platforms and browsers when used with Confluence: End of Support Announcements for Confluence.
- More information about these supported platforms and hardware requirements: System Requirements.

Related pages:

- Confluence Installation Guide
- Confluence Setup Guide
- Installing Confluence and JIRA Together
- Server Hardware Requirements Guide
- Supported Platforms FAQ
- Confluence Documentation Home

Key: ✅ = Supported. ❌ = Not Supported

Java Version	
Oracle JRE / JDK	✅ 1.6.0_4+ (Note: Java 6 update 18+ have known issues.) Recommend to use Java 6 Update 26+. ✅ 1.7
Operating Systems	
Microsoft Windows (including 64-bit)(1)	✅ (Microsoft Supported Versions only)
Linux / Solaris (1, 2)	✅
Apple Mac OS X	❌ Not supported as server. ✅ Supported as client platform.
Application Servers	
Apache Tomcat	✅ 5.5.20 - 6.0.x
Databases	
PostgreSQL	✅ 8.3, 8.4, 9.0
MySQL (3)	✅ 5.1, 5.5
Oracle	✅ 11.1, 11.2
Microsoft SQL Server	✅ 2005, 2008, 2008 R2

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HSQLDB [4]	✅ (for evaluation purposes only)
Web Browsers – Desktop	
Microsoft Internet Explorer (Windows) [5, 6]	✅ 8, 9
Mozilla Firefox (all platforms)	✅ Latest stable version supported ✅ Tested with 10
Google Chrome (Windows and Mac) [7]	✅ Latest stable version supported ✅ Tested with 17
Safari (Windows and Mac)	✅ Latest stable version supported ✅ Tested with 5
Web Browsers – Mobile	
Mobile Safari (iOS) [8]	✅ Latest stable version supported ✅ Tested with iOS 5.1

1. Confluence is a pure Java application and should run on this platform provided the JRE or JDK requirement is satisfied.
2. While some of our customers run Confluence on SPARC-based hardware, Atlassian only officially supports Confluence running on x86 hardware and 64-bit derivatives of x86 hardware.
3. Ensure that you configure your Confluence MySQL database to use the InnoDB storage engine as the MyISAM storage engine could lead to data corruption.
4. Confluence ships with a built-in HSQL database. While this database is fine for evaluation purposes, it is somewhat susceptible to data loss during system crashes. Hence, for production environments, we recommend that you configure Confluence to use an external database.
5. Internet Explorer 8 and 9 do not support the drag-and-drop functionality of HTML5. As Confluence relies on this functionality, the drag-and-drop experience in Internet Explorer 8 and 9 is not complete.
6. Confluence is tested with these versions of Internet Explorer in standards-compliant rendering mode, not compatibility mode. Enabling compatibility mode may cause problems because it emulates older, unsupported rendering modes.
7. Chrome does not have WEBDAV / plugin support so features such as Edit in Word for attachments will not work. Please refer to CONF-23322 for information on the progress of the issue.
8. Confluence does not support editing in Mobile Safari on iOS devices (such as iPhone and iPad). Please refer to CONF-19524 for information on the progress of this issue.

End of Support Announcements for Confluence

This page contains announcements of the end of support for various platforms and browsers when used with Confluence. This is summarised in the table below. Please see the sections following for the full announcements.

End of Support Matrix for Confluence

The table below summarises information regarding the end of support announcements for **upcoming** Confluenc e releases. If a platform (version) has already reached its end of support date, it is **not** listed in the table.

Platform	Confluence End of Support
Tomcat 5.5.x	Confluence 5.0 (announcement)

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Java 6	Confluence 5.0 (announcement)
DB2 database	Confluence 4.3 (announcement)
PostgreSQL 8.2	Confluence 4.3 (announcement)

Why is Atlassian ending support for these platforms?

Atlassian is committed to delivering improvements and bug fixes as fast as possible. We are also committed to providing world class support for all the platforms our customers run our software on. However, as the complexity of our applications grows, the cost of supporting multiple platforms increases exponentially. Each new feature has to be tested on several combinations of application servers, databases, web browsers, etc, with setup and ongoing maintenance of automated tests. Moving forward, we want to reduce the time spent there to increase Confluence development speed significantly.

On this page (most recent announcements first):

- Deprecated Tomcat platform for Confluence (29 August 2012)
- Deprecated Java platform for Confluence (6 August 2012)
- Deprecated Databases for Confluence (1 May 2012)
- Deprecated Databases for Confluence (13 March 2012)
- Deprecated Operating Systems for Confluence (21 July 2011)
- Deprecated Databases for Confluence (7 January 2011)
- Deprecated Web Browsers for Confluence (7 January 2011)
- Deprecated Databases for Confluence (12 October 2010)
- Deprecated Web Browsers for Confluence (12 October 2010)
- Deprecated Databases for Confluence (6 July 2010)
- Deprecated Web Browsers for Confluence (6 July 2010)
- Deprecated Databases for Confluence (24 March 2010)
- Deprecated Application Servers for Confluence (27 January 2010)
- Deprecated Java Platforms for Confluence (27 January 2010)
- Deprecated Web Browsers for Confluence (14 December 2009)

Deprecated Tomcat platform for Confluence (29 August 2012)

This section announces the end of Atlassian support for Tomcat 5.5.x for Confluence. Please note: Apache hav announced that support for Apache Tomcat 5.5.x will end on 30 September 2012: End of life for Apache Tomca 5.5.x.

End of support means that Atlassian will not fix bugs related to the specified version of Tomcat, past the suppo end date for your version of Confluence. The details are below. Please refer to the list of supported platforms fo details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Tomcat 5.5.x Support

Platform	Support End Date
Tomcat 5.5.x	When Confluence 5.0 is released, due in early 2013

Tomcat 5.5.x notes:

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- Confluence 4.3 is the last major version that will support Tomcat 5.5.x. The Confluence 4.3.x bug-fix releases will also continue to support Tomcat 5.5.x.
- Tomcat 6.0.x will still be supported in Confluence 5.0.
- Confluence 4.3.x and previously-released versions will continue to work with Tomcat 5.5.x. However, we will not fix bugs affecting Tomcat 5.5.x after the end-of-life date for your version of Confluence.
- Confluence 5.0 will not be tested with Tomcat 5.5.x.

Deprecated Java platform for Confluence (6 August 2012)

This section announces the end of Atlassian support for Java 6 for Confluence. Please note that Oracle has announced the end of public updates for Java 6: Java SE 6 End of Public Updates Notice.

End of support means that Atlassian will not fix bugs related to the specified version of Java, past the support end date for your version of Confluence. The details are below. Please refer to the list of supported platforms fo details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Java 6 Support

Platform	Support End Date
Java 6 (JRE and JDK 1.6)	When Confluence 5.0 is released, due in early 2013

Java 6 notes:

- Confluence 4.3 is the last major version that will support Java 6. The Confluence 4.3.x bug-fix releases will also continue to support Java 6.
- Java 7 (JRE and JDK 1.7) will still be supported in Confluence 5.0.
- Confluence 4.3.x and previously-released versions will continue to work with Java 6. However, we will n fix bugs affecting Java 6 after the end-of-life date for your version of Confluence.
- Confluence 5.0 will not be tested with Java 6.

Deprecated Databases for Confluence (1 May 2012)

This section announces the end of Atlassian support for certain databases for Confluence. End of support means that Atlassian will not fix bugs related to the specified database past the support end date for your version of Confluence.

The details are below. Please refer to the list of supported platforms for details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcemen t at atlassian dot com`.

End of Life Announcement for Database Support

Database	Support End Date
PostgreSQL 8.2	When Confluence 4.3 is released, due in mid 2012

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PostgreSQL 8.2 notes:

- Confluence 4.2 is the last version that will support version 8.2 of PostgreSQL.
- Versions 8.3, 8.4 and 9.0 will still be supported in Confluence 4.3.
- Confluence 4.2 and previously-released versions will continue to work with PostgreSQL 8.2. However, w will not fix bugs affecting PostgreSQL 8.2 after the end-of-life date for your version of Confluence.
- Confluence 4.3 will not be tested with PostgreSQL 8.2.

Deprecated Databases for Confluence (13 March 2012)

This section announces the end of Atlassian support for certain databases for Confluence. End of support means that Atlassian will not fix bugs related to the specified database past the support end date for your version of Confluence.

The details are below. Please refer to the list of supported platforms for details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcemen t at atlassian dot com`.

End of Life Announcement for Database Support

Database	Support End Date
DB2	When Confluence 4.3 is released, due in mid 2012

DB2 notes:

- Confluence 4.2 is the last version that will support DB2.
- From Confluence 4.3, no versions of DB2 will be supported.
- Confluence 4.2 and previously-released versions will continue to work with DB2. However, we will not fix bugs affecting DB2 after the end-of-life date for your version of Confluence.
- Confluence 4.3 will not be tested with DB2.
- For help with moving from DB2 to a supported database, please refer to the list of supported databases nd the guide to migrating to another database.

Deprecated Operating Systems for Confluence (21 July 2011)

This section announces the end of Atlassian support for certain operating systems for Confluence. End of support means that Atlassian will not fix bugs related to running Confluence server on that operating system pa the support end date.

We will stop supporting the following operating systems from Confluence 4.0, due in late 2011:

- Mac OS X (as a Confluence server platform).

The details are below. Please refer to the list of supported platforms for details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcemen t at atlassian dot com`.

End of Life Announcement for Operating System Support

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Operating System	Support End Date
Mac OS X (as a Confluence server platform)	When Confluence 4.0 releases, due in late 2011

- **Mac OS X Notes:**
  - Atlassian intends to end support for Mac OS X (as a server platform) in Confluence 4.0 (due for release in late 2011). Confluence 3.5 is the last version that will support Mac OS X.
  - The Sun/Oracle JDK/JRE 1.6 is the only JDK platform officially supported by Atlassian. This mea that Apple Mac OS X is not a supported operating system for the Confluence server, as the Sun/Oracle JDK does not run on Mac OS X.
  - Accessing Confluence as a user from Mac OS X via a compatible web browser will still be supported for the forseeable future.

Deprecated Databases for Confluence (7 January 2011)

This section announces the end of Atlassian support for certain database versions for Confluence. End of support means that Atlassian will not fix bugs related to certain database versions past the support end date.

We will **stop supporting the following database versions** from Confluence 4.0, due in late 2011:

- MySQL 5.0.

The details are below. Please refer to the list of supported platforms for details of platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcemen t at atlassian dot com`.

End of Life Announcement for Database Support

Database	Support End Date
MySQL (version 5.0 only)	When Confluence 4.0 releases, due in late 2011

- **MySQL Notes:**
  - Atlassian intends to end support for MySQL 5.0 in Confluence 4.0 (due for release in the middle c 2011). Confluence 3.5 is the last version that will support MySQL 5.0.
  - MySQL 5.1 will still be supported.
  - 'Support End Date' means that Confluence 3.5 and previously released versions will continue to work with MySQL 5.0. However, we will not fix bugs affecting MySQL 5.0 past the support end date.
  - Confluence 4.0 will not be tested with MySQL 5.0.

Deprecated Web Browsers for Confluence (7 January 2011)

This section announces the end of Atlassian support for certain web browser versions for Confluence. End of support means that Atlassian will not fix bugs related to certain web browser versions past the support end dat

We will **stop supporting the following web browser versions** from Confluence 4.0, late middle of 2011:

- Microsoft Internet Explorer 7 (IE7).
- Safari 4.
- Firefox 3.5.

The details are below. Please refer to the list of supported platforms for details of platform support for

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Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Web Browser Support

Web Browser	Support End Date
Microsoft Internet Explorer (version 7 only)	When Confluence 4.0 releases, late the middle of 2011
Safari (version 4 only)	When Confluence 4.0 releases, due in late of 2011
Firefox (version 3.5 only)	When Confluence 4.0 releases, due in late of 2011

- **Internet Explorer Notes:**
  - Atlassian intends to end support for IE7 in Confluence 4.0 (due for release in the middle of 2011). Confluence 3.5 is the last version that will support IE7.
  - IE8 will still be supported.
  - 'Support End Date' means that Confluence 3.5 and previously released versions will continue to work with IE7. However, we will not fix bugs affecting IE7 past the support end date.
  - Confluence 4.0 will not be tested with IE7.
- **Safari Notes:**
  - Atlassian will introduce support for Safari 5 in Confluence 3.5.
  - We intend to end support for Safari 4 in Confluence 4.0 (due for release in the middle of 2011). Confluence 3.5 is the last version that will support Safari 4.
  - 'Support End Date' means that Confluence 3.5 and previously released versions will continue to work with Safari 4. However, we will not fix bugs affecting Safari 4 past the support end date.
  - Confluence 4.0 will not be tested with Safari 4.
- **Firefox Notes:**
  - Atlassian will end support for Firefox 3.0 in Confluence 3.5, as previously announced.
  - We intend to end support for Firefox 3.5 in Confluence 4.0 (due for release in the middle of 2011) Confluence 3.5 is the last version that will support Firefox 3.5.
  - Firefox 3.6 will still be supported.
  - 'Support End Date' means that Confluence 3.5 and previously released versions will continue to work with Firefox 3.5. However, we will not fix bugs affecting Firefox 3.5 past the support end date
  - Confluence 4.0 will not be tested with Firefox 3.5.

Deprecated Databases for Confluence (12 October 2010)

This section announces the end of Atlassian support for certain database versions for Confluence. End of support means that Atlassian will not fix bugs related to certain database versions past the support end date.

We will **stop supporting the following database versions**:

- From Confluence 3.5, due in the first half of 2011, Confluence will no longer support PostgreSQL 8.1. *Note, PostgreSQL 8.2 and PostgreSQL 8.4 will still be supported.*

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Database Support

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Database	Support End Date
PostgreSQL (version 8.1 only)	When Confluence 3.5 releases, due in the first half of 2011

- **PostgreSQL (version 8.1 only) End of Support Notes:**
  - Atlassian intends to end support for PostgreSQL 8.1 in Confluence 3.5 (due to release in the first half of 2011), with the final support for these platforms in Confluence 3.4. PostgreSQL 8.2 and PostgreSQL 8.4 will still be supported.
  - 'Support End Date' means that Confluence 3.4 and previous released versions will continue to work with the PostgreSQL 8.1 However, we will not fix bugs affecting PostgreSQL 8.1 past the support end date.
  - Confluence 3.5 (due to release in the first half of 2011) will not be tested with PostgreSQL 8.1.

Deprecated Web Browsers for Confluence (12 October 2010)

This section announces the end of Atlassian support for certain web browser versions for Confluence. End of support means that Atlassian will not fix bugs related to certain web browser versions past the support end date.

We will **stop supporting the following web browser versions**:

- From Confluence 3.5, due in the first half of 2011, Confluence will no longer support Firefox 3.0.
  Note, Firefox 3.5 and Firefox 3.6 will still be supported.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Web Browser Support

Web Browser	Support End Date
Firefox (version 3.0 only)	When Confluence 3.5 releases, due in the first half of 2011

- **Firefox (version 3.0 only) End of Support Notes:**
  - Atlassian intends to end support for Firefox 3.0 in Confluence 3.5 (due to release in the first half of 2011), with the final support for these platforms in Confluence 3.4. Firefox 3.5 and Firefox 3.6 will still be supported.
  - 'Support End Date' means that Confluence 3.4 and previous released versions will continue to work with Firefox 3.0. However, we will not fix bugs affecting Firefox 3.0 past the support end date.
  - Confluence 3.5 (due to release in the first half of 2011) will not be tested with Firefox 3.0.

Deprecated Databases for Confluence (6 July 2010)

This section announces the end of Atlassian support for certain database versions for Confluence. End of support means that Atlassian will not fix bugs related to certain database versions past the support end date.

We will **stop supporting the following database versions**:

- From Confluence 3.4, due in the second half of 2010, Confluence will no longer support Oracle 10g (i.e. Oracle 10.1 and Oracle 10.2).
  Note, Oracle 11g (i.e. Oracle 11.1 and Oracle 11.2) will still be supported.

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We have made these decisions in line with Oracle's decision to stop support for Oracle 10g, as per the "Oracle Database (RDBMS) Releases Support Status Summary [ID 161818.1]" article on the Oracle Support site (note you will need an Oracle Support account to find and view the article). This also will reduce the testing time required for each release and help us speed up our ability to deliver market-driven features. We are committed to helping our customers understand this decision and assist them in upgrading to Oracle 11g if needed.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Database Support

Database	Support End Date
Oracle (version 10.1 and 10.2 only)	When Confluence 3.4 releases, due in the second half of 2010

- **Oracle (version 10.1 and 10.2 only) End of Support Notes:**
  - Atlassian intends to end support for Oracle 10.1 and Oracle 10.2 in Confluence 3.4 (due to release in the second half of 2010), with the final support for these platforms in Confluence 3.3 ?. Oracle 11.1 and Oracle 11.2 will still be supported.
  - 'Support End Date' means that Confluence 3.3 and previous released versions will continue to work with the Oracle 10.1 and Oracle 10.2. However, we will not fix bugs affecting Oracle 10.1 or Oracle 10.2 past the support end date.
  - Confluence 3.4 (due to release in the second half of 2010) will not be tested with Oracle 10.1 and Oracle 10.2.

Deprecated Web Browsers for Confluence (6 July 2010)

This section announces the end of Atlassian support for certain web browser versions for Confluence. End of support means that Atlassian will not fix bugs related to certain web browser versions past the support end date.

We will **stop supporting the following web browser versions**:

- From Confluence 3.4, due in the second half of 2010, Confluence will no longer support Safari 3 or Safari 3.1.
  Note, Safari 4 will still be supported.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Web Browser Support

Web Browser	Support End Date
Safari (version 3 and 3.1 only)	When Confluence 3.4 releases, due in the second half of 2010

- **Safari (version 3 and 3.1 only) End of Support Notes:**
  - Atlassian intends to end support for Safari 3 and Safari 3.1 in Confluence 3.4 (due to release in the second half of 2010), with the final support for these platforms in Confluence 3.3. Safari 4 will still be supported.
  - 'Support End Date' means that Confluence 3.3 and previous released versions will continue to

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work with the Safari 3 and Safari 3.1. However, we will not fix bugs affecting Safari 3 and Safari 3 past the support end date.
- Confluence 3.4 (due to release in the second half of 2010) will not be tested with Safari 3 and Safari 3.1.

Deprecated Databases for Confluence (24 March 2010)

This section announces the end of Atlassian support for certain database versions for Confluence. End of support means that Atlassian will not fix bugs related to certain database versions past the support end date.

We will **stop supporting the following database versions**:

- From Confluence 3.3, due in Q3 2010, Confluence will no longer support DB2 8.2.
  Note, DB2 9.7 will still be supported.

We are reducing our database support to reduce the amount of testing time and help us speed up our ability to deliver market-driven features. We are committed to helping our customers understand this decision and assist them in upgrading to DB2 9.7 if needed.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Database Support

Database	Support End Date
DB2 (version 8.2 only)	When Confluence 3.3 releases, due Q3 2010

- **DB2 (version 8.2 only) End of Support Notes:**
  - Atlassian intends to end support for DB2 8.2 in Q3 2010, with the final support for these platforms in Confluence 3.2. DB2 9.7 will still be supported.
  - 'Support End Date' means that Confluence 3.2 and previous released versions will continue to work with the DB2 8.2. However, we will not fix bugs affecting DB2 8.2 past the support end date.
  - Confluence 3.3 (due to release in Q3 2010) will not be tested with DB2 8.2.

Deprecated Application Servers for Confluence (27 January 2010)

This section announces the end of Atlassian support for certain application servers for Confluence. End of support means that Atlassian will not fix bugs related to certain application servers past the support end date.

We will **stop supporting the following application servers**:

- From Confluence 3.2, due late Q1 2010, Confluence will no longer support JBoss application servers.
- From Confluence 3.3, due in Q3 2010, Confluence will no longer support Oracle WebLogic, IBM WebSphere or Caucho Resin.

We are reducing our application server platform support to reduce the amount of testing time and help us speed up our ability to deliver market-driven features. We are committed to helping our customers understand this decision and assist them in migrating to Tomcat, our supported application server.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

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End of Life Announcement for Application Server Support

Application Servers	Support End Date
JBoss 4.2.2	When Confluence 3.2 releases, due late Q1 2010
Oracle WebLogic 9.2	When Confluence 3.3 releases, due Q3 2010
IBM WebSphere 6.1	When Confluence 3.3 releases, due Q3 2010
Caucho Resin 3.0, 3.1.6, 3.1.7	When Confluence 3.3 releases, due Q3 2010

- **JBoss End of Support Notes:**
  - 'Support End Date' means that Confluence 3.1 and previous released versions will continue to work with stated application servers. However, we will not fix bugs affecting JBoss application servers.
  - Confluence 3.2 will not support JBoss application servers.
- **WebLogic, WebSphere and Resin End of Support Notes:**
  - Atlassian intends to end support for Oracle WebLogic, IBM WebSphere, and Caucho Resin in Q3 2010, with the final support for these platforms in Confluence 3.2.
  - 'Support End Date' means that Confluence 3.2 and previous released versions will continue to work with the stated application servers. However, we will not fix bugs affecting Oracle WebLogic IBM WebSphere, and Caucho Resin application servers past the support end date.
  - Confluence 3.3 (due to release in Q3 2010) will only be tested with and support Tomcat 5.5.20+ and 6.0.
  - If you have concerns with this end of support announcement, please email `eol-announcement at atlassian dot com`.

Why is Atlassian doing this?

We have chosen to standardise on Tomcat, because it is the most widely used application server in our user population. It is fast, robust, secure, well-documented, easy to operate, open source, and has a huge communi driving improvements. It is the de facto industry standard, with several companies available that specialise in providing enterprise grade support contracts for it, ranging from customisations to 24/7 support.

Deprecated Java Platforms for Confluence (27 January 2010)

This section announces the end of Atlassian support for certain Java Platforms for Confluence.

We will **stop supporting the following Java Platforms**:

- From Confluence 3.3, due Q3 2010, support for Java Platform 5 (JDK/JRE 1.5) will end.

We are ending support for Java Platform 5, in line with the Java SE Support Roadmap (i.e. "End of Service Life for Java Platform 5 dated October 30, 2009). We are committed to helping our customers understand this decision and assist them in updating to Java Platform 6, our supported Java Platform.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcement at atlassian dot com`.

End of Life Announcement for Java Platform Support

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Java Platform	Support End Date
Java Platform 5 (JDK/JRE 1.5)	When Confluence 3.3 releases, due Q3 2010

- **Java Platform 5 End of Support Notes:**
  - Atlassian intends to end support for Java Platform 5 in Q3 2010.
  - 'Support End Date' means that Confluence 3.2.x and previous released versions will continue to work with Java Platform 5 (JDK/JRE 1.5), however we will not fix bugs related to Java Platform 5 past the support end date.
  - Confluence 3.3 will only be tested with and support Java Platform 6 (JDK/JRE 1.6).
  - If you have concerns with this end of support announcement, please email `eol-announcement at atlassian dot com`.

Deprecated Web Browsers for Confluence (14 December 2009)

This section announces the end of Atlassian support for certain web browsers for Confluence.

We will **stop supporting older versions of web browsers** as follows:

- From Confluence 3.2, due late Q1 2010, support for Firefox 2 and Safari 2 will end.
- From 13 July 2010, in line with Microsoft's Support Lifecycle policy, support for IE6 will end.

The details are below. Please refer to the Supported Platforms for more details regarding platform support for Confluence. If you have questions or concerns regarding this announcement, please email `eol-announcemen` `t at atlassian dot com`.

End of Life Announcement for Web Browser Support

Web Browsers	Support End Date
Firefox 2	When Confluence 3.2 releases, late Q1 2010
Safari 2	When Confluence 3.2 releases, late Q1 2010
Internet Explorer 6	When Confluence 3.3 releases (target Q3 2010) or 13 July 2010, whichever is sooner

- **Firefox 2 and Safari 2 Notes:**
  - Confluence 3.1 is the last version to officially support Firefox 2 and Safari 2.
  - You may be able to use these older browser for the most common use cases like viewing and editing content, but official support for these browsers will end once you upgrade to Confluence 3.2.
  - Confluence 3.2 is currently targeted to release late Q1 2010 and will not be tested with Firefox 2 and Safari 2. After the Confluence 3.2 release, Atlassian will not provide fixes in older versions of Confluence for bugs affecting Firefox 2 and Safari 2.
- **Internet Explorer 6 Notes:**
  - Confluence 3.2 (due late Q1 2010) will be the last version to officially support Internet Explorer 6.
  - Confluence 3.3 is currently targeted to release Q3 2010 and will **not** support IE6.
  - Atlassian will support IE6 in Confluence until the 13th of July 2010, in line with Microsoft's Suppor Lifecycle policy. Beyond that date, released versions of Confluence will continue working with IE6 just as they did before, but we will not fix bugs affecting Internet Explorer 6.
  - You may be able to use Internet Explorer 6 for the most common use cases like viewing and editing content, but official support for this browser will end once you upgrade to Confluence 3.3.

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Supported Platforms FAQ

Q: How does Atlassian choose which JRE versions, application servers and databases to support?

For application servers and databases, we try to pick a good cross-section of open source options and popular commercial platforms. We then choose which JRE versions to support based on the recommended environments for these servers.

Q: What is a supported platform?

A supported platform is one that:

- Confluence is regularly tested on during the development cycle
- One that is available within Atlassian for support technicians and developers to reproduce problems
- Bugs raised against it will be given a high priority

Supporting a platform means we know how to get Confluence running in that environment and can troubleshoot Confluence issues within it. It does not mean we have any particular expertise beyond that. As such, we may not be able to provide assistance with customising or tuning that application server or database. (Atlassian support is not a substitute for a good database administrator.)

Q: Can I get assistance with running Confluence on a platform that is *not* supported?

If you are running Confluence on an unsupported platform, then we can not guarantee providing any support for it. Furthermore, we will recommend that you switch to a platform which is supported.

Q: If you write your application to standards like J2EE, JDBC and SQL, doesn't that mean it should run on any compliant server?

Confluence is a complicated application and we commonly encounter interesting edge-cases where different servers have interpreted the specifications differently. Then again, each server has its own different collection of bugs.

Q: How can I get Atlassian to support Confluence on a new platform?

Supporting a new platform involves a significant investment of time by Atlassian, both up-front costs to set up new testing environments and fix any issues we might encounter and the ongoing costs involved in maintaining the application against this new environment in the future. As such, supporting a new platform is not something we will do unless we know there is significant demand for it.

Please be aware that your interest alone will not be enough for us to add support for your application server or database. We would need to see a significant number of votes on the issue raised in our public JIRA site or a significant level of interest in our forums, before considering supporting that platform.

Q: My organisation has standardised on an operating environment that Confluence does not support. What can I do?

In this situation, you have the following two options:

1. Run Confluence in the unsupported environment, with the caveats mentioned above.
2. Make an exception to your standardised operating environment and set up Confluence based on its supported platforms.

Migrating Confluence Between Servers

This page describes how to move Confluence between physical servers. It is distinct from other functions. It does not cover database migration, application server migration, or upgrading. Atlassian suggests doing each of these steps separately. See also:

- Upgrading Confluence

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- Migrate to Another Database
- Switching to Apache Tomcat

How to Create a Test or Development Site

Administrators may need to move a Confluence site from one server to another for upgrades or downtime. This page tells you how to copy a Confluence site from one server to another. For example, you may want to transfer your current production snapshot to a test server as permitted in the licence agreement.

- **Avoid upgrades while migrating.** If you are planning to switch databases, application servers or Confluence versions, firstly perform the application transfer in isolation, and test that it was successful before making other changes.
- Development licenses are available for any Commercial or Academic license. Create one or contact Atlassian for help.

On this page:

- How to Create a Test or Development Site
- Transferring Confluence To Another Server Using The Same Operating System
- Transferring Confluence To Another Server Using a Different Operating System
- Ensuring no contact with production systems
- Migrating from HTTPS to HTTP
- Notes

The information on this page does not apply to Confluence OnDemand.

Transferring Confluence To Another Server Using The Same Operating System

If the operating systems on both servers are the same, then the home and install folders can be copied straight into an identical external database and user management setup.

1. On the original server, create zips of the Confluence install and home directories. Copy the zips to the new server.
2. On the new server, unzip the install and home directories. Windows users should avoid unzipping with the Windows built-in extractor, instead use Winzip or the free 7Zip.

   If you are changing the location of the home directory, open the Confluence install\confluence\WEB-INF\classes directory and edit confluence-init.properties by changing the line starting with 'confluence.home='.

3. Modify the location of your war file if need be. If using Tomcat, this is likely in /Conf/Catalina/localhost. You'll want to make sure the docbase attribute is pointing to the right location.
4. This next step is dependent on your database:

   a. Database configuration:
      i. For users of the *internal database*, the database content is stored inside the home directory. You should switch to an external database after the transfer is successful.
      ii. For *external databases stored on another server*: change the user account or datasource permissions so that the new server has the same network access permissions as the original. Then confirm from the new server that the hostname can be resolved and is listening for database connections on the expected port.
      iii. For *external databases hosted locally (ie. localhost)*: on the original server, create a manual database backup using a native db dump backup tool. Copy the database backup to the new server.

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   b. On the new server, install or upgrade the database version to match the original server.
   c. Import the database backup.
   d. Add a database user account with the same username and password as the original.
   e. Provide the user with the full access to the imported database.
   f. Use a database administration tool to confirm that the user can login from the localhost.
   g. To modify any database connection information, go to the Confluence home directory and edit confluence.cfg.xml. The connection URL is set under hibernate.connection.url. **Ensure it does not point to your production database server.**
   h. If you are using internal user management, skip this step. For users who have JIRA or LDAP integration, provide the new server with network or local access to the same hosts as the original. If this is a true test site, set up a test of your JIRA site or LDAP server so as not to disrupt production systems and change the server.xml or atlassian-user.xml files to point to the appropriate test servers. Note that it might be acceptable to use a production connection here, as users won't be logging on to the test system in high volume.
   i. If appropriate, make sure no emails are sent out from the test system.
   j. Start Confluence.
   k. Go to Administration > License Details and add your development license key. You can generate one at http://my.atlassian.com. There are more details in How Can I Get a License for a Staging Environment?.
   l. If you configured Confluence as a Windows service, repeat those instructions.
   m. Add your development license key.
5. Some customers have experienced problems with Confluence's search functions after performing a migration, or that the content of their `{recently-updated}` macro is not being updated correctly. Errors in the `atlassian-confluence.log` file corroborate such problems. Hence, to avoid these issues, it is strongly recommended that you perform a rebuild of your content indices after performing a migration.

Transferring Confluence To Another Server Using a Different Operating System

Migrating from Windows to Linux

You will need to replace the backslash with forward slash in the following lines in `confluence.cfg.xml`:

```
<property
name="attachments.dir">${confluenceHome}/attachments</property>
    <property name="lucene.index.dir">${confluenceHome}/index</property>
    <property
name="webwork.multipart.saveDir">${confluenceHome}/temp</property>
```

Using database tools (preferred option)

If you are using the Production backup strategy, follow these steps:

1. Download the proper distribution (**the same one you have from your original site**) from the Download Archive.
2. Copy your Confluence *home* (not install) directory from your original server (even if it was a different OS).
3. If you are changing the location of the home directory, open the Confluence install\confluence\WEB-INF\classes directory and edit confluence-init.properties by changing the line starting with 'confluence.home='.
4. For external databases stored locally, on the original server, create a manual database backup using a native db dump backup tool.
5. Copy the database backup to the new server.
6. On the new server, install or upgrade the database version to match the original server.
7. Import the database backup.
8. Add a database user account with the same username and password as the original.

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9. Provide the user with the full access to the imported database.
10. Use a database administration tool to confirm that the user can login from the localhost.
11. To modify any database connection information, go to the Confluence home directory and edit confluence.cfg.xml. The connection URL is set under hibernate.connection.url. **Ensure it does not point to your production database server.**
12. If you are using internal user management, skip this step. For users who have JIRA or LDAP integration, provide the new server with network or local access to the same hosts as the original.
13. Copy server.xml, atlassian-user.xml, osuser.xml, any patches, and any other customized files velocity or properties files. If you are using internal user management, skip this step. For users who have JIRA or LDAP integration, provide the new server with network or local access to the same hosts as the original. If this is a true test site, set up a test of your JIRA site or LDAP server so as not to disrupt production systems and change the server.xml or atlassian-user.xml files to point to the appropriate test servers. Note that it might be acceptable to use a production connection here, as users won't be logging on to the test system in high volume.
14. If appropriate, make sure no emails are sent out from the test system.
15. Start Confluence.
16. Go to **Administration > License Details** and add your development license key. You can generate one at http://my.atlassian.com. There are more details in How Can I Get a License for a Staging Environment? .
17. If you configured Confluence as a Windows service, repeat those instructions.
18. Add your development license key.
19. Some customers have experienced problems with Confluence's search functions after performing a migration, or that the content of their {`recently-updated`} macro is not being updated correctly. Errors in the `atlassian-confluence.log` file corroborate such problems. Hence, to avoid these issues, it is strongly recommended that you perform a rebuild of your content indices after performing a migration.

Using XML data backups (only for small to medium sized installations)

Note: The XML export built into Confluence is not suited for the backup or migration of large data sets. There are a number of third party tools that may be able to assist you with the data migration. If you would like help in selecting the right tool, or help with the migration itself, we can put you in touch with one of the Atlassian Experts .

If you're not yet using the Production backup strategy, you can migrate Confluence to a different server machine by creating an XML data backup as usual, and then importing that to Confluence on the new server.

1. Create an XML data backup from Confluence as follows:
    a. Choose **Browse** > **Confluence Admin**.
    b. Select **Backup & Restore**.
    c. Check the **Backup Attachments** option and click **Backup**.
2. Identify the version of Confluence that you are currently using. This is displayed at the bottom of each Confluence page.
3. Download Confluence to the new server. Get the version of Confluence that you identified above, but for the operating system of the new server. You may be using either the latest Confluence version, or an older version.
4. Install Confluence on the new server.
5. Go to **Administration** > **License Details** and add your development license key. You can generate a license at http://my.atlassian.com. You can find more details in How Can I Get a License for a Staging Environment?.
6. Restore your XML data backup from **Administration** > **Backup and Restore**.
7. If appropriate, make sure that no email contact can be made with the test system.
8. Some customers have experienced problems with Confluence's search functions after performing a migration, or that the content of their {`recently-updated`} macro is not being updated correctly. Errors in the `atlassian-confluence.log` file corroborate such problems. Hence, to avoid these issues, it is strongly recommended that you rebuild your content indices after performing a migration.

Ensuring no contact with production systems

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To ensure no contact with external systems, you will need to disable both inbound and outbound mail services.

1. Disable global outbound mail by running the following database query:

```
SELECT * FROM BANDANA WHERE BANDANAKEY =
'atlassian.confluence.smtp.mail.accounts';
```

2. Disable space-level mail archiving by running the following database query:

```
SELECT * FROM BANDANA WHERE BANDANAKEY =
'atlassian.confluence.space.mailaccounts';
```

Change 'SELECT' to 'DELETE' in the above queries once you are sure you want to remove the specified accounts.

Once this is done, you can start your test site without any mails being sent or retrieved. Think carefully about other plugins which may access production systems (SQL macro, JIRA macro, etc.). If these write content, or create unwanted load on external systems, they should be disabled promptly after starting the test site.

Migrating from HTTPS to HTTP

You may want to migrate from a server secured by SSL to one which is not secured by SSL. For example, this may be useful if you are copying a Confluence site from a production to a test site.

To migrate from HTTPS to HTTP, undo the HTTPS-specific settings that are described on this page: Adding SSL for Secure Logins and Page Security.

Notes

- Ricky Sheaves (calebscreek) has written an interesting blog post on Moving Confluence from Windows to (Ubuntu) Linux.
- If you wish to **merge** two Confluence sites, you can consider using the remote import plugin. This plugin is currently not supported. The supported method would be to export a space and then import each space one by one. The two Confluence sites must be running the same version of Confluence.

Migrating from Confluence OnDemand to a Confluence Installed Site

This page is for people who are currently using a Confluence OnDemand site, and wish to move to a Confluence site that is hosted on their own servers.

Summary

You will need to download and install a special **OnDemand release** of Confluence (for example, 'Confluence 5.0-OD-1') and then move your data from your hosted Confluence OnDemand site into your newly installed site. You cannot move your data from Confluence OnDemand to a site installed from the standard Confluence download.

Instructions

Note: You must do the data export and the Confluence download (both described in the steps below) **on the same day**. This will ensure that your data and your Confluence installation are of the same version and are therefore compatible.

To migrate from Confluence OnDemand to a Confluence installed site:

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1. Export the data from your Confluence OnDemand site, using the Confluence backup manager.
    - For instructions, see this page in the Confluence OnDemand documentation: Exporting wiki data.
    - You now have a backup file, also called an XML export, of your Confluence OnDemand data.
2. Download the OnDemand release of Confluence. Go to the Confluence OnDemand download page and get the latest 'OD' release for your operating system. The latest downloads are at the top of the list. For example, get the following files, replacing 'x' with the latest number available:
    - **For Windows 64-bit:** Get '5.0-OD-x - Windows Installer (64 bit)'
    - **For Windows 32-bit:** Get '5.0-OD-x - Windows Installer (32 bit)'
    - **For Linux 64-bit:** Get '5.0-OD-x - Linux Installer (64 bit)'
    - **For Linux 32-bit:** Get '5.0-OD-x - Linux Installer (32 bit)'
    - To install Confluence from an archive on UNIX or Mac OS X: Get '5.0-OD-x - Standalone (TAR.GZ Archive)'
    - To install Confluence from an archive on Windows: Get '5.0-OD-1 - Standalone (ZIP Archive)'
    - EAR/WAR archives are also available.
3. Install Confluence as described in the Confluence Installation Guide.
4. Import the data from your backup file (XML export) into your new Confluence installation. See Restoring a Site.
5. Log in to your new Confluence site, using the following credentials:
    - Username: `sysadmin`
    - Password: `sysadmin`
6. Change the password immediately after logging in.

On this page:

- Summary
- Instructions
- Background
- Support, limitations, and recommendations
    - Upgrade required as soon as full release is available
    - Compatibility of third-party plugins
    - PostgreSQL database recommended
    - Confluence license

Related pages:

- Confluence Installation Guide
- Confluence Administrator's Guide

Background

Backups taken from Confluence OnDemand are only compatible with the current OnDemand release (for example, 'Confluence 5.0-OD-1'). The reason is that Confluence OnDemand is typically ahead of the downloadable version of Confluence, meaning that you will have new features in Confluence OnDemand that are not yet available in the downloadable version.

It is therefore not possible to migrate your data to a Confluence site installed from the standard Confluence download. You will need to download and install the special OnDemand release of Confluence (for example, 'Confluence 5.0-OD-1') as described above.

The advantage is that you will be able to keep the Confluence OnDemand features currently not available to other customers who are using the standard downloadable version of Confluence. However, there are a few major limitations as noted below.

Support, limitations, and recommendations

Please note the following points about your Confluence site installed from an OnDemand release.

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Upgrade required as soon as full release is available

Atlassian Support will support your newly installed Confluence site, running the OnDemand release, until the full Confluence release is available.

For example, if your OnDemand release is 'Confluence 5.0-OD-1', then we will support it until Confluence 5.0 is released.

When the full version is released, you will need to upgrade to the full release in order to continue to receive support.

Compatibility of third-party plugins

Because Confluence OnDemand is typically ahead of the downloadable version of Confluence, most third-party plugins will not be compatible with the OnDemand release. You may have some problems with third-party plugins on your Confluence site, until you are able to upgrade to the full release. Note, however, that any third-party plugins that you were using in Confluence OnDemand should be compatible with your newly installed site too.

If you have any questions about the compatibility of third-party plugins with your OnDemand release, please contact the plugin vendors. Contact details are on the Atlassian Marketplace.

PostgreSQL database recommended

If you are uncertain about which database to choose for your Confluence site, we recommend PostgreSQL. See Database Setup for PostgreSQL. The Confluence OnDemand site runs on PostgreSQL, and we therefore know it to be compatible with your OnDemand release.

If you decide to choose another supported database and discover any problems with compatibitily, please contact Atlassian Support. For a list of supported databases, see Supported Platforms.

Confluence license

Your Atlassian OnDemand license cannot be used in a site installed from the downloadable version of Confluence. Please get your new Confluence license at https://my.atlassian.com.

Confluence Release Notes

Welcome to this page about all production releases of Confluence wiki. The **release notes** give up-to-date information about the improvements made in each release. If you are upgrading from an earlier version of Confluence, you will find essential information in the **upgrade notes** associated with the relevant release notes.

Latest major release: Confluence 4.3

With great pleasure, Atlassian presents **Confluence 4.3**. Keep up with what's happening, rediscover your team's focus, and take action faster – even while on the go!

Read the **full release notes**.

Related pages:

- Confluence Development Releases
- Confluence Documentation Home

Summary of major releases

Looking for a list of highlights in the major Confluence releases? See the **Confluence Release Summary**.

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All release notes

Confluence 4.3

- Confluence 4.3 Release Notes

Confluence 4.2

- Confluence 4.2.13 Release Notes
- Confluence 4.2.12 Release Notes
- Confluence 4.2.11 Release Notes
- (Confluence 4.2.9 and 4.2.10 were internal releases)
- Confluence 4.2.8 Release Notes
- Confluence 4.2.7 Release Notes
- Confluence 4.2.6 Release Notes
- Confluence 4.2.5 Release Notes
- Confluence 4.2.4 Release Notes
- Confluence 4.2.3 Release Notes
- Confluence 4.2.2 Release Notes
- Confluence 4.2.1 Release Notes
- Confluence 4.2 Release Notes

Confluence 4.1

- Confluence 4.1.9 Release Notes
- (Confluence 4.1.8 was an internal release)
- Confluence 4.1.7 Release Notes
- Confluence 4.1.6 Release Notes
- Confluence 4.1.5 Release Notes
- Confluence 4.1.4 Release Notes
- Confluence 4.1.3 Release Notes
- Confluence 4.1.2 Release Notes
- (Confluence 4.1.1 was an internal release)
- Confluence 4.1 Release Notes

Confluence 4.0

- Confluence 4.0 Release Notes

Confluence 3.5

- Confluence 3.5.17 Release Notes
- Confluence 3.5.16 Release Notes
- Confluence 3.5.13 Release Notes
- (Confluence 3.5.12 was an internal release)
- Confluence 3.5.11 Release Notes
- (Confluence 3.5.10 was an internal release)
- Confluence 3.5.9 Release Notes
- (Confluence 3.5.8 was an internal release)
- Confluence 3.5.7 Release Notes
- Confluence 3.5.6 Release Notes
- Confluence 3.5.5 Release Notes
- Confluence 3.5.4 Release Notes
- Confluence 3.5.3 Release Notes
- Confluence 3.5.2 Release Notes
- Confluence 3.5.1 Release Notes
- Confluence 3.5 Release Notes

Confluence 3.4

- Confluence 3.4.9 Release Notes

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- Confluence 3.4.8 Release Notes
- Confluence 3.4.7 Release Notes
- Confluence 3.4.6 Release Notes
- Confluence 3.4.5 Release Notes
- (Confluence 3.4.4 was an internal release)
- Confluence 3.4.3 Release Notes
- Confluence 3.4.2 Release Notes
- Confluence 3.4.1 Release Notes
- Confluence 3.4 Release Notes

Confluence 3.3

- Confluence 3.3.3 Release Notes
- (Confluence 3.3.2 was an internal release)
- Confluence 3.3.1 Release Notes
- Confluence 3.3 Release Notes

Confluence 3.2

- Confluence 3.2.1 Release Notes
- Confluence 3.2 Release Notes

Confluence 3.1

- Confluence 3.1.2 Release Notes
- Confluence 3.1.1 Release Notes
- Confluence 3.1 Release Notes

Confluence 3.0

- Confluence 3.0.2 Release Notes
- Confluence 3.0.1 Release Notes
- Confluence 3.0 Release Notes

Confluence 2.10

- Confluence 2.10.4 Release Notes
- Confluence 2.10.3 Release Notes
- Confluence 2.10.2 Release Notes
- Confluence 2.10.1 Release Notes
- Confluence 2.10 Release Notes

Confluence 2.9

- Confluence 2.9.3 Release Notes
- Confluence 2.9.2 Release Notes
- Confluence 2.9.1 Release Notes
- Confluence 2.9 Release Notes

Confluence 2.8

- Confluence 2.8.3 Release Notes
- Confluence 2.8.2 Release Notes
- Confluence 2.8.1 Release Notes
- Confluence 2.8 Release Notes
- Confluence 2.8 Beta Release Notes

Confluence 2.7

- Confluence 2.7.4 Release Notes
- Confluence 2.7.3 Release Notes
- Confluence 2.7.2 Release Notes

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- Confluence 2.7.1 Release Notes
- Confluence 2.7 Release Notes

Confluence 2.6

- Confluence 2.6.3 Release Notes
- Confluence 2.6.2 Release Notes
- Confluence 2.6.1 Release Notes
- Confluence 2.6 Release Notes

Confluence 2.5

- Release Notes 2.5.8
- Release Notes 2.5.7
- Release Notes 2.5.6
- Release Notes 2.5.5
- Release Notes 2.5.4
- Release Notes 2.5.3
- Release Notes 2.5.2
- Release Notes 2.5.1
- Release Notes 2.5

Confluence 2.4

- Release Notes 2.4.5
- Release Notes 2.4.4
- Release Notes 2.4.3
- Release Notes 2.4.2

Confluence 2.3

- Release Notes 2.3.3
- Release Notes 2.3.2
- Release Notes 2.3.1
- Release Notes 2.3

Confluence 2.2

- Release Notes 2.2.10
- Release Notes 2.2.9
- Release Notes 2.2.8
- Release Notes 2.2.7
- Release Notes 2.2.6a
- Release Notes 2.2.5
- Release Notes 2.2.4
- Release Notes 2.2.3
- Release Notes 2.2.2
- Release Notes 2.2.1
- Release Notes 2.2

Confluence 2.1

- Release Notes 2.1.5
- Release Notes 2.1.4
- Release Notes 2.1.3
- Release Notes 2.1.2
- Release Notes 2.1.1
- Release Notes 2.1

Confluence 2.0

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- Release Notes 2.0.3
- Release Notes 2.0.2
- Release Notes 2.0.1
- Release Notes 2.0

Confluence 1.4

- Release Notes 1.4.4
- Release Notes 1.4.3
- Release Notes 1.4.2
- Release Notes 1.4.1
- Release Notes 1.4

Confluence 1.3

- Release Notes 1.3.6
- Release Notes 1.3.5
- Release Notes 1.3.4
- Release Notes 1.3.2
- Release Notes 1.3.1
- Release Notes 1.3

Confluence 1.2

- Release Notes 1.2.3
- Release Notes 1.2.2
- Release Notes 1.2.1
- Release Notes 1.2

Confluence 1.1

- Release Notes 1.1.2
- Release Notes 1.1.1
- Release Notes 1.1

Confluence 1.0

- Release Notes 1.0.3
- Release Notes 1.0.1
- Release Notes 1.0

Notes

How to find a list of known issues

To find a list of known issues in a particular Confluence version, you can create a filter in the Atlassian issue tracker and use the permalink located at the top right of the issue tracker's page to access the filtered report. The following example filter is the list of bugs reported for Confluence 4.3 and now fixed:

```
https://jira.atlassian.com/secure/IssueNavigator.jspa?reset=true&jqlQuery=project
+%3D+CONF+AND+issuetype+%3D+Bug+AND+affectedVersion+%3D+%224.3%22+AND+resolution+
%3D+Fixed
```

Read the JIRA documentation on creating filters.

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Confluence Release Summary

This page shows the highlights of the major Confluence releases.

Current Release

For information about the latest release, please go to the Confluence Release Notes.

Confluence 4.3 — 4 September 2012

- Workbox notifications
- Personal tasks
- Tasks on pages
- Confluence mobile
- Table sorting and highlighting
- Draggable images and macros
- Rich text templates
- Space archiving
- Improved user invitations and signup options
- Default space permissions
- More in the Confluence 4.3 Release Notes

Confluence 4.2 — 10 April 2012

- Page layouts
- Likes
- Quick comments
- Popular content on the dashboard
- Recommended content by email
- Labels on attachments
- Signup invitations via URL
- Easy upgrade, try and buy for plugins
- More in the Confluence 4.2 Release Notes

Confluence 4.1 — 13 December 2011

- Autoconvert for Pasted Links
- Image effects
- Quick find and replace
- Follow Your Network On the Dashboard
- Space attachments macro
- Global PDF stylesheets
- Use any character in page titles
- New translation feature
- More in the release notes

Confluence 4.0 — 19 September 2011

- Brand New Editor
- Simplified Editing Experience
- New Macros
- Faster Editing Experience
- Introducing @mentions
- Improved Page Comparison Functionality
- Email Notification Improvements
- New Confluence Installer and Guided Upgrades
- New Editor Plugin Points for Developers
- More in the release notes

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Confluence 3.5 — 16 March 2011

- Easy, Powerful Connections to Active Directory, LDAP and Crowd
- Improved JIRA Integration
- Drag-and-Drop for HTML5 Browsers
- Autowatch and Improved Notification Settings
- Sharing Pages and Blog Posts
- Enhanced Code Macro
- More Administrative Improvements
- "What's New" Feature Tour
- Categories, a New Way of Organising Spaces
- Embedding Audio and Video with the Multimedia Macro
- Infrastructure Changes
- More in the release notes

Confluence 3.4 — 12 October 2010

- New Keyboard Shortcuts, Mac-Friendly Too
- Keyboard Shortcut Dialog
- User Macros in Macro Browser and Autocomplete
- New Plugin Manager
- Improved Performance
- Infrastructure Changes
- More in the release notes

Confluence 3.3 — 7 July 2010

- Confluence Page Gadget
- Autocomplete for Inserting Macros
- Property Panels for Links
- Property Panels for Images
- Manage Watchers
- Email Notifications for Network Activity and Blogs
- Blog Improvements
- Context-Sensitive Help Links
- Security Features
- Infrastructure Changes
- More in the release notes

Confluence 3.2 — 24 March 2010

- Autocomplete for Inserting Links
- Autocomplete for Embedding Images and Documents
- A Link Browser that's Smarter, Smoother, Faster
- New Documentation Theme
- New Easy Reader Theme
- Template Bundles
- Reordering while Moving a Page
- New Keyboard Shortcuts and Editor Hints
- User Interface Enhancements
- More in the release notes

Confluence 3.1 — 8 December 2009

- Introducing Gadgets
- Drag-and-Drop
- Office 2007 Support
- New 'Move Page' Feature
- Enhanced Image Browser
- Draft Comparisons

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- Page Restrictions Dialog Box
- Other Editor Enhancements
- New Web Browser Versions Supported
- More in the release notes

Confluence 3.0 — 1 June 2009

- Introducing the Macro Browser
- Enhanced User Profiles
- Introducing Your Network
- New User Status
- New Hover Profile Feature
- Customisable Enhanced PDF Exports
- Improved Rich Text Editor
- Performance Improvements
- Engine Room and Developer Community
- Administration Improvements
- More in the release notes

Confluence 2.10 — 3 December 2008

- Introducing the Widget Connector
- Improved Office Connector Now Bundled
- Introducing Quick Navigation
- 'Did You Mean', OpenSearch and More
- Custom Stylesheets for Confluence Spaces
- Updated JIRA Issues Macro with Custom Fields and Dynamic Display
- Enhanced User and Group Management
- Upgraded Rich Text Editor
- Universal Wiki Converter now with SharePoint Import and More
- Improved Activity Macros
- Plugin Framework 2
- More in the release notes

Confluence 2.9 — 7 August 2008

- Streamlined Search
- Auto Save
- Charts
- Page Tree
- Gallery
- New Tutorial
- More in the Menus
- Alphabetical Page Ordering
- Better Spam Prevention
- Plugin Repository
- Engine Room and Developers' Community
- More in the release notes

Confluence 2.8 — 10 April 2008

- Dynamic menus and simplified screen design
- Page ordering
- Collapsible comments
- Multiple-label filter
- Confluence installer
- Task list
- Performance enhancements
- Administration, management and monitoring

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- More in the release notes

Confluence 2.7 — 12 December 2007

- JIRA Issues and Portlet macros use new trusted authentication
- Two-tier administrator permissions
- Inserting images and attaching files during page creation
- Sorting of images in Gallery macro
- Simplified and improved logging
- Performance, maintainability and administration
- More in the release notes

Confluence 2.6 — 27 September 2007

- Fresh look for the Default theme
- Personalised comments and Dashboard
- Space description on Dashboard
- Labels on templates
- Default content for space home pages
- Social Bookmarking plugin now bundled with Confluence
- Back-dating and renaming news items
- More in the release notes

Confluence 2.5 — 29 April 2007

- Introducing flexible page restrictions
- Dynamic task list JRE incompatibilities
- contentbylabel macro supports AND condition
- More in the release notes

Confluence 2.4 — 14 March 2007

- Editable comments
- Page mailing
- More in the release notes

Confluence 2.3 — 5 January 2007

- Confluence Massive — cluster support
- People directory
- Activity plugin — usage statistics
- Blogging RPC plugin — manage news in Confluence using blogger-compatible desktop clients
- WebDAV client support via WebDAV plugin — create, edit, move pages, attachments, etc via WebDAV
- More in the release notes

Confluence 2.2 — 27 April 2006

- Personal spaces
- Localisation/internationalisation — drop-in language packs (similar to JIRA)
- CAPTCHA support — spam protection
- Improved searching
- Improved LDAP performance
- Confluence ships with Tomcat 5.5
- More in the release notes

Confluence 2.1 — 20 December 2005

- Autosave
- Concurrent edit warnings
- LDAP integration with Atlassian User/POLIS
- More in the release notes

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Confluence 2.0 — 17 November 2005

- Rich Text Editing — WYSIWYG editor
- Labels
- Dashboard tabs — All, My, Team, New
- RSS builder
- Export pages as Word documents
- Copy pages
- More in the release notes

Confluence 1.4 — 23 May 2005

- New user interface
- Enhanced editing — doing more in the edit interface
- Page permissions
- New plugin types
- Configurable themes
- Completely rewritten Wiki to HTML conversion engine
- More in the release notes

Confluence 1.3 — 30 November 2004

- Mail archiving
- Themes
- Trash can
- More granular space permissions
- More in the release notes

Confluence 1.2 — 23 August 2004

- Page list views — alphabetical, directory view and search view of all pages in a space
- Image thumbnails and thumbnail galleries
- Threaded comments
- Enhanced Search - indexing attachment comments and file names and contextual searching
- New permissions interface
- More in the release notes

Confluence Release Cycle

New versions of Confluence are released frequently. Our goals are to:

- Make bug-fixes available to customers sooner
- Give interested customers early access to new features and API changes
- Make Confluence major releases predictable

Feature Releases

We aim to release new versions of Confluence every three to four months. These releases will contain the bulk of new functionality.

Feature releases are numbered by incrementing Confluence's minor version number, so the move from Confluence 2.0 to 2.1 and 2.1 to 2.2 both introduced significant new features to the product. Occasionally we may change to a whole new major version number (Confluence 2.0 was originally slated to be released as 1.5), but that is mostly done for marketing purposes, and shouldn't be considered to have any practical meaning. 🙂

Feature releases may not be API-compatible with the previous release. This means that you should test RPC clients, macros and plugins before running them on a newer version of Confluence.

You can find the time line history of our major releases at the downloads archive.

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Bug-Fix Releases

Confluence bug-fix releases are scheduled every three to four weeks, depending on the number and urgency of the bugs that have been fixed during that particular development cycle. We aim to minimise the time between a bug being reported and a fix being available, without either us or our customers having to manage clumsy sets of manual patches.

Bug-fix releases will contain mostly bug-fixes, plus the occasional minor new feature or enhancement. Enhancements will be limited, however, as the main aim of these point releases is to improve stability, and make no significant API changes.

Bug-fix releases are numbered by incrementing the patch-level. So the first bug-fix release after Confluence 2.2 is 2.2.1, followed by 2.2.2. Occasionally, we will re-issue a bug-fix release because something was faulty with the original download. In that case we will create a "re-issue" release number, for example 2.1.5a or 2.2.1a.

Obviously, we don't expect anyone to upgrade Confluence every two weeks, administrators should keep their own schedule, based on how much of an inconvenience is being caused by any bugs that may have been fixed since. Sometimes, however, a security issue or serious application bug will arise that we feel it is in everyone's best interests to fix as soon as possible. In such cases, we will recommend in the Confluence Release Notes tha t all customers upgrade to the latest version.

Milestone Releases

Occasionally, when possible, we will release preview "milestone releases" of the next major Confluence version. How often and when we do so depends on the particulars of the current development cycle. In situations where we are working on a number of disparate features we may be able to do a number of progressive development releases, whereas in iterations where we are making significant changes to the Confluence internals, we may not have anything suitable for public consumption until quite late in the release cycle.

Milestone releases will be announced in the developer release notes. Milestone releases are published for testing plugins and early feedback about our work, please don't use them on production systems.

The version number of a milestone release will be the version number of the *next* major release, suffixed with -m. So Confluence 2.3-m1 will be followed by 2.3-m2, and so on until the ultimate release of the finished Confluence 2.3.

Upgrade Notes Overview

Typically, each major release of Confluence comes with upgrade notes, which are specific recommendations for upgrading from the previous major version. If you plan to upgrade and skip a few Confluence versions, you must read the upgrade notes for all major versions between your current version and the version to which you are upgrading, to make sure you do not miss something important.

Please read our general information about upgrading Confluence.

> ✅ **For example:**
>
> When upgrading from Confluence 3.4 to Confluence 4.0, read the upgrade notes for Confluence 3.5, as well as those for Confluence 4.0.

Also, we strongly recommend that you read the upgrade notes for any minor releases in-between, since they contain important information that will affect your Confluence upgrade.

Below is a list of upgrade notes for previous major releases of Confluence, as well as the upgrade notes for important minor releases:

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- Confluence 4.3 Upgrade Notes
- Confluence 4.2 Upgrade Notes
- Confluence 4.1 Upgrade Notes
- Confluence 4.0 Upgrade Notes
- Confluence 3.5 Upgrade Notes
- Confluence 3.4 Upgrade Notes
- Confluence 3.3 Upgrade Notes
- Confluence 3.2 Upgrade Notes
- Confluence 3.1 Upgrade Notes
- Confluence 3.0.1 Upgrade Notes
- Confluence 3.0 Upgrade Notes
- Confluence 2.10 Upgrade Notes
- Confluence 2.9 Upgrade Notes
- Confluence 2.8 Upgrade Notes
- Confluence 2.7 Upgrade Notes
- Confluence 2.6 Upgrade Notes

You will find the upgrade notes attached to the release notes for the relevant version.

Useful plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

RELATED TOPICS

Confluence Release Summary
Confluence Release Notes

Confluence 4.3 Release Notes

DOWNLOAD latest version

4 September 2012

With great pleasure, Atlassian presents **Confluence 4.3**. Keep up with what's happening, rediscover your team focus, and take action faster – even while on the go!

Highlights of Confluence 4.3

- Workbox notifications
- Personal tasks
- Tasks on pages
- Confluence mobile
- Table sorting and highlighting
- Draggable images and macros
- Rich text templates
- Space archiving
- Improved user invitations and signup options
- Default space permissions
- Other improvements
- Infrastructure changes

More

- Read the upgrade notes for important information about this release.
- See the full list of issues resolved in this release.

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Thank you for your feedback

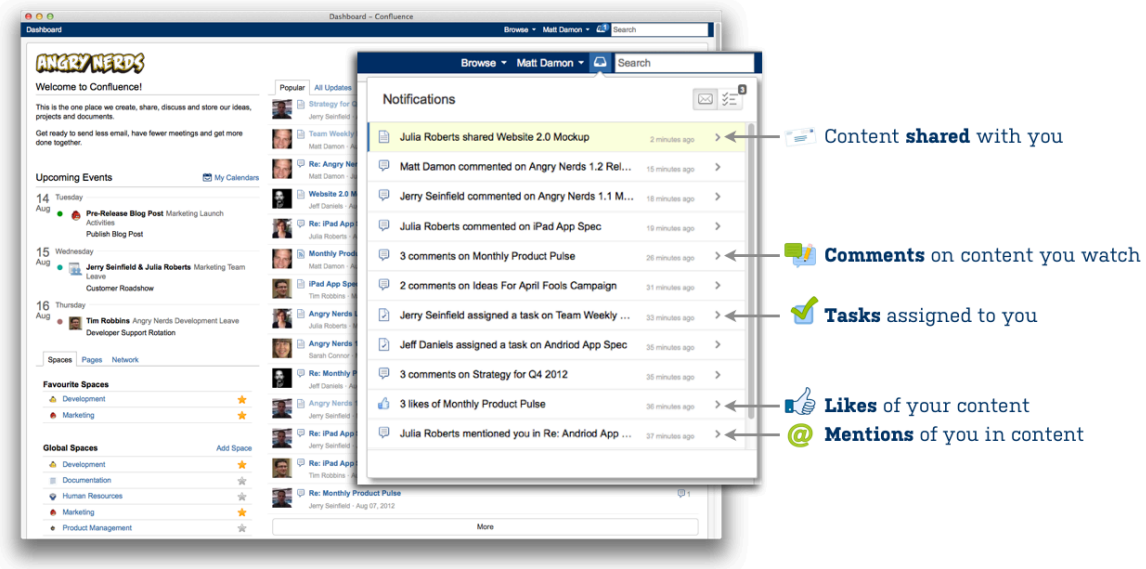
- Over **20** feature and improvement requests fulfilled
- More than **960** votes satisfied

Video of what's new

1

Workbox notifications

The new Confluence workbox collects your notifications from page watches, shares and mentions. Use the inli actions to comment on, like, or watch a page. More...



Do you want to mark a notification for later attention? Add it to your task list and come back to it later.

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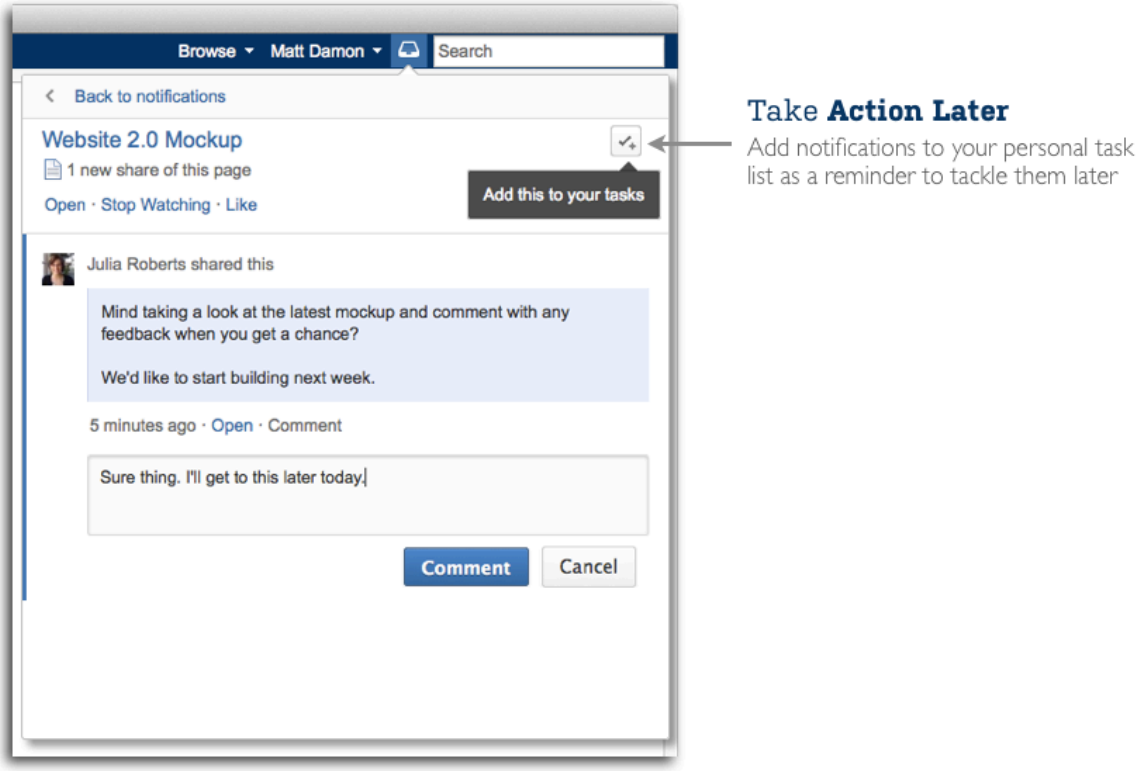

2

Personal tasks

As part of your workbox, you can now create and manage all your tasks in Confluence: personal tasks, tasks from notifications, and tasks assigned to you on Confluence pages. Plan your day's work, drag your tasks into order of priority, make notes, and mark your tasks as complete – all in one place. More...

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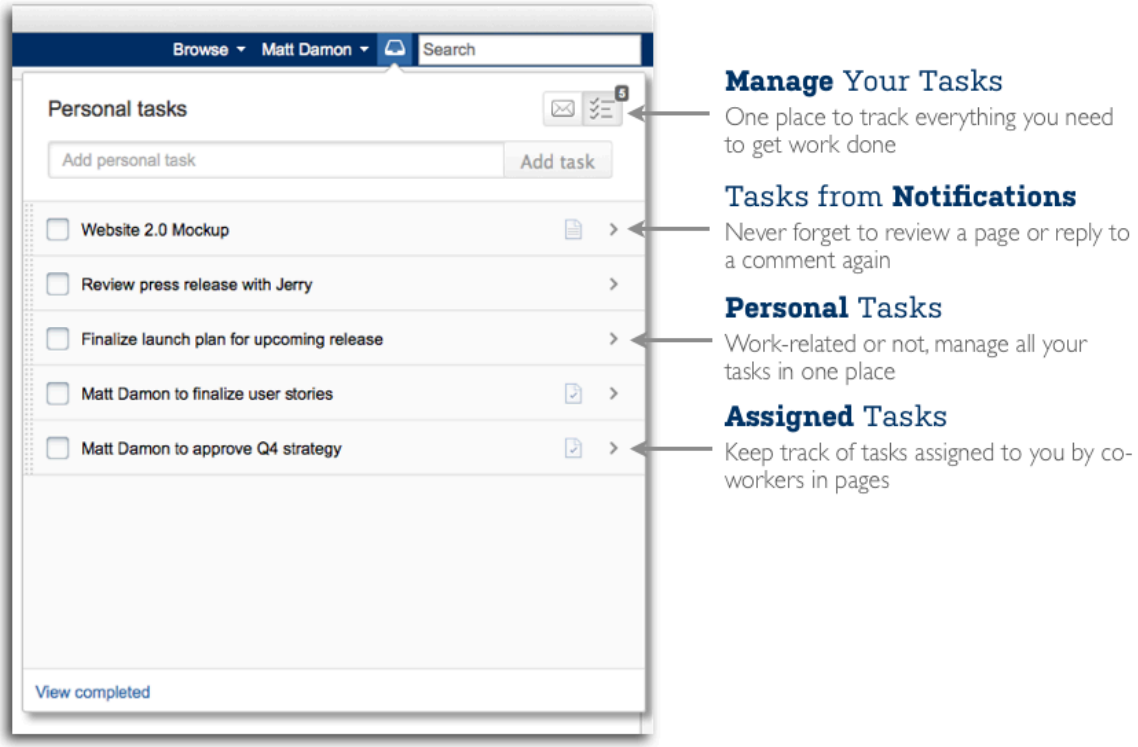

3

Tasks on pages

It's now really simple to track your team's tasks on a page: project tasks, meeting action items, checklists, and whatever takes your fancy.

1. **Create task lists**
   Choose the new task icon in the editor to add a task list.
2. **Assign tasks using mentions**
   You can @mention a user within a task to assign it to that person. The task will appear in the user's personal task list.
3. **Notify assignees**
   Users receive a notification when a task has been assigned to them. In addition, page watchers will be notified when tasks in a page are marked as complete.
4. **Track tasks from anywhere**
   View all your assigned tasks in your workbox. Add notes, prioritise the tasks, and mark them as complet

More...

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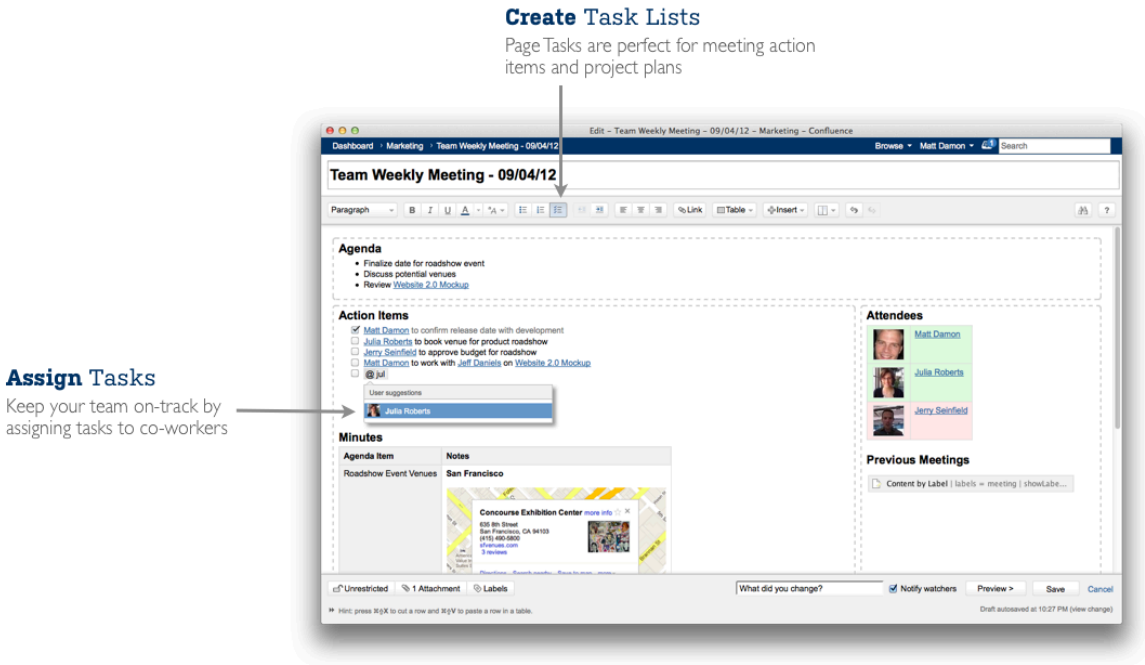

4

Confluence mobile

Stay productive on the go with a new, super-responsive interface optimised for iOS 5. With Confluence mobile ou can:

- Manage your personal tasks and notifications.
- Browse popular content, recent blog posts and network activity.
- Search Confluence for content and people.
- Like pages, blog posts and comments.
- Add comments to pages and blog posts.
- View the profiles of your colleagues. Tap to call, SMS or email them directly from your mobile device.

More...

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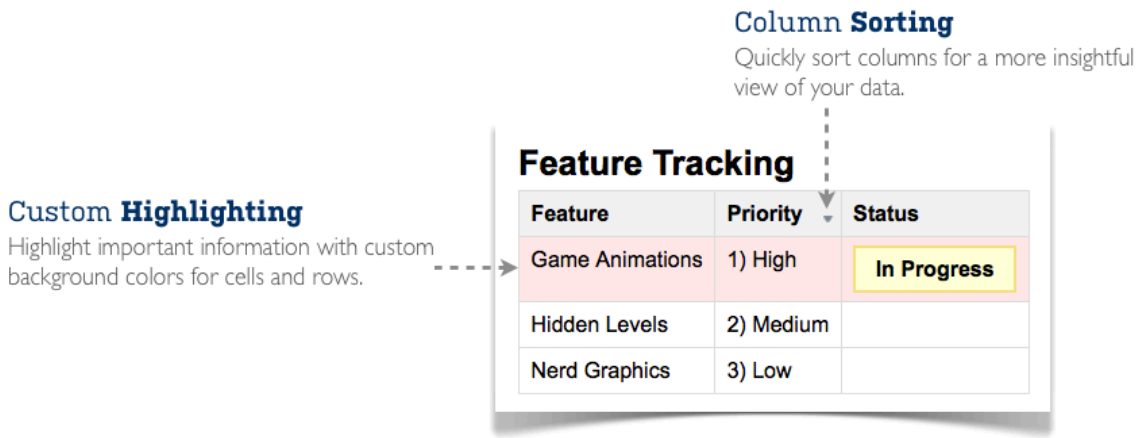
5

Table sorting and highlighting

Sortable tables are here! They're colourful and easier to read too.

- **Column sorting**
  When viewing a page, click a column header to sort the table by the values in the column.
- **Cell highlighting**
  Fill cells, rows and columns with a background colour to highlight important information.



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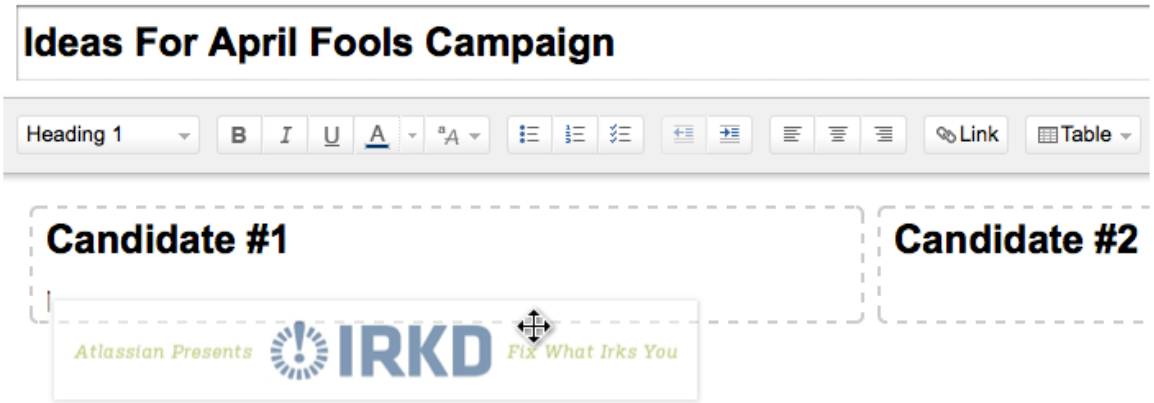
6

Draggable images and macros

Within the Confluence editor, you can drag and drop images and macros anywhere on the page that you are editing. This feature is supported in the following browsers: Chrome, Firefox, and Internet Explorer 9.



7

Rich text templates

The template editor now supports rich text content, just like the page editor. You no longer need to use wiki markup to create and update templates. This means that you can convert an existing page to a template. And i easy to add form fields, known as variables, to your templates. More...

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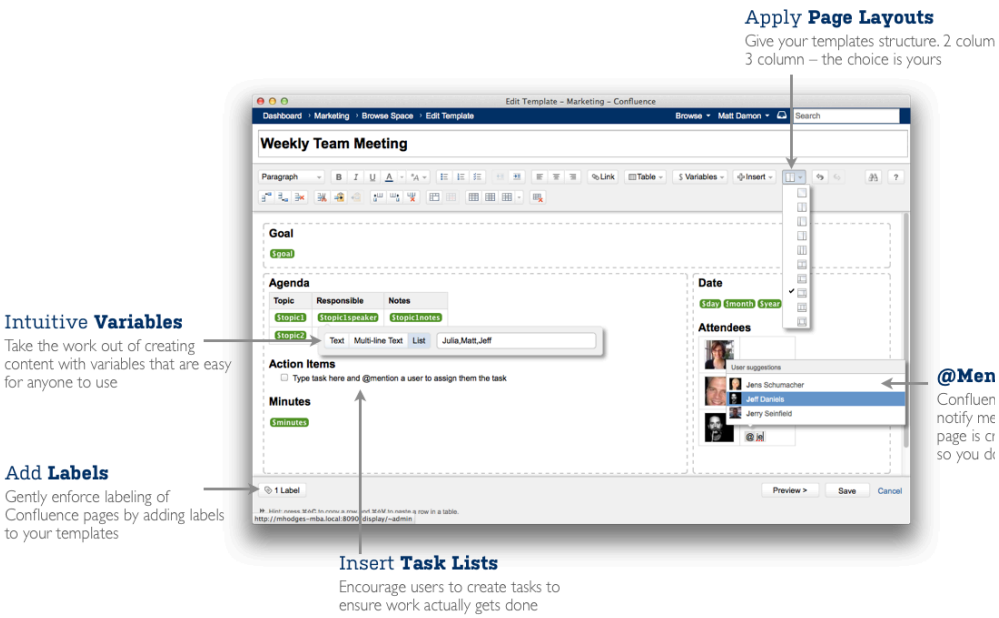
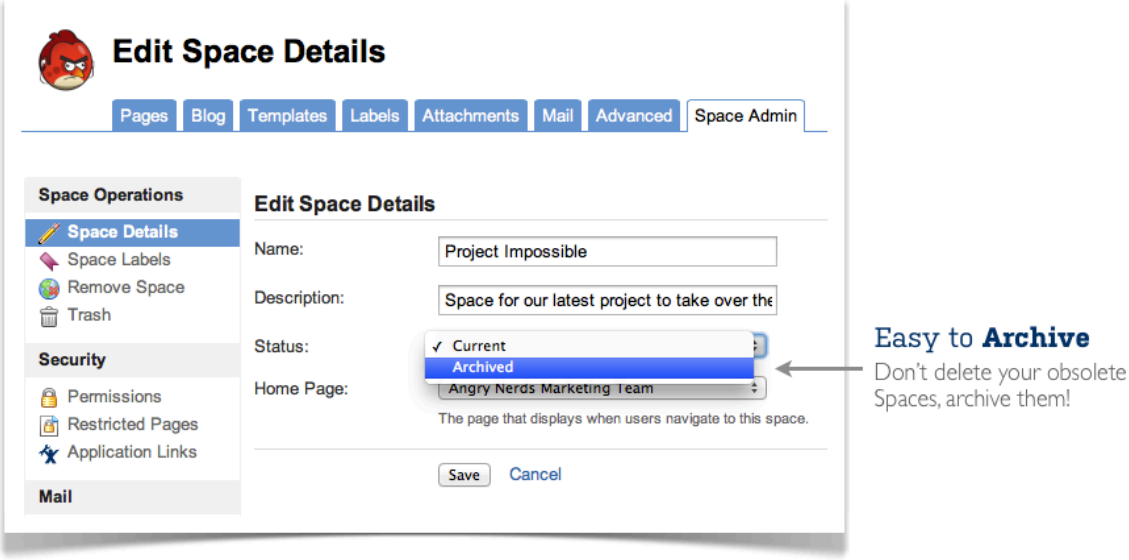


8

Space archiving

Do you need to make a space's content less visible, but keep the space available on your Confluence site? Archive it! When a space is archived, the pages and other content do not appear in the Confluence search results, activity streams, or dropdown menus. In the space directory, the archived space will appear on a new archive tab. More...



9

Improved user invitations and signup options

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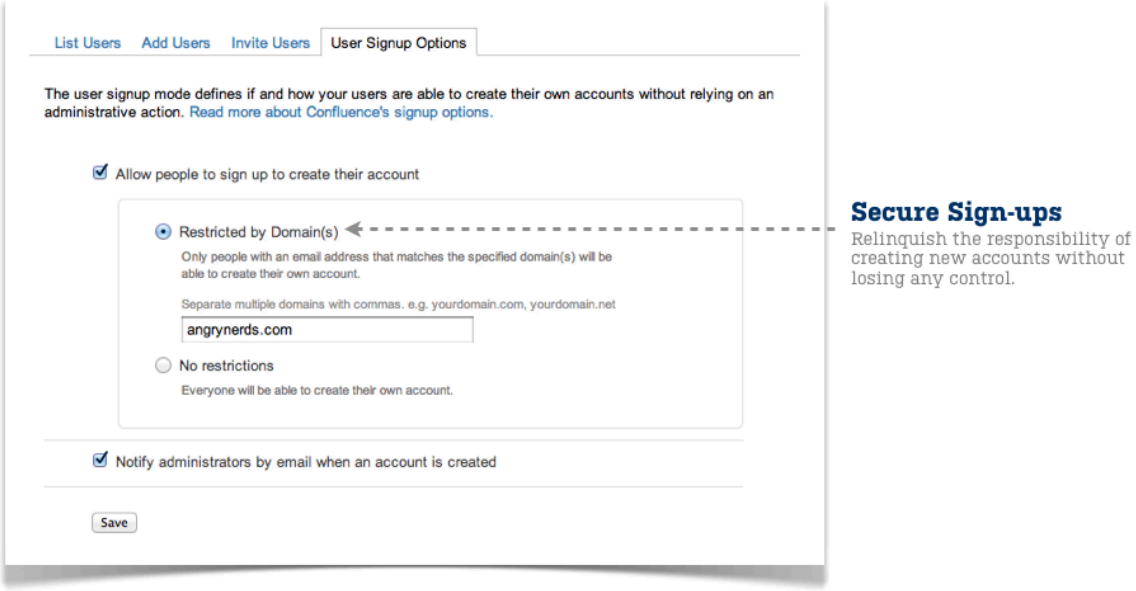
If you want to invite people to sign up to Confluence, you can email an invitation directly from the Confluence user administration screen. To further encourage people to sign up, the login screen includes a signup option too.

If you choose to add users manually, Confluence can send them an email message informing them of their nev account.

If you want to allow only people from within your organisation to sign up, use the new domain restriction option. People will only be able to sign up if their email address belongs to one of the domains specified. Confluence w send the person an email message, asking them to click a link to confirm their email address. More...



10

Default space permissions

Confluence administrators can now set the default permissions that will be applied to new spaces. The default permissions are configurable for groups, and not for individual users or anonymous users. Note that the space permissions scheme remains as flexible as before. Space administrators can change the space permissions at any time, including the anonymous permissions, group permissions and individual user permissions. More...

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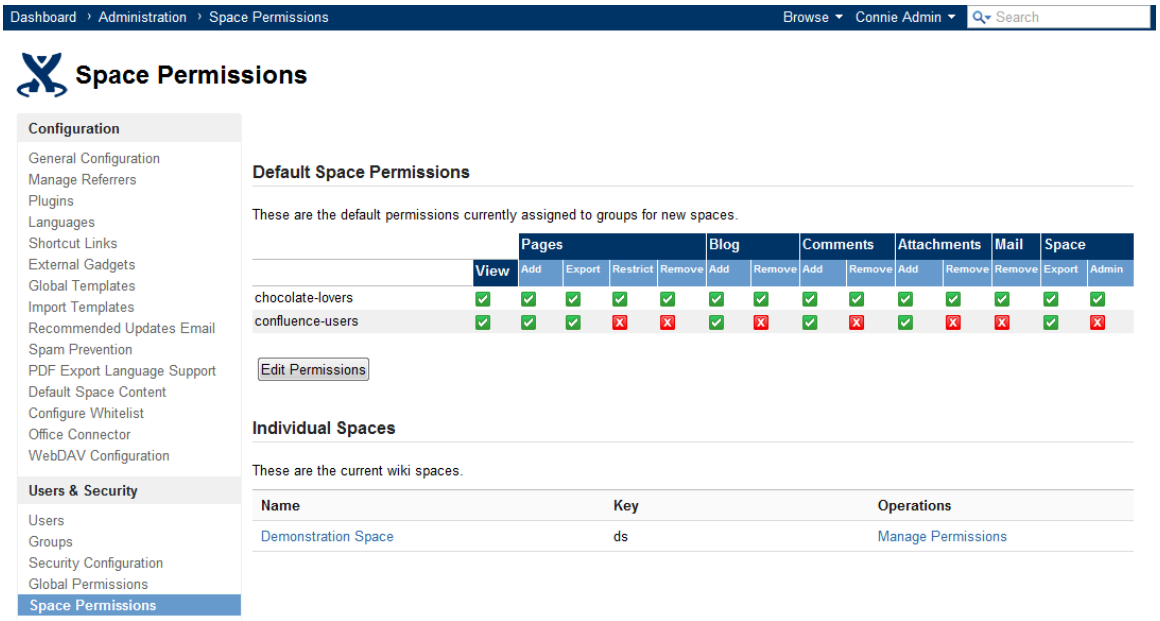
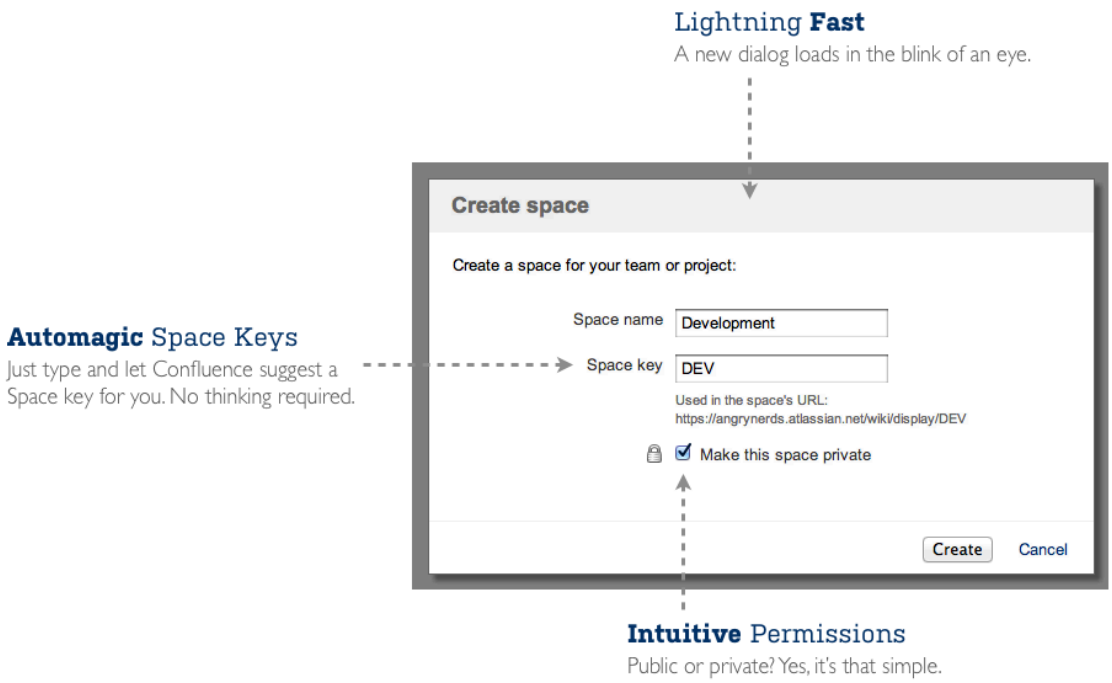


We've also simplified the way you create spaces. The quick 'Add Space' option at the top of the dashboard lea you into the new, simplified dialog for adding global spaces, shown below. Adding a personal space is even simpler.



11

Other improvements

- **Removing attachment versions.** You can now delete a specific version of an attachment.

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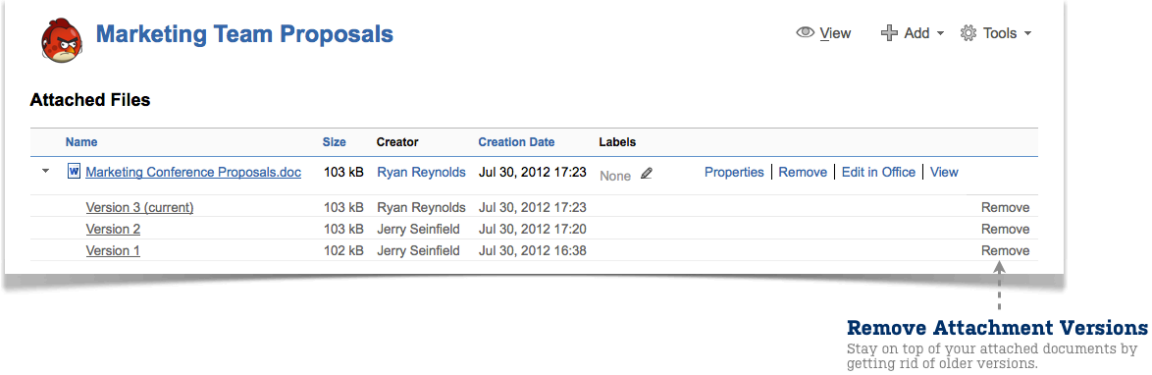

- **Mentions now available via the 'Insert' menu.** In Confluence 4.0 we introduced @mentions, a handy way of mentioning someone in a page or comment. Now we have added this user mention option to the editor's 'Insert' menu, to help new users discover this useful feature.
- **Multiple new drafts.** You can now have more than one draft of a new page or blog post in the same space. (In earlier versions of Confluence, you could have multiple drafts of existing pages, but only one new draft.)
- **Reduced memory usage by up to 2 MB per plugin.** We have improved the implementation of the Atlassian template renderer, reducing memory usage by up to 2 megabytes per plugin, for those plugins that bundle their own Velocity templates.
- **Support for MySQL 5.5.** Reminder: We support MySQL 5.5 as well as 5.1. We announced this support with the Confluence 4.2.3 release, and made it applicable to Confluence 4.2 and later.
- **Session resource management.** Confluence now aggressively expires HTTP sessions that appear to come from bots or web crawlers, by lowering the idle timeout for sessions that only perform a single request. This significantly reduces the resource consumption by HTTP sessions on public-facing Confluence servers, or on servers integrated with third-party search appliances. This functionality is supplied by the Atlassian Bot Session Killer plugin, now bundled with Confluence.
- **Faster switching of dashboard tabs.** Switching between the activity tabs on the dashboard no longer causes the entire dashboard to reload.

12

Infrastructure changes

Here are some points of interest for plugin developers.

- **JIRA Portlets gone.** We have removed the JIRA Portlet code from Confluence. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and the JIRA Portlet plugin is no longer bundled in Confluence 4.3.
- **Improved data storage for plugin developers.** In previous versions of Confluence, Bandana was the primary data storage mechanism available to plugin developers. Confluence 4.3 ships with Active Objec , a new ORM (object relational mapping) layer for Atlassian products, implemented as a plugin. It enable easier, faster, and more scalable data access and storage than the existing Bandana and PluginSettings APIs. Active Objects in Confluence is still under rapid development, and is currently used by only a few plugins. If you would like to experiment with it, we would love to hear your feedback.
- **API changes.** Please see our guide to preparing for Confluence 4.3.
- **Experimental API for workbox notifications and tasks.** Confluence 4.3 introduces the workbox for managing notifications and tasks. We have an *experimental* API available and we're requesting your feedback! Here is your chance to help us shape the notifications and tasks API. Details are in our guide preparing for Confluence 4.3.

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Confluence 4.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.3**. For details of the new features and improvements in this release, please read the Confluence 4.3 Release Notes.

On this page:

- Preparing your team for Confluence 4
- Upgrade notes
  - End of support for DB2 and PostgreSQL 8.2
  - Removal of JIRA Portlet macro
  - Active Objects bundled
  - Migration of templates from wiki markup to the rich text format
  - Advance notice: End of support for Java 6 in Confluence 5.0
  - Advance notice: End of support for Tomcat 5.5.x in Confluence 5.0
- Upgrade procedure
- Checking for known issues and troubleshooting the Confluence upgrade

Preparing your team for Confluence 4

If you are **upgrading to Confluence 4 for the first time** (coming from Confluence 3.5 or earlier) then please note that the change to the Confluence editing experience is significant. People in your organisation will need to be aware of the coming changes, so that they can plan and prepare for them. We have written some guides to help you:

Planning for Confluence 4

- Confluence 4 Editor FAQ
- Confluence 4 Editor - What's Changed for Users of the Old Rich Text Editor
- Confluence 4 Editor - What's Changed for Wiki Markup Users
- Quick Administrator Tips To Prepare for Confluence 4
- Trying Confluence 4 Yourself
- Giving Feedback on Confluence Releases
- Confluence 4 Editor - Customer Feedback

Upgrade notes

End of support for DB2 and PostgreSQL 8.2

As previously announced, **from this release onwards** we no longer offer support for the following database platforms:

- No versions of DB2 database are supported. For help with moving from DB2 to a supported database, please refer to the list of supported databases and the guide to migrating to another database.
- Version 8.2 of PostgreSQL database is not supported.

Please see End of Support Announcements for Confluence.

Removal of JIRA Portlet macro

The JIRA Portlet macro is no longer supported. Gadgets replaced portlets in JIRA 4.0 and Confluence 3.1. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and have removed the portlet code in Confluence 4.3. Pages that contain the macro will no longer display information

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drawn from JIRA. Instead, they will show an error reporting that the macro does not exist. To prevent this behaviour, please upgrade to a version of JIRA that supports gadgets, and follow the instructions in How to Migrate from JIRA Issues and JIRA Portlets to Gadgets.

Active Objects bundled

Confluence 4.3 ships with the Active Objects plugin. If you have previously installed Active Objects into your Confluence 4.2 site, you will need to uninstall it before upgrading to Confluence 4.2. This is because user-installed plugins override bundled plugins.

Migration of templates from wiki markup to the rich text format

As part of the Confluence upgrade, an automatic migration of your page templates will take place. This is a non-destructive process. Your existing content is not overwritten. Instead, the migration process will create a new version of each space template and each global template on your Confluence site. The new version will use the new XML storage format, so that you can edit the templates in the Confluence rich text editor.

This process is automatic, and you should not need to take any action. For more details about the upgrade process, see Migration of Templates from Wiki Markup to XHTML-Based Storage Format.

Advance notice: End of support for Java 6 in Confluence 5.0

We are planning to end support for Java 6 (JRE and JDK 1.6) **in Confluence 5.0**. See End of Support Announcements for Confluence.

Advance notice: End of support for Tomcat 5.5.x in Confluence 5.0

We are planning to end support for Tomcat 5.5.x **in Confluence 5.0**. See End of Support Announcements for Confluence.

Upgrade procedure

Note: Upgrade to a test environment first. Test your upgrades in your test environment before rolling them into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.5, then you *must* upgrade to Confluence 3.5.x before upgrading to Confluence 4.x. There are several reasons for this:
   - There were major changes to user management and LDAP in Confluence 3.5.
   - From version 3.5, you will be able to use our new automated installer / upgrader to move to 4.0. The Confluence 4.0 installer does not support upgrading from Confluence versions earlier than 3.5.
   - We recommend that you fix any issues arising from the upgrade to version 3.5.x, separately from those that may arise from upgrading to version 4.x. Please contact Atlassian Support for assistance.
   - Please read the Upgrade Notes Overview and the upgrade notes for each version of Confluence listed on that page. (There are hyperlinks to each one.)

   If you are upgrading from 2.1 or earlier, please read the 2.2 Release Notes.
   If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade from version 2.7.x to version 3.5.x, then upgrade to the latest version. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.

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4. Follow the instructions in the Upgrade Guide.

Checking for known issues and troubleshooting the Confluence upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.
- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.
- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Issues Resolved in Confluence 4.3

Below are the issues resolved in Confluence 4.3, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. The Confluence 4.3 Release Notes describe the new features in this release.

Features and Improvements

JIRA Issues (22 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-11744	Creating a template using the rich text editor	Resolved	Fixed	143
	CONF-3079	Need ability to remove specific versions of an attachment	Resolved	Fixed	127
	CONF-6482	Custom background colour for rows or cells in table	Resolved	Fixed	126
	CONF-3921	Archive spaces	Resolved	Fixed	117
	CONF-2559	Customizable default permissions for newly created space	Resolved	Fixed	106
	CONF-19524	Add offical support for Mobile Safari on the iPad	Resolved	Fixed	76
	CONF-2493	Sortable Tables	Resolved	Fixed	61
	CONF-4591	User signup with email verification	Resolved	Fixed	23

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	CONF-6488	When creating new user, optionally send the new user an email with their account information and reset password link	Resolved	Fixed	14
	CONF-8577	Add support for wireless devices to view and contribute to Confluence content	Resolved	Fixed	13
	CONF-7644	Create super lightweight alternate theme for mobile users	Resolved	Fixed	13
	CONF-6318	Headings should produce unique anchors so that headings with identical text can still be referred to	Resolved	Fixed	11
	CONF-5520	Allow deletion of individual version attachments	Resolved	Fixed	9
	CONF-12555	Create Multiple Drafts of News/Pages	Resolved	Fixed	5
	CONF-23144	Tasks in Confluence	Resolved	Fixed	4
	CONF-26057	Rework likes i18n to be sentence based rather than word based	Resolved	Fixed	0
	CONF-25658	Allow OnDemand a la carte instances to select permissions when creating spaces	Resolved	Fixed	0
	CONF-25657	Simplify create space permissions	Resolved	Fixed	0
	CONF-25292	Enable gzip transfer encoding by	Resolved	Fixed	0

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		default			
	CONF-25000	Better wording on the Like feature for Anonymous users	Resolved	Fixed	0
	CONF-23756	Move to vertical positioning of the labels on the login form	Resolved	Fixed	0
	CONF-21845	Confusing label on CAPTCHA screen	Resolved	Fixed	0

Bugs Fixed

JIRA Issues (24 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-4540	Complex headings generate invalid anchors	Resolved	Fixed	21
	CONF-25642	External developers are unable to compile plugins against Confluence 4.2	Resolved	Fixed	8
	CONF-25518	Mention @user email notification doesn't work on page or comment edit	Resolved	Fixed	6
	CONF-26238	Backup Manager not working in OnDemand	Resolved	Fixed	3
	CONF-23665	Cannot save Page after trying to insert a status macro with a % character	Resolved	Fixed	2
	CONF-26341	Misbehavior when you type an username inside the Network tab (in the following field).	Resolved	Fixed	1
	CONF-26045	PageTemplateManager API	Resolved	Fixed	1

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		change in 4.3 without deprecation			
	CONF-26040	Misleading statement of 'Like' status in Deutsch	Resolved	Fixed	1
	CONF-26019	Editor freezes when moving down with cursor and pasting status macro	Resolved	Fixed	1
	CONF-25965	"n people like this" link does not work in IE8	Resolved	Fixed	1
	CONF-22804	Code Macro's parameter case sensitivity is causing issues.	Resolved	Fixed	1
	CONF-26340	Opening Notifications panel throws ActiveObjectsSQLException	Resolved	Fixed	0
	CONF-26248	The LucidChart plugin is automacially enabled for every OnDemand customer	Resolved	Fixed	0
	CONF-26170	French translation of "Child Pages" ("enfants") is wrong	Resolved	Fixed	0
	CONF-26014	Macro browser does not work in 4.3-beta1	Resolved	Fixed	0
	CONF-25995	Confluence 4.2.9 and 4.3-beta1 can not upgrade due to invalid cast	Resolved	Fixed	0
	CONF-25701	Scheduled Job Admin fails to load when running Confluence in Dev mode	Resolved	Fixed	0
	CONF-25683	User reports being unable to	Resolved	Fixed	0

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		'Like' a Comment with IE8			
	CONF-25670	Either Jira or jira should autoformat to JIRA	Resolved	Fixed	0
	CONF-25603	Warnings during Confluence setup: "Cannot find web resource module for: confluence.aui.staging:..."	Resolved	Fixed	0
	CONF-25586	Unnecessary warning in Confluence backup: "There really are map items, such as ..."	Resolved	Fixed	0
	CONF-25348	Fix Turkish translation for the comment summary in "Confluence Like Plugin"	Resolved	Fixed	0
	CONF-24932	Tasklist sometimes enters tasks multiple times if enter is pressed while script is running.	Resolved	Fixed	0
	CONF-15051	IM Presence NG Plugin (v 2.3) includes outdated links to Wildfire / Openfire	Resolved	Fixed	0

Confluence 4.2.13 Release Notes

20 August 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.13, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

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Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.13 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (5 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-26328	Upgrade to Streams 5.0.11		Resolved	Fixed
	CONF-25780	Recommended Updates are ignored if "Default" option is disabled. No Recommended Updates are send if Default is disabled.		Resolved	Fixed
	CONF-26019	Editor freezes when moving down with cursor and pasting status macro		Resolved	Fixed
	CONF-26096	NullPointerException when trying to edit a comment that has been deleted		Resolved	Fixed
	CONF-25477	Import Word Document of a docx file doesn't import the image		Resolved	Fixed

Confluence 4.2.13 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.13**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

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If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.12 Release Notes

7 August 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.12, which is a bug-fix release.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.12 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (2 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-26039	Confluence is sending an 'Unlike' notification		Resolved	Fixed
	CONF-22985	Space directory		Resolved	Fixed

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		fails to load: ORA-01795: maximum number of expressions in a list is 1000			

Confluence 4.2.12 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.12**. For details of the fixes in this release, please read the release notes.

Upgrade notes

⚠️ **Note:** An API change in Confluence 4.2.6 and later is incompatible with the current version of the Refined Wiki theme. The changed API may result in problems with other plugins too. Please watch this issue for news:

CONF-25981 - Authenticate to see issue details

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.11 Release Notes

24 July 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.11, which is a bug-fix release.

Note: Confluence 4.2.9 and 4.2.10 were internal releases, not publicly available.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

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Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.11 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (6 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-25995	Confluence 4.2.9 and 4.3-beta1 can not upgrade due to invalid cast		Resolved	Fixed
	CONF-25704	Links under recently-updated macro section contains null in Recommended Updates email notification		Resolved	Fixed
	CONF-25472	DefaultRestSearchService.userSearch(String, Integer) should query the database instead of the search index		Resolved	Fixed
	CONF-25316	Failure to find web resource module for com.atlassian.confluence.ext.newcode-macro-plugin:syntaxhighlighter-lang		Resolved	Fixed
	CONF-22553	Confluence share page feature tries to autocomplete username to LDAP users who no longer exist		Resolved	Fixed
	CONF-21822	Indexing fails for		Resolved	Fixed

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		content created by LDAP users with null full name			

Confluence 4.2.11 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.11**. For details of the fixes in this release, please read the release notes.

Upgrade notes

⚠️ **Note:** An API change in Confluence 4.2.6 and later is incompatible with the current version of the Refined Wiki theme. The changed API may result in problems with other plugins too. Please watch this issue for news:

CONF-25981 - Authenticate to see issue details

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.8 Release Notes

9 July 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.8, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release Notices

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Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.8 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (7 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-26030	Pasting code into a code block in Confluence looses existing formatting of the code		Resolved	Fixed
	CONF-25312	PDF Export is using a very large font size for code-macro blocks		Resolved	Fixed
	CONF-25860	Using ExceptionUtils.getRootCause(e).getMessage causes NPEs to be thrown		Resolved	Fixed
	CONF-25483	Preformatted text outputs too large when exporting to PDF		Resolved	Fixed
	CONF-25283	Provide option to disable "Add User" link / signup URL from being visible to anyone		Resolved	Fixed
	CONF-25259	Confluence Page Gadget on JIRA will shows "Resource cannot be found" on Confluence 4.2		Resolved	Fixed
	CONF-25223	Comment section does not follow theme colors		Resolved	Fixed

Confluence 4.2.8 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.8**. For details of the fixes in this release,

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please read the release notes.

Upgrade notes

⚠️ **Note added on 10 July 2012:** An API change in Confluence 4.2.6 to 4.2.8 is incompatible with the current version of the Refined Wiki theme. The changed API may result in problems with other plugins too. Please watch this issue for news: **CONF-25981** - Authenticate to see issue details

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.7 Release Notes

2 July 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.7, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.7 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

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Updates and fixes in this release

JIRA Issues (5 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-23923	Backspace key can cause unexpected embedded macros to appear on Safari		Resolved	Fixed
	CONF-25686	Confluence 4.2.4 shows grey borders around code blocks		Resolved	Fixed
	CONF-24095	Safari 5 support broken in new editor: cut and paste inside macro blocks is unusable		Resolved	Fixed
	CONF-23485	Copy/pasting nested content broken in Safari 5		Resolved	Duplicate
	CONF-25744	Border around comments section of Attachments macro is missing		Resolved	Fixed

Confluence 4.2.7 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.7**. For details of the fixes in this release, please read the release notes.

Upgrade notes

⚠️ **Note added on 10 July 2012:** An API change in Confluence 4.2.6 and Confluence 4.2.7 is incompatible with the current version of the Refined Wiki theme. The changed API may result in problems with other plugins too. Please watch this issue for news: **CONF-25981** - Authenticate to see issue details

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before

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upgrading to Confluence 4.2.x.

3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.6 Release Notes

25 June 2012

The Atlassian Confluence team is pleased to announce the release of **Confluence 4.2.6**. This release includes the option to set default permissions for new spaces, and a simplified dialog for adding spaces. We have also fixed some bugs.

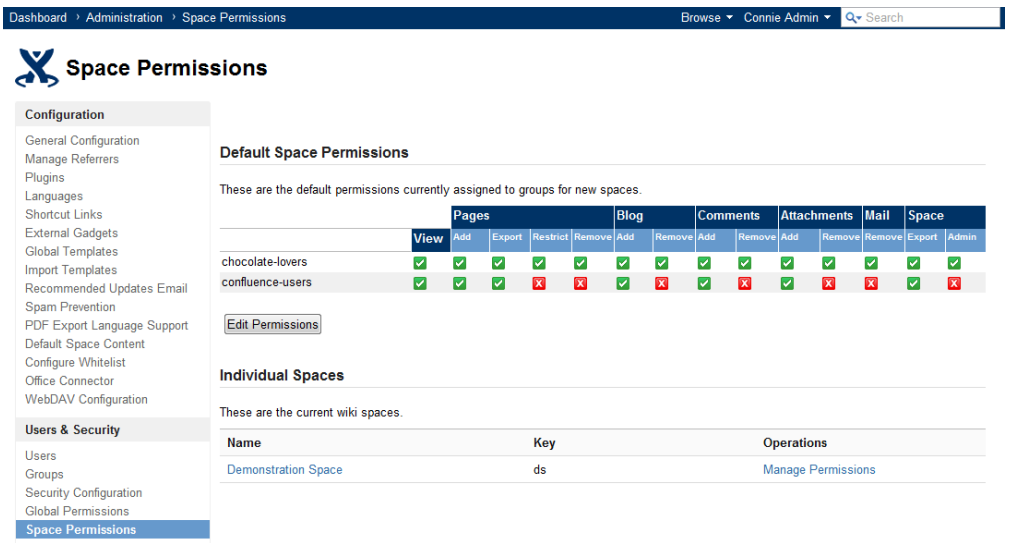
Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Default space permissions

Confluence administrators can now set the default permissions that will be applied to new spaces. The default permissions are configurable for groups only, not for individual users or anonymous users.



Simplified option for adding a space

In Confluence 4.2.3 we introduced a simple dialog for adding spaces. Now in Confluence 4.2.6, it has become even simpler. Just enter the space name and key, and indicate whether the space is private or not. A private space will be visible only to the person who created it. If you do not make it private, the space will have the default space permissions. Adding a personal space is even simpler – just say whether it is private or not. You can change the space permissions later.

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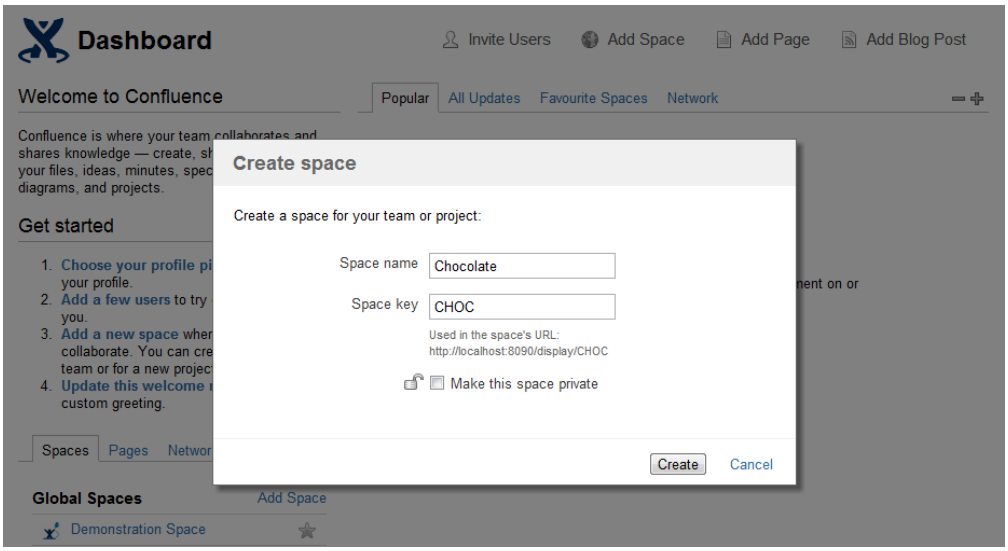

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.6 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (6 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25658	Allow OnDemand a la carte instances to select permissions when creating spaces		Resolved	Fixed
	CONF-25657	Simplify create space permissions		Resolved	Fixed
	CONF-25639	Rendering labels heatmap or space labels overview needs high mysql performance and leads to a timeout		Resolved	Duplicate
	CONF-25699	CurrentContentForLabelAndSpace throws class cast exceptions		Resolved	Fixed
	CONF-2559	Customizable default		Resolved	Fixed

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		permissions for newly created space			
	CONF-25892	Space Key is limited to 10 characters as opposed to the default 255		Resolved	Fixed

Confluence 4.2.6 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.6**. For details of the fixes in this release, please read the release notes.

Upgrade notes

⚠️ **Note added on 10 July 2012:** An API change in Confluence 4.2.6 is incompatible with the current version of the Refined Wiki theme. The changed API may result in problems with other plugins too. Please watch this issue for news: **CONF-25981** - Authenticate to see issue details

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.5 Release Notes

14 June 2012

The Atlassian Confluence team is pleased to announce the release of **Confluence 4.2.5**. This release includes a new option for administrators to send an email message directly from Confluence, inviting new users to the site. We have also fixed some bugs.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

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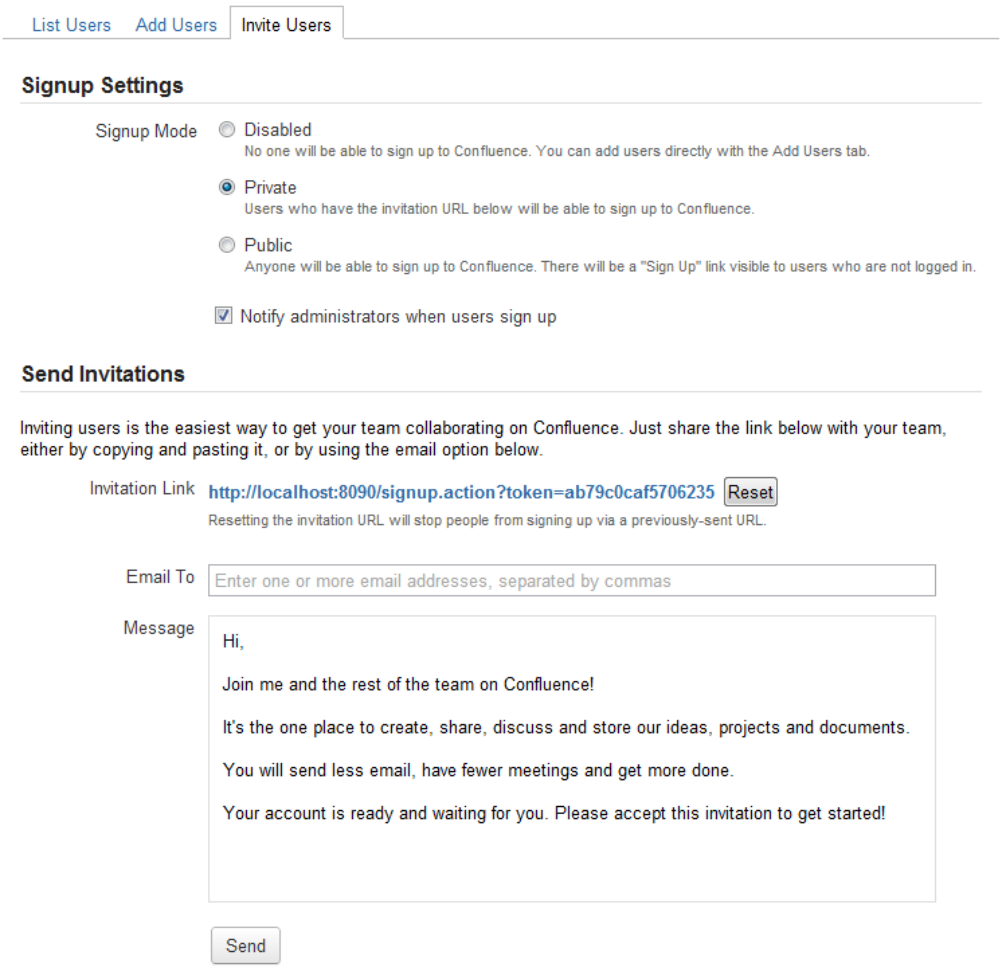
Inviting new users by email

You can now send an email message directly from the Confluence user administration screen, inviting people to join the site. We have also clarified the signup modes as public, private, or disabled.



Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.5 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (17 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25681	Add a send email field form to the invite users admin screen		Resolved	Fixed

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	CONF-25610	Add plugin Table of Contents 2.5.12 for Confluence OnDemand in order to fix TOC and Dynamic Tasklist macros		Resolved	Fixed
	CONF-25498	Allow browser language detection for rest endpoints		Resolved	Fixed
	CONF-25236	Slow response and Confluence crashing when you have too many labels		Resolved	Fixed
	CONF-25678	Upgrade TOC to 2.5.12 or higher for OnDemand instances to fix TOC-64		Resolved	Duplicate
	CONF-25255	Space admin labels page formatting is broken		Resolved	Fixed
	CONF-25213	Customers report that the recommended updates email goes to ALL LDAP users whether logged in or not		Resolved	Fixed
	CONF-18379	Macro recently updated creates exception if "view change" is tried for space detail change		Resolved	Fixed
	CONF-11092	Include invite plugin among Atlassian Supported plugins		Resolved	Obsolete
	CONF-26048	Indirect Function did not work in viewxls		Resolved	Fixed
	CONF-25572	Use loginManager instead of presence of PersonalInforma		Resolved	Fixed

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		tion objects to determine if an LDAP user should receive recommended updates email			
	CONF-25468	HTML headers with anchors no longer create links in Table of Contents macro		Resolved	Fixed
	CONF-25442	NoClassDefFoundError: Signup		Resolved	Fixed
	CONF-25424	Confluence should use site name in app links		Resolved	Fixed
	CONF-24449	ClassCastException from getAbstractPageById thrown by AttachmentNotFoundAction		Resolved	Fixed
	CONF-20695	pageId query parameter can't be used in own web actions because of ClassCastException		Resolved	Tracked Elsewhere
	CONF-18422	Cannot create a page from a template which contains the attachment macro and template variables		Resolved	Fixed

Confluence 4.2.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.5**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database

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supplied for evaluation purposes, the database files are also stored in this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.

2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.4 Release Notes

28 May 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.4, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.4 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (8 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25525	"Insert JIRA Issue" in Confluence fails, requires "Reporter" field.		Resolved	Duplicate
	CONF-25405	Insert JIRA Issue does not set reporter correctly in JIRA 5.0.3 and later		Resolved	Fixed
	CONF-24057	Velocity Macro		Resolved	Fixed

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		#userLogoBlock Otherwise uses deprecated GeneralUtil method and breaks in 'dev' mode			
	CONF-20248	Documentation Theme CSS is over-riding content styling		Resolved	Fixed
	CONF-25583	Japanese character in comment are garbled on some browsers (except Firefox)		Resolved	Resolved Locally
	CONF-24493	Document Theme css setting prevents Table-Plus and csv Plugins to highlight table rows		Resolved	Duplicate
	CONF-20468	Scroll bar disappears when Space Theme is set to Easy Reader Theme and Global Site Theme is set to Documentation Theme		Resolved	Fixed
	CONF-18710	No Cache Configuration for ImageDetailsDto		Resolved	Fixed

Confluence 4.2.4 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.4**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before

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upgrading to Confluence 4.2.x.

3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.3 Release Notes

21 May 2012

The Atlassian Confluence team is pleased to announce the release of **Confluence 4.2.3**. This release includes a faster and simpler dialog for adding spaces. We have also added support for MySQL 5.5, and fixed some bugs.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

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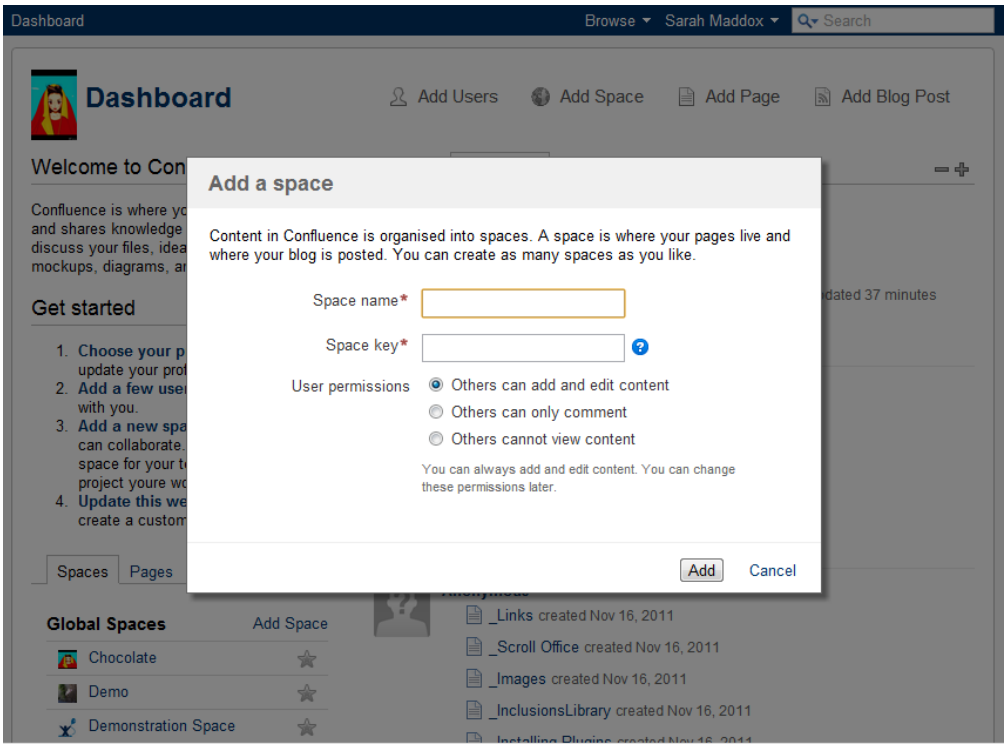
Adding spaces quickly and simply

Confluence 4.2.3 introduces a quick 'Add Space' option at the top of the dashboard, which leads you to the new, simplified dialog for adding global spaces, shown below. Adding a personal space is even simpler.



Support for MySQL 5.5

Confluence 4.2 and later now support MySQL 5.5 as well as 5.1. See Supported Platforms. This announcement is retrospectively applicable to the Confluence 4.2 release.

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Release notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and fixes in this release

JIRA Issues (11 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25502	Simplify the create space workflow		Resolved	Fixed
	CONF-25369	Creating list items in the same table cell with a paragraph in between renders with different indentation padding		Resolved	Fixed
	CONF-25297	Documentation Theme on 4.2 does not display footer		Resolved	Fixed
	CONF-25476	Mail subscriptions ignoring users space permission		Resolved	Fixed
	CONF-25406	Centering a paragraph loses image effect		Resolved	Fixed
	CONF-25284	Recommended in Confluence notifications are still sent to users even though Confluence is a disabled application		Resolved	Fixed
	CONF-23240	Camel Case links should work after upgrade to confluence 4.0		Resolved	Fixed
	CONF-25717	Add space link/button does not show up for		Resolved	Fixed

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		some users who have permission to create spaces			
	CONF-25418	Both Toolbar buttons are Active when nesting a UL inside an OL or vice-versa		Resolved	Fixed
	CONF-25409	Mail polling fails to run with org.springframework.dao.InvalidDataAccessApiUsageException: Write operations are not allowed in read-only mode (FlushMode.NEVER): Turn your Session into FlushMode.AUTO or remove 'readOnly' marker from transaction definition		Resolved	Fixed
	CONF-25397	Un-indenting a non-indented paragraph scrolls to top of page (Chrome)		Resolved	Fixed

Confluence 4.2.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.3**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.

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In particular:
- Please read the Confluence 4.2 Upgrade Notes.
- Please read the Confluence 3.5 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.2 Release Notes

8 May 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.2, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.2.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (19 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-25173	Non ascii comment content is corrupted when using the new Quick Comment mechanism (except for Firefox users)		Resolved	Fixed
	CONF-25185	Daily/weekly summary email shouldn't send if empty		Resolved	Fixed
	CONF-25294	Changes to Recommended Updates Email settings do not persist		Resolved	Fixed

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	CONF-25291	When adding an entry into gadgets white-list the browser jumps back to the first tab		Resolved	Fixed
	CONF-25287	Recommended updates email sent without content		Resolved	Duplicate
	CONF-25194	It is not possible to deselect "Subscribe to recommended updates" in the user profile		Resolved	Fixed
	CONF-24644	Anonymous User is able to access label dialog popup despite not having permission		Resolved	Fixed
	CONF-24584	/images/icons/favicon.png is not up to date		Resolved	Fixed
	CONF-4862	Use a page's content ID as the filename when exporting as HTML		Resolved	Fixed
	CONF-25373	Selecting multiple fields in table and utilizing shortcut for bold causes row shift		Resolved	Fixed
	CONF-25201	Font sizes in the Popular Labels Macro Heatmap are being overridden when placed in the footer section of a page layout		Resolved	Fixed
	CONF-25120	The addition of file labels breaks the layout of Tools->Attachments View when files have multiple versions		Resolved	Fixed

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	CONF-25114	Unable to insert jira issue in comment because I can't click on "Login & Approve" link.		Resolved	Fixed
	CONF-24354	Project names do not render while mapping a Confluence a JIRA project		Resolved	Fixed
	CONF-23497	Bullet points are not aligned with the text in Safari/Chrome		Resolved	Fixed
	CONF-23268	Chrome 14 and above can't displayed attached .swf file on a page		Resolved	Fixed
	CONF-16993	Multiple emails sent out when multiple files are uploaded at once		Resolved	Fixed
	CONF-25177	Space admin > Space Labels uses incorrect i18n key 'space-labels'		Resolved	Fixed
	CONF-25170	Fix French translation for the comment summary in "Confluence Like Plugin"		Resolved	Fixed

Confluence 4.2.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.2**. For details of the fixes in this release, please read the release notes.

Upgrade notes

Bug sends the recommended updates email message to all LDAP users

Confluence now sends a regular email report to subscribers, containing the top content that is relevant to the person receiving the message. By default Confluence will send a weekly update to **all** users, except under these conditions:

- If you have public signup enabled, the Recommended Updates email notification is turned off by default.
- If you are connected to LDAP and a user has never logged in to Confluence, that user will not receive the Recommended Updates notification.

⚠ Due to a bug in Confluence 4.2, 4.2.1 and 4.2.2, the Recommended Updates email notification may be sent

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to **all** LDAP Confluence users, whether they have logged in or not. The problem is tracked on this issue: **CONF-25213** - Authenticate to see issue details The problem will be fixed in Confluence 4.2.3. Until then, you may wish to disable the notification as described in the next paragraph, if your Confluence site is connected to a large LDAP user base.

You can turn off the Recommended Updates notification, or change its settings for the site. See Configuring the Recommended Updates Email Notification. Confluence users can choose their personal settings, which will override the defaults. See Subscribing to Email Notifications of Updates to Confluence Content.

Advance notice: End of support for PostgreSQL 8.2 in Confluence 4.3

We are planning to end support for **version 8.2 of PostgreSQL in Confluence 4.3**. See End of Support Announcements for Confluence.

Upgrade procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2.1 Release Notes

23 April 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.2.1, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.2 yet?

Take a look at the new features and other highlights in the Confluence 4.2 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence

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4.2.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.

Updates and Fixes in this Release

JIRA Issues (3 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25455	Cannot move pages if new parent page contains special character		Resolved	Handled by Support
	CONF-25155	Upgrade the OAuth library to prevent frequent session timeouts		Resolved	Fixed
	CONF-25158	Fix German translation for the comment summary in "Confluence Like Plugin"		Resolved	Fixed

Confluence 4.2.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2.1**. For details of the fixes in this release, please read the release notes.

Upgrade Notes

Confluence now sends a regular email report to subscribers, containing the top content that is relevant to the person receiving the message. By default Confluence will send a weekly update to **all** users, except under these conditions:

- If you have public signup enabled, the Recommended Updates email notification is turned off by default.
- If you are connected to LDAP and a user has never logged in to Confluence, that user will not receive the Recommended Updates notification.

⚠ Due to a bug in Confluence 4.2, 4.2.1 and 4.2.2, the Recommended Updates email notification may be sent to **all** LDAP Confluence users, whether they have logged in or not. The problem is tracked on this issue: **CONF-25213** - Authenticate to see issue details The problem will be fixed in Confluence 4.2.3. Until then, you may wish to disable the notification as described in the next paragraph, if your Confluence site is connected to a large LDAP user base.

You can turn off the Recommended Updates notification, or change its settings for the site. See Configuring the Recommended Updates Email Notification. Confluence users can choose their personal settings, which will override the defaults. See Subscribing to Email Notifications of Updates to Confluence Content.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest

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version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.2.x.
3. If your version of Confluence is earlier than 4.2, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.2 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.2 Release Notes

10 April 2012

With great pleasure, Atlassian presents **Confluence 4.2**. Create content that pops, see what's trending, and be a trendsetter.

Highlights of Confluence 4.2

- Page layouts
- Likes
- Quick comments
- Popular content on the dashboard
- Recommended content by email
- Labels on attachments
- Signup invitations via URL
- Easy upgrade, try and buy for plugins
- Other improvements
- Infrastructure changes

More

- Read the upgrade notes for important information about this release.
- See the full list of issues resolved in this release.

Thank you for your feedback

Over **440** votes recognised
More than **40** requests fulfilled

Video of What's New

Highlights of Confluence 4.2

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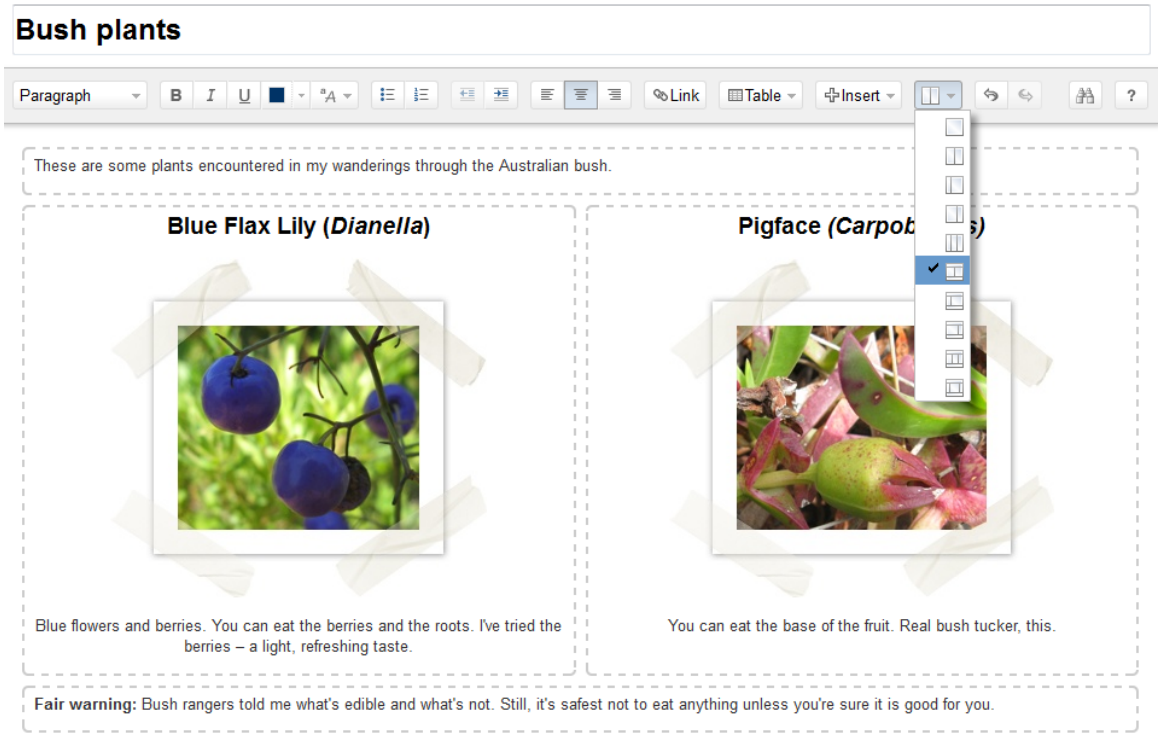
1

Page layouts

Page layouts offer a quick and easy way to add sections and columns to a page. Choose a predefined layout, add the content to each section, and you're done. It's a great way of creating a common page structure, so that readers know where to find the information on each page. Don't worry, the Section and Column macros are still available too. See the video.



A two-column page layout in edit mode. (It's all laid out in the documentation.)

2

Likes

Has someone written a mind-bogglingly clever post on Confluence? Did you laugh out loud at someone's comment? Click **Like** to let them know. Confluence has like buttons on every page, blog post and comment. If enough people like the post, it will show up on the dashboard's new 'Popular' tab and in the 'Recommended Updates' summary sent by email. See the video.

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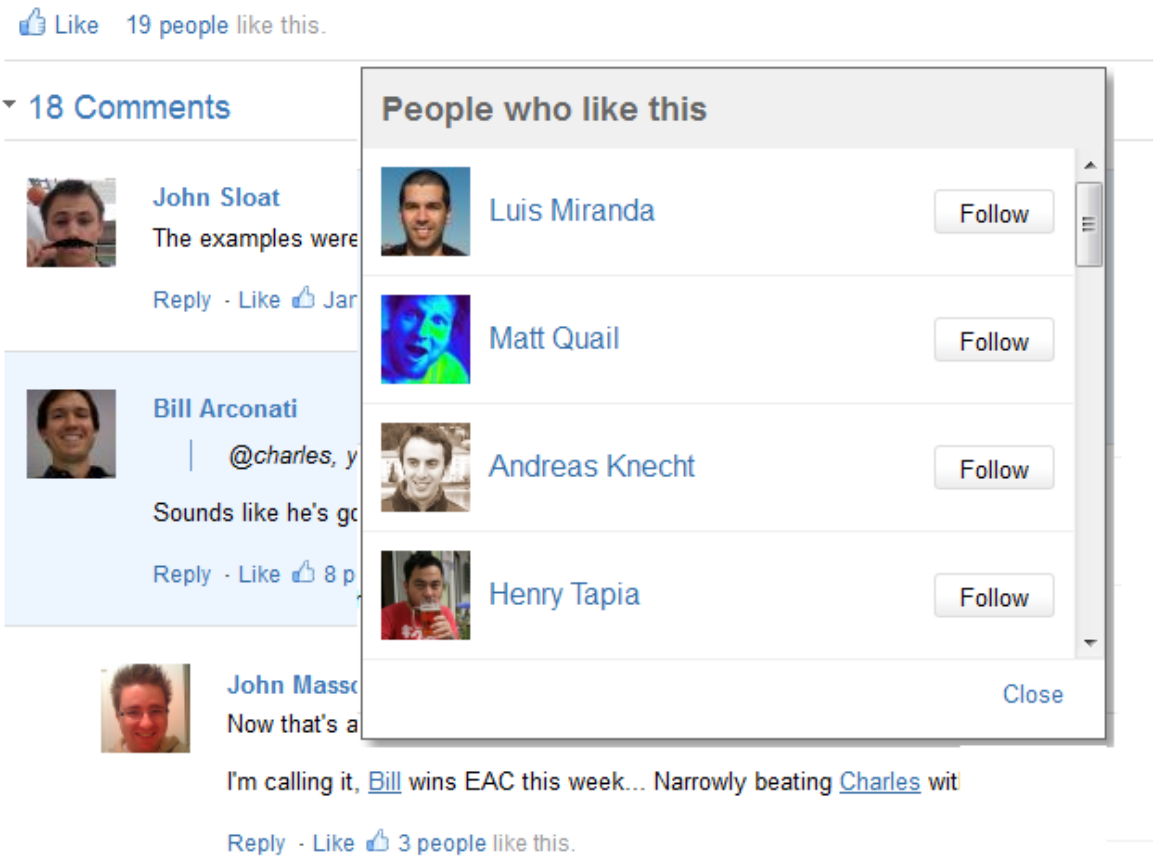

Likes on a page and on comments. (You may like the documentation too.)

3

Quick comments

Showing people a picture of themselves is a great way to encourage them to say something! We have added a enticingly empty comment at the bottom of every page, with the user's profile picture. This replaces the rather uninviting **Add Comment** button in earlier versions of Confluence. And here's what we are really proud of: Whe you click the box to write a comment, the full editor loads instantly. No page refresh required. See the video. **Po w!**

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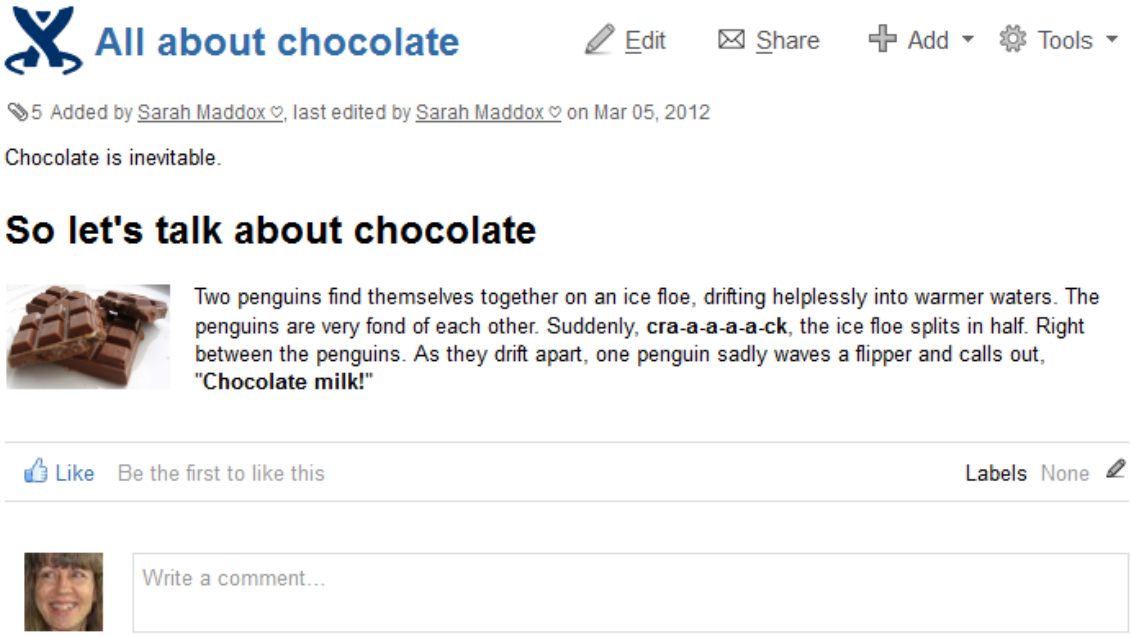

Invitation to add a comment

4

Popular content on the dashboard

Want to see what's trending? The new 'Popular' tab on the dashboard shows the pages, blog posts and comments that are attracting most attention, based on the number of comments and likes they have received. The items are listed in order of popularity, with the most popular at the top. Activity that involves people in your network ranks higher than activity not involving your network, and the most recent activity ranks higher than earlier activity. See the video.

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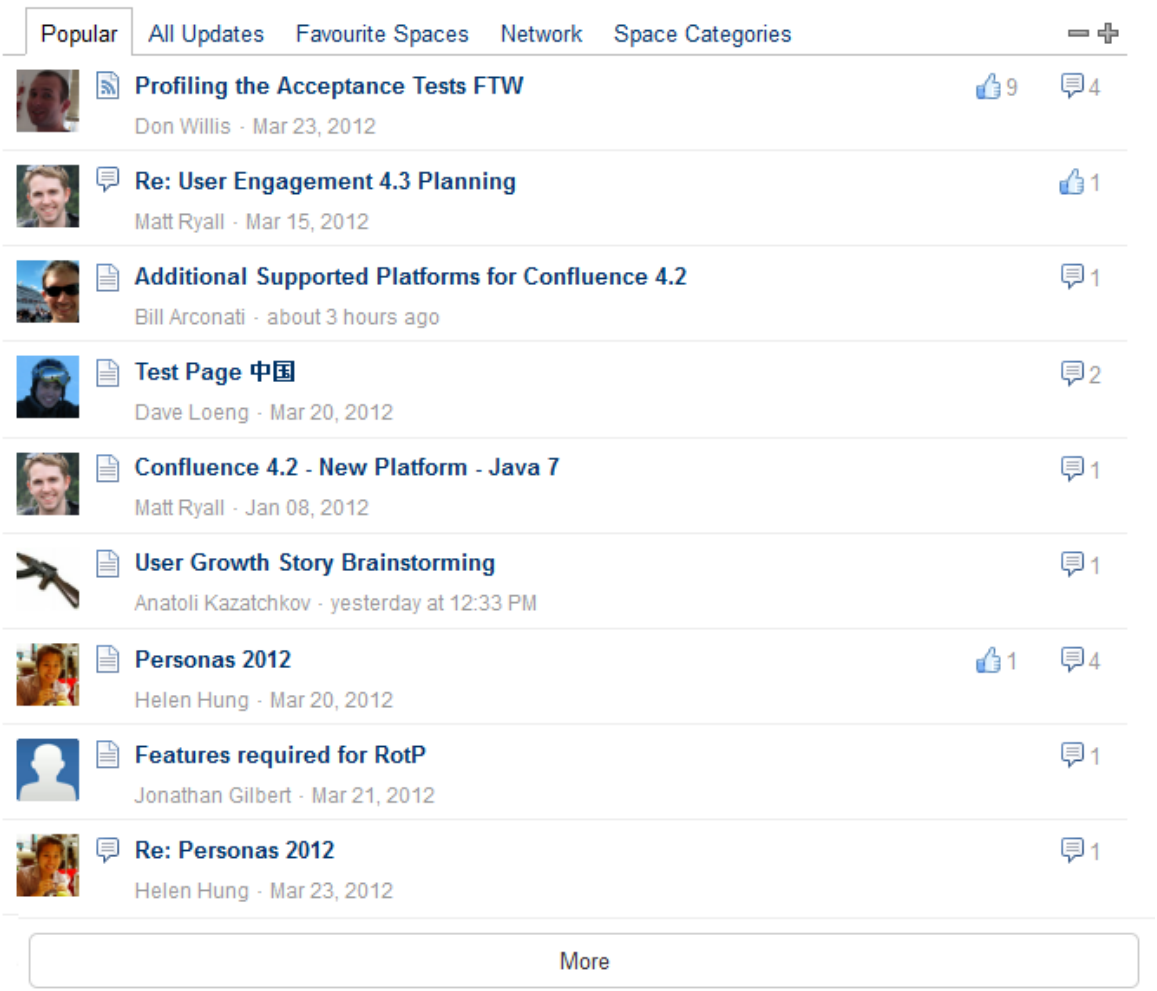

New popular content tab on the dashboard. (Try our trendy topic.)

5

Recommended content by email

Confluence sends out a daily or weekly email message summarising the top news that is relevant to you. This a great way of drawing people into the wiki discussions even if they are infrequent users of Confluence. The report shows the most popular content in the wiki, based on the number of likes and comments, and recently-created pages or blog posts. Confluence gives a higher ranking to activity by people in your network o in your favourite spaces. A link in the email message allows you to choose daily or weekly notifications, or to turn the notification off. See the video.

Note: All Confluence users will receive this email message by default. For instructions on turning it off, see the onfluence 4.2 Upgrade Notes.

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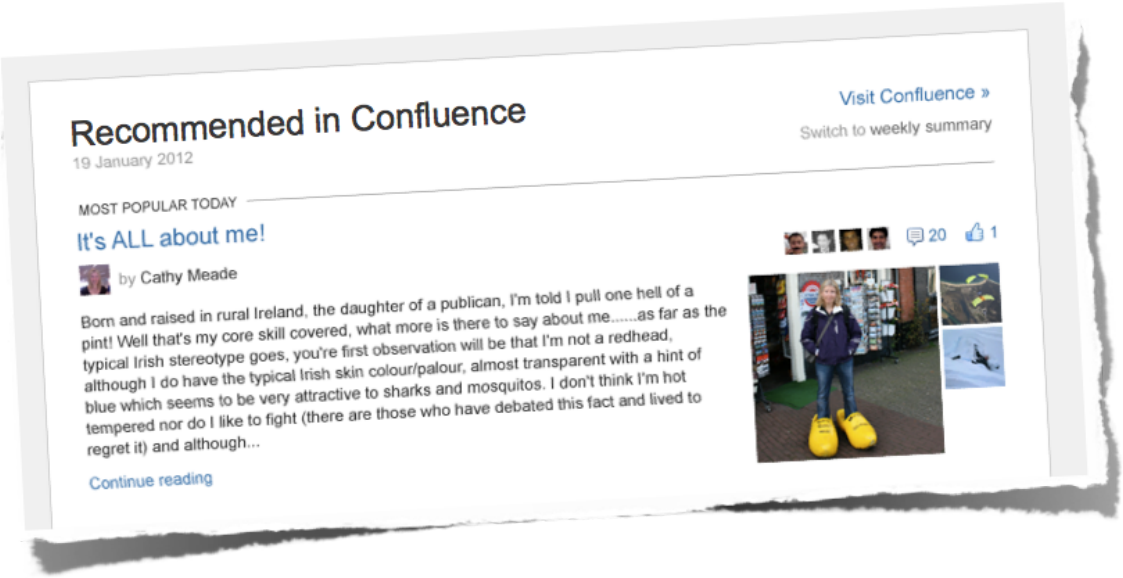


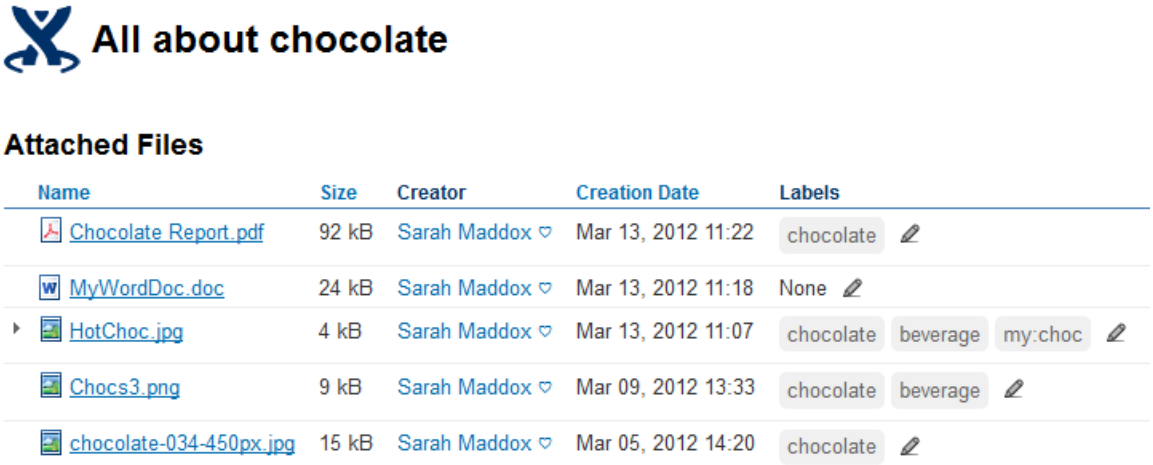
Personalised summary of Confluence news and updates. (See the documentation.)

6

Labels on attachments

You can now label attachments, just as you can label pages and blog posts.

- Using the Gallery macro, you can display a selection of images on your page filtered by label.
- The Attachments macro and the Space Attachments macro can show documents or other attachments with a specific label.
- The Content by Label macro also displays attachments (alongside pages, blog posts and spaces) with a given label, and you can filter by content type to show only attachments.



Labels on attachments. (Become attached to our documentation.)

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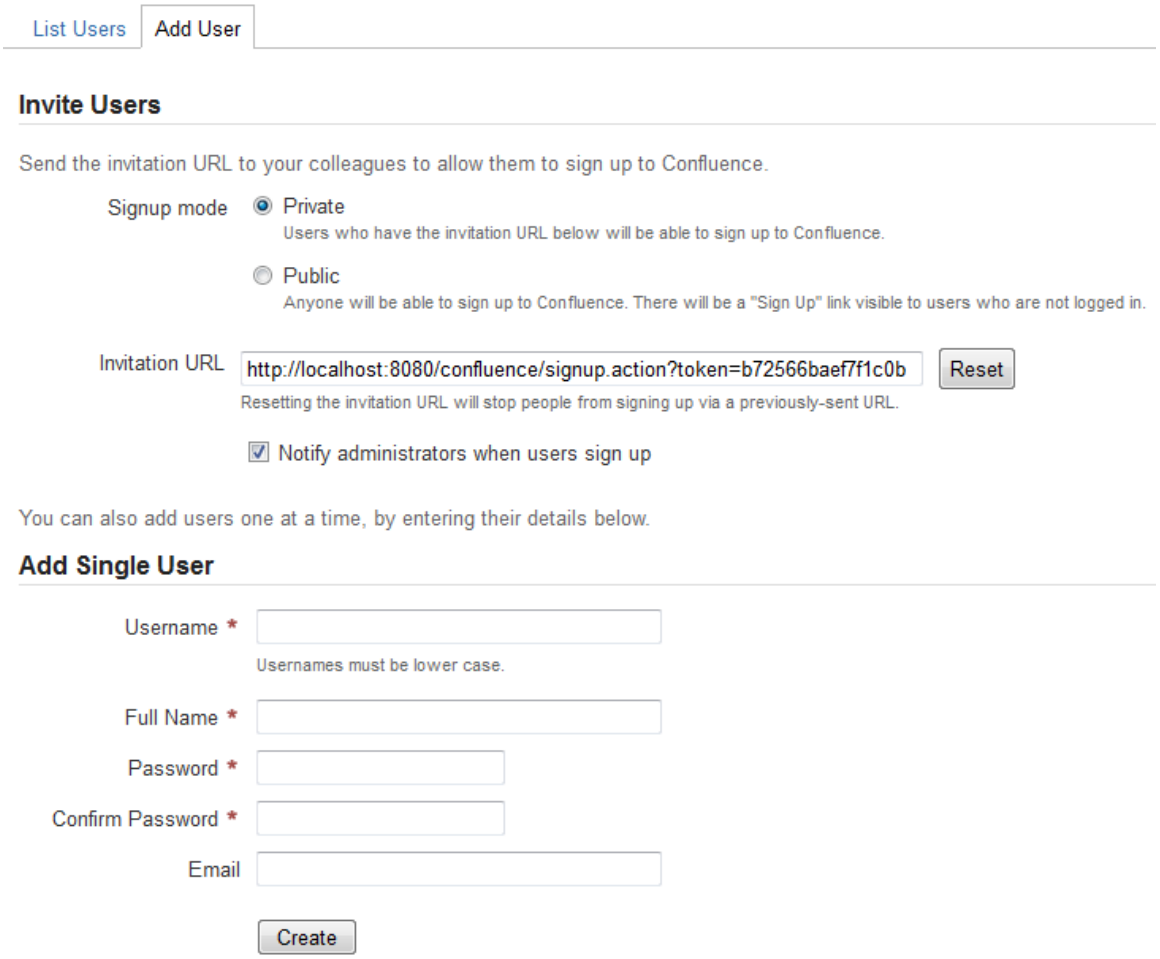
7

Signup invitations via URL

It's what you have been dreaming of: a quick and easy way of inviting people to sign up to Confluence. Just send them a URL. You can also choose between public and private signup modes, and decide whether you want a notification each time someone signs up.



Inviting users and setting the signup mode. (You're invited to see the documentation too.)

8

Easy upgrade, try and buy for plugins

Now you can view, manage and upgrade your existing plugins from just one tab, called **Manage my plugins**. Simple, logical, clean. You will also notice some shiny **Try**, **Buy**, and **Renew** buttons appearing, for plugins tha support the new functionality in the Universal Plugin Manager. Clicking one of those buttons takes you straight MyAtlassian.com, where you can get an evaluation or full license on the spot. The license is automatically adde to Confluence, and you are returned to the plugin manager. And the plugin manager looks much prettier too.

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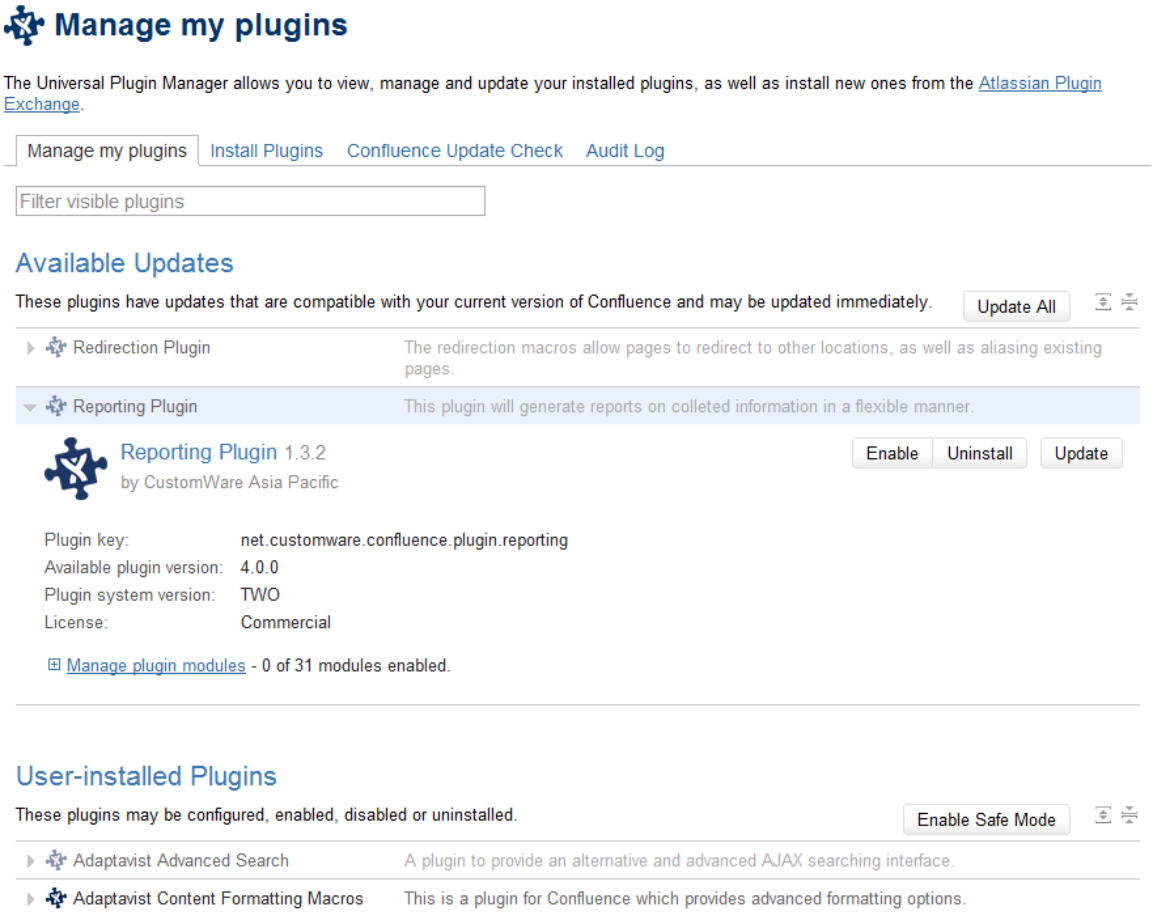
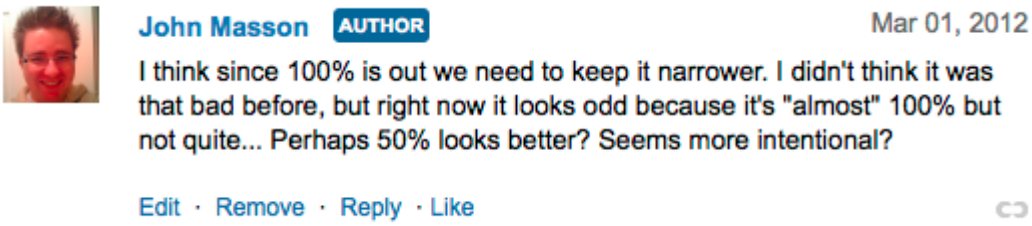


Plugins offered for upgrade under 'Available Updates'. (See the documentation.)

9

Other improvements

- **Author lozenge on blog post comments:**
  You will see an 'author' lozenge on blog comments, making it easy to scan a post for comments from the author. The author lozenge appears only on blog posts, and only for the original creator of the post.



- **Share notifications showing all people notified:**
  When someone shares a page with you, the email message shows the other people they shared it with too.

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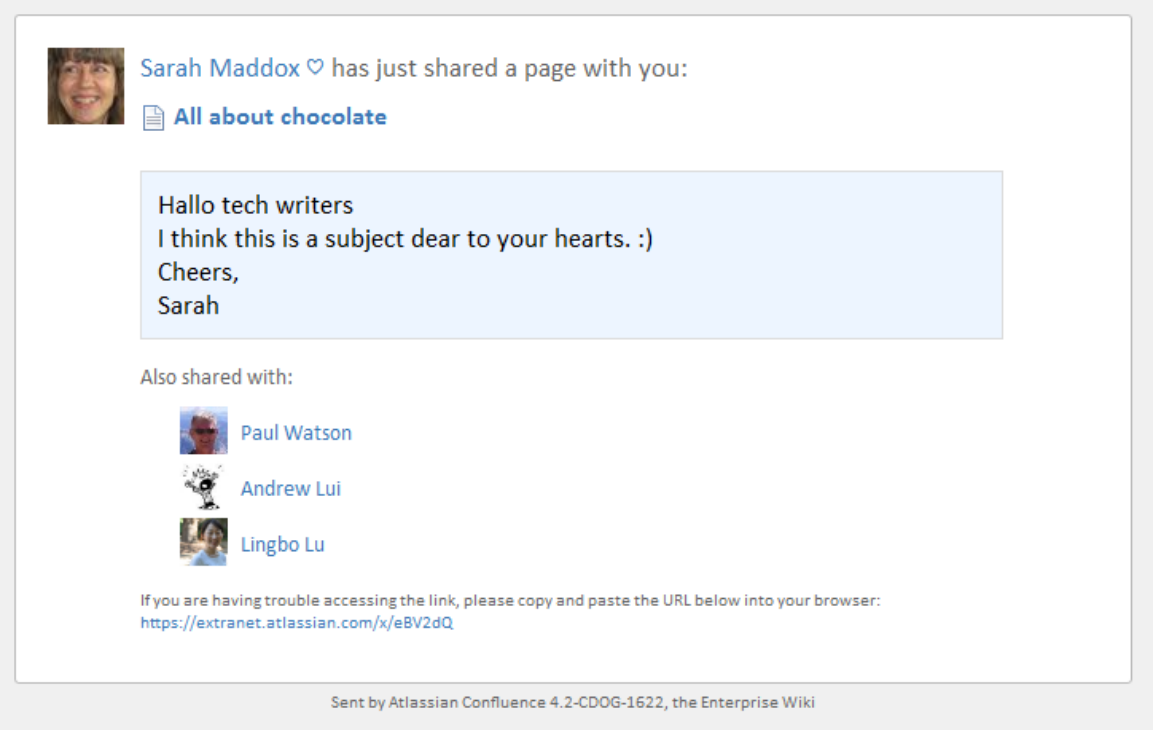

- **Mouse-free macros, links and images:**
  This is one for wiki markup fans! Now you can add macros, links and images by wiki markup alone. Typ the macro, including its parameters and the closing curly bracket. Add a link, such as an anchor link, an end it with a square bracket. Insert an image or other embedded object, enclosed between exclamation marks. As soon as you close the macro, link, or embedded image, Confluence will convert it to rich text format and add it to the page. See the video.

- **Fixed images in Word exports:**
  We have fixed this bug: CONF-6246 - Authenticate to see issue details

- **Personal spaces more open:**
  The permissions for personal spaces are now more in line with Confluence's philosophy of encouraging collaboration. When you create your personal space, the option that allows registered users to update content is selected by default. You will also be assigned as a watcher of your new personal space. (Exis ng settings will not be changed on upgrade.)

- **Gadget subscriptions:**
  An administrator can quickly add all the gadgets from a JIRA, Bamboo, FishEye or Crucible site – or fro another Confluence site – to your Confluence gadget directory. People can then pick and choose the gadgets to add to their Confluence pages. Before this release, the administrator had to register the gadgets one by one. To subscribe to another site's gadgets, go to **Confluence Admin** > **External Gadgets** and open the new **Gadget Feeds** tab.

10

Infrastructure changes

- **PostgreSQL 9.0:** From this release of Confluence, we support PostgreSQL 9.0 as well as 8.2, 8.3 and 8 4. See Supported Platforms.
- **Java 7:** We now support Oracle JRE / JDK 1.7 as well as 1.6. See Supported Platforms.
- **MySQL 5.5:** Confluence 4.2 and later now support MySQL 5.5 as well as 5.1. See Supported Platforms.

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Announcement made on 11 May 2012, retrospectively applicable to the Confluence 4.2 release.)

- Confluence 4.2 includes version 2.0.5 of the Universal Plugin Manager (UPM).
- Confluence 4.2 includes Atlassian Gadgets 3.2
- The implementation of quick comments required some significant changes to the editor's initialisation code. This will have consequences for some Confluence plugins. Details are in this blog post: JavaScrip Changes Required for Confluence 4.2 Compatibility.

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Confluence 4.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.2**. For details of the new features and improvements in this release, please read the Confluence 4.2 Release Notes.

On this page:

- Upgrade Notes
  - Checking for compatible plugins before upgrading
  - Disabling notification of signups
  - Configuring the Recommended Updates notification
  - Disabling the new 'Popular' tab on the dashboard
  - Advance notice: End of support for DB2 in Confluence 4.3
  - Advance notice: Removal of JIRA Portlet macro in Confluence 4.3
  - Advance notice: End of support for PostgreSQL 8.2 in Confluence 4.3
- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

Upgrade Notes

Checking for compatible plugins before upgrading

Before upgrading to Confluence 4.2, please consider the plugins that are essential for your installation, and use the plugin upgrade check to see whether there is a compatible version of those plugins available for Confluence 4.2.

In particular, the implementation of quick comments required some significant changes to the editor's initialisation code. This will have consequences for some Confluence plugins. Details are in this blog post: JavaScript Changes Required for Confluence 4.2 Compatibility.

Disabling notification of signups

This release includes an automatic notification, sent by email to all administrators, each time someone signs up to the Confluence site. This notification is part of the feature that allows you to invite people to sign up via a URL, and to set your signup mode to public or private. See the documentation.

The notification is enabled by default on the first upgrade to Confluence 4.1.9 or later. If you are upgrading to Confluence 4.2 from Confluence 4.1.7 or earlier, you may want to disable the notification after upgrading, especially if you allow public signup and are expecting a large number of signups.

To disable the notification:

The email notification includes a link to change notification settings. Alternatively, follow these steps:

1. Click **Add Users** on the dashboard.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Click **Users** > **Add User**.
2. Remove the tick from **Notify administrators when users sign up**.

Configuring the Recommended Updates notification

Confluence now sends a regular email report to subscribers, containing the top content that is relevant to the person receiving the message. By default Confluence will send a weekly update to **all** users, except under these

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conditions:

- If you have public signup enabled, the Recommended Updates email notification is turned off by default.
- If you are connected to LDAP and a user has never logged in to Confluence, that user will not receive the Recommended Updates notification.
  Due to a bug in Confluence 4.2, 4.2.1 and 4.2.2, the Recommended Updates email notification may be sent to **all** LDAP Confluence users, whether they have logged in or not. The problem is tracked on this issue: **CONF-25213** - Authenticate to see issue details The problem will be fixed in Confluence 4.2.3. Until then, you may wish to disable the notification as described in the next paragraph, if your Confluence site is connected to a large LDAP user base.

You can turn off the Recommended Updates notification, or change its settings for the site. See Configuring the Recommended Updates Email Notification. Confluence users can choose their personal settings, which will override the defaults. See Subscribing to Email Notifications of Updates to Confluence Content.

Disabling the new 'Popular' tab on the dashboard

In some environments, you may prefer not to display the new 'Popular' tab on the dashboard. For example, if your wiki allows only a small group of people to log in and contribute content or comments. Then the tab may not be relevant to you.

To prevent the tab from appearing, you can disable the relevant plugin module. You need System Administrator permissions to do this. Go to the **Dashboard Macros** plugin (See Configuring a Plugin), click **Manage plugin modules** and disable the **Popular Tab** module.

Advance notice: End of support for DB2 in Confluence 4.3

We are planning to end support for DB2 **in Confluence 4.3**. See End of Support Announcements for Confluence .

Advance notice: Removal of JIRA Portlet macro in Confluence 4.3

The JIRA Portlet macro, for JIRA 3.x and earlier, allows you to display a JIRA dashboard portlet on a Confluence page. Gadgets replaced portlets in JIRA 4.0 and Confluence 3.1.

In Confluence 4.1 and 4.2, it is no longer possible to add a JIRA Portlet macro via the Confluence macro browser. It is still possible to add the macro using wiki markup or by copying an existing JIRA Portlet macro. The macro still displays information correctly.

In Confluence 4.3, we will remove the JIRA Portlet macro from Confluence. Pages that contain the macro will no longer display information drawn from JIRA. Instead, they will show an error reporting that the macro does not exist. To prevent this behaviour, please upgrade to a version of JIRA that supports gadgets, and follow the instructions in How to Migrate from JIRA Issues and JIRA Portlets to Gadgets.

Advance notice: End of support for PostgreSQL 8.2 in Confluence 4.3

Update added on 1 May 2012: We are planning to end support for **version 8.2 of PostgreSQL in Confluence 4.3**. See End of Support Announcements for Confluence.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

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If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.5, then you *must* upgrade to Confluence 3.5.x before upgrading to Confluence 4.x. There are several reasons for this:
   - There were major changes to user management and LDAP in Confluence 3.5.
   - From version 3.5, you will be able to use our new automated installer / upgrader to move to 4.0. The Confluence 4.0 installer does not support upgrading from Confluence versions earlier than 3.5.
   - We recommend that you fix any issues arising from the upgrade to version 3.5.x, separately from those that may arise from upgrading to version 4.x. Please contact Atlassian Support for assistance.
   - Please read the Upgrade Notes Overview and the upgrade notes for each version of Confluence listed on that page. (There are hyperlinks to each one.)

   If you are upgrading from 2.1 or earlier, please read the 2.2 Release Notes.
   If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade from version 2.7.x to version 3.5.x, then upgrade to the latest version. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Issues Resolved in Confluence 4.2

Below are the issues resolved in Confluence 4.2, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 4.2 Release Notes for the new features in this release.

Features and Improvements

JIRA Issues (10 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-3963	Label attachments	Resolved	Fixed	117
	CONF-21797	Add official support for Postresql 9.x	Resolved	Fixed	11

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	CONF-23549	Support Java 7	Resolved	Fixed	10
	CONF-9639	Attachment macro should allow filtering by labels	Resolved	Fixed	9
	CONF-10691	Enable the daily update subscription by default	Resolved	Fixed	8
	CONF-22109	Add support for MySQL 5.5	Resolved	Fixed	6
	CONF-17545	viewfile macro for Excel should display conditional formatting	Resolved	Fixed	6
	CONF-22826	No "Back to User Details" link on "User Password Successfully Changed" page	Resolved	Fixed	1
	CONF-25024	Add the ability to unwatch from RPC API	Resolved	Fixed	0
	CONF-12512	Confluence Page Layouts	Resolved	Fixed	0

Bugs Fixed

JIRA Issues (56 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-6246	Images in Word export pages do not show up because of login requirement	Resolved	Fixed	153
	CONF-20631	Viewfile throws ConversionException when field has currency format	Resolved	Fixed	69
	CONF-10619	toc macro doesn't work properly in preview mode	Resolved	Fixed	12
	CONF-25063	Delete and backspace do the wrong thing in lists with macros	Resolved	Fixed	10

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	CONF-25062	Making lists out of paragraph text differs from plain text to list context.	Resolved	Fixed	9
	CONF-6152	Exporting a page as a Word document in Safari saves as "exportword.action", instead of the page name	Resolved	Fixed	8
	CONF-24438	Attachment version history isn't displayed in page view	Resolved	Fixed	6
	CONF-21785	Confluence Search Form can't parse the user value it puts into the Who user input box	Resolved	Fixed	6
	CONF-24902	Label Manager updates in 4.2 break compatibility with plugins compiled against earlier releases.	Resolved	Fixed	5
	CONF-19740	Viewfile of excel chart from Office 2007 is missing some chart information	Resolved	Fixed	5
	CONF-20075	Strange behavior in Viewfile macro if cell contains hyperlinks	Resolved	Fixed	4
	CONF-13647	Umlauts in the Who suggestion tooltip in search do not work	Resolved	Fixed	4
	CONF-24571	Save, Preview, Cancel Button Grey Out When Create JIRA Issue	Resolved	Fixed	2
	CONF-24300	Confluence 4.0.5 excel display macro (viewxls) fails to render usable links from .xls file	Resolved	Fixed	2

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	CONF-21057	Excel file with incorrect suffix can cause OutOfMemory errors	Resolved	Fixed	2
	CONF-19549	Remove Space times out on large spaces	Resolved	Fixed	2
	CONF-16692	Viewfile macro doesn't display date format correctly in excel file (doc and chart).	Resolved	Fixed	2
	CONF-10395	Deleting a space fails (on CAC)	Resolved	Fixed	2
	CONF-25145	Heading loses formatting when preceding newline is deleted	Resolved	Fixed	1
	CONF-25012	Confluence 4.2-beta3 Integration Tests fail to restore site during setup	Resolved	Fixed	1
	CONF-24228	Attachments macro empties when one attachment removed	Resolved	Fixed	1
	CONF-16542	Special characters in the title of the home page cause the deleted home page showing up when visiting the space link.	Resolved	Fixed	1
	CONF-14929	viewfile macro won't load excel file. java.io.IOException: Corrupt file	Resolved	Fixed	1
	CONF-26301	statement text of bottom of one page move up/down along with scroll up/down page when using "easy reader theme"	Resolved	Fixed	0

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	CONF-25916	Deleted page with a title containing special characters can still be accessed	Resolved	Fixed	0
	CONF-25313	version history doesn't open	Resolved	Fixed	0
	CONF-25226	DEL at the end of the numbered line doesn't delete the line break	Resolved	Fixed	0
	CONF-25126	Gadgets on pages are horizontally cut off	Resolved	Fixed	0
	CONF-25077	XML Vulnerability in Confluence	Resolved	Fixed	0
	CONF-25047	Demonstration space icon displays the old charlie	Resolved	Fixed	0
	CONF-25037	Unable to apply page restrictions for multiple users on SQL Server and Oracle	Resolved	Fixed	0
	CONF-25001	Some bundled plugins are listed under "User-installed Plugins" in UPM	Resolved	Fixed	0
	CONF-24999	Popular tab in dashboard just loads infinitely with "Loading popular stream ..." for anonymous users	Resolved	Fixed	0
	CONF-24783	Attachment and label parameter are not working for the Recently Updated Dashboard macro	Resolved	Fixed	0
	CONF-24768	BoostByModificationDateStrategy is slightly buggy on Feb 29	Resolved	Fixed	0

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	CONF-24688	Special characters in anchor links are converted to HTML entities	Resolved	Fixed	0
	CONF-24682	Replace All confirmation message in comments is not consistent with Page editor	Resolved	Fixed	0
	CONF-24641	Space templates shows empty Labels list	Resolved	Fixed	0
	CONF-24618	Product setup loses step numbers after step 2	Resolved	Fixed	0
	CONF-24557	Deleted Homepage -> No Link to Space-Admin in "Browse"	Closed	Fixed	0
	CONF-24443	Watches are not included in XML space exports	Resolved	Fixed	0
	CONF-24178	Oauth "Authenticate" links will appear more than once in an issue Lozenge	Resolved	Fixed	0
	CONF-23288	VM for Space Details Macro Has an Error	Resolved	Fixed	0
	CONF-23270	German translation in code block macro	Resolved	Fixed	0
	CONF-23134	viewxls converts text to hyperlink addresses	Resolved	Fixed	0
	CONF-22977	code Xml doesn't display text with a ":"	Resolved	Fixed	0
	CONF-22031	Code macro draws on top of the personal sidebar	Resolved	Fixed	0
	CONF-21640	Setup fails when entering v1 format license	Resolved	Fixed	0

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	CONF-20643	Highlighted stage is wrong on product install	Resolved	Fixed	0
	CONF-20306	PDF Export shows raw date format in filename if page title contains apostrophe	Resolved	Fixed	0
	CONF-18039	Colors rendered from a xlsx file are less accurate than colors rendered from a xls file	Resolved	Fixed	0
	CONF-17722	Excel charts don't look anything like they do in Excel, plus the conditional formatting disappears:	Resolved	Fixed	0
	CONF-17241	error msg contains html markup code after signup fails	Resolved	Fixed	0
	CONF-15945	Inconsistent validation of usernames between admin-added and public signup	Resolved	Fixed	0
	CONF-15097	Space Details macro will prevent content from being displayed if it used more than once on a page	Resolved	Fixed	0
	CONF-14460	Performing an XML backup on a large dataset takes a very very long time and causes an OOM.	Resolved	Fixed	0

Confluence 4.1.10 Release Notes

17 May 2012

Confluence 4.1.10 is a bug-fix release. The full list of fixes is provided at the bottom of this page.

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Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

Download Latest Version

Release Notices

- **Security advisory:** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.10 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (1 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25077	XML Vulnerability in Confluence		Resolved	Fixed

Confluence 4.1.10 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.10**. For details of the fixes in this release, please read the release notes .

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.9 Release Notes

27 March 2012

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The Atlassian Confluence team is pleased to announce the release of **Confluence 4.1.9**. This release includes the new invitation URL, providing a quick and easy way of inviting people to sign up to Confluence. We have also fixed some bugs.

Note: Confluence 4.1.8 was an internal release, not available publicly.

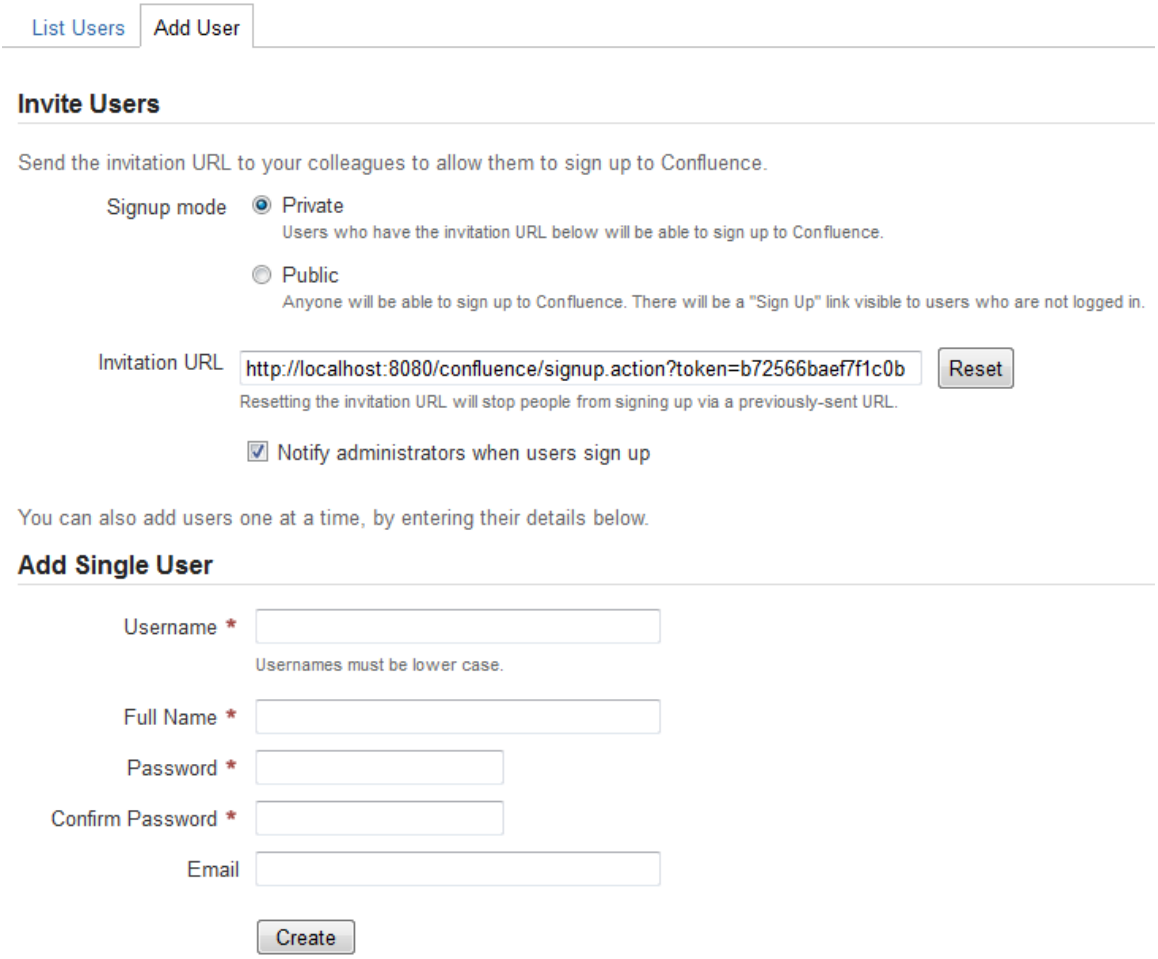
Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

Download Latest Version

Inviting people to sign up via a URL

It's what you have been dreaming of: a quick and easy way of inviting people to sign up to Confluence. Just send them a URL. You can also choose between public and private signup modes, and decide whether you want a notification each time someone signs up. See the documentation.



Inviting users and setting the signup mode.

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.9 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading

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to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (10 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-24482	Moving the cursor down in a table and pasting freezes the editor.		Resolved	Fixed
	CONF-25011	Duplicate links at bottom of email notifications		Resolved	Fixed
	CONF-24172	Getting System Error page when accessing Application Links page and User Language setting is set to Germany		Resolved	Fixed
	CONF-21785	Confluence Search Form can't parse the user value it puts into the Who user input box		Resolved	Fixed
	CONF-9039	Jpeg filename extension should be recognized as valid thumbnailable format when attaching images to comments. Currently jpg extension is ok, but not jpeg. Both jpg and jpeg should be allowed		Resolved	Fixed
	CONF-25108	Pasting HTML tags into a Confluence table can cause the editor to lock up		Resolved	Fixed
	CONF-25030	No spacing between page first paragraph and table		Resolved	Fixed
	CONF-24717	Expired Session		Resolved	Fixed

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		results in a lot of error messages when trying to favourite			
	CONF-24705	Drag'n'drop'ing .jpeg files doesn't show the image in the page like it does for .jpg		Resolved	Duplicate
	CONF-24475	'Error creating manual index or constraint' during space import		Resolved	Fixed

Confluence 4.1.9 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.9**. For details of the fixes in this release, please read the release notes.

Upgrade Notes

Disabling notification of signups

This release includes an automatic notification, sent by email to all administrators, each time someone signs up to the Confluence site. This notification is part of the feature that allows you to invite people to sign up via a URL, and to set your signup mode to public or private. See the documentation.

The notification is enabled by default on the first upgrade to Confluence 4.1.9 or later. You may want to disable the notification after upgrading to Confluence 4.1.9, especially if you allow public signup and are expecting a large number of signups.

To disable the notification:

The email notification includes a link to change notification settings. Alternatively, follow these steps:

1. Click **Add Users** on the dashboard.
   Or take the longer route: Choose **Browse** > **Confluence Admin**. Click **Users** > **Add User**.
2. Remove the tick from **Notify administrators when users sign up**.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.

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In particular:
- Please read the Confluence 4.1 Upgrade Notes.
- Please read the Confluence 3.5 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.7 Release Notes

12 March 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.7, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.7 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (5 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-24709	Entered text is lost in Firefox after previewing, entering text and saving		Resolved	Fixed
	CONF-24691	Repository validation doesn't check userSearchFilter properly		Resolved	Fixed
	CONF-25046	Share dialog box floats over content		Resolved	Fixed
	CONF-24559	blog-posts macro with content-titles shows wrong blogpost creation		Resolved	Fixed

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		time for 1-2 days old blogposts			
	CONF-24488	Table entered via Wiki Markup Dialog Box wraps cells in p tags.		Resolved	Fixed

Confluence 4.1.7 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.7**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.6 Release Notes

27 February 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.6, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.6 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and

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database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (7 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-24567	Copy & paste image data into RTE no longer working in Firefox 10		Resolved	Fixed
	CONF-24423	Activity Streams Plugin throws Error when it encounters a space in the space name		Resolved	Fixed
	CONF-24643	Space Permissions -> Individual Users -> Select All -> all(!) boxes are checked		Resolved	Fixed
	CONF-24561	Startup fails with VIEWS in MySQL database		Resolved	Fixed
	CONF-24382	Cannot search user by fullname in languagies that use multi-byte characters within Share dialog.		Resolved	Fixed
	CONF-24232	Selecting any label in Space Categories leads to Page not found error		Resolved	Fixed
	CONF-22011	The code macro doesn't render URL within XML		Resolved	Fixed

Confluence 4.1.6 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.6**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

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If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.5 Release Notes

13 February 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.5, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.5 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (13 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-23914	Source Editor Plugin - Edit XHTML		Resolved	Fixed
	CONF-23666	External JIRA Gadget does not		Resolved	Incomplete

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		display properly in Confluence			
	CONF-17598	Using move page dialog you can cause duplicate titles in a space		Resolved	Fixed
	CONF-23998	Fancybox background images 404		Resolved	Fixed
	CONF-23759	Impossible to select some of the page template from the Page template winzard table		Resolved	Fixed
	CONF-23616	List style parameter is ignored in TOC macro		Resolved	Fixed
	CONF-24494	Export to PDF fails if title contains invalid character on Windows using Chrome		Resolved	Fixed
	CONF-24447	User Profile Macro shows an incorrect 'Documentation' link in the Macro Browser		Resolved	Fixed
	CONF-24339	wrong statement in the setup wizard about latest PostgreSQL is thoroughly tested against		Resolved	Fixed
	CONF-24278	String value is displayed as property key in certain menu		Resolved	Fixed
	CONF-22265	The french translation lack the change of the word "by" on the recently-updated part of the DashBoard.		Resolved	Fixed
	CONF-19685	NullPointerExce		Resolved	Obsolete

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		ption occurs when saving a page with specific content after pasting in from a web page in richtext edit mode			
	CONF-13801	MissingResourceException: Can't find resource for bundle com.atlassian.confluence.util.i18n.CombinedResourceBundle		Resolved	Fixed

Confluence 4.1.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.5**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.4 Release Notes

31 January 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.4, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

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Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.4 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (3 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-24536	IE8 only - Trying to tab into a table generates an exception		Resolved	Fixed
	CONF-24538	Wrong Z-Index of Sidebar in Documentation Theme		Resolved	Fixed
	CONF-24359	Improve startup speed of confluence by implementing an efficient CacheKey		Resolved	Fixed

Confluence 4.1.4 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.4**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:

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- Please read the Confluence 4.1 Upgrade Notes.
- Please read the Confluence 3.5 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.3 Release Notes

16 January 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.3, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (14 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-24361	Pressing TAB inside a plain text macro placeholder should insert a tab character (rather than shifting the browser's focus)		Resolved	Fixed
	CONF-24221	Show complete location of an image on the tooltip in the editor		Resolved	Fixed
	CONF-22183	The Jira macro cannot find a Jira project that has		Resolved	Fixed

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		alphanumeric characers within its project key.			
	CONF-24277	Documentation Theme - comment anchor links have whitespace gap at the bottom		Resolved	Fixed
	CONF-24198	The spacing between columns that have panels has been altered		Resolved	Fixed
	CONF-24194	SOAP incompatibility introduced in 4.1 - addComment		Resolved	Fixed
	CONF-23983	Allow copy and pasting of the last row (or selections involving the last row) in webkit		Resolved	Fixed
	CONF-23691	Selecting the whole contents of a code macro and pasting text into it removes the placeholder in webkit		Resolved	Fixed
	CONF-23566	Copying and pasting white space inside the code macro does not work (right click also causes the selection to collapse undesirably)		Resolved	Fixed
	CONF-22358	Upgrade PDFBox to 1.3.1		Resolved	Fixed
	CONF-17968	Page order seems to randomly re-arrange itself		Resolved	Fixed
	CONF-24365	PRE elements containing a textnode with only white space is erroneously considered		Resolved	Fixed

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		empty by core tinymce code			
	CONF-24330	Confluence editor does not preserve layout when pasting tab characters		Resolved	Fixed
	CONF-23959	Browse and User menus appear under vertical separater bar		Resolved	Fixed

Confluence 4.1.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.3**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1.2 Release Notes

03 January 2012

The Atlassian Confluence team is pleased to announce the release of Confluence 4.1.2, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.1 yet?

Take a look at the new features and other highlights in the Confluence 4.1 Release Notes.

Download Latest Version

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.1.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.

Updates and Fixes in this Release

JIRA Issues (30 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-24038	Allow quick insertion of macros, links and embedded content using autoformat		Resolved	Fixed
	CONF-23899	Backspacing a bullet item should remove the bullet style only		Resolved	Fixed
	CONF-22269	The new "Share" button should allow arbitrary email addresses		Resolved	Fixed
	CONF-24233	In Confluence 4.1.1, image (e.g. PNG) and Gliffy diagram attachments on pages which are 'included' (and possibly 'excerpt-included') on host pages are broken on these host pages.		Resolved	Fixed
	CONF-23544	default macro parameter not accessible within EditorImagePlaceholder#getImagePlaceholder		Resolved	Fixed
	CONF-23360	Drag-dropping images into the editor does nothing in FireFox 7		Resolved	Fixed

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	CONF-23279	Multi-byte characters in macro placeholder aren't displayed at all.		Resolved	Fixed
	CONF-23273	Blog Posts Macro in Confluence 4.0 will not render entire posts		Resolved	Fixed
	CONF-22867	Viewfile PDF causes Confluence to crash		Resolved	Fixed
	CONF-22853	XML export of a small space from in a large system is very slow		Resolved	Fixed
	CONF-17147	Edit Link Inside Section Macro Causes Unknown Runtime Error in IE		Resolved	Fixed
	CONF-25764	Search times out with specific search terms		Resolved	Fixed
	CONF-24157	The attachments macro used in an included page is not displaying attachments from included page, but instead showing attachments from current page		Resolved	Not a bug
	CONF-24089	Can't escape out of a list item containing a macro body placeholder		Resolved	Fixed
	CONF-24028	Copying and pasting a macro placeholder into a table cell only copies the contents of the macro placeholder		Resolved	Fixed
	CONF-23981	Fix copying and		Resolved	Fixed

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		pasting into a table with more columns than the clipboard contents			
	CONF-23946	Notification emails get sent with the locale of the modifier		Resolved	Fixed
	CONF-23700	Drag-and-Drop upload sets incorrect mimeType for Office 2007 and 2010 documents		Resolved	Fixed
	CONF-23603	Wrong avatar shows up in "Share" email notifications for Apple Mail and iPhone email client		Resolved	Fixed
	CONF-19611	Unable to remove a space - gives a DataIntegrityViolationException		Resolved	Fixed
	CONF-16284	viewpdf macro causes OOM when used to view large pdf documents		Resolved	Fixed
	CONF-24276	Image attachment on page which is included isn't displayed.		Resolved	Duplicate
	CONF-24250	Paste images has broken after re-implementing FF7 drag and drop		Resolved	Fixed
	CONF-24107	OFFCONN-50 update webdav plugin for firefox 7		Resolved	Fixed
	CONF-24090	Unbolding text causes the page to slowly creep down		Resolved	Fixed
	CONF-23844	More weirdness with nested bullets		Resolved	Fixed

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	CONF-23805	Mention Notifications are in language of sender		Resolved	Fixed
	CONF-23718	Broken Emoticons in Panel Titles		Resolved	Fixed
	CONF-23696	Non-ascii characters in the subject field of daily updates emails are displayed as encoded characters		Resolved	Fixed
	CONF-23373	Broken Emoticons in Status Update in Confluence 4.0		Resolved	Fixed

Confluence 4.1.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1.2**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1.x.
3. If your version of Confluence is earlier than 4.1, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.1 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1 Release Notes

Download »
latest version

13 December 2011

With great pleasure, Atlassian presents Confluence 4.1. With numerous improvements for content presentatior

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it delivers the extraordinary new Autoconvert feature, along with attractive new image effects, find and replace, new icons, improved translation features and global PDF stylesheets.

Highlights of Confluence 4.1:

- Autoconvert for Pasted Links
- Image effects
- Quick find and replace
- Follow Your Network On the Dashboard
- Space attachments macro
- Global PDF stylesheets
- Use any character in page titles
- New translation feature
- Other improvements
- Helping you transition to the Confluence 4.x generation
- Confluence Quick Reference Guide
- Release notices

Thank you for your feedback:

More than **35** requests implemented
Over **185** votes fulfilled

More:

- Read the Upgrade Notes for important information about this release.
- See the full list of issues resolved in this release.

> **OnDemand Customers**
>
> Confluence OnDemand customers will be automatically upgraded to Confluence 4.1 in the next scheduled maintenance window.

Highlights of Confluence 4.1

1

Autoconvert for Pasted Links

When you paste URLs into Confluence, Autoconvert will now analyse what you are pasting and automatically convert it into something that will display well in Confluence. Examples include YouTube videos, JIRA issue queries and Google Maps; many other content types are supported.

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YouTube URLs

Create the widget below with Autoconvert, simply by pasting the **YouTube URL** onto the page.

Paste this:
http://www.youtube.com/watch?feature=player_embedded&v=2XQlQGf0lnk

To get this:

JIRA Issues URLs

Create the **JIRA list** below with Autoconvert, simply by pasting the JIRA query URL onto the page.

Paste this:
https://jira.atlassian.com/sr/jira.issueviews:searchrequest-xml/temp/SearchRequest.xml?jqlQuery=project...

To get this:

JIRA Issues (20 issues)		
Key	**Summary**	**Due**
CONF-26509	TOC Macro is poorly formatted and uses too much whitespace	
CONF-26503	Dragging content into body macro causes placeholder to shake	
CONF-26501	Dragging content towards the bottom of a page causes editor to jump	
CONF-26484	Implement User Recognition Feature in Confluence	
CONF-26483	Add "pilcrow" (¶) toolbar button in the editor	
CONF-26479	View Access Database Directly From Within Wiki	
CONF-26472	Create a way for a non-internet connected Confluence to check for plugin updates	

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CONF-26459	RLC Loader
CONF-26454	aaaaa
CONF-26451	Export to html reference links in other spaces with a relative option on export
CONF-26450	Add "Change Log" for locking and unlocking of a Confluence page
CONF-26446	Inherit Edit Restrictions for Child Pages
CONF-26439	Search content by certain user/permission combination
CONF-26434	Add ability to prevent certain users from calling certain user macros
CONF-26429	Is it possible to display all cards without scrolling the horizontal sceoll bar?
CONF-26425	Add compatibility with iWork Pages on export to Word feature
CONF-26422	Confluence throws exception when clicking Add Page with no space selected
CONF-26417	PDF Rendering in Confluence
CONF-26412	Links with asteriks won't render as a clickable link
CONF-26411	Blog post macro documentation for excepts not consistent with functionality

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Google Maps URLs

Create the **Google Maps Widget** below with Autoconvert, simply by pasting the Google Maps URL onto the page.

Paste this:
http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=san+francisco+golden+gate+bridge...

To get this:

Other supported content types:

- Confluence page, blog, comment, status, user links,
- Shared screenshot links from Skitch,
- Google search results links,
- Confluence shortcut links: when pasting these, just the name of the link content (minus the URL prefix) will be used as the link display name.

2

Image effects

Enhance the presentation of your images and screenshots with slick new border effects.

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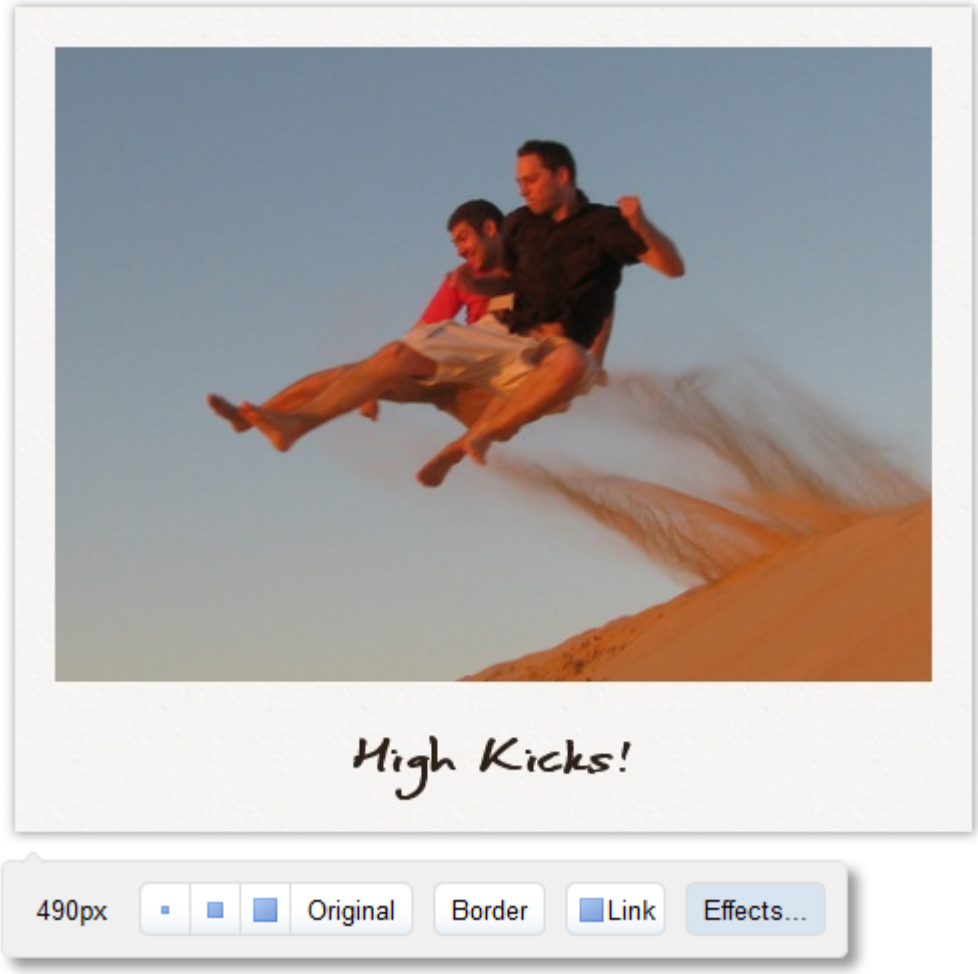
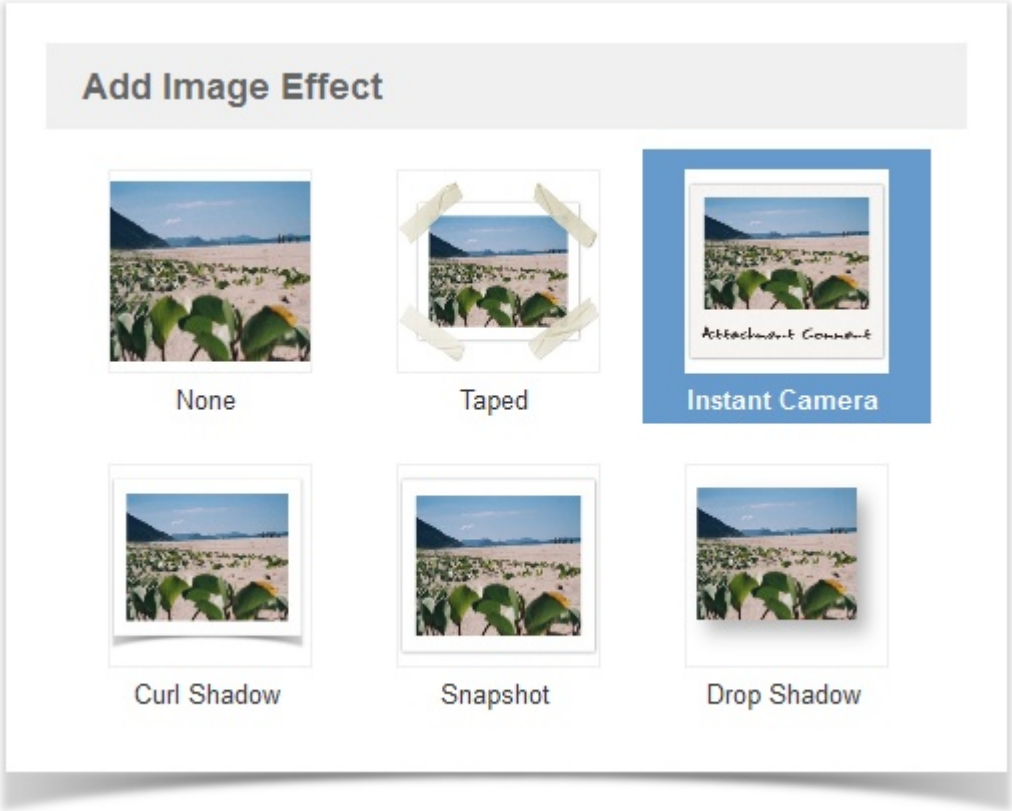


Click **Effects** to apply taped style, instant camera style, drop shadow style, captions and more.



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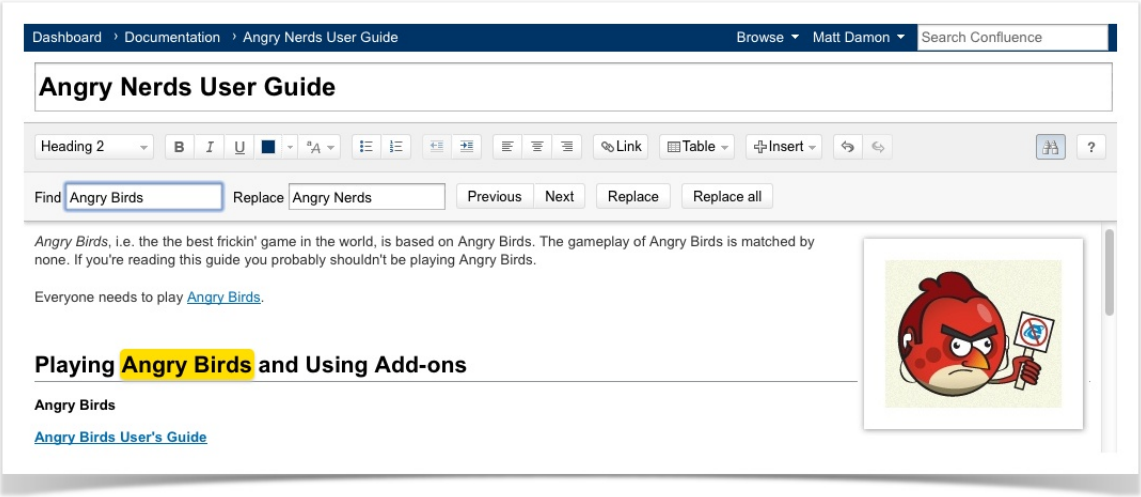
See the documentation for more details.

3

Quick find and replace

Updating your wiki content is now easier with the new find and replace feature. Using familiar conventions, automatically find and replace specific text strings within your Confluence page or blog. It's also accessible with a keyboard shortcut **Ctrl-F** (*Windows*) or **Cmd-F** (*Mac OS*).



See the documentation for more details.

4

Follow Your Network On the Dashboard

See recent updates from just the people you follow in Confluence, with the new network tab on the Confluence dashboard. With this, following a few people in different parts of your company to make a quick filter of the main events happening outside your immediate team.

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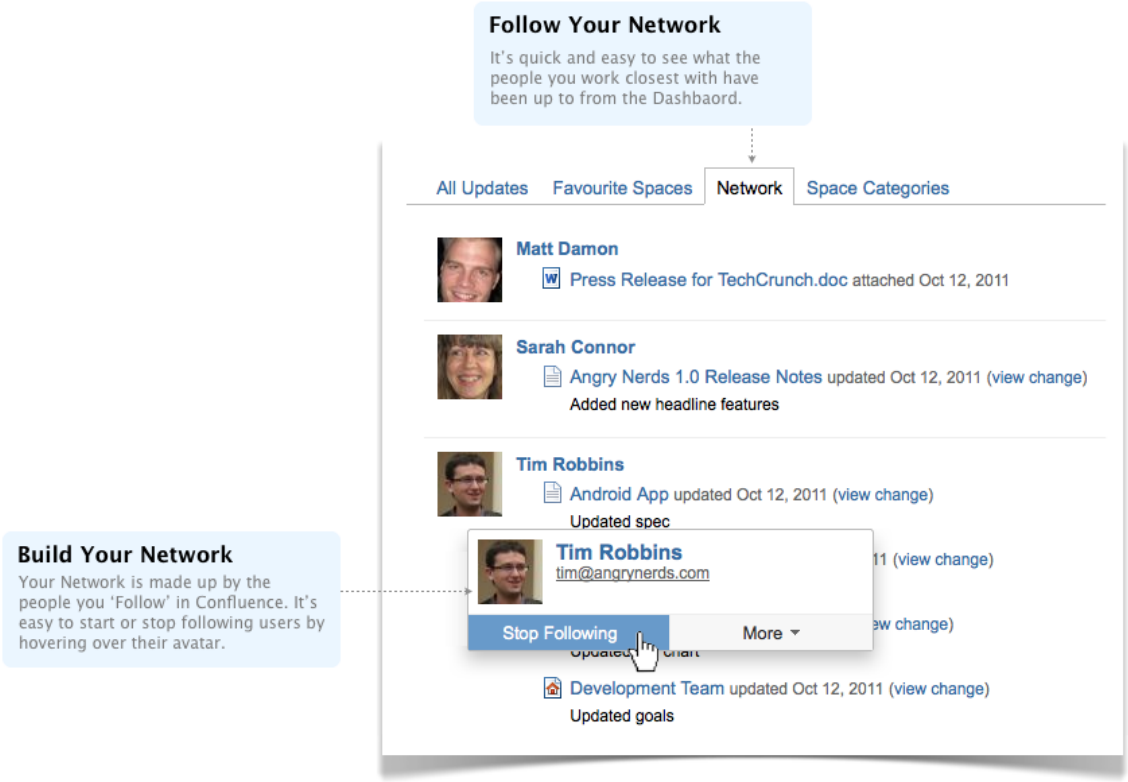

5

Space attachments macro

The new Space Attachments macro allows you to show all the attachments in the current space on your page. You can even filter them by file extension. Previously, you've only been able to show the attachments on the current page, using the Attachments macro.

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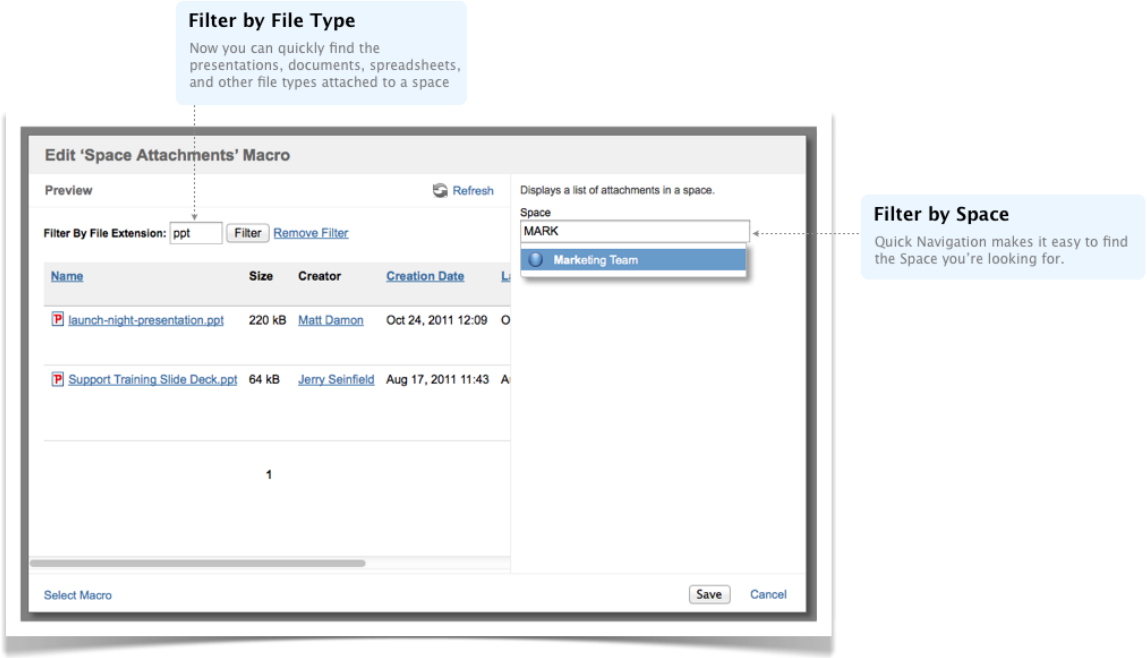

Simply type **{space-attachments}** into a page to use it.

6

Global PDF stylesheets

Set your custom PDF stylesheets at the global level, as with custom layouts. When there is no specific individu space stylesheet defined, PDF space exports will fall back to this global stylesheet. This means that users won have to re-apply the same stylesheet to all their individual spaces. This is an efficient way of achieving one lool and feel.

See the documentation for more details.

7

Use any character in page titles

Confluence now allows "special" characters in your page titles, such as semicolons and exclamation marks. Th allows more descriptive page names and generally removes restrictions when creating page titles and naming your content.

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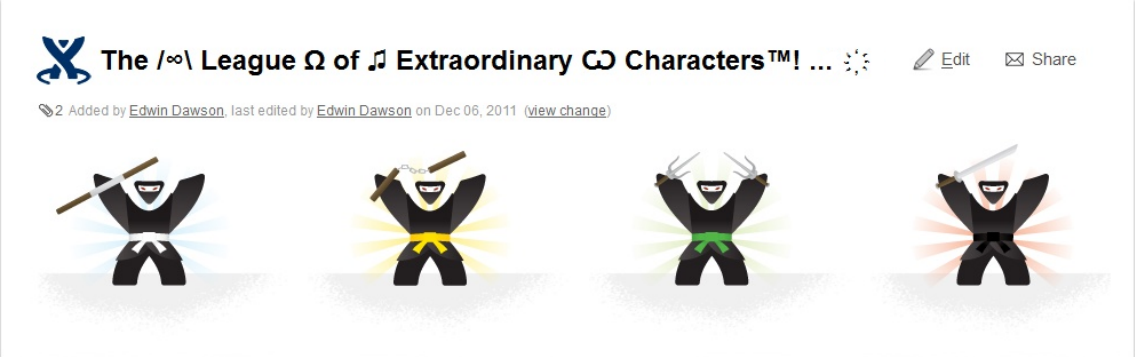


8

New translation feature

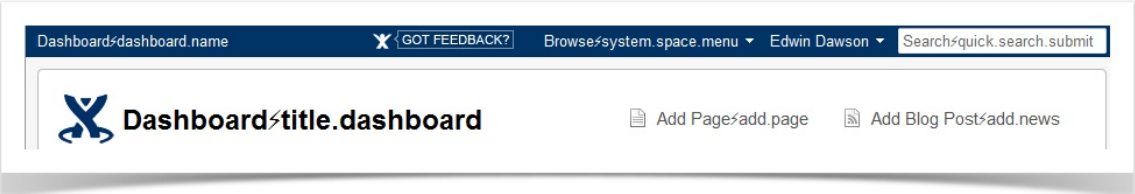
For those customers working on creating translations of the Confluence user interface, the 4.1 release has a new feature that will help. After opening the Confluence dashboard, you can simply add this text to the end of your Confluence URL, like so:

```
?i18ntranslate=on
```

Then press **Enter**.

This will then cause each element of the user interface to display its special **key name** while Confluence is still an interactive mode. This makes it easier to find the essential context for each key, which can then be searche on http://translations.atlassian.com where you can enter an appropriate translation for your custom language pack.

The key names are displayed with a "lightning bolt" graphic between elements of the names. For example, the buttons will show up with elements shown like so:



For the **Browse** menu, you can find its associated `system.space.menu` key on http://translations.atlassian.com. When you use this new translation feature, you can see the full context of the user interface elements. By understanding where a feature appears on the interface, for example the **Browse** menu, you can write a more meaningful translation for your users.

To turn off the translation view, use this:

```
?i18ntranslate=off
```

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9

Other improvements

As always, we have made various small improvements to Confluence.

General improvements

- **Favourites have been refined**
  You'll now see a newly named and cleaner Favourites tab in your personal space. Additionally, the list c favourites is now paginated and you can click the stars to remove favourites.
- **Global plugin & macro timeout setting**
  There is now a globally configurable timeout setting. This will stop pages going into a permanent loading state. In the past, this could lead to instability issues.
- **New JSON RPC**
  Confluence now has a JSON RPC library. This offers a way for Javascript developers to more easily access the Confluence API. For more details, see the documentation.

Editor improvements

- **Copy and paste table improvements**
  You can now copy and paste multiple table rows and entire tables. There are also new keyboard shortcuts. You can now use **Alt+Up Arrow** or **Alt+Down Arrow** to add a row above or below the curren row.
- **Copy and paste list improvements**
  If you copy and paste list items from one list to another, the list content will now be joined together as expected.

New icons

- Based on customer feedback, this version of Confluence has a number of redesigned interface and installer icons. These new designs add more of a contemporary look and feel and are aimed at improvin icon consistency and ease of use in Confluence.

  General Confluence Icon

  Installer icons

  User Interface icons

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10

Helping you transition to the Confluence 4.x generation

We've created a set of resources to help you manage the transition to Confluence 4.x. The change manageme resources are listed under the current documentation.

> **Note:** The Wiki Markup editor has been removed in Confluence 4.x and replaced with a new XHTML-based editor. Please see Why We Removed the Wiki Markup Editor in Confluence 4.0 for full details

11

Confluence Quick Reference Guide

Kick-start Confluence adoption with the Origami Necktie – full of tips and tricks to help your users get off the ground running. Get yours now!

Release notices

Upgrading from a previous version of Confluence

We strongly recommend that you back up your Confluence Home directory and your database before upgrading. Follow the normal upgrade instructions to upgrade your test instance to this release.

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When upgrading from a previous version of Confluence, if you have customised your cache settings (as documented in Cache Performance Tuning) then you may run into memory problems during the wiki to XHTML migration. We are working to fix this in a later release, but in the meantime you can revert your `ehcache.xml` to the default version.

Removed functionality

Features removed from Confluence

- **Personal labels**

  The ability to create personal labels is being removed in Confluence 4.1. You will still be able to access any personal labels you have created previously by going directly to http://<confluence_url>/users/viewmylabels.action
- **Mail archiving**
  This feature is being disabled by default in Confluence 4.1. However, it is still bundled as the Confluence Mail Archiving plugin, and easy to restore. Current users of the feature will not suffer any interruption, as the feature will be automatically kept in an operational state if you are using it. See details.
- **The SVG graphics library Batik**
  Any plugins that previously relied on the
  Batik package being provided by Confluence will now have to bundle their own version of Batik into their plugin. See details.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

The Confluence 4.1 team

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Confluence 4.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.1**. For details of the new features and improvements in this release, please read the Confluence 4.1 Release Notes.

On this page:

- Upgrade Notes
  - Confluence Clustered reactivated
  - Personal labels deprecated
  - Legacy Crowd SSO Authenticator removed
  - Reduced functionality for JIRA Portlets macro
- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

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Upgrade Notes

Confluence Clustered reactivated

Please be aware that **Confluence Clustered** is now available again, following a brief hiatus after the release of Confluence 4.0.

Personal labels deprecated

The tab that displays personal labels in the user profile has been hidden in Confluence 4.1. We are planning to remove personal labels altogether from Confluence in a future release. The functionality for creating personal labels is still in Confluence, but we recommend that you stop using them. People can still see their existing personal labels by visiting the following URL:

```
CONFLUENCE-URL/users/viewmylabels.action
```

Where CONFLUENCE-URL is the URL of your Confluence site.

For example: https://confluence.atlassian.com/users/viewmylabels.action

Legacy Crowd SSO Authenticator removed

For customers with Crowd SSO authentication who ever used Confluence 3.4.9 or earlier: Customers who were using the `com.atlassian.crowd.integration.seraph.v22.CrowdAuthenticator` in their `seraph-config.xml` must replace this with `com.atlassian.confluence.user.ConfluenceCrowdSSOAuthenticator`. This has been the default Crowd SSO authenticator since Confluence 3.5, so users who installed from scratch with Confluence 3.5 or higher are not affected.

Reduced functionality for JIRA Portlets macro

Upgrade notes updated in March 2012: In Confluence 4.1, it is no longer possible to add a JIRA Portlet macro via the Confluence macro browser. It is still possible to add the macro using wiki markup or by copying an existing JIRA Portlet macro. The macro still displays information correctly.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.

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2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.1. There are several reasons for this:
   - There were major changes to user management and LDAP in Confluence 3.5.
   - From version 3.5, you'll be able to use our new automated Installer / Upgrader to move to 4.1. The Confluence 4.1 Installer does not support upgrading from earlier versions of Confluence than 3.5.x.
   - We recommend that any issues arising from the upgrade to version 3.5.x be fixed separately to those that may arise from upgrading to version 4.1. Please contact Atlassian Support for assistance.
   - Please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.)

   If you are upgrading from 2.1 or earlier, please read the 2.2 Release Notes.
   If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade from version 2.7.x to version 3.5.x, before upgrading to the latest version. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

RELATED TOPICS

Confluence 4.1 Release Notes

Issues Resolved in Confluence 4.1

Below are the issues resolved in Confluence 4.1, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 4.1 Release Notes for the new features in this release.

Features and Improvements

JIRA Issues (12 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-16210	Global custom PDF stylesheet	Resolved	Fixed	90
	CONF-9458	Remove restrictions on characters in page and blog titles	Resolved	Fixed	53
	CONF-6351	Attachments	Resolved	Fixed	32

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		macro should allow listing attachments from another page			
	CONF-3813	Space attachments macro	Resolved	Fixed	21
	CONF-984	Extended Characters to be allowed in Page Title	Resolved	Fixed	20
	CONF-7835	Rewrite URLs to internal links if possible.	Resolved	Fixed	18
	CONF-4042	Search/Replace support in WYSIWYG Editor	Resolved	Fixed	13
	CONF-23730	Performance improvements for /admin/viewgeneralconfig.action	Resolved	Fixed	1
	CONF-24000	Reach parity in behaviour between PageContext#getSpaceKey() and ConversionContext#getSpaceKey()	Resolved	Fixed	0
	CONF-23683	note macro alignment is out unless an optional title is entered	Resolved	Fixed	0
	CONF-23567	Autoformat for JIRA URL	Resolved	Fixed	0
	CONF-22387	Add a shadow effect to images	Resolved	Fixed	0

Bugs Fixed

JIRA Issues (37 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-23380	Can't see bottom of some pages in editor	Resolved	Fixed	15
	CONF-23578	Cannot delete list item that is	Resolved	Fixed	13

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		before a nested list item in webkit			
	CONF-7882	Multiple AttachmentData objects were returned when only one was expected	Resolved	Fixed	12
	CONF-23551	Multi-byte characters aren't displayed correctly in Code Block Macro.	Resolved	Fixed	11
	CONF-23188	Officially Support IE8	Resolved	Fixed	7
	CONF-15104	CLONE -System error when adding users to a group if the group name contains certain characters	Resolved	Fixed	6
	CONF-23816	Null pointer exception when viewing previous version of page	Resolved	Fixed	3
	CONF-23318	Restore and data import from XML file both fail on Confluence 4.0	Resolved	Fixed	3
	CONF-23281	Highlight panel text look mis-aligned with icon when there is no title.	Resolved	Fixed	3
	CONF-24066	Copying and pasting plain text containing brackets into a table cell freezes the editor	Resolved	Fixed	2
	CONF-24017	Link Text not editable when editing a link to an attachment	Resolved	Fixed	2
	CONF-23651	Daily updates or changes email contains a broken or blank image	Resolved	Fixed	2
	CONF-24350	code macro add	Resolved	Fixed	1

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		a > before =			
	CONF-24084	Daily email notifications sends empty mails	Resolved	Fixed	1
	CONF-24058	error when you copy in to the table a text containing the characters '«' or '»' (Windows (CP-1251): '«' - 171 '»' - 187)	Resolved	Fixed	1
	CONF-23712	Copy and paste content in editor results in indented text and undesirable markup being entered	Resolved	Fixed	1
	CONF-23570	Code in code block macro gets mangled when http:// is included in <a href="..."> tag.	Resolved	Fixed	1
	CONF-17657	java.lang.ClassCastException: com.atlassian.confluence.setup.settings.GlobalDescription cannot be cast to com.atlassian.confluence.pages.AbstractPage	Resolved	Fixed	1
	CONF-24097	Trying to delete bullets from editor results in unselectable hanging bullet	Resolved	Fixed	0
	CONF-24031	Bad constraints on SQL Server	Resolved	Fixed	0
	CONF-23982	Documentation Theme does not load resources for atl.general	Resolved	Fixed	0
	CONF-23911	Activity Streams may be slow when filtering specifically for "blog added" or "space added"	Resolved	Fixed	0

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	CONF-23881	Code Block displayed incorrectly if '//' is present	Resolved	Fixed	0
	CONF-23865	Pasting a URL that contains something email-address like (an @) creates up to three links	Resolved	Fixed	0
	CONF-23783	Attachment Migration stores too much in the hibernate session	Resolved	Fixed	0
	CONF-23771	Attachment Migration from database to filesystem fails due to filesize mismatch	Resolved	Fixed	0
	CONF-23726	Link browser does an unnecessary Search on open	Resolved	Fixed	0
	CONF-23725	If you open the Link Browser more than once while editing a page, the up and down keys no longer work	Resolved	Fixed	0
	CONF-23724	Link browser quick search has no result limit and then displays the results poorly	Resolved	Fixed	0
	CONF-23721	Selecting link from quick search should clear the search results	Resolved	Fixed	0
	CONF-23652	Upgrades can log errors for ignorable errors	Resolved	Fixed	0
	CONF-23648	Searching for attachment doesn't highlight attachment in result overview	Resolved	Fixed	0
	CONF-23621	Regresssion:	Resolved	Fixed	0

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		<code:xml/> broken after upgrade to confluence 4.0			
	CONF-23599	Cannot reduce number of updates displayed to 10	Resolved	Fixed	0
	CONF-23596	Special characters not rendered in Code Macro	Resolved	Fixed	0
	CONF-21306	Lucene search characters are not escaped from the dosearchsite.action's contributor query parameter, resulting in a system error whenever users (unwittingly) enter them into the "Who" input field.	Resolved	Fixed	0
	CONF-19730	Error thrown when search results filtered by Author in Russian	Resolved	Fixed	0

Confluence 4.0.7 Release Notes

17 May 2012

Confluence 4.0.7 is a bug-fix release. The full list of fixes is provided at the bottom of this page.

Don't have Confluence 4.0 yet?

Take a look at the new features and other highlights in the Confluence 4.0 Release Notes.

Download Latest Version

Release Notices

- **Security advisory:** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.0.7 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

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JIRA Issues (1 issues)					
Type	Key	Summary	Priority	Status	Resolution
	CONF-25077	XML Vulnerability in Confluence		Resolved	Fixed

Confluence 4.0.7 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.0.7**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.
3. If your version of Confluence is earlier than 4.0, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.0 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.0.5 Release Notes

> **Note:** The Wiki Markup editor has been removed in Confluence 4.x and replaced with a new XHTML-based editor. Please see Why We Removed the Wiki Markup Editor in Confluence 4.0 for full details

25 November 2011

The Atlassian Confluence team is pleased to announce the release of Confluence 4.0.5, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.0 yet?

Take a look at the new features and other highlights in the Confluence 4.0 Release Notes.

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Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.0.5 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.

Updates and Fixes in this Release

JIRA Issues (25 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-24244	Cut, Paste Table row cant be performed to put a row at the buttom.		Resolved	Fixed
	CONF-23929	Add keyboard shortcut to quickly insert a row before or after the current row		Resolved	Fixed
	CONF-23842	Copying and pasting list items into an existing list		Resolved	Fixed
	CONF-23408	Ability for users to copy and paste tables and multiple rows and cells		Resolved	Fixed
	CONF-24106	ExcelXMLTextExtractor causes OOME in onDemand		Resolved	Fixed
	CONF-23809	Mention user name links are occasionally replaced by the page title		Resolved	Fixed
	CONF-24096	crossing out of text does not work		Resolved	Fixed
	CONF-23911	Activity Streams may be slow when filtering specifically for "blog added" or "space added"		Resolved	Fixed

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	CONF-23795	Some text boxes in a Powerpoint presentation get flipped horizontally when viewed in Confluence		Resolved	Fixed
	CONF-23658	Links with Multi-byte Characters are Displayed as HTML Escape Characters (&#xxxxx;)		Resolved	Fixed
	CONF-23650	Confluence serves anchors to the browser as an empty element <a name="..." /> which the browsers don't handle very well leading to all subsequent text being rendered as a link		Resolved	Fixed
	CONF-23554	Russian links in {toc} follow to wrong places		Resolved	Fixed
	CONF-23483	Pasting email links containing upper-case (capital) letters does not autoformat correctly		Resolved	Fixed
	CONF-23353	jiraissues macro can no longer be rendered by the wiki markup renderer (eg. Dashboard welcome message, User Macros, unmigrated wiki markup blocks)		Resolved	Fixed
	CONF-23289	Table Copy / Paste in Safari 5 always copies cell information		Resolved	Duplicate

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		into another cell instead of contents			
	CONF-23234	up and down arrow keys should navigate the cursor to the cell above/below in the table		Resolved	Fixed
	CONF-23114	Some people not showing up in user autocomplete for Share button		Resolved	Fixed
	CONF-21043	Excel Sheets with large row count causes out of memory errors		Resolved	Fixed
	CONF-15937	OutOfMemoryError while migrating attachments from database to files		Resolved	Fixed
	CONF-23810	ALT + CTRL + S inserts an illegal control character in safari that prevents the page from being saved		Resolved	Fixed
	CONF-23727	Share button autocomplete can get in a state where it will not share with a particular email		Resolved	Fixed
	CONF-23684	Link is not recognized when "Hide External Links From Search Engines" is unchecked		Resolved	Fixed
	CONF-23456	Copy pasting text into the new editor causes the page to "jump" to the end of the pasted text rather than staying put		Resolved	Fixed
	CONF-23436	Entity references appear in space		Resolved	Fixed

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		descriptions and when editing a space description			
	CONF-18922	if the last content on a page is a table row, positioning the cursor after it and presing enter/return in the RTE causes a new line to be created at the top of the page not the end		Resolved	Fixed

Confluence 4.0.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.0.5**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.
3. If your version of Confluence is earlier than 4.0, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.0 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.0.4 Release Notes

> **Note:** The Wiki Markup editor has been removed in Confluence 4.x and replaced with a new XHTML-based editor. Please see Why We Removed the Wiki Markup Editor in Confluence 4.0 for full details

08 November 2011

The Atlassian Confluence team is pleased to announce

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the release of Confluence 4.0.4, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.0 yet?

Take a look at the new features and other highlights in the Confluence 4.0 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.0.4 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.

Updates and Fixes in this Release

JIRA Issues (11 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-23707	Enable cluster performance tests for stable		Resolved	Fixed
	CONF-23701	After creating link in editor the backspace removes paragraph text after the cursor in editor 4.0.3		Resolved	Fixed
	CONF-23673	Migration of wiki to XHTML is not happening on the cluster set up used for performance test builds		Resolved	Fixed
	CONF-23659	Exception upon opening "Browse -> Spacedirectory" in Browse		Resolved	Fixed
	CONF-23599	Cannot reduce number of updates displayed to 10		Resolved	Fixed
	CONF-23457	Certain combinations of keypresses		Resolved	Fixed

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		causes the editor to lose focus in Chrome			
	CONF-23363	Demo Space and other imported spaces will still contain absolute links instead of relative links		Resolved	Fixed
	CONF-22808	Improve reindex performance by not retrieving previous versions unnecessarily		Resolved	Fixed
	CONF-22548	IllegalArgument Exception Encountered when Comparing Page Versions in Cluster		Resolved	Fixed
	CONF-21306	Lucene search characters are not escaped from the dosearchsite.action's contributor query parameter, resulting in a system error whenever users (unwittingly) enter them into the "Who" input field.		Resolved	Fixed
	CONF-19730	Error thrown when search results filtered by Author in Russian		Resolved	Fixed

Confluence 4.0.4 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.0.4**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration

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information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.

2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.
3. If your version of Confluence is earlier than 4.0, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.0 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.0.3 Release Notes

> **Note:** The Wiki Markup editor has been removed in Confluence 4.x and replaced with a new XHTML-based editor. Please see Why We Removed the Wiki Markup Editor in Confluence 4.0 for full details

19 October 2011

The Atlassian Confluence team is pleased to announce the release of Confluence 4.0.3, which is a bug-fix release. 4.0.1 and 4.0.2 were internal releases only.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 4.0 yet?

Take a look at the new features and other highlights in the Confluence 4.0 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 4.0.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

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Confluence 4.0.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.0.3**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.
3. If your version of Confluence is earlier than 4.0, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.0 Upgrade Notes.
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.0 Release Notes

> Confluence **4.3** has now been released – see the Confluence 4.3 Release Notes.

19 September 2011

With great pleasure, Atlassian presents Confluence 4.0. This is one of the most significant updates to Confluence since its initial release in 2004. With a brand new WYSIWYG editor and wide-ranging user interface improvements, we're confident that Confluence 4.0 is the most productive and user-friendly version to date.

Highlights of Confluence 4.0:

- Brand New Editor
- Simplified Editing Experience
- New Macros
- Faster Editing Experience
- Introducing @mentions
- Improved Page Comparison Functionality
- Email Notification Improvements
- New Confluence Installer and Guided Upgrades
- New Editor Plugin Points for Developers
- Other Improvements
- Helping You Transition to Confluence 4.0
- Release Notices

More:

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- Read the Upgrade Notes for important information about this release.
- See the full list of issues resolved in this release.

Learn more
about Confluence 4.0

Video of What's New:

Thank you for your feedback:

More than **215** requests implemented
Over **1050** votes fulfilled

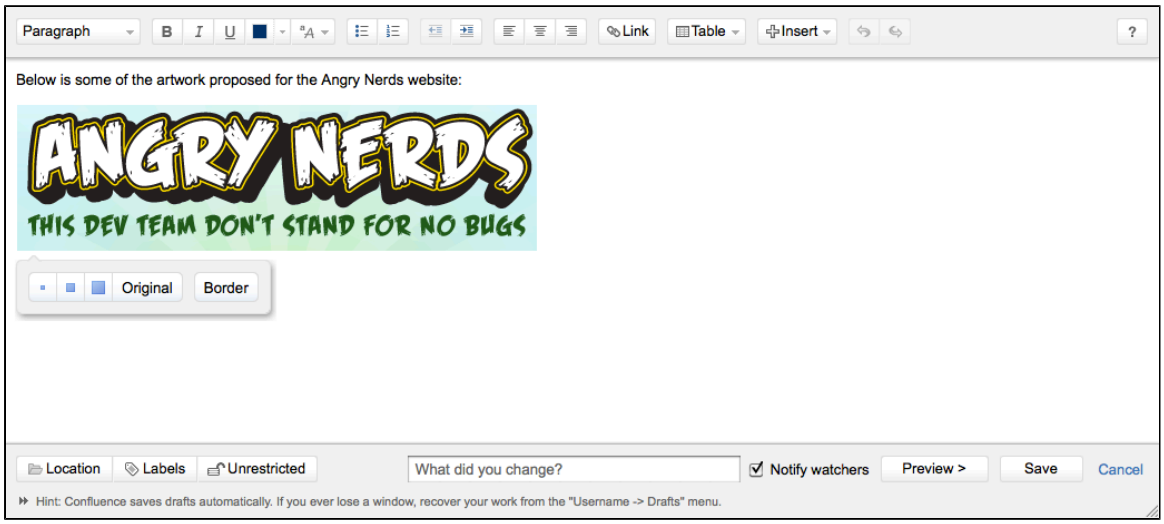
> **Note:** The Wiki Markup editor has been removed in Confluence 4.x and replaced with a new XHTML-based editor. Please see Why We Removed the Wiki Markup Editor in Confluence 4.0 for full details

Highlights of Confluence 4.0

1

Brand New Editor

We've rebuilt the Confluence editor from the ground up, bringing you an editing experience that's simpler, faste and richer.



The new Confluence editor delivers many advantages:

- Just one editor!
- New, streamlined user interface.
- Redesigned toolbar with enhanced text formatting (indent paragraphs) and alignment controls.

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2

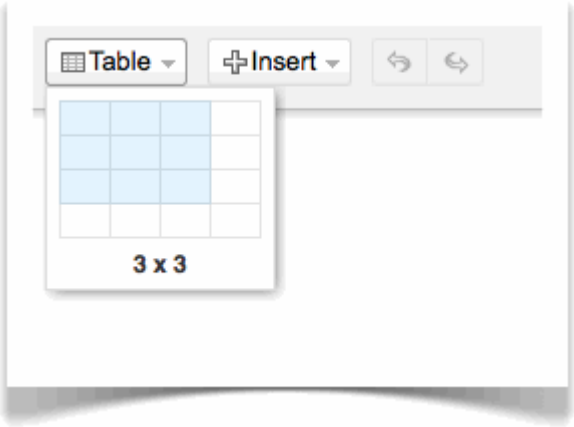
Simplified Editing Experience

Editing in Confluence 4.0 is more visual and more contextual, putting more power at your fingertips.

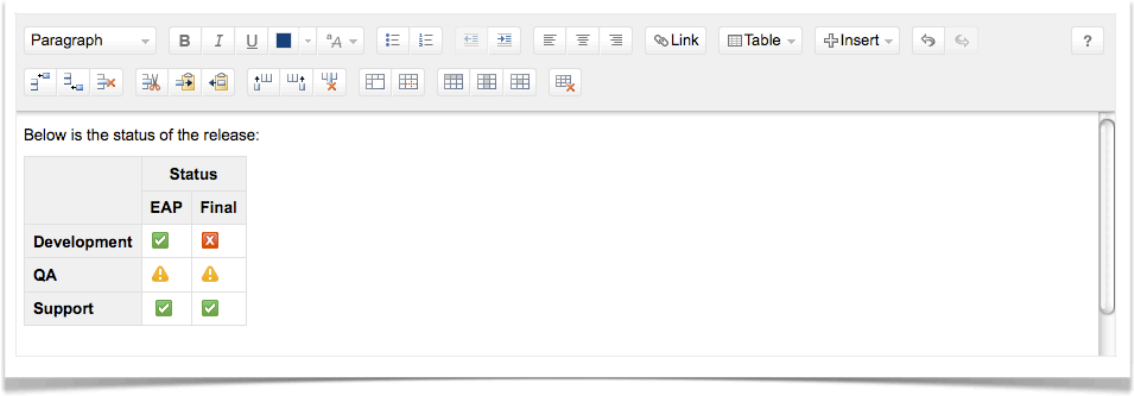
Table Editing

We've made table operations better in Confluence 4.0 with the following features:

- **Drag to Insert Tables**
  Inserting tables is now easier and truly "WYSIWYG" with this new feature. Just click on the new Table dropdown and drag your mouse to choose the number of rows and columns you'd like in your new table Oh, and don't worry if you like inserting tables with your keyboard, you can still use autoformatting or CTRL+SHIFT+I to insert a table.



- **New In-Context Table Toolbar**
  The new table toolbar removes the need for a context menu and only appears when you add a table to the page.
- **Merge and Split Table Cells.**
- **Highlight cells, rows or columns.**
- **Cut, copy and paste table rows.**



Improved Image Handling

- **Paste Images From Clipboard (Firefox and Chrome only)**
  Just copy any image to your clipboard and hit CTRL+V in the editor. The image will get attached and embedded directly into your page. There's nothing to install on your desktop, it just works!
- **Turn Images Into Links**
  Now you can turn images into links. This is especially handy for turning images into a button.

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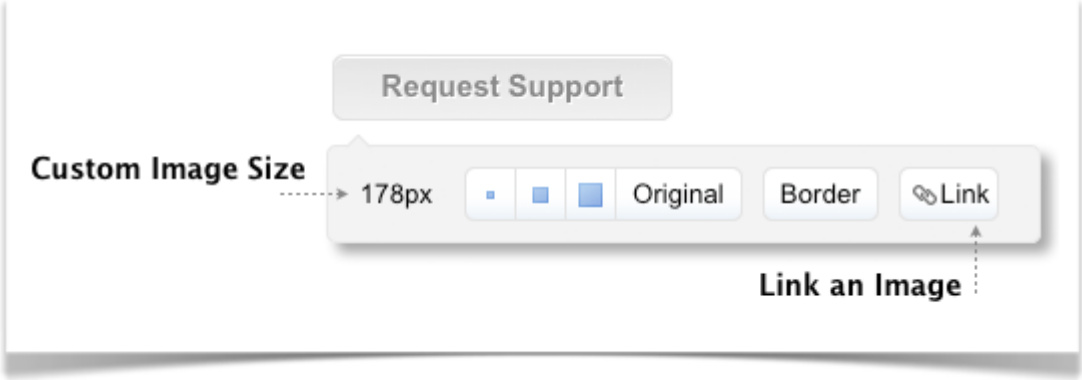
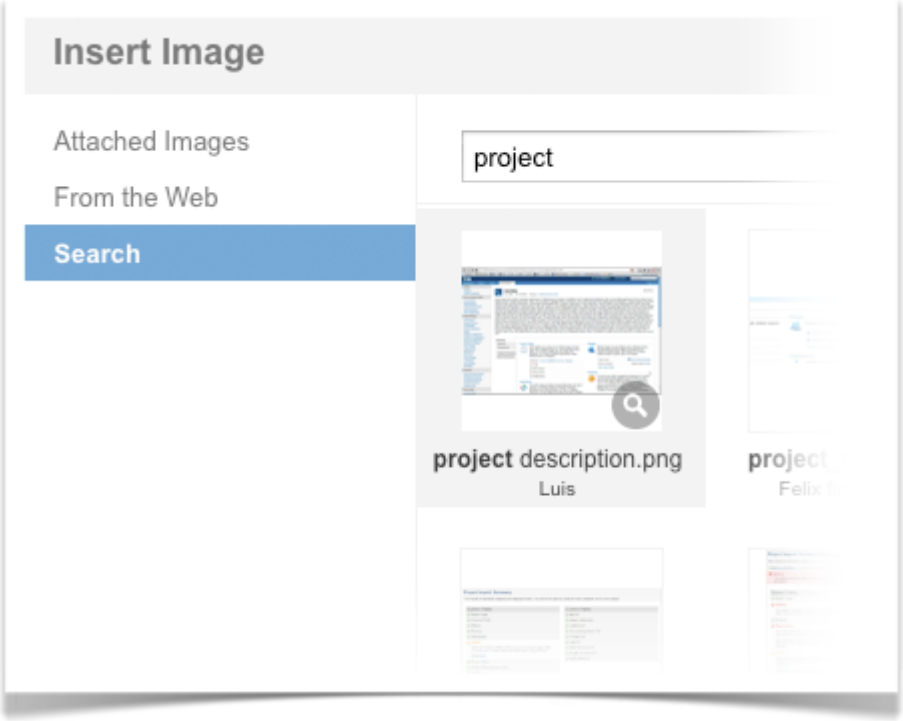
- **Custom Image Sizes**
  If you don't like the preset image sizes, you can now specify an exact image width.



- **Search Images**
  You can now embed images from other pages using the new Search tab in the image browser.



Simplified Macro Editing

Confluence 4.0 introduces macro placeholders, a visual representation of your macros while editing. Create ric content with new and existing macros, without the tools getting in the way. Makes macros easier to manage while editing.

- **A More Visual Experience**
  Making it easier to visualise what the page will look like when you save it.
- **Macro Properties Panel**
  Every macro has a properties panel. The property panels for particular macros, such as the Status and View PowerPoint macros have additional functionality, as shown in the screenshot below.
- **Quick Access to Macro Editing**
  Double-click the macro to open the Macro Browser for parameter editing. The contents of some macros can be modified directly from the editor.

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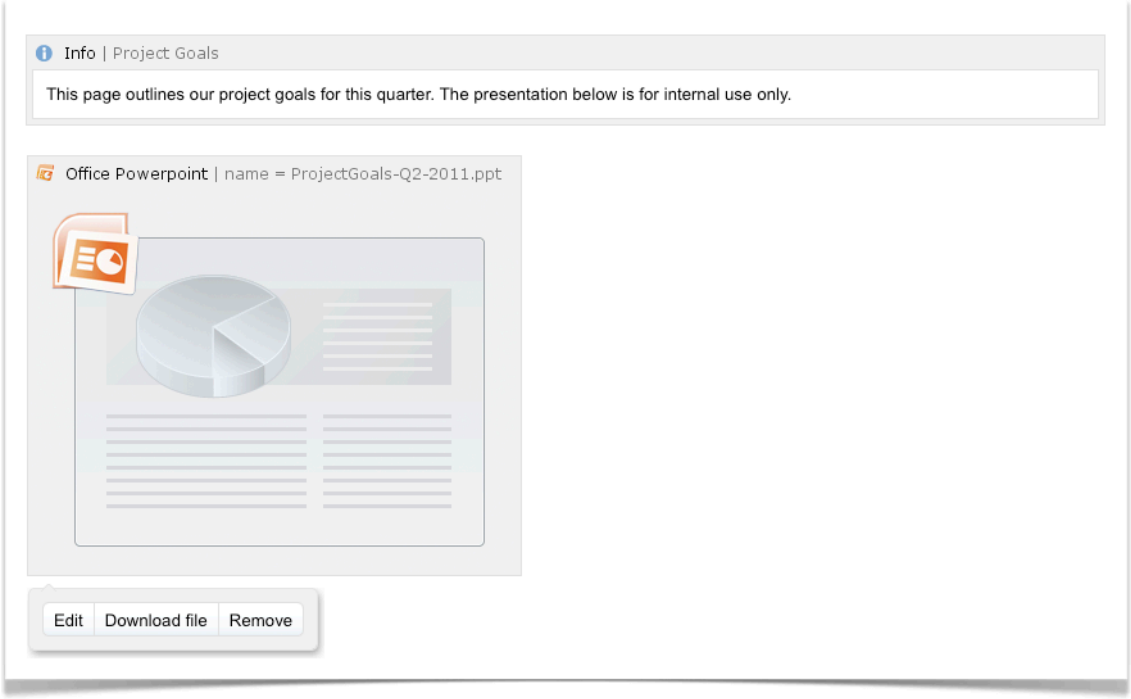
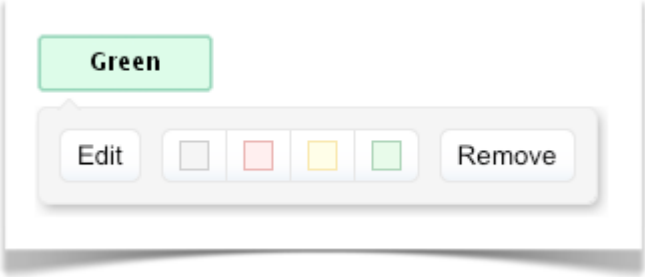


3

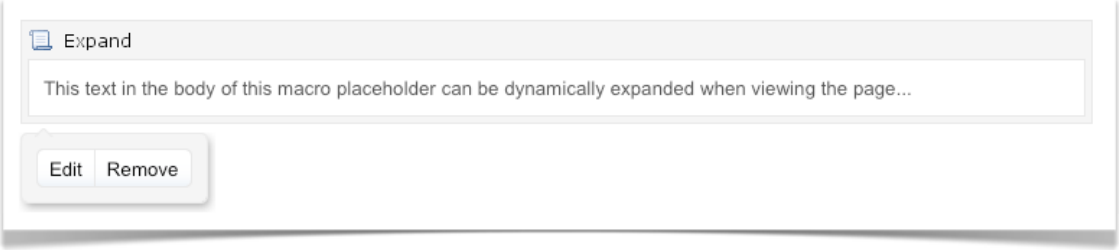
New Macros

We've bundled more macros with Confluence, and made some of the existing macros better, to help you easily include and present relevant content:

- **Status Macro**
  The Status macro is an easy way to show your status in reports (i.e. red, yellow or green) as a coloured lozenge. You can use the properties panel to quickly change the status.



- **Expand Macro**
  The Expand macro allows you to add a dynamically expandable section of text to your page.



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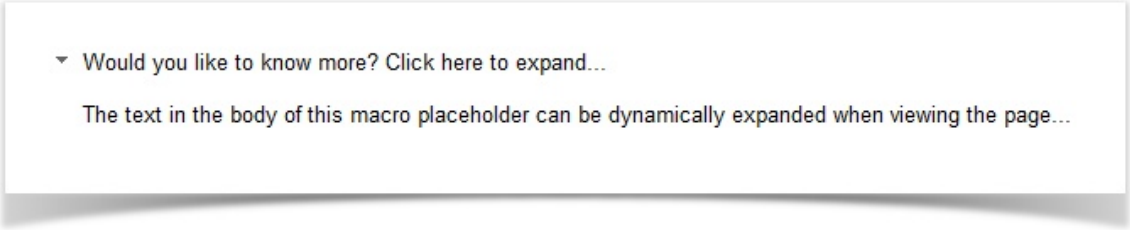
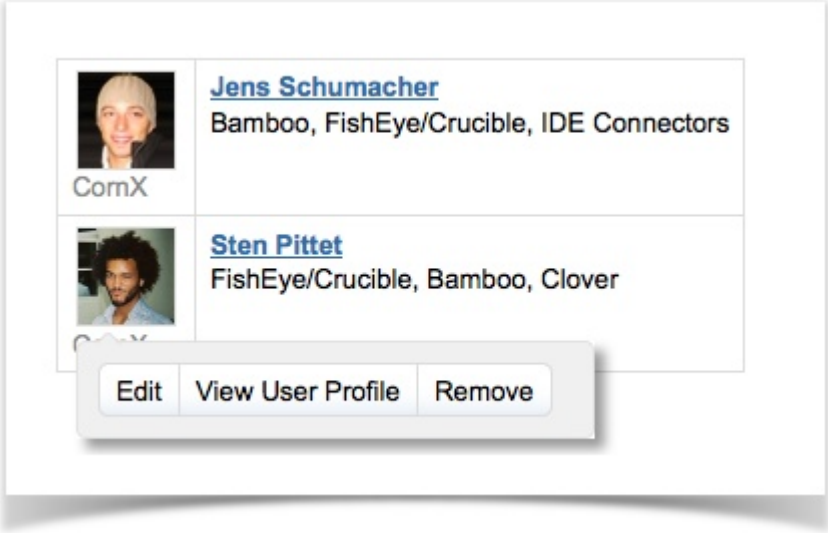


- **Profile Picture Macro**
  The Profile Picture macro displays a users profile picture on a page. Useful for creating Team Pages.



4

Faster Editing Experience

Write Wiki Markup ... Fast!

Many of Confluence's biggest fans are avid wiki markup users. For you aficionados, we wanted to give you the fastest editing experience possible, while preserving the speed and efficiency of your existing wiki markup skills So, we present you with Autoformatting!

Video of Autoformatting in Action:

What is Autoformatting?

Autoformatting lets you type wiki markup into the editor. This new feature will "auto-format" your text on the fly.

To learn more, click on the ? help button in the editor and select the **Editor Autoformatting** tab.

Try these and see what you think:

- **Font Formatting**
  Bold, underline, strikethough, italic, superscript, subscript – just type the markup, such as *Bold*, and watch it convert to **Bold** on the fly!
- **Basic Tables**
  Try typing **|||||** , or **|| Heading 1 || Heading 2 ||** , then hit enter to to instantly see this:

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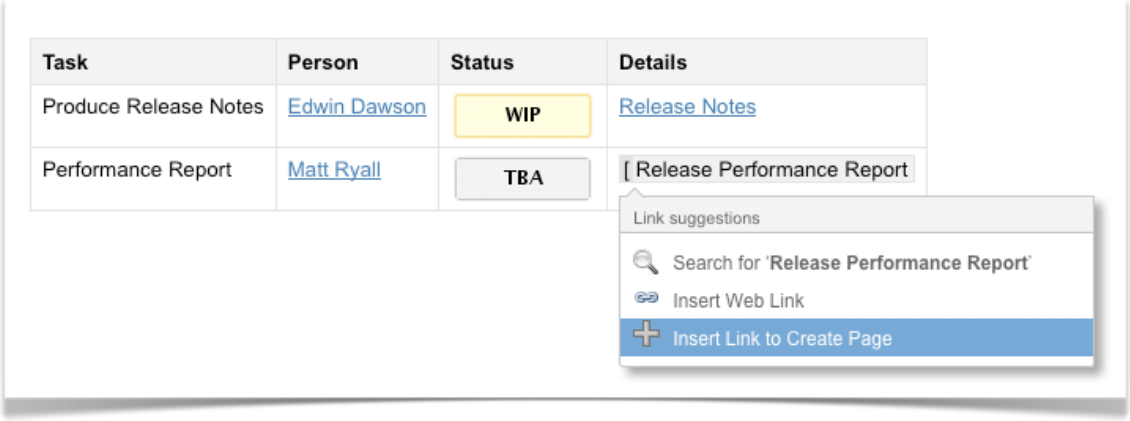
Heading 1	Heading 2

- **Emoticons**
  All of our emoticons convert on the fly. Try typing **:-)** into the editor to instantly see this: 🙂. It even work
  for **(/)**, showing this: ✅ .
- **Lists**
  For numbered lists, type # and a space at the start of each line.
  For bulleted lists, type * and a space at the start of each line.
- **Headings**
  Type h4. then some heading text to see a level 4 heading.

New Page Links

Quickly insert a link to create a page with Autocomplete for links. Simply type '**[**' in the editor and as you type, Confluence will display a Create Page link if a page with that title does not already exist in your current space.



Introduced in a previous release of Confluence (see details in this blog post), adding links, media and macr
can still be quickly added by typing [, ! or { in the editor to add various kinds of content to your page.

5

Introducing @mentions

Confluence 4.0 includes the new @mentions feature. This allows you to easily bring collaborators into a conversation: if you are mentioned in any Confluence content (a page, blog post or comment) you will be notifi
by email.

To mention someone, type @ and their name, when editing. Mentions will instantly suggest people you are following in your network, so you can quickly find and involve your friends.

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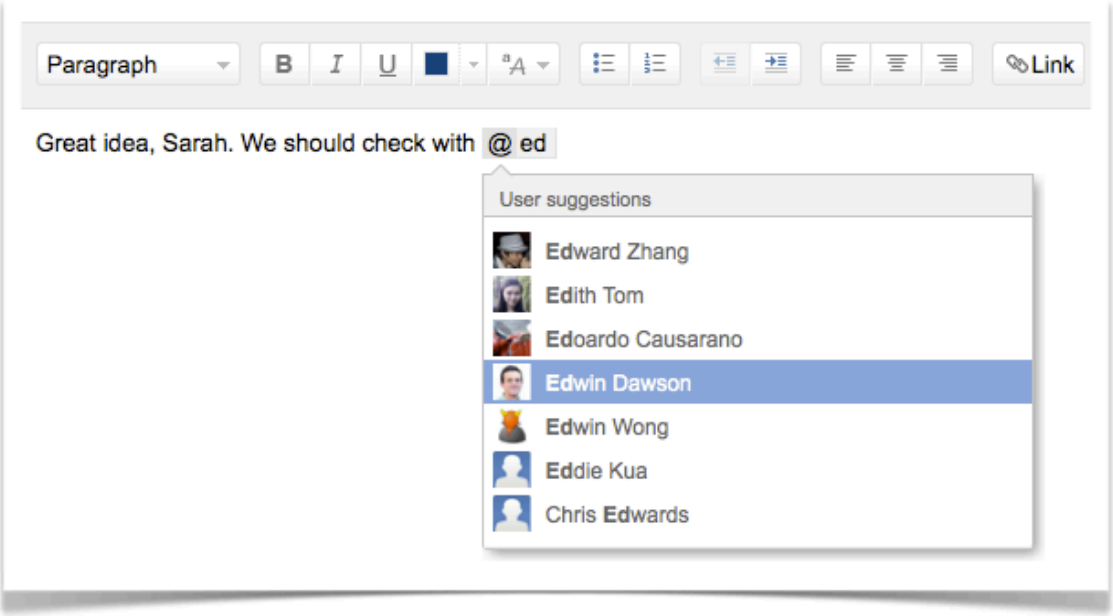

6

Improved Page Comparison Functionality

We've got a better way to view changed content in Confluence.

Improved Page Diffs

We've simplified page diffs to make them easier to read. Now, page differences appear exactly as they do in Confluence. Images, text and tables are displayed as rendered. Additionally, page diffs now show changes to both formatting and macros.

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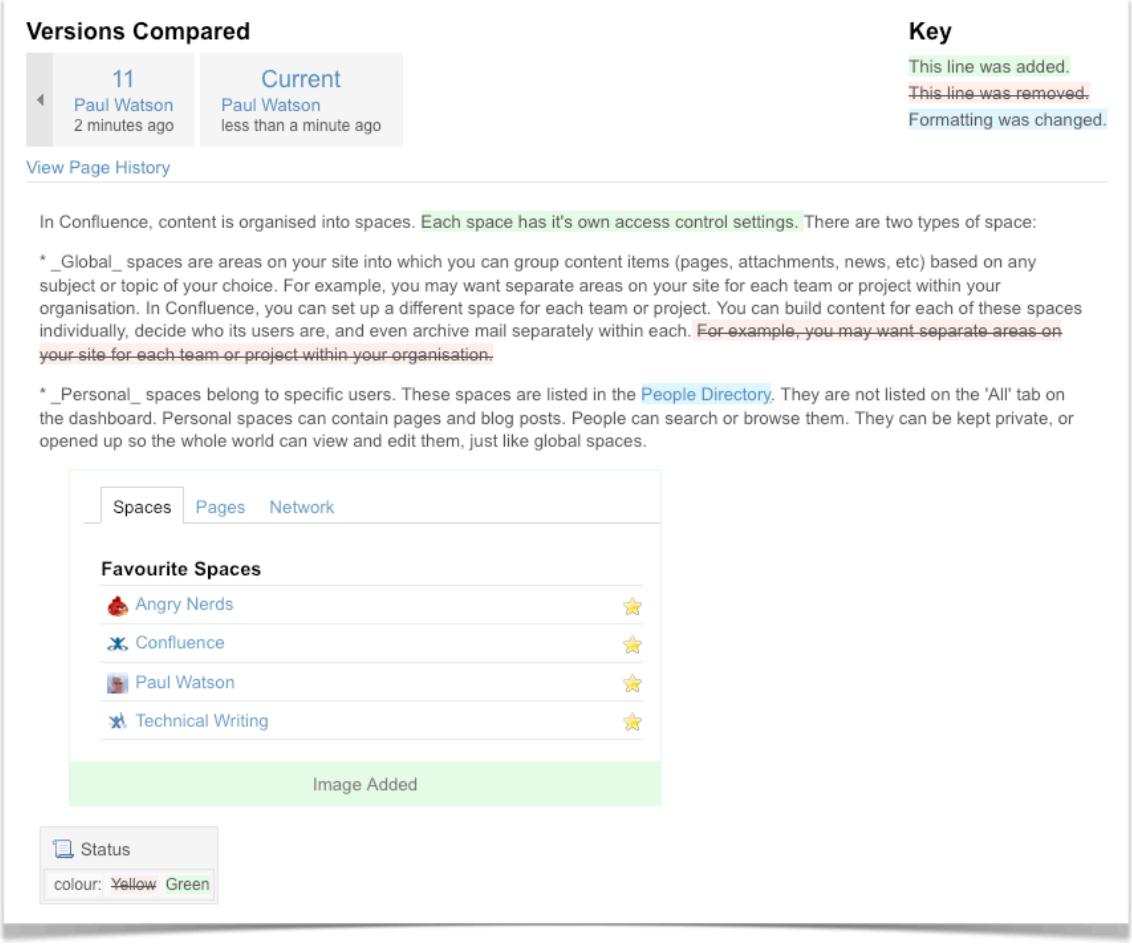

Diffs in Email

Where possible, email notifications are now rendered in your email view with the correct diff colour coding.

7

Email Notification Improvements

New Email Design

All email notifications in Confluence now have a new design. This works in major email clients as well as on the iPhone.

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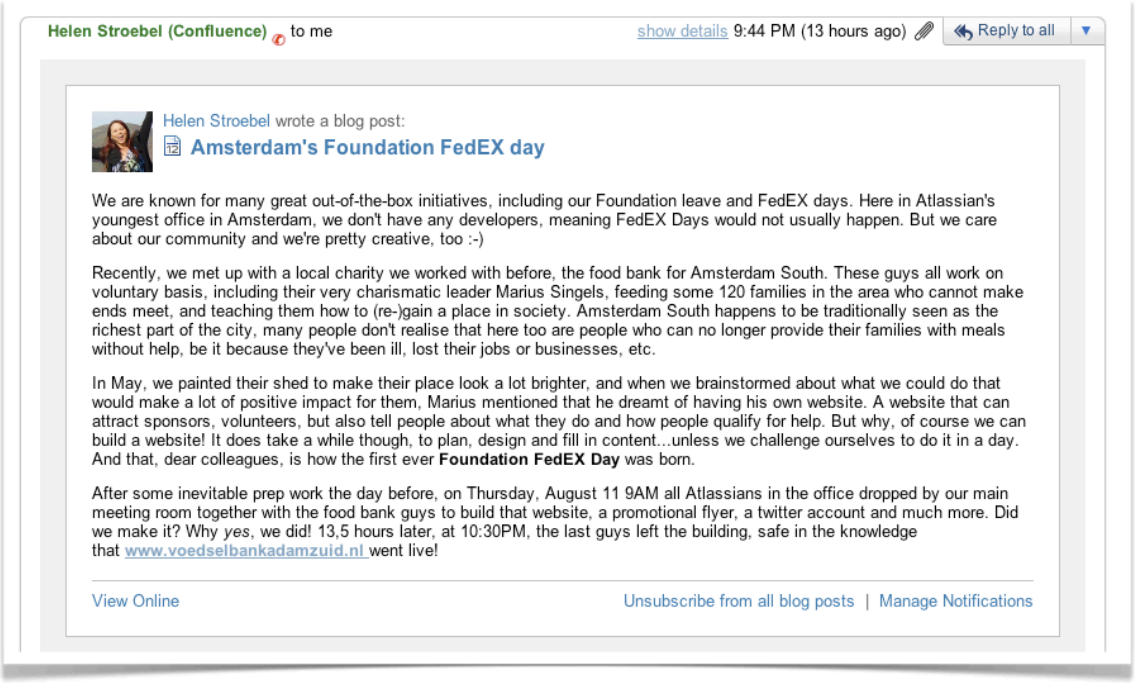
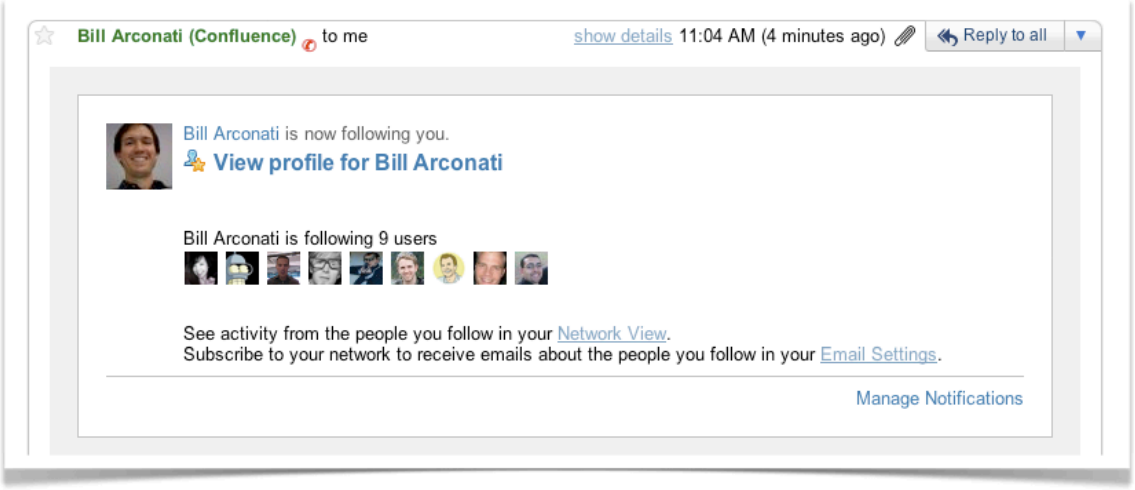


Follow Notifications

Confluence now sends email when someone follows you.



8

New Confluence Installer and Guided Upgrades

Much to the delight of any sysadmins that are looking after Confluence, the Windows and Linux guided installe are now available.

Guided Upgrades

The new Linux and Windows Installers include an option that allows you to upgrade an existing Confluence 3.5 (or later) installation. This upgrade automates the following tasks for you:

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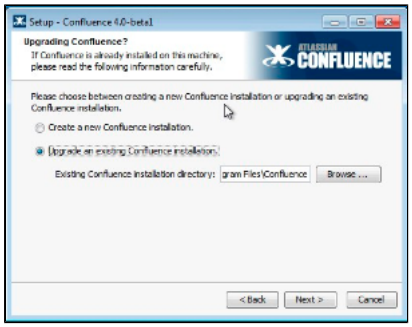
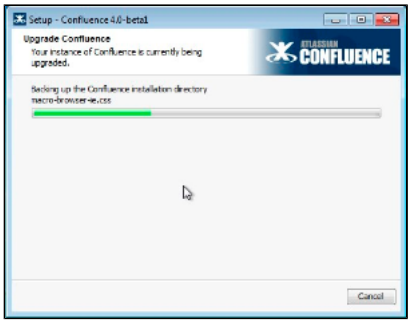
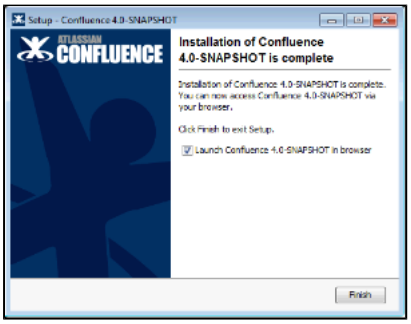
1. Backs up the Installation and Home Directories of the existing Confluence installation.
2. Installs **Confluence 4.0.x** whilst migrating the following from your existing Confluence installation:
    - TCP port values in your existing Confluence installation's server.xml file,
    - The upgrade feature detects and notifies you of any other files in the Confluence subdirectory of your existing Confluence Installation Directory, which have been deleted, added or modified from the default. This informs you of any customisations you will need to manually migrate across to your upgraded Confluence installation directory.





Simplified Installation Process

- **Guided installer:** The guided install wizard has been implemented for Confluence 4.0 on both Windows and Linux operating systems. Installing a new instance is a breeze.
- **Easy JIRA Integration:** Hook Confluence up with JIRA, right within the Confluence setup wizard.



9

New Editor Plugin Points for Developers

We've added more editor plugin points for developers. Notable improvements include:

Editor Plugin Points

- **Extend the Macro Property Panel**
  Plugin developers can add buttons to the Macro Property Panel in the editor.
  For example, insert a Gliffy diagram or see the tutorial on how to do this.
- **Render an Image in the Macro Placeholder**
  A plugin developer can now render an image instead of a placeholder for bodyless macros. For more information, check out the tutorial on how to do this.
- **Custom Parameter Rendering in Placeholders**
  You can choose to display any parameter in the macro placeholder in the editor, instead of having the placeholder automatically show the first few parameters.
- **New Pluggable More Menu**
  Plugin developers can add items to the editor's More menu. See this tutorial for details.

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Developer Resources

- **View Storage Format**
  To assist with plugin developers and help with developer issues, developers running in Dev mode and Confluence administrators can view the page storage format from the Tools menu in Confluence.
- **New API Changes**
  We have disabled the getPage() and getBlogEntry() read methods in the XML-RPC/SOAP API. If you have a script that primarily reads or appends to existing pages, it will break. Creating pages and overwriting existing pages will still work.
- **Plugin Developer Documentation**
  We have created a landing page for Confluence 4.0 planning. This includes resources for plugin developers to help you create new plugins, and make use of the new plugin points, as well as upgrade your existing plugins.

Infrastructure Changes

This release includes a number of improvements in the APIs and under the covers as well.

- **Anti-XSS Mode**
  This is now enabled by default for plugins.
- **Alignment and Border Parameters**
  The **alignment** and **border** properties in the macro definition template have been removed.
- **Thumbnail Settings**
  The **Thumbnail maximum height** and **Thumbnail maximum width** settings have been removed from the General Configuration page.
- **Link Browser**
  The Link browser is no longer built in GWT and is now built in core JavaScript.
- **Integration Platform 2.12.0**
- **Upgrade to AUI 3.5.0**

10

Other Improvements

As always, we have made various small improvements to Confluence screens, functionality and supported platforms.

- **Chrome and Internet Explorer 9 Support**
  See the upgrade notes for more information about browser support.
- **Administrator's task list in the Admin Console**
  This new task list in the Admin Console helps administrators get started after a new install.
- **New keyboard shortcut:**
  CTRL+SHIFT+E to preview when you are in the editor; hit 'E' to get back to the editor.
- **Administration UI**
  Help tips have been added to the field descriptions.
- **Quicknav Improvements**
  Quicknav now indicates the space the page is coming from. This helps you find a page that might have the same title across multiple spaces, as well as selecting the first search result by default, making it quicker to open the link.
- **Advanced Linking**
  We've updated the Link dialog to cater for these link types: shortcut links, anchor Links, and undefined links (which you can do using Autocomplete).

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Helping You Transition to Confluence 4.0

We've created a set of resources to help you manage the transition away from wiki markup. We know your people have become experts with using wiki markup in Confluence, but we think you'll really appreciate the new editor, and we want to make it as easy as possible for you to make the change. The change management resources are listed under the current documentation.

Learn more about Confluence 4.0 | Live Webinar» September 27th 8 AM Pacific

Release Notices

Upgrading from a previous version of Confluence

⚠ You can only upgrade to Confluence 4.0 from Confluence 3.5. From version 3.5 , you'll be able to use our now automated upgrader to move to 4.0. See the Confluence 4.0 Upgrade Notes.

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*

When upgrading from a previous version of Confluence, if you have customised your cache settings (as documented in Cache Performance Tuning) then you may run into memory problems during the wiki to XHTML migration. We are working to fix this in a later release, but in the meantime you can revert your `ehcache.xml` to the default version.

- If you still experience problems, try reducing the '`maxElementsInMemory`' attribute on each cache to a very small value such as 50.
- Note that any cache changes you make to work around migration problems should only be considered temporary. You should restore caching to its original settings again after migration has been successful.

Removed Functionality

Features removed from Confluence

- **The Edit Page in Word functionality**
  This is being removed in Confluence 4.0. **Note:** This is a different feature to "Edit attachment in Word".
- **Mail Page Plugin**
  The Mail Page plugin is no longer bundled in Confluence. With the introduction of the "Share Page" feature in 3.5 this is no longer needed.
- **Social Bookmarking Plugin**
  The Social Bookmarking plugin is no longer bundled in Confluence but is still supported.
- The **SnipSnap importer** has been removed from the admin console.
- Please be aware that **Confluence Clustered** is not available for version 4.0 yet. It will be forthcoming in a minor release, following the launch of version 4.0.

Settings removed from Confluence

These settings were removed due to low recorded usage and the ongoing goal of simplifying Confluence.

- The **CamelCase Links** setting, from general configuration.
- The **Number of Ancestors to Show in Breadcrumbs** setting.

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A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

The Confluence 4.0 Team

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Issues Resolved in Confluence 4.0

Below are the issues resolved in Confluence 4.0, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 4.0 Release Notes for the new features in this release.

Features and Improvements

JIRA Issues (49 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-3808	Add colspan functionality to simple table markup	Resolved	Fixed	360
	CONF-5587	Allow users to paste image in WYSIWYG editor	Resolved	Fixed	201
	CONF-12952	Support Chrome	Resolved	Fixed	102
	CONF-19666	Office conector	Resolved	Fixed	65

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		should support MS Office 2010			
	CONF-22060	Please add support for Internet Explorer 9	Resolved	Fixed	62
	CONF-22057	Add support for Firefox 4 in Confluence and in the Firefox Add-On for the Office Connector	Resolved	Fixed	61
	CONF-2803	macro to allow for expand/collapse of a section or region of the page	Resolved	Fixed	45
	CONF-4902	Wiki markup should support easily indenting a line	Resolved	Fixed	44
	CONF-5311	Move to WYSIWYG editor based on HTML instead of wiki markup. Replace wiki markup mode with HTML editor mode.	Resolved	Fixed	28
	CONF-8268	Support inline unformatted text	Resolved	Fixed	19
	CONF-5308	Add text alignment capabilities to align text left, centre or right to WYSIWYG	Resolved	Fixed	19
	CONF-4997	Support nested macros by allowing an open / close tag syntax	Resolved	Fixed	18
	CONF-6007	no space required before sub/superscript	Resolved	Fixed	17
	CONF-22757	Add support for Firefox 5 in Confluence and in the Firefox Add-On for the Office Connector	Resolved	Fixed	15

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	CONF-20394	Host WebDAV launcher add-on for Firefox at Mozilla and provide information for people wanting to install it	Resolved	Fixed	11
	CONF-16171	comparing the page history in rich text editor alongwith Wiki mark-up	Resolved	Fixed	9
	CONF-503	Add a generic HTML cleaning service	Resolved	Fixed	9
	CONF-21173	keyboard shortcut: "Ctrl+Alt+q" makes it impossible to type a "@" in the Rich Text editor on a german keyboard	Resolved	Fixed	8
	CONF-4803	Add button for monospaced formatting	Resolved	Fixed	7
	CONF-9052	Save button on full screen edit mode.	Resolved	Fixed	6
	CONF-7819	WYSIWYG should keep new lines	Resolved	Fixed	6
	CONF-9227	Moving an attachment does not update embedded images	Resolved	Fixed	5
	CONF-7542	Embed macro parameters form in Rich Text Editor instead of markup syntax	Resolved	Fixed	4
	CONF-23097	Add support for Firefox 6 in the Firefox Add-On for the Office Connector	Resolved	Fixed	3
	CONF-16187	Notification when a confluence user is following you	Resolved	Fixed	3

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	CONF-10568	Show Space logos next to Space names on Dashboard instead of default Earth icon	Resolved	Fixed	3
	CONF-6030	Adding Nested Table Function	Resolved	Fixed	3
	CONF-22236	Support monospace text with trailing or leading spaces, and with adjacent letters	Resolved	Fixed	2
	CONF-20503	Make images from another page selectable in image browser	Resolved	Fixed	2
	CONF-11804	Detect MySQL MyISAM Storage Type and report as Error	Resolved	Fixed	2
	CONF-9491	Version Comments and Minor Change buttons are overlooked by most users on the default page layout	Resolved	Fixed	2
	CONF-23039	Text Editor - configurable editing area	Resolved	Fixed	1
	CONF-21616	Allow autocomplete for links to allow linking to an undefined page page	Resolved	Fixed	1
	CONF-20310	Create Table with First Column As Heading	Resolved	Fixed	1
	CONF-19765	Make "large" in the image editor propery panel a thumbnail to the full-sized image	Resolved	Fixed	1
	CONF-15735	Drop-down menus should allow choosing top/default option	Resolved	Fixed	1

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	CONF-13619	In QuickNav visually differentiate between documents with the same name in different spaces	Resolved	Fixed	1
	CONF-23145	Horizontal scroll option for tables	Resolved	Fixed	0
	CONF-22538	Improve performance of DefaultSpacePermissionManager.hasPermissionViaGroups	Resolved	Fixed	0
	CONF-21787	Using "Web Link" to add a link to a new page confusing and counterintuitive	Resolved	Fixed	0
	CONF-20174	During database setup, "Next" button should be disabled if the page is still loading	Resolved	Fixed	0
	CONF-18696	Usability: Even more keyboard shortcuts	Resolved	Fixed	0
	CONF-17518	Insert Table link should be included in the Insert menu	Resolved	Fixed	0
	CONF-16568	Allow users to specify image width and height in the RTE	Resolved	Fixed	0
	CONF-10280	download center remarks + file naming	Resolved	Fixed	0
	CONF-9912	Rename "Comment" on page editing to "Revision Comment"	Resolved	Fixed	0
	CONF-8977	Support two white-spaces after a full stop in the Wiki Markup Editor mode	Resolved	Fixed	0

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	CONF-5978	Create new pages from within RTE	Resolved	Fixed	0
	CONF-950	Incorporate external user management cleanly into setup process.	Resolved	Fixed	0

Bugs Fixed

JIRA Issues (200 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-6992	Markup umbrella issue - errors switching between modes or rendering escaped content	Resolved	Fixed	139
	CONF-4907	Rich text editor indenting feature does not seem to work	Resolved	Fixed	67
	CONF-10058	Links in macro bodies not updated on rename page	Resolved	Fixed	51
	CONF-14374	RTE is showing extra line breaks and space characters on IE	Resolved	Fixed	31
	CONF-4435	When indents used in a table (eg list items) there appears to be no way to stop indenting further text	Resolved	Fixed	23
	CONF-17582	Missing attachments causes Confluence page move to other space to fail	Resolved	Fixed	21
	CONF-8207	Extra \\ line breaks added by rich text editor near macros and images	Resolved	Fixed	19
	CONF-5895	Switching between editing modes doesn't preserve	Resolved	Fixed	18

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		backslash escapes			
	CONF-3844	Anchor links to the current page break when included in a different page	Resolved	Fixed	18
	CONF-11599	Link from comment or page to blog attachment doesn't work	Resolved	Fixed	17
	CONF-5950	Rich Text Editing destroys layout when using User Macros	Resolved	Fixed	14
	CONF-17385	Anchor Name must be unique following the HTML 4 standard	Resolved	Fixed	13
	CONF-16526	RTE incorrectly escapes code syntax within macros	Resolved	Fixed	13
	CONF-5258	Escaped backslash is lost in WYSIWYG -> wiki markup roundtrip	Resolved	Fixed	13
	CONF-20692	google-caja warnings cluttering atlassian-confluence.log file upon Confluence startup	Resolved	Fixed	12
	CONF-7595	WYSIWYG editor adds unnecessary double backslashes	Resolved	Fixed	11
	CONF-5228	Table editing bugs	Resolved	Fixed	11
	CONF-13434	Image size settings are corrupted on round tripping	Resolved	Fixed	10
	CONF-9929	Rich Text Editor handling of macros with body markup is	Resolved	Fixed	10

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		buggy and/or incomplete			
	CONF-8722	Shortcut links in content moved between spaces append the space key of the previous space to the shortcut link	Resolved	Fixed	10
	CONF-21371	Page move fails with deep page hierarchy	Resolved	Fixed	9
	CONF-20774	Pages with toc macro do not fully render after restoring Site or Space XML backup	Resolved	Fixed	9
	CONF-7262	Can't escape double-backslash (like '\\') in wiki markup editor	Resolved	Fixed	9
	CONF-22292	Image lightbox popup fails to render on some IE8 systems	Resolved	Fixed	7
	CONF-20444	Floating footer bar	Resolved	Fixed	6
	CONF-15990	Cannot edit panel macro in RTE using the macro browser	Resolved	Fixed	6
	CONF-12566	In wiki markup-mode completely erased content reappears in rich text-mode	Resolved	Fixed	6
	CONF-11830	WYSIWYG corrupts consecutive escaped characters	Resolved	Fixed	6
	CONF-17477	Linked image does not work on IE when align=left or align=right is used	Resolved	Fixed	5
	CONF-9029	Superscripts, eg for floating point	Resolved	Fixed	5

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		notation, are lost by round trip through wysiwyg editor			
	CONF-8677	Changes to panel macro's title does not take effect when editing using Rich Text mode	Resolved	Fixed	5
	CONF-22263	PDF export doesn't render the content of a code macro inside an include macro	Resolved	Fixed	4
	CONF-21780	Updated: Cannot produce special characters using AltGr due to RTE keyboard shortcuts	Resolved	Fixed	4
	CONF-21375	Pasting blocks of text in to the Rich Text editor	Resolved	Fixed	4
	CONF-18010	Adittional escape character added when bold and strikethrough surround a macro	Resolved	Fixed	4
	CONF-11962	Using {excerpt-include} in {excerpt} does not render wiki markup correctly	Resolved	Fixed	4
	CONF-11032	Switching between editor modes breaks the {include} macro wrapped in a link markup	Resolved	Fixed	4
	CONF-7767	When using a line break (\\) followed by a table, the table heading does not render properly due to additional characters	Resolved	Fixed	4
	CONF-6041	headings declared in list	Resolved	Fixed	4

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		items break the list			
	CONF-5426	Switching between editors changes markup with + characters	Resolved	Fixed	4
	CONF-4920	Color tags surrounding a link are not rendered correctly by WYSIWYG	Resolved	Fixed	4
	CONF-22372	include and excerpt-include macros do not render wiki markup if they are part of an excerpt	Resolved	Fixed	3
	CONF-21026	link to attachment with @ in filename is broken	Resolved	Fixed	3
	CONF-19917	Round-trips after entering image markup with width parameter (with quoted value) along with a page rename causes INVALID_CHARACTER_ERR error	Resolved	Fixed	3
	CONF-16434	RTE: Links containing a hyphen save with an alias, even if not necessary breaking renames	Resolved	Fixed	3
	CONF-15708	Link text with blackslashes followed by some characters render incorrectly	Resolved	Fixed	3
	CONF-14278	Asterix and quote characters mangled with output when	Resolved	Fixed	3

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		using bold, quote and text color in RTE			
	CONF-13422	excerpt-include macro is not rendering wiki markup correctly	Resolved	Fixed	3
	CONF-11547	Links with strikethru are duplicated by the rich text editor in IE and Safari	Resolved	Fixed	3
	CONF-10846	list inside table is rendered outside when table immeditely follows list item	Resolved	Fixed	3
	CONF-10451	Merge of concurrent page edits seems broken	Resolved	Fixed	3
	CONF-7907	Multiple underscores entered into Rich Text Editor should be individually escaped	Resolved	Fixed	3
	CONF-7219	Square [] brackets in image filename should be automatically escaped by !this syntax!	Resolved	Fixed	3
	CONF-5655	Adding macros with attributes using separators (|) in rich text (WYSIWYG) breaks	Resolved	Fixed	3
	CONF-5569	First image inserted with Rich Text Editor actually inserts wiki tag as text	Resolved	Fixed	3
	CONF-22185	Insert image in rich text editor doesn't follow up formatting	Resolved	Fixed	2
	CONF-21410	Copy and paste of emoticons shows broken	Resolved	Fixed	2

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		image icon in IE7 and IE8			
	CONF-21056	Confluence Wysiwyg icons are truncated when browser is resized manually	Resolved	Fixed	2
	CONF-21020	Round-tripping between RTE and Wiki Markup causes WiKi Markup that contains bullets and BlockQuote macro to mangle	Resolved	Fixed	2
	CONF-21005	Improper size of image in Rich Text Editor mode during editing as to compare with in Wiki Markup or Preview mode	Resolved	Fixed	2
	CONF-20381	Round-tripping between RTE and Wiki Markup causes sub-item bullet to mangle if the preceding bullet has emoticon at the end of the line	Resolved	Fixed	2
	CONF-20197	Make Wiki Markup editor's Full notation guide keyboard navigable	Resolved	Fixed	2
	CONF-20128	Switching between Editor and Wiki Markup containing at least two links will cause second link to add new line space	Resolved	Fixed	2
	CONF-19711	"Edit in Word" resizes former thumbnail to normal size	Resolved	Fixed	2
	CONF-14506	The combo of a bulleted list (and numbered list) w/ a heading inside a table creates	Resolved	Fixed	2

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		the error condition whenever you edit, switch between rich text/wiki markup.			
	CONF-10622	Text is not spaced when image/thumbnail is aligned to the left	Resolved	Fixed	2
	CONF-7244	Hyphen is not escaped when switching between RT and Wiki, causes strikethrough	Resolved	Fixed	2
	CONF-6405	Unexpected behaviour with multiple escape characters in editors	Resolved	Fixed	2
	CONF-25068	Link to attachments with special characters (i.e "@") does not work	Resolved	Fixed	1
	CONF-24795	Failure to save when editing long pages	Resolved	Fixed	1
	CONF-23850	Thumbnail does not expand when using Windows 7 x64bit	Resolved	Fixed	1
	CONF-23323	Make cursor handling around placeholders in webkit and firefox more robust	Resolved	Fixed	1
	CONF-23173	Error rendering JIRA issues macro on release notes page: "Unable to determine if sort should be enabled"	Resolved	Fixed	1
	CONF-22386	Problem Creating Link to	Resolved	Fixed	1

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		a Page when the Page Title contains "-"			
	CONF-22084	Unresponsive script error when editing a page with XML code	Resolved	Fixed	1
	CONF-21898	Corrupt Anchor Link After Copying a Page if RTE is Marked as Default	Resolved	Fixed	1
	CONF-21042	Image file attached to Confluence page is not displayed, if its filename contains some specific characters	Resolved	Fixed	1
	CONF-21030	Changing the colour of a link in the Rich Text Editor can break the link	Resolved	Fixed	1
	CONF-20817	Autocomplete for links doesn't work with apostrophes	Resolved	Fixed	1
	CONF-20382	Round-tripping between RTE and Wiki Markup will break bullets formating inside some macros such as {panel}, {quote}, {note}, etc if heading is preceeding the macros	Resolved	Fixed	1
	CONF-20331	"\r\n" added when switching from wiki-markup to rich-text mode	Resolved	Fixed	1
	CONF-20177	Bold markup gets reliably corrupted to/from WYSIWYG editor with certain sequences of escaped literal *	Resolved	Fixed	1
	CONF-19158	Frequent logins	Resolved	Fixed	1

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		by one user across a cluster lead to errors			
	CONF-19134	Page title with exclamation mark cannot be linked in Rich Text Editor	Resolved	Fixed	1
	CONF-18928	Autocomplete doesn't create links for special character pages correctly	Resolved	Fixed	1
	CONF-18694	Autocomplete: A link inserted onto coloured text will not display the colour	Resolved	Fixed	1
	CONF-18200	editor appends new line after heading	Resolved	Fixed	1
	CONF-17972	PageManager getById can return a Page.class for a blogpost or other non-page	Resolved	Fixed	1
	CONF-17923	Unable to add content beneath a table when in RTE mode	Resolved	Fixed	1
	CONF-16693	When editing a page, embeded images do not display according to the align parameter	Resolved	Fixed	1
	CONF-16566	Rich Text Editor allows table resizing but changes are not saved	Resolved	Fixed	1
	CONF-16493	Increasing backslashes in table cells	Resolved	Fixed	1
	CONF-16035	Image macro: Markup is corrupted by round-tripping when there are square brackets in the filename	Resolved	Fixed	1

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	CONF-15460	Rich Text editor removes bold and italics from nolink macro	Resolved	Fixed	1
	CONF-14665	Strikethrough around monospace can produce very odd results	Resolved	Fixed	1
	CONF-14036	Problem with strikethrough of an eMail address in Rich Text editor	Resolved	Fixed	1
	CONF-13464	Links containing images with center alignment break when converted from the rich text editor	Resolved	Fixed	1
	CONF-12542	Links containing macros with empty body are broken when edited in Rich Text Editor (RTE)	Resolved	Fixed	1
	CONF-9329	Duplicate content when "Save" button is being clicked twice during page editing	Resolved	Fixed	1
	CONF-8901	WYSIWYG editor turns into </BR> inside HTML macro	Resolved	Fixed	1
	CONF-7811	Border around image does not appear when generating a PDF	Resolved	Fixed	1
	CONF-5771	Confluence loses wiki source formatting since the WYSIWYG-Editor was introduced.	Resolved	Fixed	1
	CONF-5269	WYSIWYG breaks	Resolved	Fixed	1

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		excerpt-include macro when used as link tip			
	CONF-25886	Login fails if total number of failed login attempts is too large	Resolved	Fixed	0
	CONF-25414	Search Macro Causes TOC Malfunction	Resolved	Fixed	0
	CONF-24055	Renaming Page doesn't update Link in Table	Resolved	Fixed	0
	CONF-24044	Sublinks inside a macro break when a page is moved to another space	Resolved	Fixed	0
	CONF-23836	Round-tripping between RTE and Wiki Markup causes	Resolved	Fixed	0
	CONF-23717	Exporting a space to pdf/word/html leaves the links in the export document pointing back to the wiki rather than referencing itself.	Resolved	Fixed	0
	CONF-23090	Wysiwyg editor messup links in content	Resolved	Fixed	0
	CONF-23066	Internal page links (with custom link aliases) on a page moved to a new space, get the space key of the originating space prefixed to their actual alias text.	Resolved	Fixed	0
	CONF-23045	Use of hash characters within Code Block Macro creates hyperlinks: using a slash to escape works	Resolved	Fixed	0

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		but slash remains visible			
	CONF-22950	Upgrade Tasks fail when thumbnails have special characters	Resolved	Fixed	0
	CONF-22938	Can't insert a link with an associate image	Resolved	Fixed	0
	CONF-22871	Include mp4 in the mulitmedia macro description in the dialog	Resolved	Fixed	0
	CONF-22866	Plugin manager is initialised inconsistently during setup process	Resolved	Fixed	0
	CONF-22793	Fix german translation for "custom"	Resolved	Fixed	0
	CONF-22737	Lost position on copy/paste in newcode plugin	Resolved	Fixed	0
	CONF-22698	Missing group and world execute permissions in bin/ scripts in tarball	Resolved	Fixed	0
	CONF-22485	Markup of "*" is being corrupted when Edited in Rich Text	Resolved	Fixed	0
	CONF-22424	Plugin fails to start with "NoSuchBeanDefinitionException: no unique bean of type" error due to duplicate interfaces in host component exports	Resolved	Fixed	0
	CONF-22346	Typos in the default language resource	Resolved	Fixed	0
	CONF-22261	"What's new in Confluence 3.5" banner fails	Resolved	Fixed	0

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	CONF-22180	Thumbnail zooms behind embedded powerpoint	Resolved	Fixed	0
	CONF-22151	Missing german translation on labels page	Resolved	Fixed	0
	CONF-22125	java.util.logging (jul) is blocking ehcache gets	Resolved	Fixed	0
	CONF-22029	The What's New popup doesn't appear by default	Resolved	Fixed	0
	CONF-22024	Changing color of links in Rich Text breaks table layouts	Resolved	Fixed	0
	CONF-21983	Escaping of strikethrough and italics lost when editing previously escaped text in Rich Text editor	Resolved	Fixed	0
	CONF-21969	Move page notifications have incorrect user in the from address	Resolved	Fixed	0
	CONF-21877	Strange question mark parsing anomaly	Resolved	Fixed	0
	CONF-21799	Strikethrough text does not save in Rich Text editor in Chrome and Safari	Resolved	Fixed	0
	CONF-21684	Switching from WIki Markup to Rich Text Editor causes the first line of text in the page to be replicated many times	Resolved	Fixed	0
	CONF-21581	Labelled spaces aren't shown in the list of content when browsing by label	Resolved	Fixed	0

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	CONF-21576	Selecting some text effects consecutively from the drop-down is broken	Resolved	Fixed	0
	CONF-21483	The structure of list in editor is broken when using with shortcut links.	Resolved	Fixed	0
	CONF-21479	Hitting Enter in the Macro Browser cancels instead of inserting	Resolved	Fixed	0
	CONF-21445	Mispelling at "Insert 'Table of Contents' Macro"	Resolved	Fixed	0
	CONF-21307	Escaping of rich edit component is not consistent with wiki escaping.	Resolved	Fixed	0
	CONF-21123	Network notifications for move page use the last editor, not the mover	Resolved	Fixed	0
	CONF-21031	Move Page dialog: Text is cut off when language is set to german	Resolved	Fixed	0
	CONF-21011	Seeing null wiki markup link when linking to an old version of a page	Resolved	Fixed	0
	CONF-20915	Copying and pasting links that use the color macro doesn't work	Resolved	Fixed	0
	CONF-20908	Rich Text Editor Inserts Extra Lines using FireFox	Resolved	Fixed	0
	CONF-20893	Copy/Paste problem of {code} in Rich Text Editor	Resolved	Fixed	0

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	CONF-20849	Underline button can get out of synch in Safari	Resolved	Fixed	0
	CONF-20596	Rich Text mode inconsistently escapes emoticons	Resolved	Fixed	0
	CONF-20344	Rich text editor strips characters from code blocks.	Resolved	Fixed	0
	CONF-20198	Space character behind a macro can be swallowed when switching editors in Internet Explorer	Resolved	Fixed	0
	CONF-20151	Formatting in the RTE should be rendered at the back end	Resolved	Fixed	0
	CONF-19990	Problems when creating link in wiki markup with a trailing space	Resolved	Fixed	0
	CONF-19915	Round-trips causing Form Field Markup to be rendered incorrectly	Resolved	Fixed	0
	CONF-19712	Unable to copy a double indented bullet point in RTE	Resolved	Fixed	0
	CONF-19697	Linefeed is not rendered properly when using Doc Import or Edit in Word	Resolved	Fixed	0
	CONF-19584	RTE instead of completely removing all formatting associated with heading only removes line feed leaves tags for color & bold	Resolved	Fixed	0
	CONF-19354	Image dialog double-escapes	Closed	Fixed	0

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		html characters in invalid file names			
	CONF-19267	Copy from Gmail and Paste to Confluence RTE with > 1 paragraph chops off paragraphs	Resolved	Fixed	0
	CONF-19111	Macro Browser parses parameters differently in Rich Text compared to Wiki Markup	Resolved	Fixed	0
	CONF-19091	German translation of Link Location causes a UI problem in the Link Browser	Resolved	Fixed	0
	CONF-18945	There is no way for new users to know about having to enable the context menu.	Resolved	Fixed	0
	CONF-18943	Can't add a link to a page that doesn't exist (even by typing the page name into the Add Link dialog).	Resolved	Fixed	0
	CONF-18919	Autocomplete in Full Screen not working for IE browsers	Resolved	Fixed	0
	CONF-18441	Search Results Image Previews: Preview is not shown when there is a double quote in the filename	Resolved	Fixed	0
	CONF-17792	RTE discards leading spaces when copying and pasting	Resolved	Fixed	0
	CONF-17447	Incorrect path displaying	Resolved	Fixed	0
	CONF-17428	Switching	Resolved	Fixed	0

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		between rich text editor to wiki markup removes bulleted list			
	CONF-17125	Custom Character String of #_# causes character loss of _ (bad escaping)	Resolved	Fixed	0
	CONF-17021	RTE changes automatically [|mailto:somebody@somewhere.com|phone:+1234] into [mailto:somebody@somewhere.com] after saving page.	Resolved	Fixed	0
	CONF-16397	Page/space watches notification contains full contents despite option is unchecked	Resolved	Fixed	0
	CONF-16352	Cursor should remain in place when applying formatting in the RTE	Resolved	Fixed	0
	CONF-16300	Text that looks like a hyperlink in a color tag in a link alias is broken by the Rich Text Editor	Resolved	Fixed	0
	CONF-16052	Edit and copy an emoticon in a table results in table row being split into two rows	Resolved	Fixed	0
	CONF-15878	RTE inserts unwanted new lines into metadata tables	Resolved	Fixed	0
	CONF-15874	RTE - Paste into a code block lose the line orientation	Resolved	Fixed	0
	CONF-15855	Wiki Markup around inline	Resolved	Fixed	0

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		macros is not rendered in wysiwyg mode and therefore lost			
	CONF-15853	Links containing inline macros round-trip badly using RTE	Resolved	Fixed	0
	CONF-15847	Editing an image in the RTE with IE causes a default height and width to be added	Resolved	Fixed	0
	CONF-15715	Links are broken by roundtripping if the user does not have permission to view the linked space	Resolved	Fixed	0
	CONF-15698	New lines in heading tags inside tables are lost when round tripping	Resolved	Fixed	0
	CONF-15572	Emoticons cannot be used as link alias in the RTE	Resolved	Fixed	0
	CONF-15225	Formatting lost after typing in RTE around macro start/end tags	Resolved	Fixed	0
	CONF-14842	Switching editor causes curly bracket being deleted in {*}	Resolved	Fixed	0
	CONF-14788	Bulleted lists in the WYSIWYG Editor can no longer have blank lines between items	Resolved	Fixed	0
	CONF-14750	in IE, a table following immediately after a heading, is lost when switching to wiki-markup mode	Resolved	Fixed	0

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	CONF-14241	html macro loses following space on IE after roundtripping	Resolved	Fixed	0
	CONF-14232	Pasted entities get converted to text that can bypass escaping	Resolved	Fixed	0
	CONF-14204	Roundtrip through wysiwyg breaks whitespace within noformat macro within color macro in IE	Resolved	Fixed	0
	CONF-14169	Monospace bullets lose newline when edited with Rich Text Editor	Resolved	Fixed	0
	CONF-13830	links that contain ^ (ie attachment filenames) are interpreted as wiki markup and are rendered as superscript rather than links	Resolved	Fixed	0
	CONF-13827	RTE adds unrequested alias to attachment links that contain apostrophes, breaking the links	Resolved	Fixed	0
	CONF-13511	When resizing images with scaled width and height parameters in the RTE, they do not correctly get updated	Resolved	Fixed	0
	CONF-13432	Rich Text editor breaks badly on "file:" text in page	Resolved	Fixed	0
	CONF-13377	Pressing enter several times when editing a table in the RTE results in a new row after saving	Resolved	Fixed	0

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	CONF-13239	Formatting text in lists is inconsistent with formatting paragraph text	Resolved	Fixed	0
	CONF-12963	Aligned images in pages lose their alignment when exported as PDF	Closed	Fixed	0
	CONF-12935	Combination of markup can confuse Rich Text Editor resulting in more mangeled markup with each save	Resolved	Fixed	0
	CONF-12604	Content of panels with broken styles is deleted by editing in the Rich Text Editor	Resolved	Fixed	0
	CONF-12075	Writing the plus signal on WYSIWYG editor	Resolved	Fixed	0
	CONF-11558	Italic text cannot be applied in the text with backslash (For path usage)	Resolved	Fixed	0
	CONF-10544	Installation wizard: Setup Steps visual indicator is ahead of current step	Resolved	Fixed	0

Confluence 4.0 Upgrade Notes

Below are some important notes on upgrading to **Confluence 4.0**. For details of the new features and improvements in this release, please read the Confluence 4.0 Release Notes.

On this page:

- Upgrade Notes
  - Content updates after upgrade
  - User macros migration
  - Email notifications
  - Plugins may not be compatible with Confluence 4.0
  - Functionality removed: converting a Global Space to a Personal Space
  - Functionality removed: editing a Confluence page in an Office application

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- Functionality removed: linking to comments using commentid
- Functionality removed: Mail Page plugin
- Functionality removed: Social Bookmarking plugin
- Drag-and-drop in Internet Explorer 9
- Various admin settings removed
- Confluence Clustered delayed

- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

Upgrade Notes

Content updates after upgrade

You will notice once you upgrade to Confluence 4.0, every page will have been edited during the migration process. This manifests itself in the appearance of changes to every page's content by various different users. When migrating pages, Confluence will show the same username that last contributed to your content as the author of the change. This is the upgrade task of migrating your wiki page storage format to XHTML from Wiki Markup. Do not be alarmed by this. This will only happen once for all current versions of content. This will not trigger email notifications, but will update your RSS feeds. Where possible, a change comment of "Upgraded to Confluence 4" will be added to pages and blog posts.

User macros migration

After upgrading, user macros will not be able to be inserted until they have defined macro parameters. See Guide to User Macro Templates. Defining macro parameters will mean that they can once again insert these user macros.

Email notifications

With the update of the email templates, the textual content of the notifications has also changed. These wording changes may invalidate any email filters set up to label or organise your email notifications.

Plugins may not be compatible with Confluence 4.0

To check your plugins are compatible with Confluence 4.0, see the Universal Plugin Manager (UPM) under **Confluence Admin > Plugins > Confluence Upgrade Check**. Here, you can select the new version of Confluence and see whether your existing plugins are compatible. If your custom plugins are not working following the upgrade to Confluence 4.0, see the Plugin Development Upgrade FAQ for 4.0 for guidance on how to solve this issue.

Functionality removed: converting a Global Space to a Personal Space

Confluence 4.0 does not offer the ability to convert a global space to a personal space. Our research has shown that this feature is not used much. We have decided to remove it as part of our ongoing mission to simplify Confluence where possible. We deprecated this functionality in the Confluence 3.5 Upgrade Notes.

Functionality removed: editing a Confluence page in an Office application

After extensive usability testing, we are confident the new Confluence 4.0 editor will be easier to learn and more reliable to use than the previous editor. Therefore this feature is no longer required. Other functions of the Office Connector (e.g. "Edit Attachments in Office") remain.

Functionality removed: linking to comments using commentid

Confluence 4.0 does not allow linking to comments **by comment ID**. Users will now have to use the permalink URL to link to comments. This will primarily affect plugin developers.

Functionality removed: Mail Page plugin

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The Mail Page plugin is no longer bundled in Confluence. With the introduction of the "Share Page" feature, this is no longer needed.

Functionality removed: Social Bookmarking plugin

The Social Bookmarking plugin is no longer bundled with Confluence as of the 4.0 release. Our research has shown that this feature is not used much. If you are currently using this plugin, you will need to reinstall it from plugins.atlassian.com. Atlassian continues to fully support this plugin.

Drag-and-drop in Internet Explorer 9

Internet Explorer 9 does not support the drag-and-drop functionality of HTML5. This means that when using IE9, you will not be able to use the attachments drag-and-drop feature in Confluence 4.0.

Various admin settings removed

In Confluence 4.0, rarely used admin settings have been taken out. These are as follows:

- The **Set Site Support Address** setting,
- The **CamelCase Links** general configuration setting,
- The **Number of Ancestors to Show in Breadcrumbs** setting,
- The **SnipSnap Importer** settings.

Confluence Clustered delayed

Please be aware that **Confluence Clustered** is not available for version 4.0 yet. It will be forthcoming in a minor release, following the launch of version 4.0.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0. There are several reasons for this:
   - There were major changes to user management and LDAP in Confluence 3.5.
   - From version 3.5, you'll be able to use our new automated Installer / Upgrader to move to 4.0. The Confluence 4.0 Installer does not support upgrading from earlier versions of Confluence than 3.5.x.
   - We recommend that any issues arising from the upgrade to version 3.5.x be fixed separately to those that may arise from upgrading to version 4.0. Please contact Atlassian Support for assistance.
   - Please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.)

   If you are upgrading from 2.1 or earlier, please read the 2.2 Release Notes.
   If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade from version 2.7.x to version 3.5.x, before upgrading to the latest version. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

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Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.
- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.
- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

RELATED TOPICS

Confluence 4.0 Release Notes

Older Releases

These Confluence versions were released earlier than the current major release series.

- Confluence 3.x.x Releases
- Confluence 2.x.x Releases
- Confluence 1.x.x Releases

Confluence 3.x.x Releases

- Confluence 3.0.1 Release Notes
  - Coherence license changes SEPT 2009 - new Standard and Clustered Confluence Editions
  - Confluence 3.0.1 Upgrade Notes
- Confluence 3.0.2 Release Notes
  - Confluence 3.0.2 Upgrade Notes
- Confluence 3.0 Release Notes
  - Confluence 3.0 Known Issues
  - Confluence 3.0 Upgrade Notes
  - Confluence 3 Performance improvements
    - High Load Cluster
    - High Load Single Node
    - Medium Load Cluster
    - Medium Load Single Node
    - Peak Load Cluster
    - Peak Load Single Node
  - Issues Resolved in Confluence 3.0
- Confluence 3.1.1 Release Notes
  - Confluence 3.1.1 Upgrade Notes
- Confluence 3.1.2 Release Notes
  - Confluence 3.1.2 Upgrade Notes
- Confluence 3.1 Release Notes
  - Confluence 3.1 Known Issues
  - Confluence 3.1 Upgrade Notes
  - Issues Resolved in Confluence 3.1
- Confluence 3.2.1 Release Notes
  - Confluence 3.2.1 Upgrade Notes
- Confluence 3.2 Release Notes

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    - Confluence 3.2 Upgrade Notes
    - Issues Resolved in Confluence 3.2
- Confluence 3.3.1 Release Notes
    - Confluence 3.3.1 Upgrade Notes
- Confluence 3.3.3 Release Notes
    - Confluence 3.3.3 Upgrade Notes
- Confluence 3.3 Release Notes
    - Confluence 3.3 Upgrade Notes
    - Issues Resolved in Confluence 3.3
- Confluence 3.4.1 Release Notes
    - Confluence 3.4.1 Upgrade Notes
- Confluence 3.4.2 Release Notes
    - Confluence 3.4.2 Upgrade Notes
- Confluence 3.4.3 Release Notes
    - Confluence 3.4.3 Upgrade Notes
- Confluence 3.4.5 Release Notes
    - Confluence 3.4.5 Upgrade Notes
- Confluence 3.4.6 Release Notes
    - Confluence 3.4.6 Upgrade Notes
- Confluence 3.4.7 Release Notes
    - Confluence 3.4.7 Upgrade Notes
- Confluence 3.4.8 Release Notes
    - Confluence 3.4.8 Upgrade Notes
- Confluence 3.4.9 Release Notes
    - Confluence 3.4.9 Upgrade Notes
- Confluence 3.4 Release Notes
    - Confluence 3.4 Upgrade Notes
    - Issues Resolved in Confluence 3.4
- Confluence 3.5 Release Notes
    - Confluence 3.5 Upgrade Notes
    - Issues Resolved in Confluence 3.5
- Confluence 3.5.1 Release Notes
    - Confluence 3.5.1 Upgrade Notes
- Confluence 3.5.2 Release Notes
    - Confluence 3.5.2 Upgrade Notes
- Confluence 3.5.3 Release Notes
    - Confluence 3.5.3 Upgrade Notes
- Confluence 3.5.4 Release Notes
    - Confluence 3.5.4 Upgrade Notes
- Confluence 3.5.5 Release Notes
    - Confluence 3.5.5 Upgrade Notes
- Confluence 3.5.6 Release Notes
    - Confluence 3.5.6 Upgrade Notes
- Confluence 3.5.7 Release Notes
    - Confluence 3.5.7 Upgrade Notes
- Confluence 3.5.9 Release Notes
    - Confluence 3.5.9 Upgrade Notes
- Confluence 3.5.11 Release Notes
    - Confluence 3.5.11 Upgrade Notes
- Confluence 3.5.13 Release Notes
    - Confluence 3.5.13 Upgrade Notes
- Confluence 3.5.16 Release Notes
    - Confluence 3.5.16 Upgrade Notes
- Confluence 3.5.17 Release Notes
    - Confluence 3.5.17 Upgrade Notes

Confluence 3.0.1 Release Notes

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20 August 2009

Confluence 3.0.1 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessments and mitigation strategies.

> **Critical issue affecting non-clustered implementations of Confluence 3.0.1**
>
> Non-clustered (i.e. you do not have a clustered license) implementations of Confluence 3.0.1 are affected by an issue that can cause Confluence to crash. Please read the Confluence 3.0.1 Upgrade Notes for details on the issue and instructions on how to address it.

Attachment Handling Fixes

When a hierarchy of pages was moved from one space to another, the attachments on child or descendent pages of the parent page were not correctly moved. Instead, users would have to move one page at a time between spaces in order to maintain page attachment integrity. This issue has now been resolved.

Sporadic issues associated with attachment migration occurred when upgrading from either Confluence 2.9.x or 2.10.x, to 3.0. These have now been fixed.

Macro Fixes

A bug was identified in which excerpted content would not be rendered in a blog post macro until the source page containing that content had first been viewed. This phenomenon could occur when excerpt include macros were used in a blog post. It could also occur when excerpt macros were used in a blog post in conjunction with the `content=excerpts` blog post macro parameter. This problem has now been fixed.

An issue was found with the tasklist macro whereby special characters used in its title were not correctly escaped. This has now been resolved.

Rich Text Editor Fixes

An issue was found in which the Rich Text Editor's link removal feature (available from the right-click context menu) did not work with external links. This has now been resolved.

In the Firefox web browser, the spell checker is now automatically enabled by default in the Rich Text Editor. Users no longer have to first disable the right-click context menu and then enable and select 'Check Spelling' from the Firefox's own right-click context menu.

An issue was identified, which prevented the ability to escape from the quote text effect once it had been selected. This has now been addressed, such that a paragraph is automatically added after selecting this text effect.

Other Enhancements and Fixes

When a Confluence administrator first installs Confluence, runs through the Confluence Setup Wizard and then reaches the database configuration step, the database password is now hidden and is no longer shown in clear text.

It is now possible to filter network RSS feeds by different content types. This is achieved by implementing parameter modifications to the RSS feed link in your RSS newsreader. For more information, please refer to Subscribing to a Network RSS Feed.

Some customers experienced problems importing their site backup from a previous version of Confluence into version 3.0. This has now been resolved in Confluence 3.0.1.

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An issue was identified in which multiple blog posts posted on a single day would be listed out of chronological order. This has now been fixed and multiple blog posts posted on a single day are now ordered according to their time of creation.

A problem was identified when accessing Confluence content in Internet Explorer that caused file downloads to fail over an SSL connection. This problem has now been fixed in this release of Confluence.

An issue was found in the page tree views on instances of Confluence running on Weblogic 10.x. This has now been resolved.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 3.0 yet?

Take a look at the new features and other highlights in the Confluence 3.0 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.0.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (44 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-16141	Directory traversal in Profile Picture path - leads to privilege escalation in < 3.0		Resolved	Fixed
	CONF-16136	XSS vulnerability can be exploited on the WebDAV Configuration page		Resolved	Fixed
	CONF-16135	XSS vulnerability in space name when page move would create a duplicate		Resolved	Fixed
	CONF-16348	Attachment File Not Found - in children pages when a page is moved to another space		Resolved	Fixed
	CONF-16019	XSS vulnerability when moving page between spaces		Resolved	Fixed

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	CONF-16509	Upgrading from any version before 2.9 to 3.0 doesn't migrate attachments and/or breaks custom space logos		Resolved	Fixed
	CONF-16466	Attachment migration from 2.10 to 3.0 fails		Resolved	Fixed
	CONF-16420	Update PDF export plugin to be compatible with new cluster/cache architecture		Resolved	Fixed
	CONF-16311	Build a Standard Edition of Confluence 3.0 (without Coherence)		Resolved	Fixed
	CONF-16225	Some bundled themes don't support web resource injection		Resolved	Fixed
	CONF-16209	XSS in PDF screen		Resolved	Fixed
	CONF-16084	Cannot filter a network feed by contentType		Resolved	Fixed
	CONF-16016	The JIRA Issues Macro in the Macro Browser is missing two parameters - "renderMode" and "baseurl".		Resolved	Fixed
	CONF-16014	Blog Posts Macro only renders excerpts if target page has been rendered		Resolved	Fixed
	CONF-16005	The Favourite Pages Macro in the Macro Browser is missing its "Maximum		Resolved	Fixed

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		Number of Results" parameter.			
	CONF-15997	Invalid error message when Updating status and session expired		Resolved	Fixed
	CONF-15970	XSS in user links		Resolved	Fixed
	CONF-15940	Server Base URL not set when sending a support request email...		Resolved	Fixed
	CONF-15923	Unlink in RTE doesn't work for external links		Resolved	Fixed
	CONF-15908	Tasklist macros double escaping titles in IE		Resolved	Fixed
	CONF-15788	Unable to import site backup during set up of Confluence 3.0		Resolved	Fixed
	CONF-15751	Cursor jumps to beginning of the page from new paragraph after cancelling the Macro Browser on Firefox		Resolved	Fixed
	CONF-15722	The DynamicTaskList2 plugin provides an explicit description making it impossible to internationalised		Resolved	Fixed
	CONF-15701	Passwords are visible when configuring database		Resolved	Fixed
	CONF-15610	New look for user email preferences needs its layout fixed		Resolved	Fixed
	CONF-15001	Firefox 3 does not enable the spell checker on		Resolved	Fixed

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		the comment text area by default			
	CONF-14276	Unable to create renderer-component module in plugins2		Resolved	Fixed
	CONF-13702	Session must not be invalidated on logout		Resolved	Fixed
	CONF-13482	Can't get out of blockquote format in the rte		Resolved	Fixed
	CONF-12576	Duplicate friendly cache names which result in cache statistics not being visible		Resolved	Fixed
	CONF-10607	Blog posts appear in wrong order		Resolved	Fixed
	CONF-8098	User browser shows duplicate accounts when a user exists both locally and in LDAP		Resolved	Fixed
	CONF-16552	Renaming the ehcache config file fails on windows		Resolved	Fixed
	CONF-16218	Add a note into the admin screen explaining that you can use wiki markup and even an include macro to put an actual page onto the dashboard.		Resolved	Fixed
	CONF-16037	Misleading message when removing page permissions through info page		Resolved	Fixed
	CONF-16017	The JUnit Macro in the Macro Browser is missing one		Resolved	Fixed

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		parameter - "debug".			
	CONF-15995	User Profile page does not indicate why name and e-mail address is uneditable when LDAP integrated.		Resolved	Fixed
	CONF-15948	Parameters passed to jQuery extend method are in wrong order		Resolved	Fixed
	CONF-15920	User Hover is not working for a username which contains plus characters		Resolved	Fixed
	CONF-15152	Images with mimetypes that do not match extension cannot be used as thumnails		Resolved	Fixed
	CONF-14592	Macro Browser icons have tooltips showing in IE		Resolved	Fixed
	CONF-12292	Draft Page Titles not displaying		Resolved	Fixed
	CONF-16028	Typo in log4j.properties		Resolved	Fixed
	CONF-15696	Context menu toggle icon loses the tick when an anonymous user switches to full-screen view		Resolved	Fixed

Click here to open a report on http://jira.atlassian.com for Resolved or Closed issues in Confluence 3.0.1.

Coherence license changes SEPT 2009 - new Standard and Clustered Confluence Editions

Summary

Oracle Coherence (formerly known as Tangosol Coherence) is the technology that provides clustering and distributed caching in Confluence. It has also been used for caching purposes in non-clustered Confluence deployments.

The Oracle Coherence technology was first incorporated into Confluence version 2.3. Since then, Atlassian has been able to distribute the Coherence technology library files via the following means:

- Included with **all** versions and distributions of Confluence downloadable from our web site since version 2.3, regardless of whether these were intended for clustered or single-server installations.

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- From the Atlassian Maven repositories.

However, Atlassian is about to enter a new license agreement with Oracle over the Coherence technology. This means that from late September 2009, Atlassian will only be be permitted to distribute the Coherence library files to customers who have purchased a license for it (that is, a Confluence clustered license).

As a result, the following changes will occur:

- The next version of Confluence (3.0.1) will be released in two editions:
  - **Standard** — Editions of Confluence without the Coherence library files. Ehcache will replace the local caching functionality previously provided by the Coherence technology.
  - **Clustered** — Editions of Confluence containing the Coherence library files.
- Customers who have purchased a non-clustered Confluence license will only be able to download standard editions of Confluence from the Atlassian web site, whereas customers who have purchased a Confluence clustered license will be able to download clustered editions of Confluence.
- **From late September 2009:**
  - **Standard editions of Confluence will be made available for each previous major releases of Confluence back to version 2.6.** These will be available as Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3 and will be available to customers with non-clustered licenses.
  - **All other previous versions of Confluence currently available from our download page (from 2.6 to 3.0 inclusively), will be re-released as clustered editions and will only be available to customers with Confluence clustered licenses.**
  - The Coherence library files will no longer be available in any form from the Atlassian Maven repositories.
  - The installation files for all versions of Confluence prior to 2.6 (which are no longer supported) will be removed from the Atlassian web site and will no longer be available for download and installation.

> If you are currently running a **clustered installation of Confluence**, please do not upgrade it with a **standard edition** of Confluence.

What are the implications?

I am a Confluence customer with a non-clustered Confluence license, running Confluence 2.3 or later.

The Confluence distribution you are running will continue to function and if it is Confluence version 2.6 or later, be supported by Atlassian in accordance with our standard support policy.

However, if you upgrade to Confluence version 3.0.1 or later or obtain any Confluence version released after late September 2009, you will only be able to download and upgrade to standard editions of Confluence.

I run a customised installation of Confluence 2.3 or later and must build Confluence from source.

Confluence source code downloaded before late September 2009 requires that the Coherence library files are present in either your local or the Atlassian Maven repositories for automated Maven builds to complete successfully.

If you have Confluence source code downloaded before late September 2009 (excluding version 3.0.1) but conduct an automated Maven build of Confluence using this source code after this date, your build will fail if the Coherence library files are not available in your local Maven repository. This is because the Coherence library files will also not be available in the Atlassian Maven repository.

Hence, to build a customised installation of Confluence using this source code, we recommend that you locate the `tangosol-3.3.jar` and `coherence-3.3.jar` from the `WEB-INF/lib` directory of **your own** existing Confluence installation and install them into your local Maven repository using the following commands:

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```
mvn install:install-file -Dfile=tangosol-3.3.jar -DgroupId=tangosol-coherence \
-DartifactId=tangosol -Dversion=3.3 -Dpackaging=jar
mvn install:install-file -Dfile=tangosol-3.3.jar -DgroupId=tangosol-coherence \
-DartifactId=coherence -Dversion=3.3 -Dpackaging=jar
```

These commands will install the Coherence library files into your *local* Maven repository, which should be available to you only. Please do not upload these files to any public Maven repository nor make them publicly available by any other means. Atlassian's End User License Agreement does not grant permission to redistribute any part of Confluence, which includes these Coherence library files.

Alternatively, you can download the sources for one of the new standard or clustered editions of Confluence and reapply your customisations. These will compile without any additional problems.

I am a plugin developer and wish to compile plugins against old or existing versions of Confluence

This will affect plugin developers in two ways:

1. When building a plugin, Maven will complain about the absence of the Coherence library files in the Atlassian Maven repository.
2. When using the Atlassian Plugin Toolkit to test a plugin, Maven will be unable to download the appropriate Confluence EAR-WAR distribution file (from the Atlassian Maven repository), against which to perform integration tests.

Therefore, we recommend that as soon as possible, plugin developers start compiling their plugins based on the new standard editions of Confluence (without the Coherence library files). Standard editions of Confluence will be binary-compatible with clustered editions and existing clustered instances of Confluence. Hence, plugins developed against standard editions of Confluence will also run on any clustered editions and existing clustered instances of Confluence.

I am a plugin developer concerned about API changes and multiple Confluence editions resulting from these changes

As long as you are using only Confluence APIs to develop plugins, your plugins will be binary compatible with both standard and clustered editions of Confluence. The interfaces of the Confluence `CacheManager`, `Cache` a nd `ClusterManager` will be the same in both editions of Confluence, although there will be only one important change from previous versions of Confluence.

In existing versions of Confluence, the `ClusterManager` exposes the Coherence `InvocationService` to allow clients to execute code or perform queries across all nodes of the cluster. This API will be unavailable in all standard edition versions of Confluence from version 3.0.1 back to 2.6. If your plugin uses this service (and Atlassian is not aware of any that do) you should instead use Confluence's `RemoteEvent` API to send messages to other cluster nodes and direct them to perform the work.

Also, if for some reason your plugin references some other Coherence classes directly (or imports the Coherence-specific implementations of the `CacheManager`, `Cache` or `ClusterManager`), you will need to rewrite your plugin to use the generic interfaces only.

I am a plugin developer and want to test my plugin against Confluence in a cluster

For testing purposes, you must own a Confluence clustered license and have access to a clustered Confluence installation (either an existing one or one based on the new Confluence clustered edition).

Confluence 3.0.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.0.1**. Confluence 3.0.1 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence

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3.0.1 Release Notes.

On this page:

- Upgrade Notes
  - ClusterManager for Non-Clustered Licenses causes Critical Errors
  - Introduction of 'Standard' and 'Clustered' editions
  - Confluence Caching Layer Changes
- Upgrade Procedure
- Useful Plugins

Upgrade Notes

> ⚠ If you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read ALL information on this page before upgrading to Confluence 3.0.1 or to a 'standard edition' of Confluence. This page also contains important information for customers who are upgrading their installation of Confluence to version 2.6 or later from September 2009.

ClusterManager for Non-Clustered Licenses causes Critical Errors

The ClusterManager in the non-clustered (i.e. you do not have a clustered license) implementations of Confluence 3.0.1 and Confluence 3.0.2 does not perform any locking (e.g. for job synchronisation). As a result, your Confluence instance may crash due to certain jobs being executed concurrently when they shouldn't be.

We **strongly recommend** that you upgrade to Confluence 3.1 or later to avoid this issue, if possible. If you wish to install or upgrade to a non-clustered implementation of Confluence 3.0.1 or 3.0.2, you must apply the patch attached to CONF-17136 after upgrading.

Introduction of 'Standard' and 'Clustered' editions

> ℹ **Oracle Coherence Licensing Change:**
> - Due to a license agreement change between Atlassian and Oracle over the Coherence technology, from September 2009, Confluence will be made available in two editions:
> - **Standard Edition** — Confluence with Ehcache's caching technology (available to customers with non-clustered Confluence licenses).
> ⚠ **If you are currently running a clustered installation of Confluence, please do not upgrade it with a standard edition of Confluence.**
> - **Clustered Edition** — Confluence with Oracle's Coherence clustering and distributed caching technology (available to customers with Confluence clustered licenses only).
> - For more information, please refer to the Coherence License Changes document.
> - In standard editions of Confluence, Ehcache replaces the local caching functionality previously provided by the Coherence technology.

Confluence 3.0.1 is the first Confluence version to be released in two editions 'standard' and 'clustered'.

Also, from September 2009:

- Standard editions will be released for each previous major version of Confluence back to 2.6. These will be:
  - Available as Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3.
  - Available to customers with non-clustered Confluence licenses.
- The remaining previous versions of Confluence currently available from our download page (from 2.6 to

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3.0 inclusively), will be re-released as clustered editions and will only be available to customers with Confluence clustered licenses.

- The installation files for all versions of Confluence prior to 2.6 (which are no longer supported) will be removed from the Atlassian web site and will no longer be available for download and installation.

Confluence Caching Layer Changes

Due to the caching layer changes in the 'standard editions' of Confluence, you will need to reapply any cache customisations made to your cache sizes and/or cache configuration file, if *all three* of the following points are applicable:

- You have implemented cache customisations to your Confluence installation's cache sizes (either via the Administration Console or cache configuration file).
- You have an existing installation of Confluence 3.0 or earlier (excluding the 'standard edition' versions) and will be upgrading to Confluence 3.0.1 or later (or one of the earlier standard editions).
- Your Confluence installation is using a non-clustered Confluence license.

If you customised your Confluence instance's cache settings via the Administration Console, please refer to the Reapplying Cache Size Modifications via the Administration Console section below.

If you customised your Confluence instance's cache settings by modifying the cache configuration file, please refer to the Reapplying Cache Configuration File Modifications section below.

Reapplying Cache Size Modifications via the Administration Console

To reapply your cache size modifications via the administration console:

1. Before you upgrade, use the procedure described on the Cache Statistics page to open the 'Cache Statistics' section of the Administration Console in the 'Advanced' view.
2. Print out this view or save a copy of the web page for later reference. (This contains your existing individual cache settings.)
3. After upgrading Confluence, view the 'Cache Statistics' section of your upgraded Confluence installation in the 'Advanced' view.
4. Use the same procedure describe on the Cache Statistics page to re-adjust the size of each cache based on the previous settings that you had printed out (or saved).

Reapplying Cache Configuration File Modifications To maintain your existing cache configuration file settings, you will need to transfer any cache customisations you have implemented in the Coherence cache configuration file (`confluence-coherence-cache-config.xml`) to the relevant entries in the Ehcache cache configuration file (`ehcache.xml`).

Each cache has a `cache-mapping` element in the Coherence file (of which there is an equivalent `cache` eleme

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nt in the `ehcache.xml` file). Unfortunately, copying across your customisations is not quite a straightforward process because the Coherence file defines several 'caching schemes' to store the actual cache values, which in turn are referenced by the `cache-mapping` elements. In contrast, the `ehcache.xml` file does not support caching schemes and a cache's values are expressed explicitly in separate parameters of a `cache` element.

To convert your Coherence cache configuration file customisations across to the equivalent Ehcache file:

1. Open both the `confluence-coherence-cache-config.xml` and `ehcache.xml` files in a text editor. These files are located in the `<confluence-home>/config` directory.
   If you implemented your customisations in a version of Confluence prior to 3.0, you will most likely find the `confluence-coherence-cache-config.xml` file in the `<confluence-install>/confluence/WEB-INF/classes` directory.
2. In the customised `confluence-coherence-cache-config.xml` file:
   a. Identify the caching schemes that were customised in this file and make a note of the values of all its child elements.
      Typically, each caching scheme is located inside a `local-scheme` element and all of these are enclosed within the `cache-schemes` element, which appears towards the end of this file.
   b. Note each customised caching scheme by the content of its `scheme-name` element.
   c. For each `cache-mapping` element (which typically appears towards the top of this file), identify if it has a `scheme-name` element whose content matches one noted in the previous step and if so, make a note of its associated `cache-name` element.
3. In the `ehcache.xml` file:
   a. Identify each `cache` element whose 'name' parameter matches the `cache-name` elements noted in step '2c'.
   b. Using the mappings table below, apply the values noted in step '2a' to the appropriate parameters of the `cache` elements identified in the previous step ('3a').

Mappings table showing how elements of the Coherence cache configuration file map to parameters of the equivalent Ehcache file.

Coherence Element	Ehcache Attribute
`high-units`	`maxElementsInMemory`
`expiry-delay` > 0s	`timeToIdleSeconds` - Use this attribute for expiry delays greater than 0s along with the `eternal` attribute set to 'false'
`expiry-delay` = 0s	`eternal` - For expiry delays of 0s, set this attribute to 'true'.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 3.0.1, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 3.0.1 release notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

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3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.0.2 Release Notes

6 October 2009

Confluence 3.0.2 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessments and mitigation strategies.

> **Critical issue affecting non-clustered implementations of Confluence 3.0.2**
>
> Non-clustered (i.e. you do not have a clustered license) implementations of Confluence 3.0.2 are affected by an issue that can cause Confluence to crash. Please read the Confluence 3.0.2 Upgrade Notes for details on the issue and instructions on how to address it.

Editing and Visual Improvements

A bug in the Rich Text Editor lead to the generation of line break and other character formatting problems after saving a page. This bug has been fixed.

The sizes of some headings were considered too similar to be visually distinguishable on a page, especially when the headings were separated by intervening text content. This was particularly the case for heading sizes 2 and 3. Hence, the sizes of headings were modified to make them visually more distinct.

The format of colours used in Confluence's user profile areas has been modified slightly to make headings more prominent and form labels clearer.

The blog posts macro was missing the 'Restrict to These Authors' (author) parameter from the macro browser. However, this parameter is now available in the macro browser.

Other Enhancements and Fixes

Some customers' users experienced long delays while logging into Confluence, especially when their user accounts belonged to groups containing a large number of other user accounts. This issue was fixed.

Customers were able to generate Confluence page PDF exports directly from external web sites by adding the ' Export to PDF' link (accessible via a Confluence page's 'Tools' menu) to their external web pages. Unfortunately, this function was broken by the introduction of the form token handling security enhancement feature introduced in Confluence 3.0. In Confluence 3.0.2, however, this issue was resolved.

Some customers experienced an issue in which automatic content indexing would stop. This problem has been resolved.

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When browsing Active Directory groups in Confluence, it was not possible to view group members if the LDAP Distinguished Names (DN) did not include the username. This bug was fixed.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 3.0 yet?

Take a look at the new features and other highlights in the Confluence 3.0 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.0.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (23 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-16651	XSS vulnerability can be exploited with the pagetree macro		Resolved	Fixed
	CONF-16644	XSS vulnerability can be exploited with the Userlister macro		Resolved	Fixed
	CONF-15440	XSS vulnerability can be exploited with the contentbylabel macro		Resolved	Fixed
	CONF-15108	Session Fixation attack using JSESSIONID in Confluence		Resolved	Fixed
	CONF-13754	HibernateGroupManager.hasExternalMembership() is slow for group with thousands of users		Resolved	Fixed
	CONF-8496	WEBDAV 1.1 plugin truncates all URL's by one character		Resolved	Fixed
	CONF-16459	PDF export link cannot be published to other sites...		Resolved	Fixed
	CONF-16428	Saving a page		Resolved	Fixed

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		can lead to round-trip errors that do not occur by just switching tabs.			
	CONF-15585	Use #333 for Headings in Confluence and #666 for labels		Resolved	Fixed
	CONF-14512	Newline lost between panel macro and table or list breaking markup		Resolved	Fixed
	CONF-13894	Recently-updated macros show all content under the same time and date when showProfilePic=true		Resolved	Fixed
	CONF-9954	h2 and h3 are too similar in Confluence 2.6		Resolved	Fixed
	CONF-9575	Content Indexing stops		Resolved	Fixed
	CONF-8148	Cluster safety job should be made more generic and report multiple deployments with same DB as well		Resolved	Fixed
	CONF-6085	Can't find group members of group when DN does not include username		Resolved	Fixed
	CONF-20653	Menu dropdowns appearing behind tabs in IE7		Resolved	Fixed
	CONF-17159	The new {code} macro puts line numbers in text when I copy/paste		Resolved	Duplicate
	CONF-16955	Support Entitlement Number is listed twice on the		Resolved	Fixed

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		System Information page			
	CONF-16774	Allow system plugins to be enabled		Resolved	Fixed
	CONF-16089	The blog posts macro is missing the 'author' parameter from the macro browser.		Resolved	Fixed
	CONF-13635	Show permgen, xmx and xms memory settings in the System Info		Resolved	Fixed
	CONF-16745	Change german translation on configuration page: Am --> Ein		Resolved	Fixed
	CONF-16683	superfluous </table> in /includes/common-listdecorators.vm		Resolved	Fixed

Click here to open a report on http://jira.atlassian.com for Resolved or Closed issues in Confluence 3.0.2.

Confluence 3.0.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.0.2**. Confluence 3.0.2 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence 3.0.2 Release Notes.

On this page:

- Upgrade Notes
  - ClusterManager for Non-Clustered Licenses causes Critical Errors
  - New License Key Requirements for Confluence 3.1
  - Upgrading an Existing Confluence License for Confluence 3.1 Compatibility
- Upgrade Procedure
- Useful Plugins

Upgrade Notes

ClusterManager for Non-Clustered Licenses causes Critical Errors

The ClusterManager in the non-clustered (i.e. you do not have a clustered license) implementations of Confluence 3.0.1 and Confluence 3.0.2 does not perform any locking (e.g. for job synchronisation). As a result, your Confluence instance may crash due to certain jobs being executed concurrently when they shouldn't be.

We **strongly recommend** that you upgrade to Confluence 3.1 or later to avoid this issue, if possible. If you wish to install or upgrade to a non-clustered implementation of Confluence 3.0.1 or 3.0.2, you must apply the patch attached to CONF-17136 after upgrading.

New License Key Requirements for Confluence 3.1

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The next major release of Confluence (version 3.1) will require Confluence administrators to upgrade (or have upgraded) their Confluence license to Atlassian's new license key format. We are undertaking this change to enhance and improve the support we provide our customers. Bear in mind that this license upgrade will not incur any additional costs and does not change Confluence's functionality in any way.

Confluence 3.0.2 will still operate as usual under your existing Confluence license. However, any customers running Confluence 3.0.0 or later will be able to upgrade their Confluence license to the new license key format before Confluence 3.1 is released. Customers whose licenses expire before Confluence 3.1 is released *will be required* to upgrade their license to the new license key format.

As a consequence of these imminent licensing changes, relevant pages of the Administration Console area in Confluence 3.0.2 contain warnings about Atlassian's new license key requirement, which will be mandatory in Confluence 3.1. Links to upgrade old licenses to the new license key format are provided in these warnings.

Upgrading an Existing Confluence License for Confluence 3.1 Compatibility

If you have just upgraded to Confluence 3.1:

Please refer to the License Upgrade procedure for Confluence 3.1 in the Confluence 3.1 Upgrade Notes instead.

The following procedure can only be performed by Confluence Administrators, on Confluence versions 3.0.0 or later.

To upgrade your existing license to the new license key format, which will be required for continued use of Confluence 3.1:

1. Visit the license upgrade area in your account at my.atlassian.com.

   If you are using Confluence 3.0.2, you can also access this site by visiting the opening page of the Administration Console (by selecting '**Browse**' -> '**Confluence Admin**' menu item) or the License Details page of your Confluence installation and clicking on the '**Upgrade this license key now**' link.
   If you are already using an upgraded Confluence license, this link will not appear on these pages.

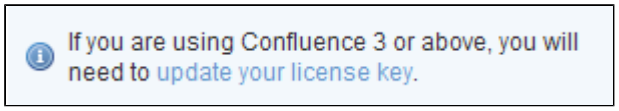
2. Enter your Atlassian account details (email address and password) to access and manage your Atlassian product licenses.

3. Select the appropriate Confluence license to expand its details.

4. In the 'info' note below your license on the right-hand side of the page, click the '**update your license key** ' link (as shown in screenshot 1 below). Once this is done, the note changes to that shown in screenshot 2 below.

   If the 'info' note looks like the one in screenshot 2, then your license key has been upgraded and you should not need to take any further action.

   Screenshot 1: License Key Update Function

   Screenshot 2: Updated License Key Note

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> This license key is compatible with Confluence 3 or above. If you are using an older version of Confluence, you can downgrade your license key.

5. Copy the new license from the text box above this message to your clipboard.
6. Visit the License Details page in your Confluence installation and paste the new license from your clipboard into the '**License**' field.
7. Click the 'Save' button. You will notice two changes:
    - If you are using Confluence version 3.0.2, the links to upgrade your license on the License Details and Administration Console opening pages will vanish.
    - A 'Support Entitlement Number' (SEN) will be assigned to your license on the License Details page.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 3.0.2, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
    - Please read the 3.0.2 release notes.
    - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.0 Release Notes

> Confluence 3.0 fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

1 June 2009

With great pleasure, Atlassian presents Confluence 3.0.

Confluence 3.0 is a major release which presents a number of new features and enhancements. With

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Confluence 3.0, we introduce the new **Macro Browser** feature, which provides a simple, point-and-click interface for discovering and inserting any of Confluence's 80+ bundled macros into a page. Macros greatly enhance the functionality of Confluence pages by allowing users to add tools like task lists, RSS feeds and multi-media content. The macro browser makes it easy to select the macro you need and preview its output with your chosen settings before finally adding it to your page. It also makes it easy to edit and modify the parameters of existing macros on a page.

Confluence 3.0 also provides a range of social features that allow you to discover and connect with other users in your Confluence site. **User Profiles** have been redesigned with a more intuitive layout and provide additional fields for users to share information about themselves like their IM handle or personal website. The new **Networ k** feature lets you follow other users inside your Confluence site and view an aggregated stream of all the activity such as page edits, blogs posts and status updates they undertake. The new **Hover Profile** feature displays a user's summary profile information whenever you hover your mouse pointer over their name anywhere in Confluence. Hover profiles provide easy access to the user's email address and profile details and allow you to add them to your network. Finally, you can let others know what you are working on, share a link or simply broadcast a short message to your team by setting your **User Status**. Once your current status message has been updated, it will appear in various activity streams, your profile views and your profile sidebar.

The new **PDF Export** feature addresses one of the most highly voted requests for Confluence. You have full control over your PDF exports using Cascading Style Sheet (CSS) modifications. You also have the ability to customise page and margin sizes, add a title page or table of contents list to your exported document, add customisable headers and footers and easily select a subsection of documentation for export.

The **Rich Text Editor** now includes a **right-click context menu** that makes it easier to insert links, images, macros and tables into your Confluence page. It is now also possible to copy/cut and paste rows within tables.

Confluence's **performance** has been substantially improved, with dramatic improvements in response times. Furthermore, **scalability** has been enhanced, with significantly improved CPU utilisation compared to previous Confluence versions.

Highlights of this Release:

- Introducing the Macro Browser
- Enhanced User Profiles
- Introducing Your Network
- New User Status
- New Hover Profile Feature
- Customisable Enhanced PDF Exports
- Improved Rich Text Editor
- Performance Improvements
- Engine Room and Developer Community
- Administration Improvements
- More than 240 Fixes and Improvements

Responding to your Feedback:

680+ votes satisfied

DOWNLOAD latest version

- Thank you for all your issues and votes. Keep logging, to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

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Upgrading from a previous version of Confluence
• Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*** • Please refer to the Confluence 3.0 Upgrade Notes for further essential information about **plugins** and other factors affecting your upgrade.

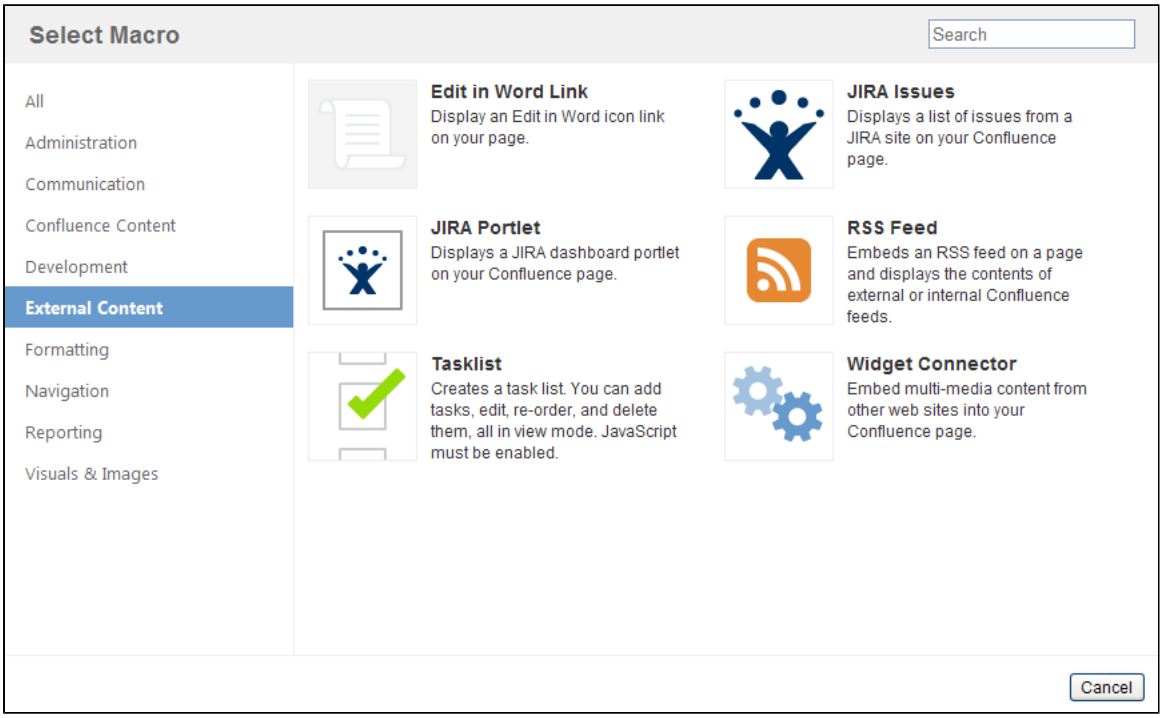
Highlights of Confluence 3.0

1

Introducing the Macro Browser

Now you can choose from Confluence's plugin-based macros and implement them with ease, from a single point.

- Using the macro browser's fast filtering capabilities, you can quickly find any bundled macro, including additional plugin-based macros installed on your Confluence system.
- Select your macro and modify and preview its parameters before adding it to your Confluence page or blog post.
- Take a look at our documentation for more details on the new macro browser feature.



2

Enhanced User Profiles

Confluence's enhanced user profiles area has been augmented to incorporate Confluence 3.0's new community-based features and to improve the overall user experience.

- User profiles now allow users to enter 'structured' information about themselves, which can be used by Confluence's community-based features.
- Each user's profile view shows a list of their own recent activities, such as page or blog post updates, changes to their profile information and status updates (described below).
- A summary of each user's profile information is displayed in a 'profile sidebar' on the right-hand side of

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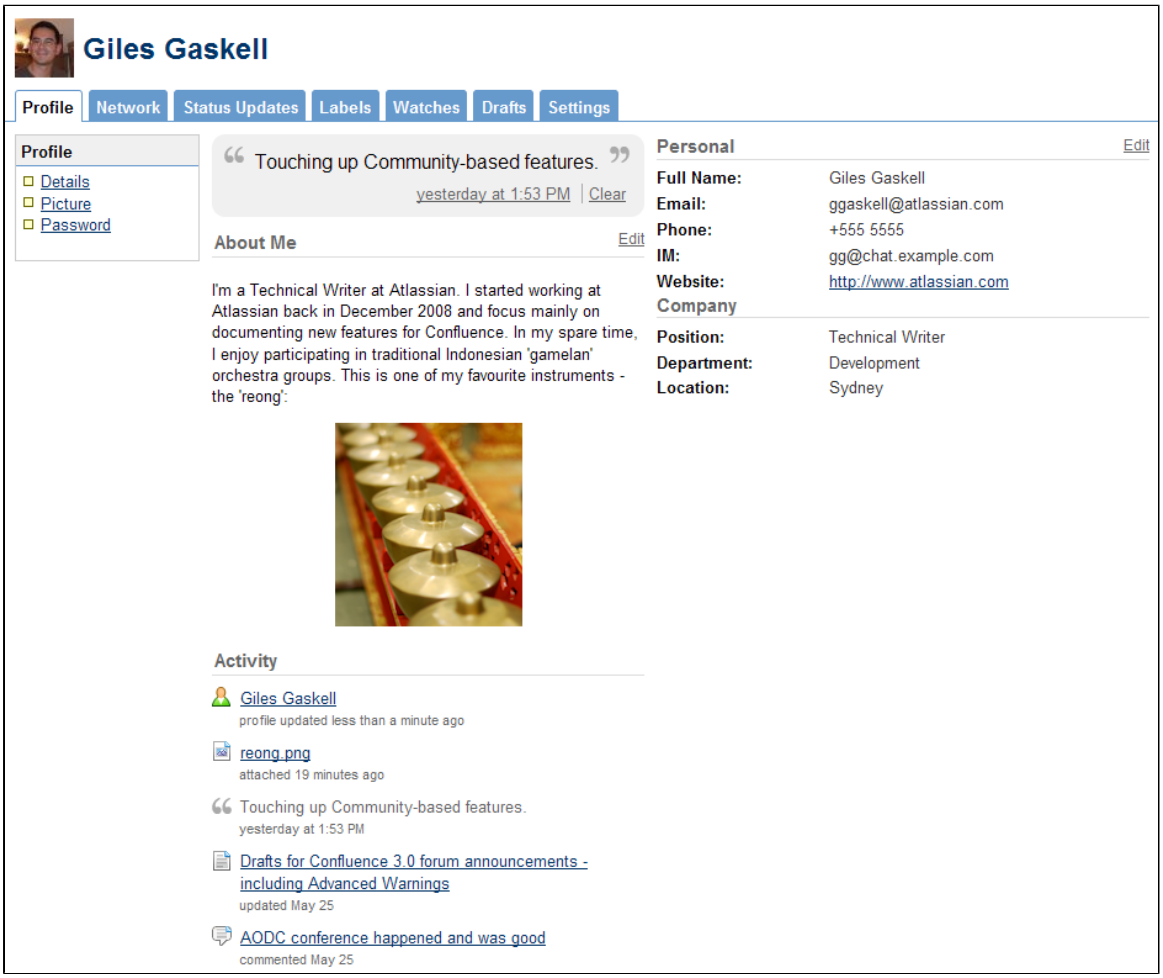
pages within their personal space and their blog posts too. The profile sidebar appears on pages based on the default Confluence theme.

- Take a look at our documentation for more details on the enhanced user profiles feature.

The new user profile view



The new profile sidebar which appears on your blog posts or pages within your personal space

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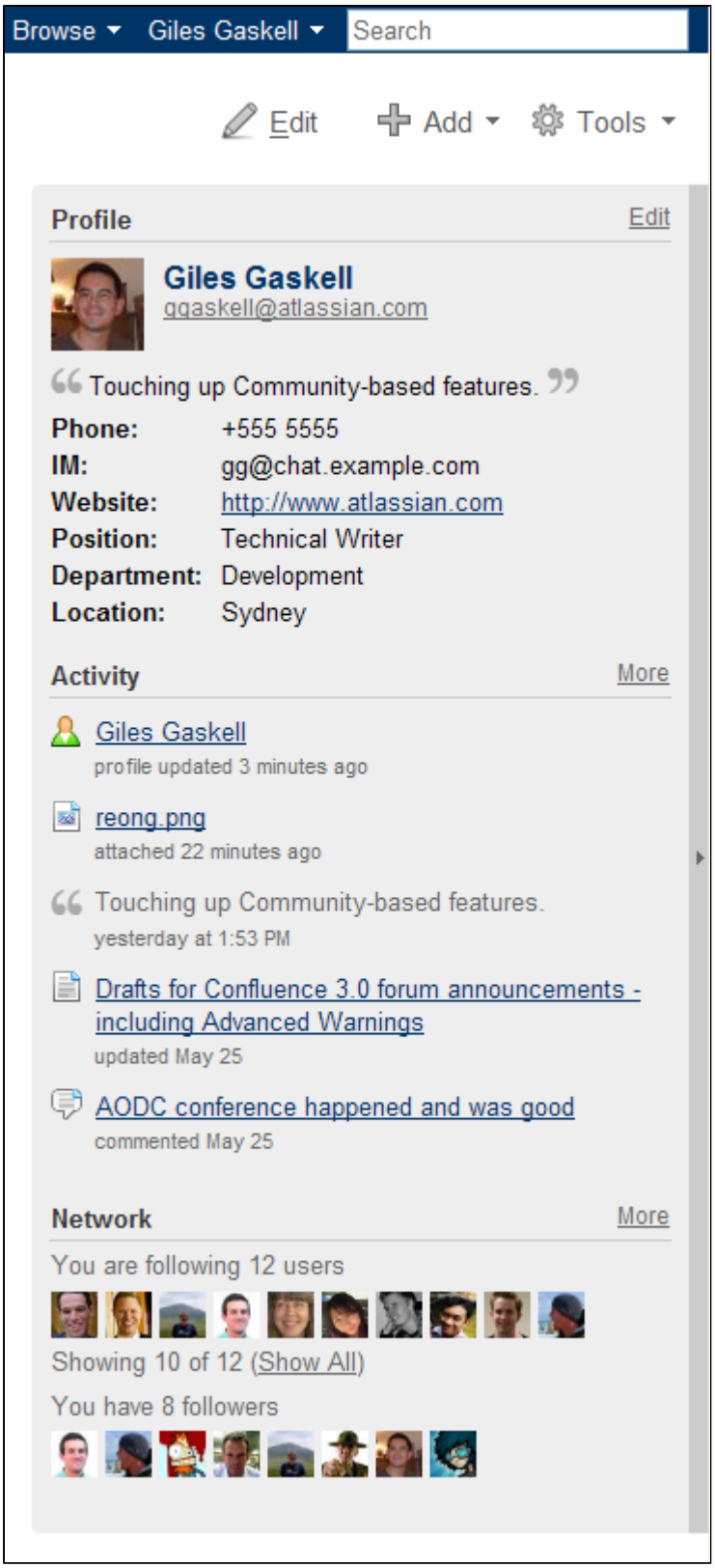

3

Introducing Your Network

The new network feature helps you keep track of what other users are doing throughout your Confluence site, by allowing you to 'follow' their recent activities.

- The activities tracked by the network feature include:
  - Additions or edits to pages or blog posts, including comments of users you are following.

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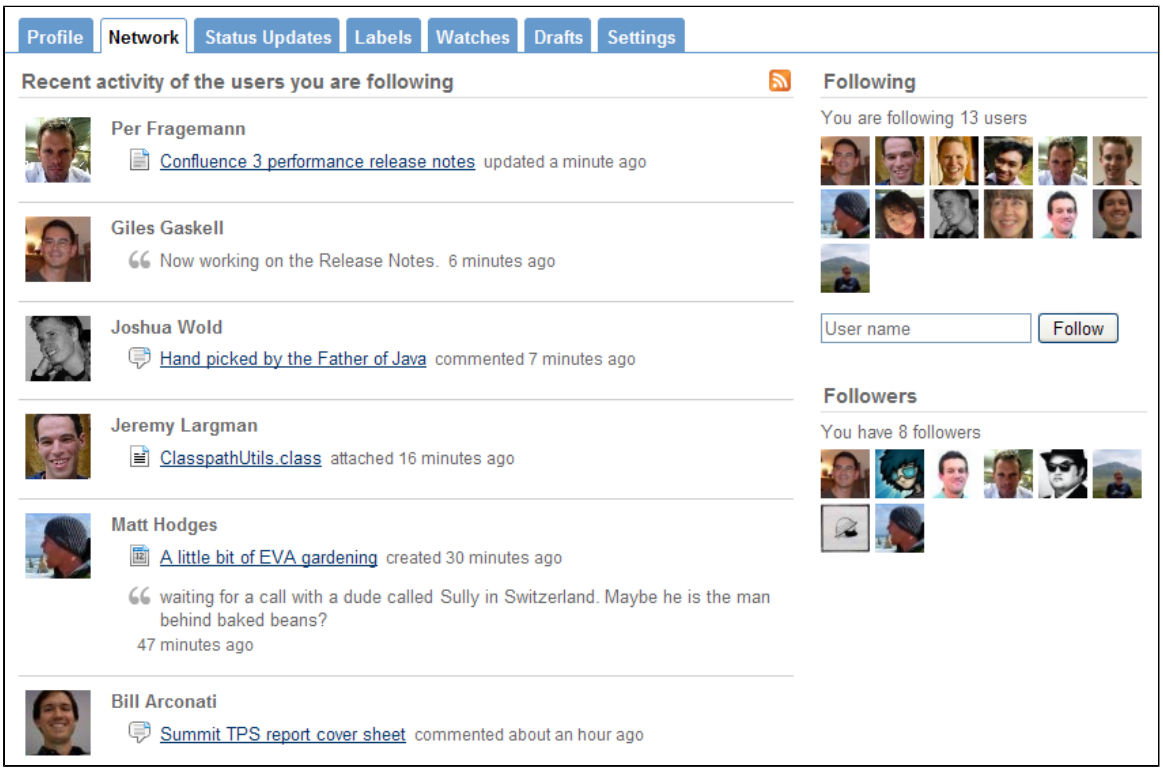
    - Updates to statuses or profile details of users you are following.
- From the network view, you can set up an RSS feed which provides notifications on the activities of users you are following.
- Take a look at our documentation for more details on the network feature.

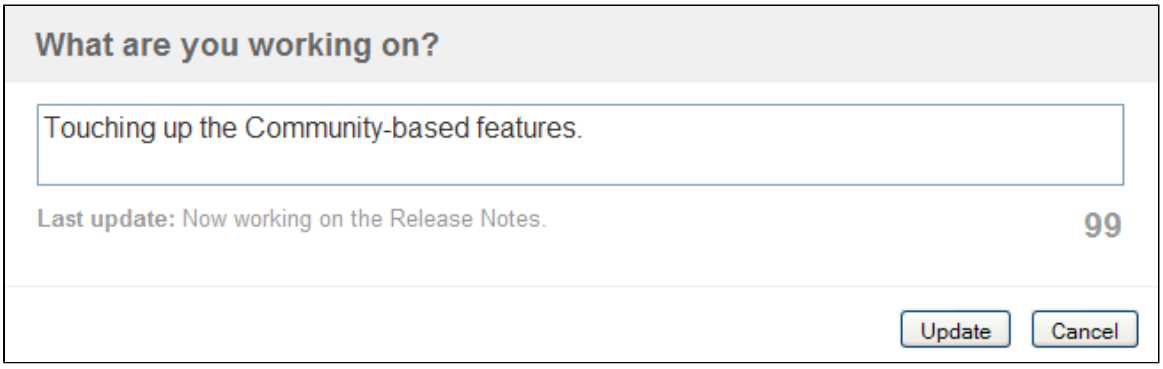


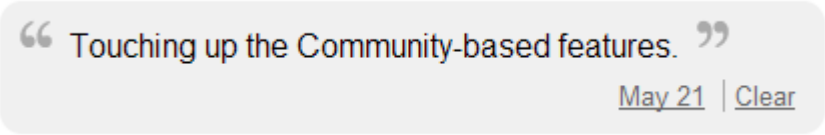
4

New User Status

User status allows you to broadcast a short message of up to 140 characters rapidly for others to see.

- Your messages could include anything from what you are currently working on to a message or a hyperlink you want to share immediately with other users.
- Other users can see your status messages on various activity streams throughout Confluence and on your profile views and personal space pages.
- Take a look at our documentation for more details on the new user status feature and your status updates page.





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5

New Hover Profile Feature

Hover profile is a convenient tool that provides quick access to key information about other Confluence users, their user profile features and their network functions. Whenever you hover your mouse pointer over a Confluence user's name, key details about them appears in a popup balloon, such as their name, profile picture, email address and their current status.

- From a user's hover profile popup balloon, you can access the following functions:
  - Follow the user to track their recent activities via your network (or stop following them).
  - Directly send the user an email message via your email client.
- You can also access the following features of their user profile via their hover profile popup:
  - The user's personal space.
  - The user's profile, network or status updates views.

6

Customisable Enhanced PDF Exports

The enhanced PDF export feature in Confluence 3.0 has been rebuilt from the ground up and provides full customisation of your PDF exports with CSS modifications, to suit your particular requirements.

- Key enhancements to PDF export customisations include the ability to:
  - Customise page and margin sizes.
  - Add a table of contents or add headers and footers with customisable content.
  - Add a title page to your document.
  - Select a subsection of a space (for example, a chapter or section) to export more easily.
- PDF exports are now up to four times faster on large spaces.
- This feature addresses some of the most highly voted Confluence issues. Important bugs in the old PDF export feature have been fixed in this new version, including:
  - Fixed width columns — Table columns were consistently presented with fixed widths using the old PDF export function. However, the new PDF export function presents table columns with variable widths, as they appear on screen.
  - Ability to handle landscape page exports.
- Take a look at our documentation for more details on the enhanced PDF export and PDF stylesheet featu res.

The old PDF export function only generated fixed-width table columns

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The Livesearch macro allows the following parameters:

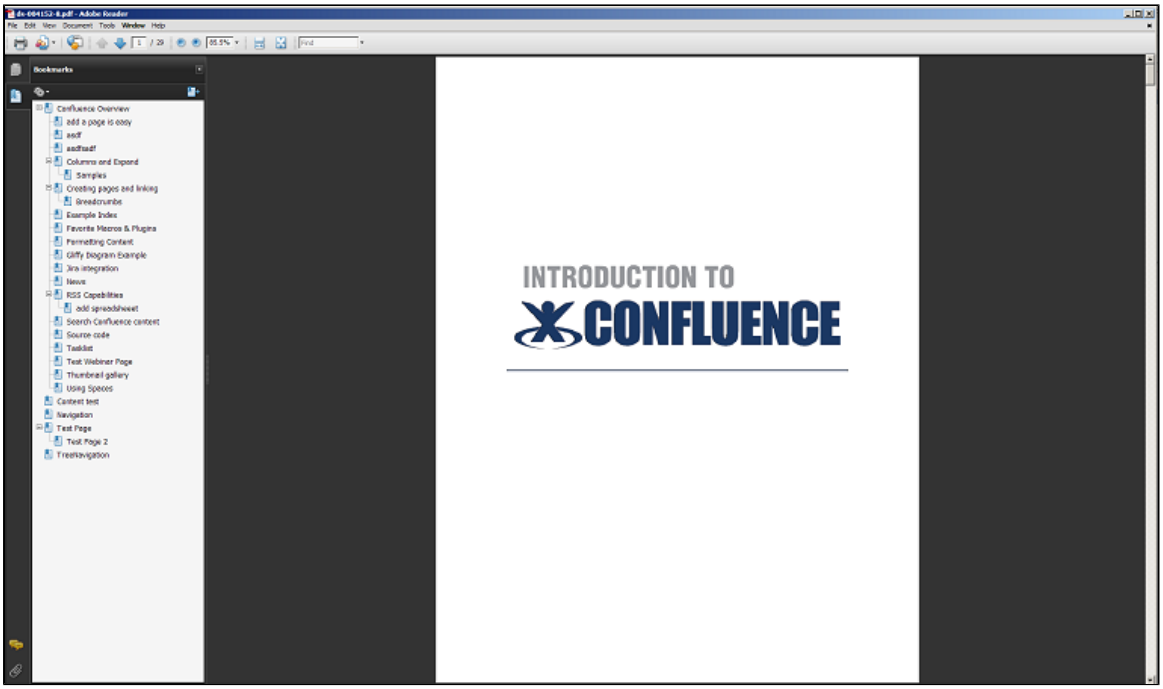
Parameter	Required	Default	Description
id	no	none	Uniquely identifies the Livesearch when there are multiple livesearch macros in one page.
spaceKey	no	all spaces	Specify a space key to limit the search to the given space.

The new PDF export feature now generates variable-width table columns

The Livesearch macro allows the following parameters:

Parameter	Required	Default	Description
id	no	none	Uniquely identifies the Livesearch when there are multiple livesearch macros in one page.
spaceKey	no	all spaces	Specify a space key to limit the search to the given space.

Easily add a title page when you export a space as a PDF



A table of contents is generated in the PDF by default when you export a space

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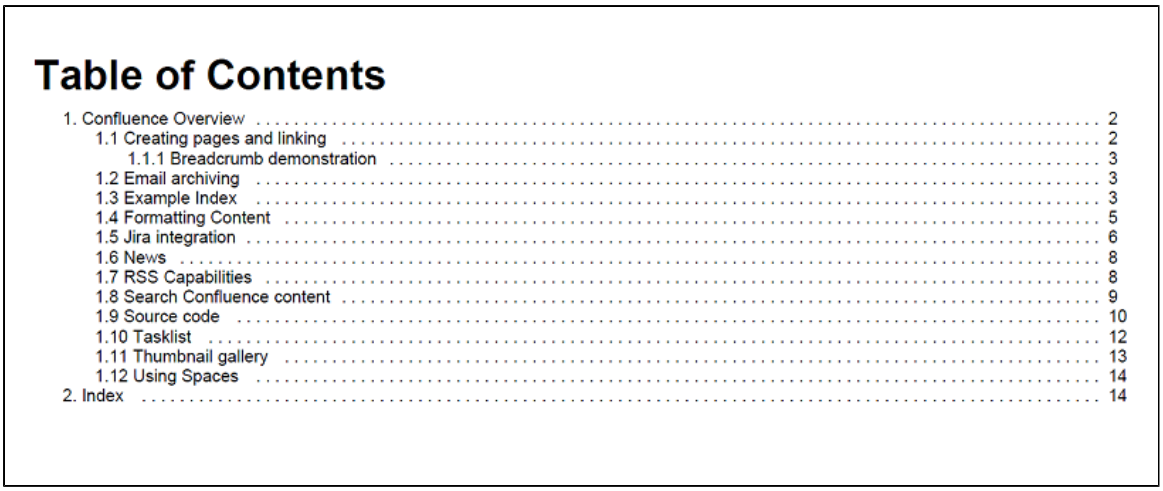
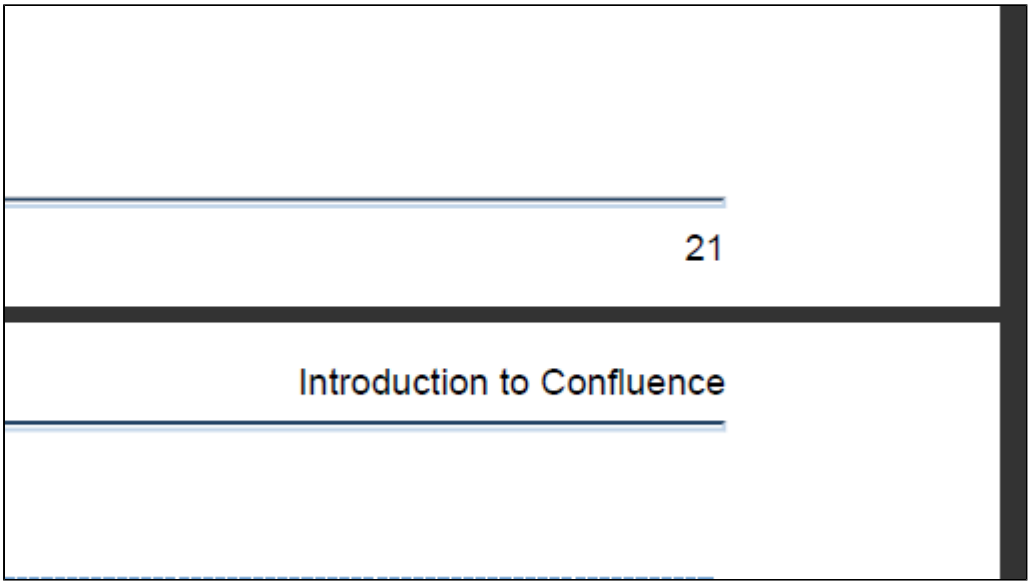


Table of Contents

1. Confluence Overview 2
1.1 Creating pages and linking 2
1.1.1 Breadcrumb demonstration 3
1.2 Email archiving 3
1.3 Example Index 3
1.4 Formatting Content 5
1.5 Jira integration 6
1.6 News 8
1.7 RSS Capabilities 8
1.8 Search Confluence content 9
1.9 Source code 10
1.10 Tasklist 12
1.11 Thumbnail gallery 13
1.12 Using Spaces 14
2. Index 14

It's easy to add custom headers and footers



7

Improved Rich Text Editor

The rich text editor contains several interface enhancements and bug fixes that improve its overall user experience.

- The rich text editor includes a right-click context menu, making it easier to insert links, images, macros and tables into your Confluence page or blog post.
- It is now possible to cut/copy and paste rows.
- Take a look at our documentation for more details on the rich text editor overview to see more information about its enhancements and redesigned interface.

Right-click context menu

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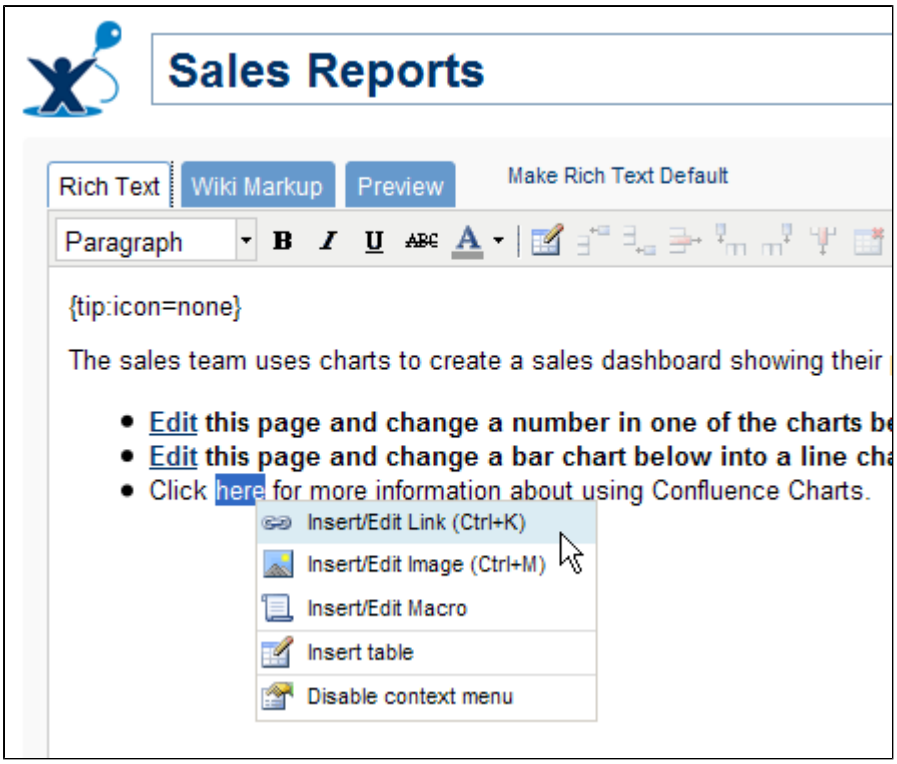


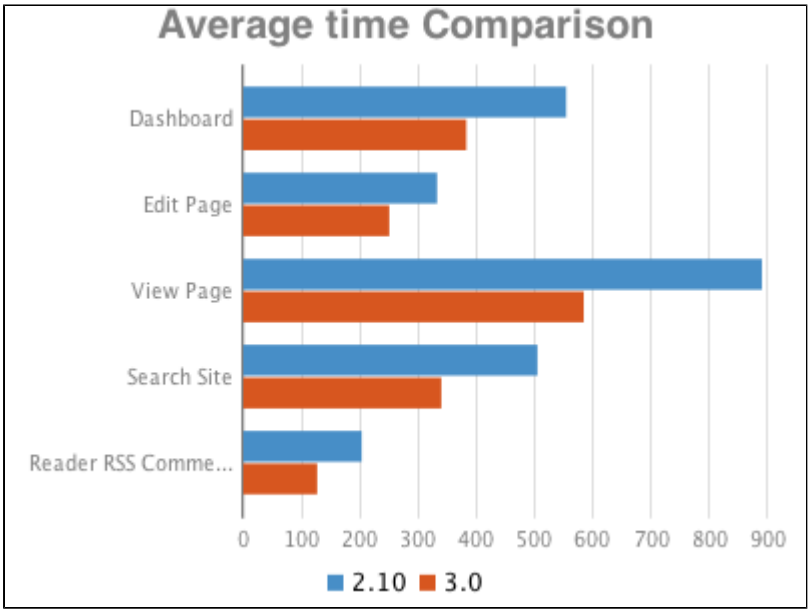
8

Performance Improvements

A number of performance improvements have been implemented.

- Confluence is now able to use more available resources under high load conditions.
- For Confluence installations, actions are up to 2 times faster.
- For Confluence Clustered installations:
  - Viewing pages is up to 2.5 times faster under medium, high and peak load.
  - Other actions are up to 5 times faster under medium load and 10 times faster under high and peak load.
- For more information, please refer to the Confluence 3.0 performance improvements documentation.

Confluence installations - Medium Load



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9

Engine Room and Developer Community

- Confluence 3.0 now implements the Atlassian Plugin Framework 2.2 and the new Shared Access Layer (SAL).
- For more information, please refer to the Plugin Framework Documentation.

10

Administration Improvements

Confluence contains a number of improvements to its administrative features, many of which are easily accessible from the Administration Console.

- Security improvements:
  - A new form token authentication mechanism provides Confluence with the means to validate the origin and intent of requested actions, thus adding an additional level of security against phenomena such as cross-site request forgery. This feature also provides a mechanism for Confluence plugin developers to protect their plugins. For more information, please refer to the form token handling documentation.
  - Anti-XSS mode is now enabled by default and the remaining encoding bugs have been fixed.
- You can now generate a thread dump from the Administration Console. See our documentation on generating a thread dump.
- It is now possible to adjust the size of Confluence's internal caches, allowing administrators to fine tune Confluence's cache handling and performance at runtime without the need to restart Confluence. For more information on using this this feature, refer to our page on cache statistics.
- The Office connector contains additional configuration options and provides simplified handling of the {viewfile} macro for the new Macro Browser.

11

More than 240 Fixes and Improvements

Page comparisons have been improved such that deletions or additions of single words (and short phrases) within a single line are highlighted red or green, respectively. Furthermore, large sections of unchanged text are compacted to reduce page length, but their content and context can easily be revealed at a click.

- Page comparisons now appear in email notifications, whenever a user edits a page or blog post.
- As well as the enhanced PDF export feature, you can now choose a subsection of a space (such as a document chapter) more easily, to export to XML or HTML.
- Using the new network, profile and user status list macros, you can incorporate components of Confluence 3.0's new community-based features directly into your page or blog post.
- Atlassian now provides support for recently added features to the widget macro, which include Widgetbox, Yahoo Video, Dailymotion, Wufoo HTML Form Builder, DabbleDB, Google Calendar and BackType micro-blogging.
- The Activity Macros now incorporate improved handling of the 'author' parameter.
- Take a look at the complete list of issues resolved in Confluence 3.0.

Page comparisons in email notifications

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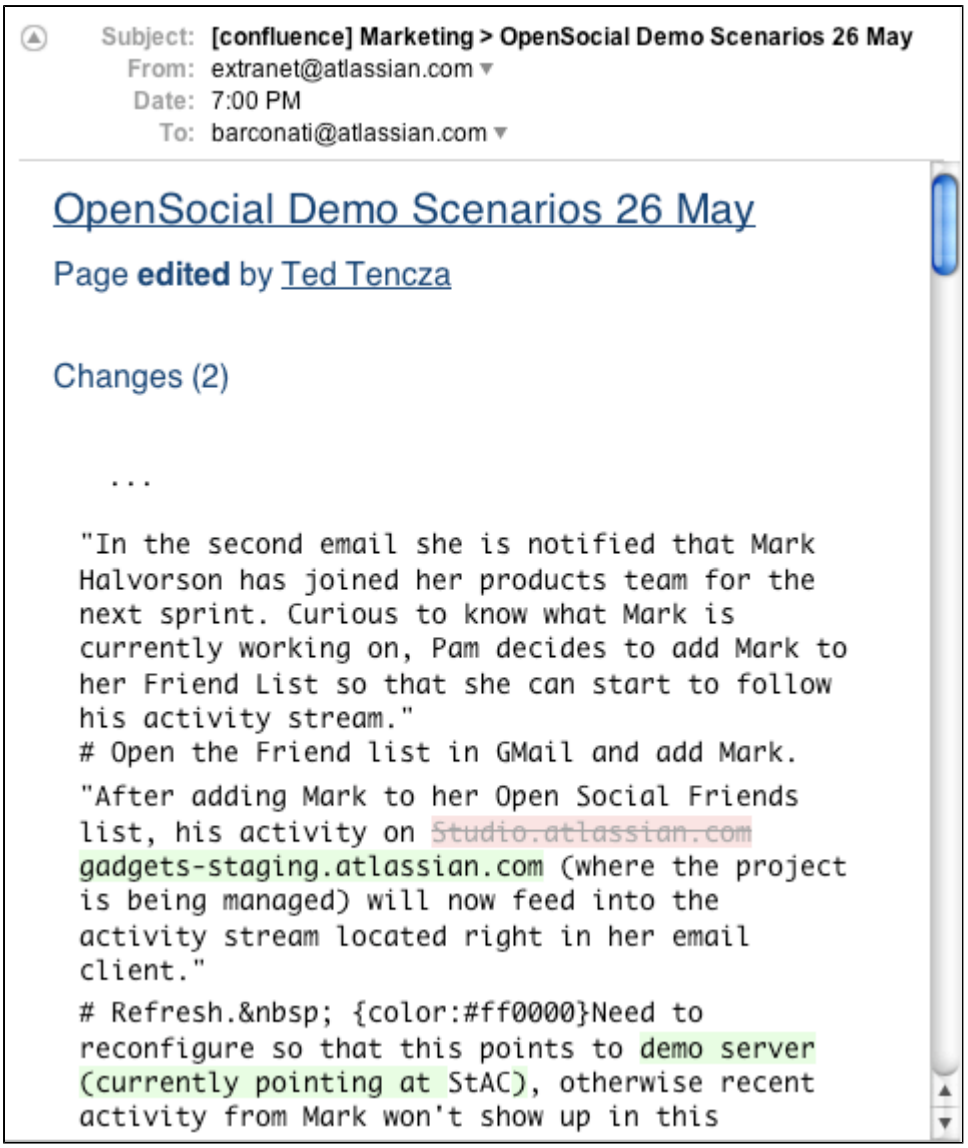

Known Issues in this Release

We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release, and report any problems so that we can fix them quickly.

We would like to highlight a known issue affecting the rich text editor, in which text cannot be added to the end of line that already ends with a link. Refer to CONF-15053 for more information about this issue. For more information on other known issues associated with the release of Confluence 3.0, please refer to Confluence 3.0 Known Issues.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.0 Team

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Engine Room and Performance
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Confluence 3.0 Known Issues

We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release, and report any problems so that we can fix them quickly. Below is a list of known issues. We're working on them, and will have a point release out as soon as possible.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

While you're waiting, take a look at the great new features in Confluence 3.0 Release Notes.

You can also browse the Confluence project in our issue tracker to see what's fixed and what's not, for each release.

Issues to be Fixed

Issue	Key
In the rich text editor, text cannot be added to the end of line that already ends with a link.	CONF-15053

Other Issues

Early 3.0 Build Issue

Note that an early build of 3.0 (Build number 1626) had a problem when moving a page from one space to another. If the default filesystem attachment storage was configured then any attachments on the page would fail to be moved if the page was moved to a new space. The attachment would only be accessible again if the page was moved back to its original space.

The current 3.0 release (3.0.0_01) does not have this problem. See CONF-15986 for more details.

Confluence on MySQL databases

Some customers who run Confluence on a MySQL database may find that when they upgrade to Confluence 3.0 or later, their Confluence 3.0 upgrade fails, with the Confluence logs revealing a "Specified key was too long" error. This issue is known to occur when MySQL's MyISAM storage engine and UTF-8 character set is used with Confluence.

If this is the case, please refer to the Upgrade to Confluence 3.0 with MySQL database fails with messages like "specified key was too long" knowledge base article on how to resolve this upgrade issue.

Confluence 3.0 Upgrade Notes

Below are some essential notes on upgrading to **Confluence 3.0**. For details of the new features and improvements in this release, please read the Confluence 3.0 Release Notes.

On this page:

- Upgrade Notes

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- Anonymous Access to User Profiles
- Plugins
- The Usage Tracking Plugin is disabled by default

- Upgrade Procedure
- Useful Plugins

Upgrade Notes

Anonymous Access to User Profiles

Confluence 3.0 introduces a new Anonymous Access Global Permission, **View User Profiles**, which prevents individuals who have not logged in to Confluence from viewing other users profiles. This permission, which is accessible from the Administration Console was introduced to protect the identity and security of Confluence user accounts and details associated with the Confluence 3.0 Community-based features.

In all new installations of Confluence 3.0, this permission is disabled for Anonymous users by default, such that an individual will not be able to view another user's profile details until they have logged in to Confluence.

Plugins

If you are having trouble with any screens in Confluence 3.0, which could be related to potentially incompatible or unsupported third-party plugins, try using the plugin safe mode to disable all unsupported plugins.

The Usage Tracking Plugin is disabled by default

Due to performance issues in high load environments, the Confluence Usage Tracking Plugin is disabled by default in Confluence 3.0. While upgrading to Confluence 3, the plugin will be turned off even if it was active before. We do still deliver the plugin as part of Confluence (and have even improved its performance since 2.10), so if you don't have a high load environment and are happy with the performance of the plugin, you can easily reactivate this plugin through the Administration Console.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.

2. If your version of Confluence is earlier than 2.10.x, read the release notes and upgrade guides for all releases between your version and the latest version. In particular:
   - Please read the 2.10 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

5. If you encounter a problem during the upgrade, please create a support ticket and one of our support engineers will assist you through the process.

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Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.0 Release Notes

Confluence 3 Performance improvements

Confluence 3.0 has significant performance improvements over Confluence 2.10 and earlier versions. This page explains the performance characteristics of Confluence 3.0 and shows the improvements that were made when compared to its predecessor Confluence 2.10. In brief, compared to version 2.10, Confluence 3.0 response times are down by 30% to 40%, and response times in a cluster are down by 50%. In other words, the clustered version of Confluence 3.0 is now twice as fast as before. Confluence also scales a lot better than before: More or faster CPU's are better utilised with Confluence 3.0 than they were with 2.10 and earlier versions.

1 Specific performance improvements

We have fixed a few bottlenecks that were so specific that you might have encountered them while analysing logfiles and thread dumps. Even if you did not see them, they might have been slowing your system down, depending on your use-case.

- **Rebuilding the search index is significantly faster**, up to factor 2. In our performance testing, a sample set of 20,000 pages that took 30 minutes using Confluence 2.10 now just takes 16 minutes in Confluence 3.0.
- **Improved Database Queries**
  - CONF-14488 : Added composite database index to SpacePermissions table. This will speed up installations with many page or space restrictions
  - CONF-14422 : Now, only the most recent version of an attachment is loaded when retrieving it for the first time. This had slowed down pages (and the dashboard) when an attachment had hundreds or thousands of revisions
  - CONF-14273 : Reduced overall DB load when rendering pages, which can help overall performance in case the database server was under high load already
- **Caching Enhancements**
  - CONF-12894 : Improved resource caching to improve HTTPS/SSL speed. This will make the screen render faster when you are using HTTPS.
  - CONF-8034 : Now serving caching headers for attachments to improve user interface responsiveness: Attachments (this includes user avatars) will not be downloaded again by the browser, leading to faster page loads
- **Others:**
  - Viewing PDF files through the office connector will use less memory and therefore significantly reduce garbage collection, which has caused some systems to perform a lot slower than needed
  - USGTRK-37 A bug was fixed in the usage statistics plugin that enables it to work smarter. It is still a plugin that is not made for high load so we suggest you disable it on high load scenarios

2 General performance improvements

We have been improving Confluence response time and scalability by implementing small improvements across the board. They are too many and too small to be presented individually, so we will use the results of our general performance-test to demonstrate the effect.

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In our general Confluence performance tests, we execute a standardised set of commonly-used functions that simulates the activity of concurrent users. We base this profile on the actual usage patterns of our public Confluence installation, a rather large and active instance. To cater for irregular usage spike, we increase the load by factor 10. On average, this load test performs 10 to 15 Confluence requests per second. Most customer installations do not even get close to these numbers during normal operation. Under normal (low) load, the response times are actually a lot better than what we present here. But we prefer to use this medium load scenario because it simulates cases which *may* occur infrequently, and in which Confluence still needs to perform reasonably well. In addition to this scenario, we defined two additional, more extreme scenarios that perform the same requests, but at 20 to 35 requests per second to simulate an even higher load.

How to read and understand the statistics

Please note that we use the term "**request**" for anything that requests or posts data to Confluence. So viewing a Confluence page is a request, performing a search is a request, posting a comment is a request, and also using the quick navigation drop-down performs requests.

The data table

Each row in the table represents one use case. All use cases are run in parallel for 30 minutes, with a 5 minute ramp-up period.

- **Samplers**: The first column is the name of the requests performed in this scenario, like reading pages, commenting pages, or performing searches.
- **95% Percentile:** This is the time (in milliseconds) by which 95% of *all* requests of this scenario have completed. This is *not* an average value, you rather can think of it as a "how long the slowest requests (except the very worst 5% cases) take" - scenario.
- **Average**: the third column shows the average response time of the requests in this scenario - the lower the better.

The most important use-cases are the following:

- **View Page:** This loads one out of hundreds of different Confluence pages. Some are short, others are long. Some have many images, others have many comments. Some have many macros, others do not. The pages are accessed through their full URL, as if someone had clicked a link within the application or a bookmark.
- **Search Site:** A search across the whole system.
- **Quick Nav:** This simulates typing a character into the search field and getting back suggestions in real time. This is one of the most popular and time-critical operations. Therefore, this operation needs to be very fast.
- **Dashboard**: Simulates visiting the Confluence dashboard.
- **Edit Page**: This saves a page back to Confluence, and notifies all people who are watching this page.

The graph

The chart shows how many concurrent requests per second are being processed. The blue line indicates the moving average per second, and they green lines indicate variation. The blue line is not constant, since the pages and operations requested are extremely different in their CPU usage: A short page with no comments will render faster than a long page with many macros and comments, which in turn, will render faster than a page-edit that triggers many notifications. These differences in requests result in different CPU loads over time.

The more stable the blue average line is, the more consistent the user experience. The higher the line is, the more users can access and use Confluence simultaneously.

Applying the numbers to your company's usage patterns

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The notes on this page geared at showing the performance differences between 2.10 and 3.0, using the same tests we used to test Confluence 2.10.

Hardware specification

All tests were conducted on two to four servers, each of which had the following specifications:

Name	Value
Server model	Dell 2950
CPU type	Intel(R) Xeon(R) CPU E5405 @ 2.00GHz (4 Cores)
CPUs per server	1 or 2, depending on test. See test details
RAM	32Gb (but just 2Gb are used for the JVMs, and the database uses 3Gb)
Disks	2 x 15K, 72Gb SAS
Network	1Gbps
Webserver	Tomcat 6, Java 6
Database	Postgres 8.2.4

When testing the Confluence distribution, one server acts as the application server and one as the database server, which is the setup we recommend to customers to enable high performance. A third server is used to generate the load, using JMeter. In the cluster, we use two application servers and one database server. In the cluster configuration we use the Pound load balancer, which runs on the same (fourth) server as the load generator JMeter. We do not use any webserver or caching proxy for our tests, and we cannot make any recommendations about which one to use. We want to measure the raw performance of the application server and suggest that you use the webservers/proxies with which you are most familiar.

Software and Settings

The JVM settings we used were -XX:MaxPermSize=192m -Xmx2000m -XX:+PrintGCTimeStamps -verbosegc -XX:+PrintGCDetails -XX:+PrintTenuringDistribution -XX:NewSize=384m -XX:SurvivorRatio=2 -XX:+UseParallelGC -XX:+UseParallelOldGC.

The usage tracking plugin was disabled during these tests because it is known to have performance issues and we recommend that it be turned off in high load deployments.

Confluence

Confluence is most frequently installed on one physical machine. Unless you know you are using (or are planning to use) a cluster, then this section is for you.

Confluence 3.0 has significantly better performance characteristics than Confluence 2.10. We compare three load scenarios and give the details below.

Medium Load scenario, 1 CPU

We define Medium Load as requesting roughly 15 requests per second from the loadtest. Most customers with smaller user bases never get even close to this usage, so they will experience a lot faster response times than

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what you can see below. But occasionally even customers with less than 1000 active users might experience spikes in usage, so we chose 15 requests per second as our medium load scenario.

We are using modest hardware (see above) with just one Xeon CPU with 4 cores, since we assume this is what a medium sized company would be using.

Confluence 2.10 vs Confluence 3.0 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	1619ms	1129ms	43%	3979ms	2387ms	66%
Commentor submit comment	306ms	338ms	-9%	805ms	794ms	1%
Commentor view commented page	737ms	628ms	17%	3386ms	1783ms	89%
Commentor view page	989ms	707ms	39%	4133ms	2168ms	90%
Creator add page	402ms	211ms	90%	765ms	391ms	95%
Creator submit new page	525ms	387ms	35%	1161ms	882ms	31%
Creator view page	256ms	233ms	9%	704ms	501ms	40%
Dashboard	554ms	382ms	44%	1685ms	634ms	165%
Editor display page	520ms	417ms	24%	1881ms	1065ms	76%
Edit Page	332ms	250ms	32%	831ms	620ms	34%
Editor submit edit	1199ms	961ms	24%	3949ms	3459ms	14%
Go to log in page	274ms	456ms	-39%	486ms	2795ms	-82%
Log In	342ms	333ms	2%	774ms	480ms	61%

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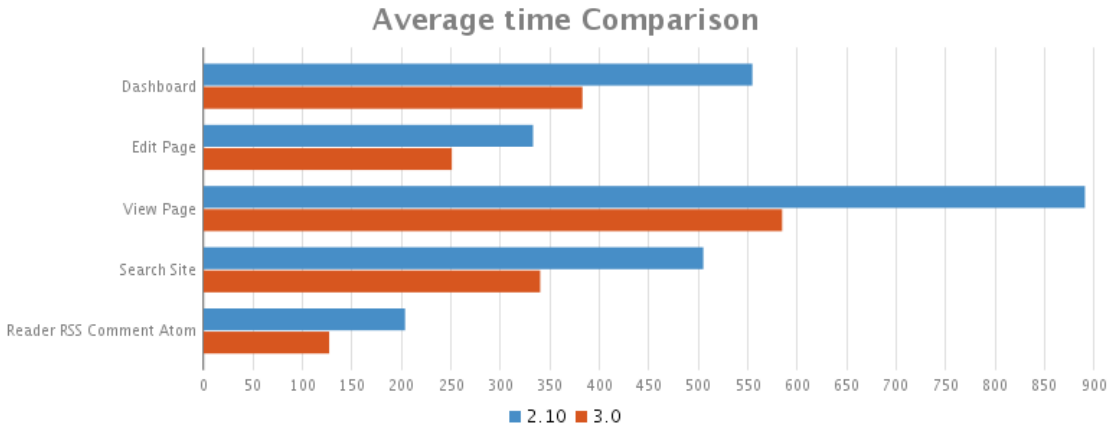
Quick Navigation Search	134ms	57ms	133%	597ms	110ms	439%
Reader Not Found	551ms	369ms	49%	1266ms	615ms	105%
Reader RSS Blogpost Atom	170ms	59ms	184%	637ms	67ms	838%
Reader RSS Blogpost RSS2	206ms	95ms	116%	754ms	97ms	675%
Reader RSS Comment Atom	203ms	126ms	60%	929ms	481ms	92%
Reader RSS Comment RSS2	369ms	151ms	143%	1602ms	477ms	235%
Reader RSS Page Atom	628ms	513ms	22%	2725ms	2147ms	26%
Reader RSS Page RSS2	800ms	547ms	46%	3381ms	2196ms	53%
View Page	890ms	584ms	52%	3259ms	1854ms	75%
Reader for Space Page	904ms	677ms	33%	2219ms	1566ms	41%
Search Site	505ms	340ms	48%	2006ms	598ms	235%



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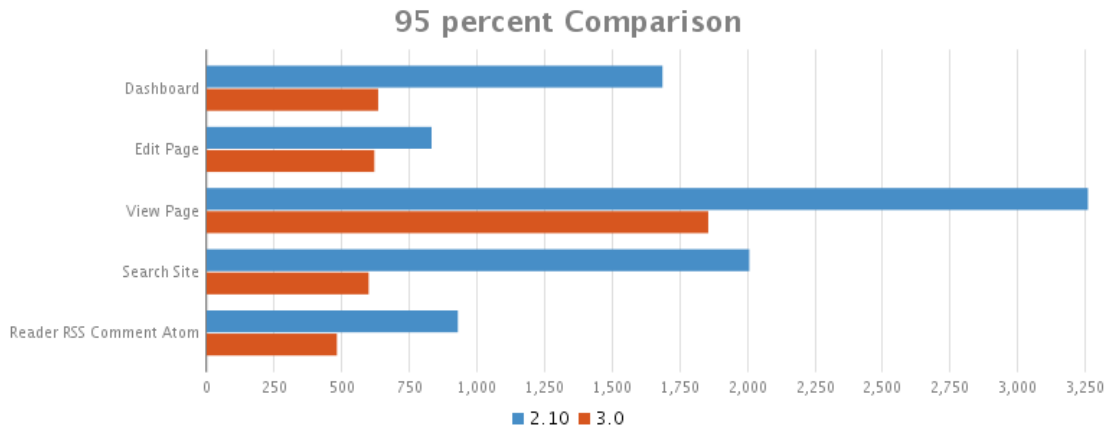
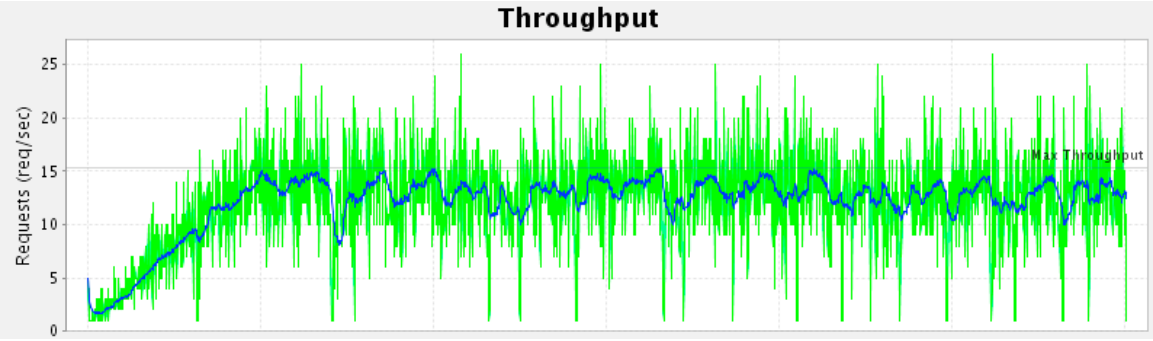
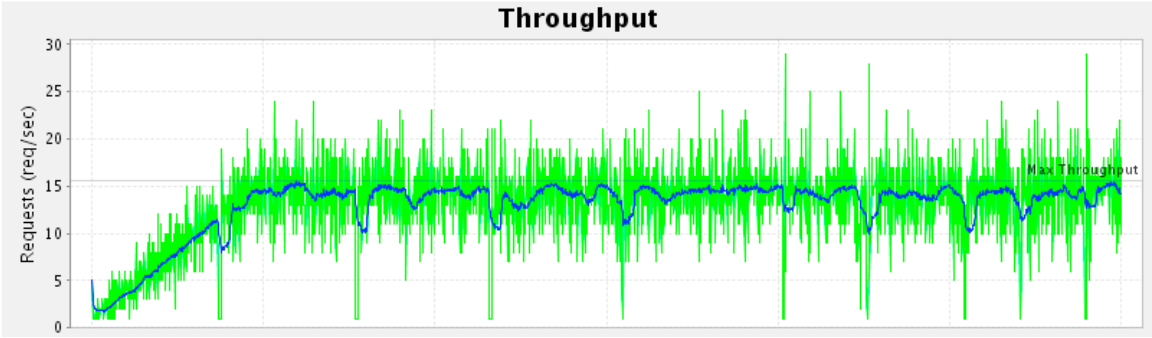


Confluence 2.10 throughput



Confuence 3.0 throughput



Medium Load comparison between 2.10 and 3.0

The most important scenario ("View Page") used to take about 900ms in Confluence 2.10, but in 3.0 it is down to 600ms, which is a performance improvement of about 50%. Almost all other scenarios have improved as well, some even by more than 100% (e.g. more than twice as fast). The throughput in this scenario has only changed from approximately 13/s to 14/s. However, this is because the test itself is not making more requests. The main improvement here is that the throughput has less variations (ups/downs) for example when rendering very complicated or large pages. You can improve the smoothness of the line even further by using a different garbage collector, as explained on our tuning page.

High Load Scenario, 2 CPUs

We define a High Load Scenario as one in which the load generation equates to approximately 25 requests per second. In this test, we are using the same hardware as above, but with 2 CPUs. We assume that any company which expects 20 or more requests per second, even if this occurs during a short time frame, will have greater hardware resources (of equivalent cost) than to what is used in this test.

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Confluence 2.10 vs Confluence 3.0 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	2389ms	1531ms	56%	6196ms	4195ms	47%
Commentor submit comment	424ms	397ms	6%	1779ms	1603ms	10%
Commentor view commented page	1211ms	815ms	48%	4729ms	2863ms	65%
Commentor view page	1402ms	912ms	53%	5284ms	3094ms	70%
Creator add page	558ms	297ms	87%	1962ms	1543ms	27%
Creator submit new page	783ms	522ms	49%	2567ms	1545ms	66%
Creator view page	443ms	284ms	55%	1845ms	843ms	118%
Dashboard	905ms	506ms	78%	2771ms	1245ms	122%
Editor display page	807ms	504ms	59%	2650ms	2165ms	22%
Edit Page	551ms	338ms	63%	1961ms	1461ms	34%
Editor submit edit	1524ms	1180ms	29%	5115ms	4189ms	22%
Go to log in page	409ms	419ms	-2%	1171ms	982ms	19%
Log In	520ms	346ms	50%	2124ms	700ms	203%
Quick Navigation Search	318ms	124ms	155%	1895ms	369ms	413%
Reader Not Found	866ms	492ms	76%	2439ms	1579ms	54%

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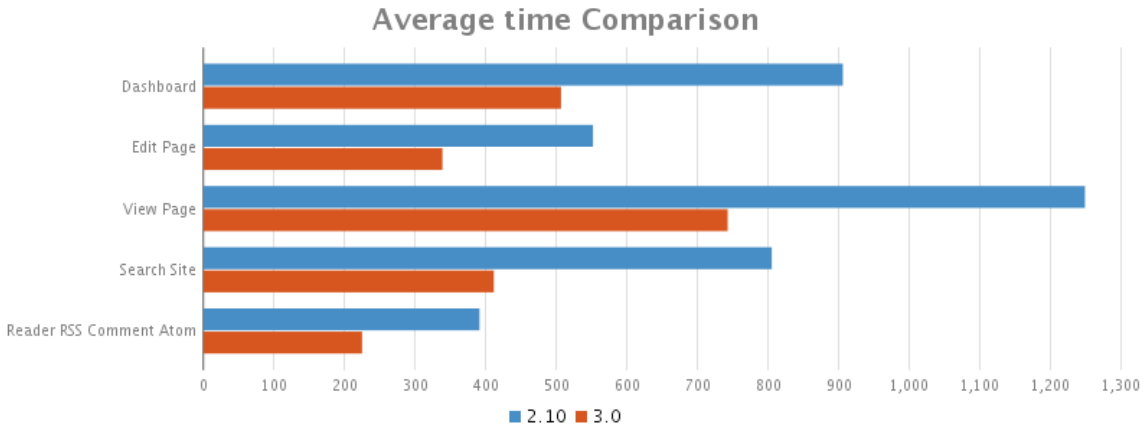
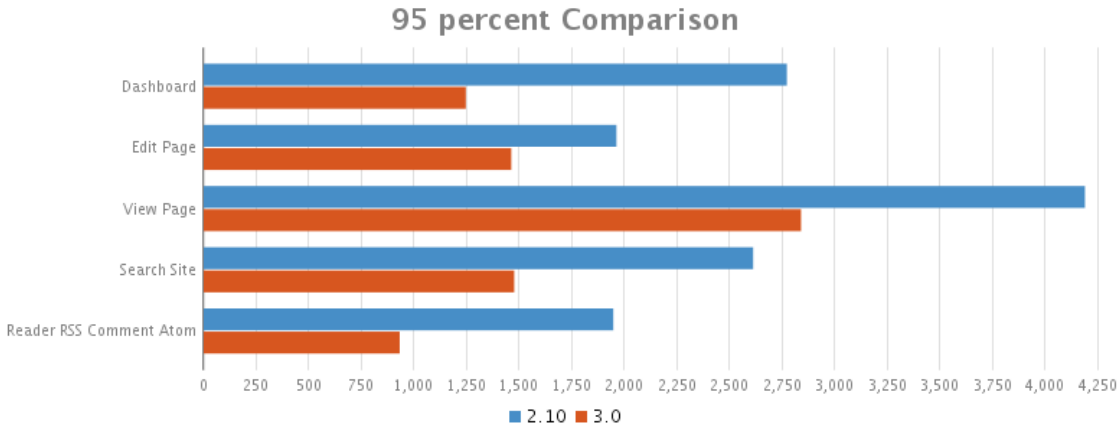
Reader RSS Blogpost Atom	300ms	105ms	186%	1549ms	191ms	709%
Reader RSS Blogpost RSS2	299ms	98ms	203%	1954ms	183ms	965%
Reader RSS Comment Atom	390ms	224ms	74%	1946ms	931ms	108%
Reader RSS Comment RSS2	362ms	254ms	42%	1824ms	1196ms	52%
Reader RSS Page Atom	1098ms	777ms	41%	4804ms	2848ms	68%
Reader RSS Page RSS2	1126ms	807ms	39%	4532ms	3406ms	33%
View Page	1248ms	742ms	68%	4188ms	2839ms	47%
Reader for Space Page	1410ms	914ms	54%	3749ms	2487ms	50%
Search Site	804ms	411ms	95%	2611ms	1475ms	76%





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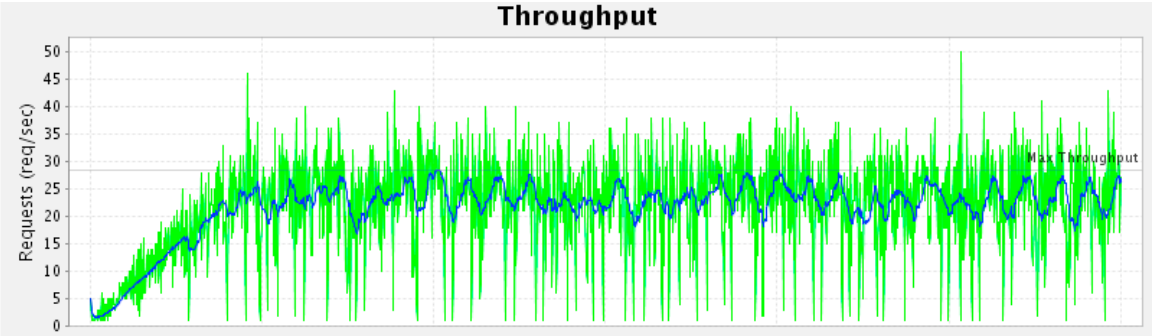
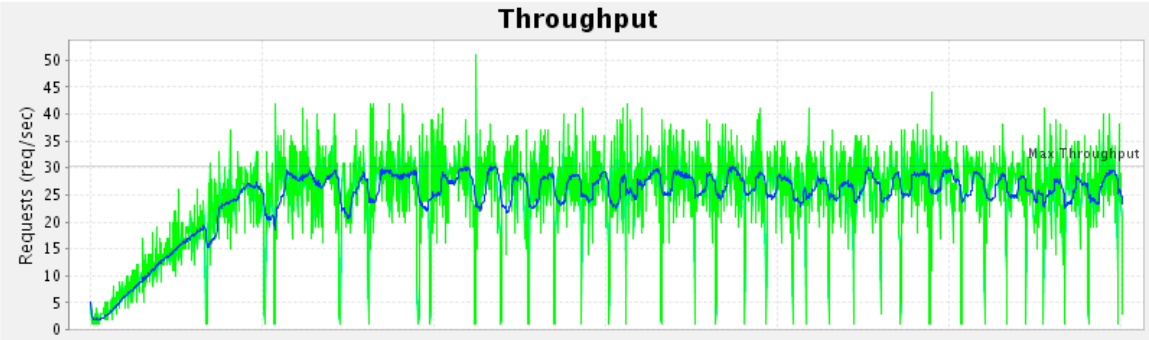
Confluence 2.10 throughput



Confluence 3.0 throughput



High Load comparison between 2.10 and 3.0

This scenario shows the performance improvements between Confluence 2.10 and 3.0 best. Confluence 2.10 managed about 22 requests per second, Confluence 3.0 about 27 requests per second. Although this is a significant improvement, those in response times are even more impressive. If you have times when there are 20 requests per second, Confluence will respond a lot better and end users will notice the difference.

Peak Load Scenario, 2 CPUs

We define a Peak Load Scenario as one in which approximately 35 requests per second from the load generator. Very few of our customers ever reach these high levels of requests per second, but if you do have 100.000 users and many of them view pages at the same time, then the peak load scenario may occasionally be reached. Again, these tests are run on a 2CPU hardware.

Confluence 3.0 vs Confluence 2.10 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	4747ms	3207ms	47%	10951ms	7575ms	44%
Commentor submit comment	1517ms	1146ms	32%	4521ms	3611ms	25%

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Commentor view commented page	3148ms	2173ms	44%	9222ms	6184ms	49%
Commentor view page	3302ms	2317ms	42%	9891ms	6410ms	54%
Creator add page	1693ms	934ms	81%	3904ms	3170ms	23%
Creator submit new page	2777ms	1959ms	41%	5812ms	5170ms	12%
Creator view page	1589ms	1065ms	49%	3523ms	3358ms	4%
Dashboard	2121ms	1420ms	49%	5492ms	3704ms	48%
Editor display page	2216ms	1502ms	47%	5081ms	4233ms	20%
Edit Page	1714ms	1062ms	61%	4008ms	3452ms	16%
Editor submit edit	3945ms	3205ms	23%	10523ms	9467ms	11%
Go to log in page	934ms	818ms	14%	4544ms	4091ms	11%
Log In	807ms	913ms	-11%	2879ms	3531ms	-18%
Quick Navigation Search	1121ms	568ms	97%	4288ms	2704ms	58%
Reader Not Found	2159ms	1222ms	76%	4265ms	3472ms	22%
Reader RSS Blogpost Atom	864ms	531ms	62%	2796ms	2511ms	11%
Reader RSS Blogpost RSS2	1099ms	527ms	108%	4307ms	2691ms	60%
Reader RSS Comment Atom	1110ms	736ms	50%	3469ms	2760ms	25%

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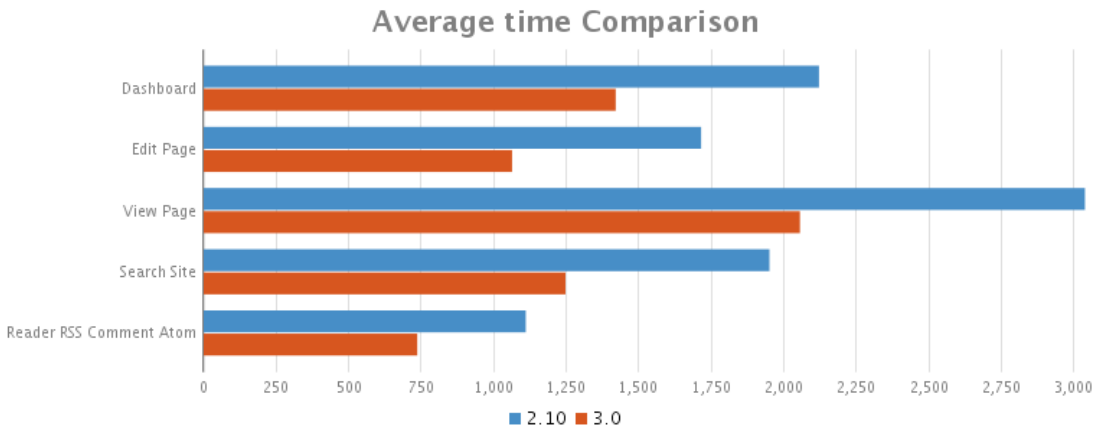
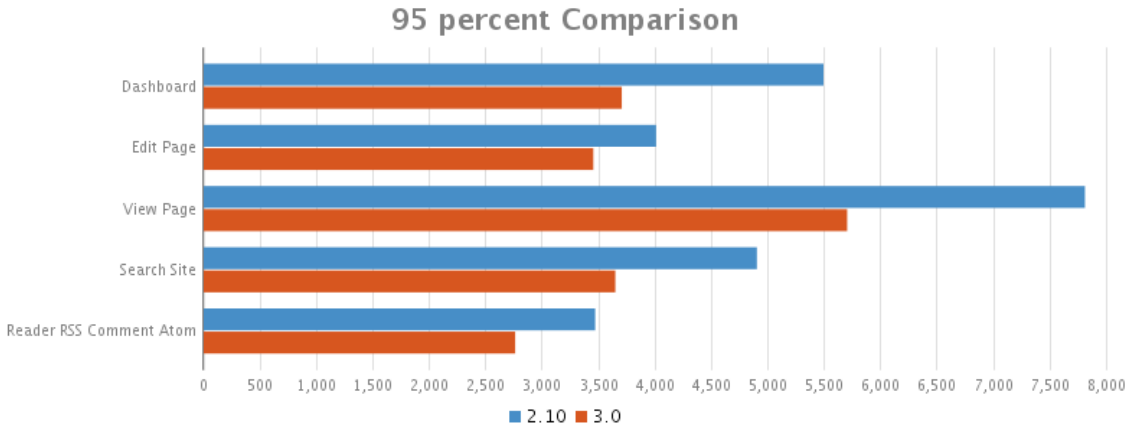
Reader RSS Comment RSS2	1159ms	863ms	34%	3959ms	3130ms	26%
Reader RSS Page Atom	2395ms	2300ms	4%	7588ms	7342ms	3%
Reader RSS Page RSS2	2661ms	2258ms	17%	8295ms	7922ms	4%
View Page	3038ms	2055ms	47%	7809ms	5702ms	36%
Reader for Space Page	3005ms	1990ms	51%	6298ms	4850ms	29%
Search Site	1950ms	1247ms	56%	4902ms	3647ms	34%





Confluence 2.10 throughput

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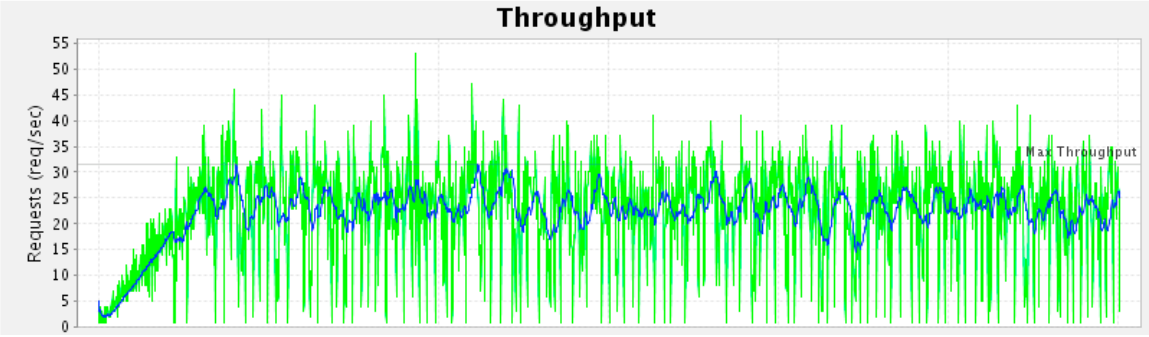
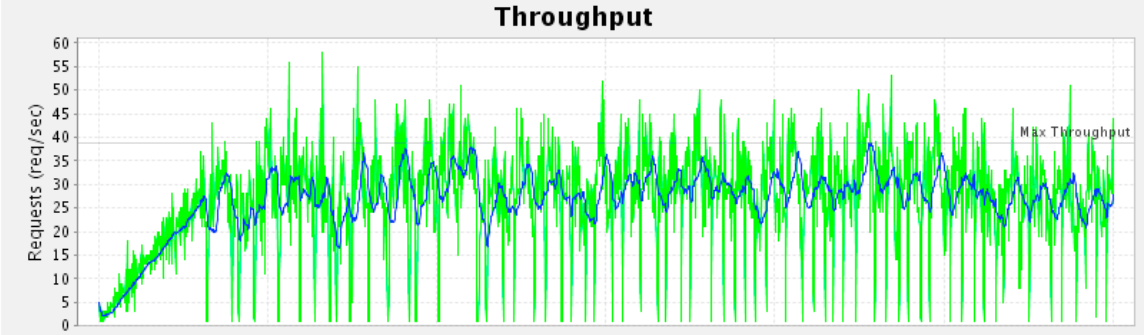


Confluence 3.0 throughput:



Please note that this test is slightly skewed by the Load generator sitting one the same machine. The actual results will look a bit better.

Peak Load comparison between 2.10 and 3.0

Confluence 2.10 is able to deliver about 22 requests per second, but response times are not so good. Rendering a page takes 3s and rendering the dashboard takes 2s on average. Confluence 3.0 delivers improved throughput of about 28 requests per second and response times are significantly better than 2.10 (rendering a page is down to 2s, and rendering the dashboard is down to 1.4s). However, response times under Peak Load in 3.0 are still not ideal. Even with 2 CPUs Confluence 3.0 starts reaching its limits here. While Confluence 3.0 is able to deliver results, what we really recommend for this peak load scenario is a clustered solution. Read on for more details.

Confluence Clustered

When rolling out Confluence to a larger amount of users, Clustering becomes important to balance spikes in load. The most commonly used deployment is a 2-node cluster, running on three physical machines (two application servers connected to one database server).

Clustering does not make a single request faster in low load scenarios, but it helps the system dealing with a larger number of requests in parallel, without degrading in performance.

Medium Load Scenario, Clustered, 2 nodes, 1 CPU per node

As above, we define the Medium Load scenario as making 15 requests per second. This test uses just 1 CPU per machine.

Confluence 3.0 vs Confluence 2.10 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement

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Browse Label	2477ms	919ms	169%	6365ms	2143ms	196%
Commentor submit comment	410ms	380ms	7%	1127ms	856ms	31%
Commentor view commented page	1029ms	595ms	72%	4193ms	1826ms	129%
Commentor view page	1367ms	786ms	73%	5264ms	2557ms	105%
Creator add page	611ms	214ms	184%	1463ms	414ms	253%
Creator submit new page	692ms	422ms	63%	1596ms	938ms	70%
Creator view page	329ms	131ms	150%	1034ms	205ms	404%
Dashboard	1319ms	395ms	234%	3787ms	556ms	581%
Editor display page	750ms	387ms	93%	2592ms	1420ms	82%
Edit Page	493ms	208ms	136%	1569ms	433ms	261%
Editor submit edit	1500ms	980ms	53%	4903ms	3435ms	42%
Go to log in page	854ms	357ms	138%	2898ms	547ms	429%
Log In	961ms	422ms	127%	3320ms	597ms	455%
Quick Navigation Search	183ms	56ms	226%	1178ms	107ms	1001%
Reader Not Found	663ms	351ms	89%	1562ms	554ms	181%
Reader RSS Blogpost Atom	499ms	73ms	577%	2674ms	118ms	2166%

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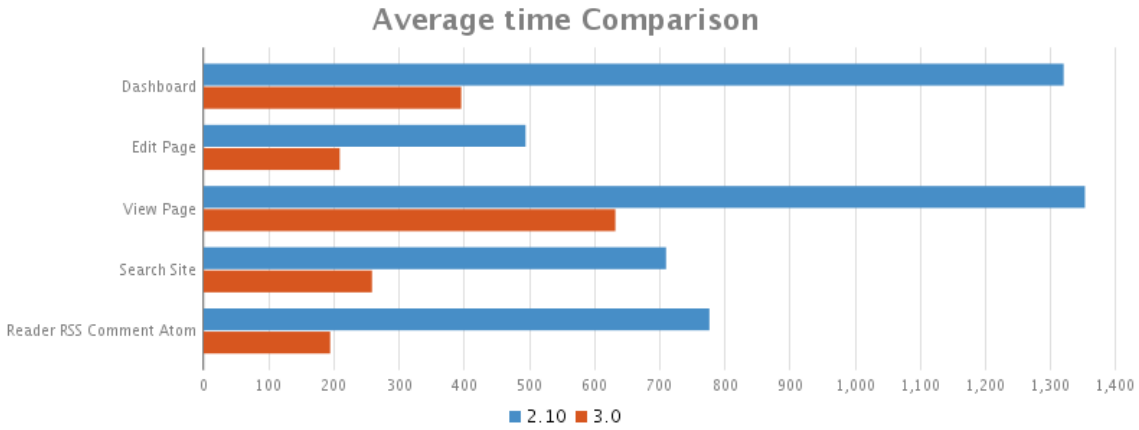
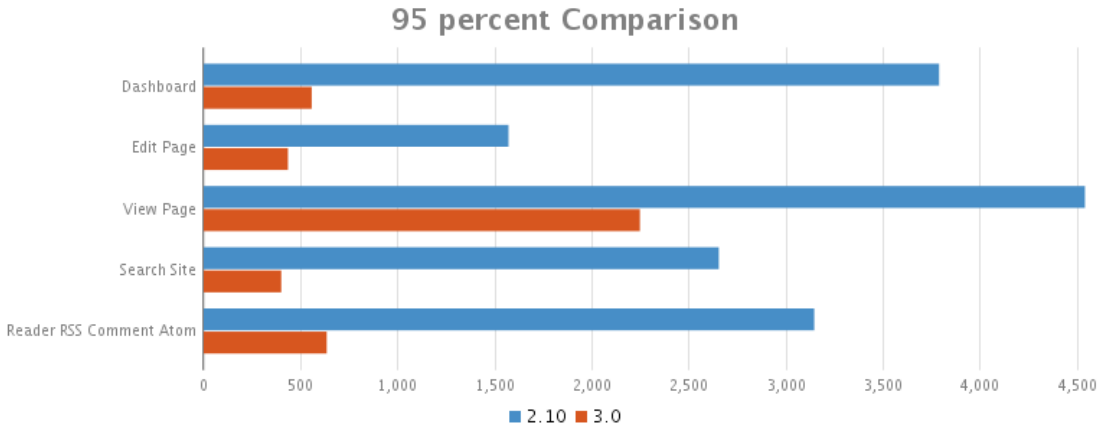
Reader RSS Blogpost RSS2	453ms	65ms	589%	1863ms	122ms	1420%
Reader RSS Comment Atom	776ms	194ms	300%	3143ms	633ms	396%
Reader RSS Comment RSS2	742ms	186ms	297%	2930ms	576ms	408%
Reader RSS Page Atom	1378ms	618ms	122%	4693ms	2109ms	122%
Reader RSS Page RSS2	1497ms	584ms	156%	4767ms	1899ms	150%
View Page	1352ms	631ms	114%	4538ms	2246ms	102%
Reader for Space Page	1251ms	793ms	57%	3124ms	1736ms	79%
Search Site	709ms	258ms	174%	2652ms	399ms	564%





Confluence 2.10 throughput

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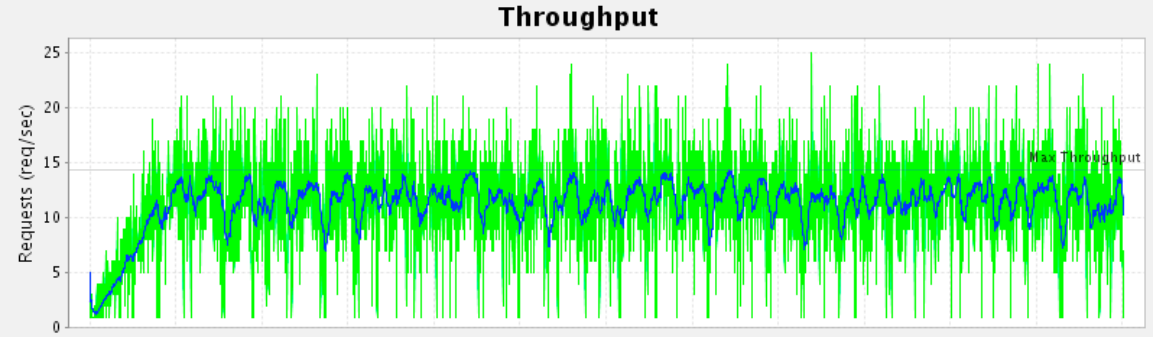
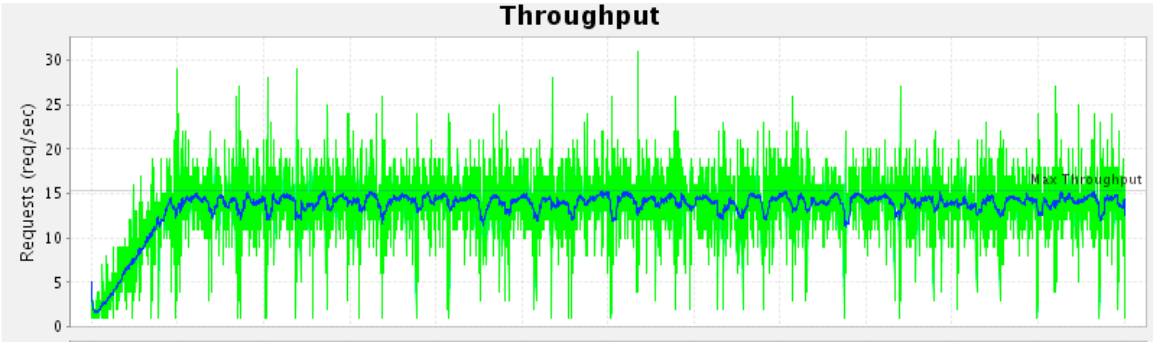


Confluence 3.0 throughput



Medium Load comparison between 2.10 and 3.0 in clustered mode

As you can see, the response time of each request is a lot better in Confluence 3.0. On average the performance has doubled, leading to response times that are just 50% of what they used to be. This means that a clustered Confluence installation provides the same responsiveness as a Confluence installation, while still being much better at scaling, which will be shown below. In this example the load was so low that throughput did not increase very much.

High Load Scenario, Clustered, 2 nodes, 2 CPUs per node

As above, we define the High Load scenario as making 25 requests per second. Few customers will reach these levels of requests per second, but if you have several ten thousand users these levels can be reached during peak business hours. This test is run on servers with 2 CPUs per machine.

Confluence 3.0 vs Confluence 2.10 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	4674ms	1447ms	222%	12831ms	3822ms	235%
Commentor submit comment	584ms	442ms	31%	1948ms	1340ms	45%
Commentor view commented page	1728ms	680ms	154%	5943ms	2164ms	174%

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Commentor view page	2048ms	893ms	129%	7111ms	2868ms	147%
Creator add page	838ms	245ms	241%	2333ms	562ms	314%
Creator submit new page	896ms	466ms	92%	2308ms	1181ms	95%
Creator view page	443ms	155ms	186%	1300ms	234ms	454%
Dashboard	2707ms	339ms	697%	7781ms	427ms	1722%
Editor display page	960ms	446ms	115%	2909ms	1633ms	78%
Edit Page	735ms	255ms	188%	2276ms	699ms	225%
Editor submit edit	1888ms	1108ms	70%	6513ms	4060ms	60%
Go to log in page	1525ms	256ms	494%	4650ms	524ms	786%
Log In	1278ms	406ms	214%	3712ms	598ms	520%
Quick Navigation Search	540ms	49ms	1000%	4292ms	95ms	4418%
Reader Not Found	882ms	413ms	113%	2151ms	813ms	164%
Reader RSS Blogpost Atom	1165ms	49ms	2245%	5052ms	72ms	6888%
Reader RSS Blogpost RSS2	1494ms	51ms	2825%	5565ms	69ms	7872%
Reader RSS Comment Atom	1655ms	195ms	748%	5990ms	763ms	684%
Reader RSS Comment RSS2	1497ms	197ms	656%	5892ms	822ms	616%

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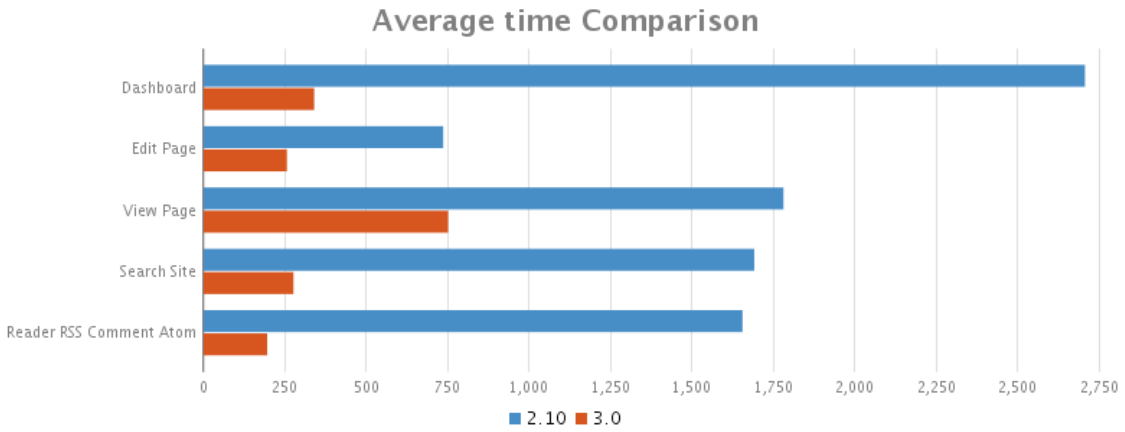
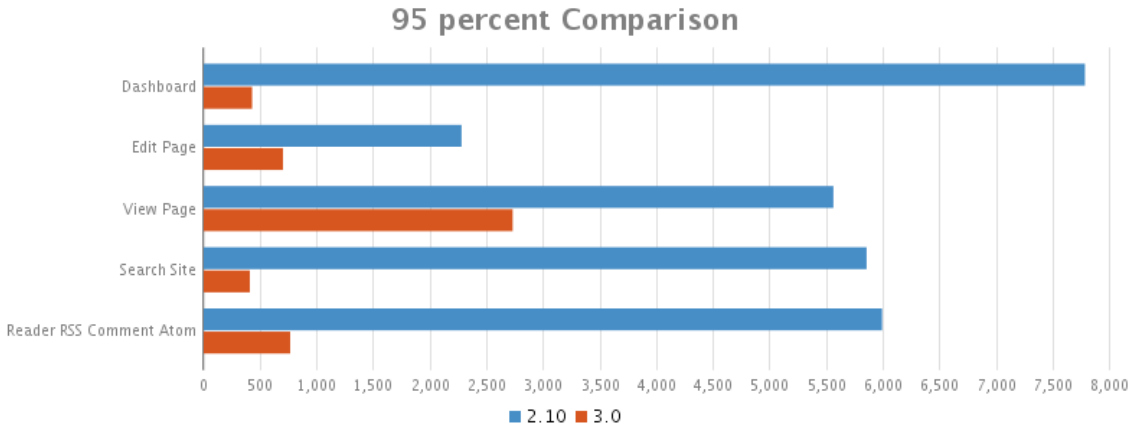
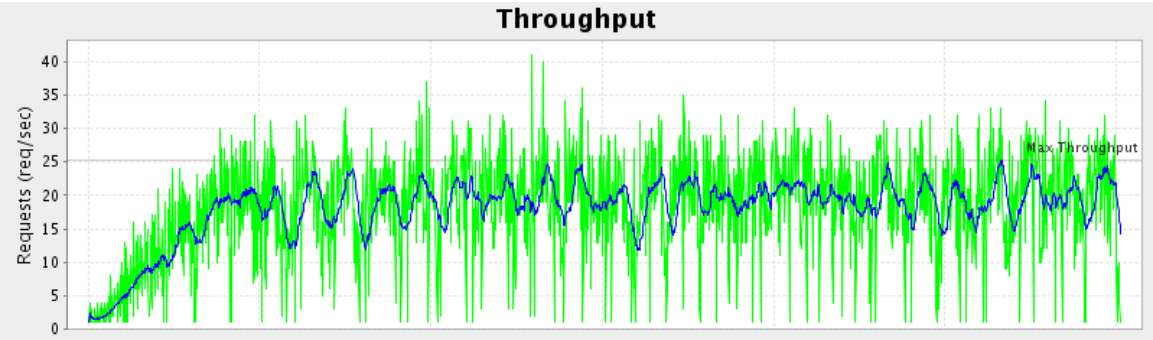
Reader RSS Page Atom	2440ms	630ms	287%	8300ms	2263ms	266%
Reader RSS Page RSS2	2562ms	685ms	273%	8027ms	2530ms	217%
View Page	1780ms	750ms	137%	5560ms	2728ms	103%
Reader for Space Page	1668ms	835ms	99%	4177ms	1976ms	111%
Search Site	1691ms	275ms	513%	5853ms	407ms	1338%





Confluence 2.10 throughput



Confluence 3.0 throughput

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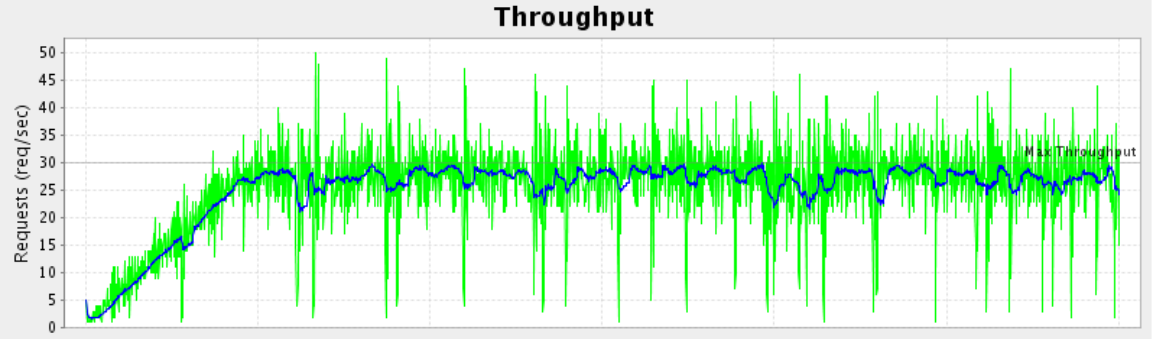

High Load comparison between 2.10 and 3.0 in clustered mode

In this test we show how using a Cluster for high load instances can increase throughput and reduce response time. Confluence 3.0 has many improvements which benefit the clustered version. In the case of the test above, we can see that as the load is increased, Confluence is able to use more of the available CPU power on the 8 core machines to scale up and handle the higher load with an very good response time. This is where clustering makes a lot of sense now.

Peak Load Scenario, Clustered, 2 nodes, 2 CPUs per node

As above, we define peak load as the load generator making around 35 requests per second. During this test we used 2 CPUs per machine.

Confluence 3.0 vs Confluence 2.10 response times

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	9179ms	2150ms	326%	22987ms	5695ms	303%
Commentor submit comment	999ms	859ms	16%	3175ms	2712ms	17%
Commentor view commented page	2760ms	1213ms	127%	8739ms	3908ms	123%
Commentor view page	3225ms	1672ms	92%	10941ms	5323ms	105%
Creator add page	2396ms	379ms	532%	7285ms	1487ms	389%
Creator submit new page	1913ms	858ms	122%	4850ms	2548ms	90%
Creator view page	1070ms	270ms	296%	2925ms	1130ms	158%

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Dashboard	7383ms	466ms	1481%	19349ms	1429ms	1254%
Editor display page	2460ms	761ms	223%	7388ms	2737ms	169%
Edit Page	2609ms	357ms	630%	7143ms	1385ms	415%
Editor submit edit	4064ms	1821ms	123%	12599ms	6287ms	100%
Go to log in page	3622ms	280ms	1191%	13728ms	497ms	2657%
Log In	3603ms	497ms	625%	12477ms	1045ms	1093%
Quick Navigation Search	1268ms	92ms	1273%	9515ms	435ms	2084%
Reader Not Found	1591ms	539ms	195%	3616ms	1622ms	122%
Reader RSS Blogpost Atom	4514ms	78ms	5688%	14570ms	136ms	10605%
Reader RSS Blogpost RSS2	4666ms	84ms	5416%	14554ms	134ms	10689%
Reader RSS Comment Atom	4750ms	328ms	1346%	14934ms	1545ms	866%
Reader RSS Comment RSS2	4723ms	302ms	1460%	16526ms	1412ms	1070%
Reader RSS Page Atom	6443ms	1012ms	536%	20556ms	4005ms	413%
Reader RSS Page RSS2	6287ms	1109ms	466%	17762ms	4175ms	325%
View Page	3363ms	1345ms	150%	10510ms	4717ms	122%
Reader for Space Page	3069ms	1161ms	164%	9475ms	3023ms	213%
Search Site	3334ms	378ms	780%	10560ms	1368ms	671%

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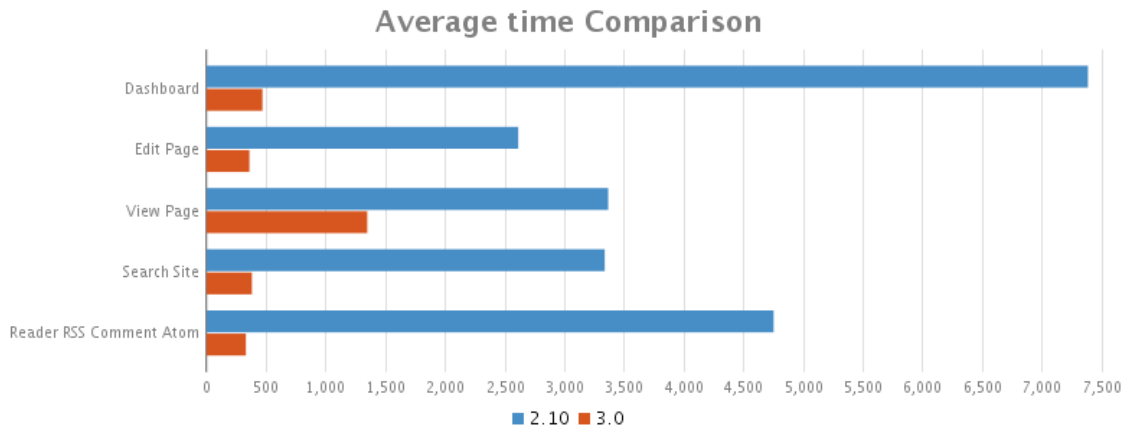
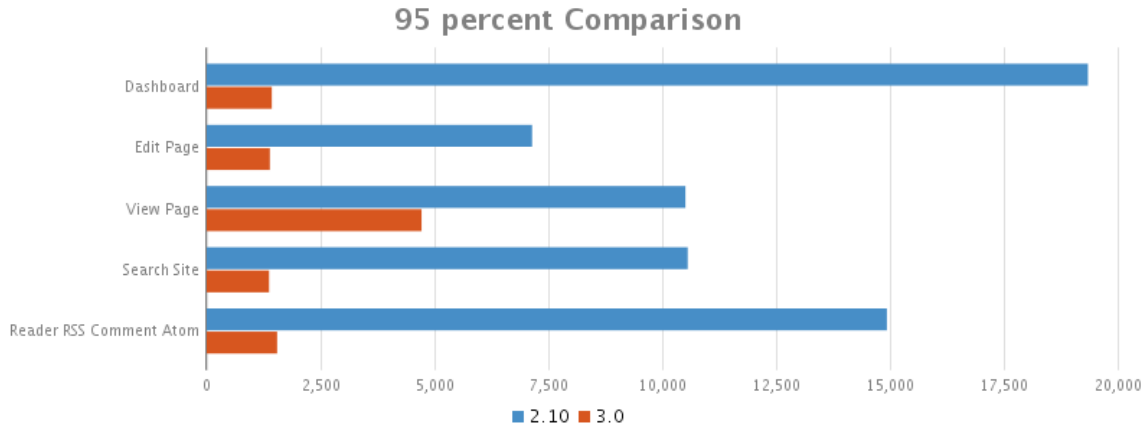
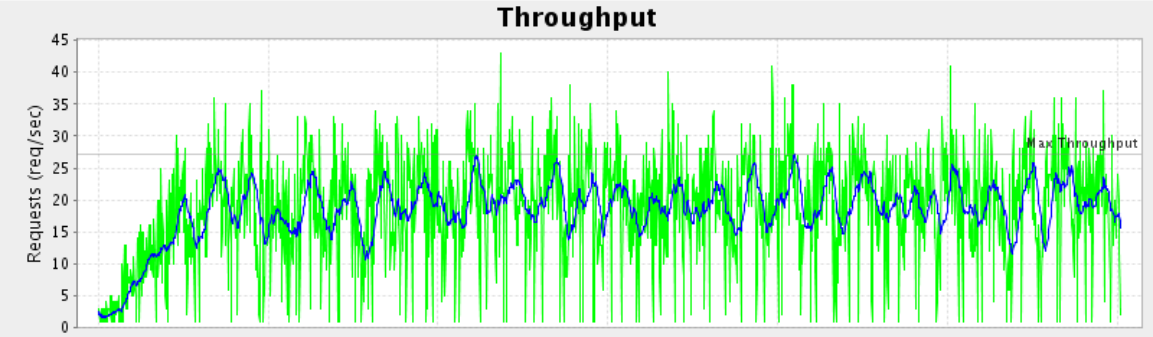
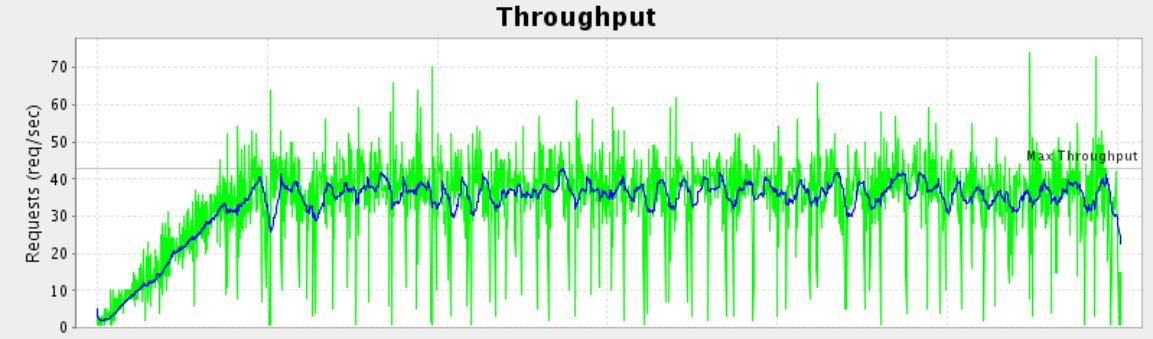




Confluence 2.10 throughput



Confluence 3.0 throughput



Peak Load comparison between 2.10 and 3.0 in clustered mode

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This test highlights how well Confluence 3.0 can now scale. Response times remain low as the load is increased. Confluence 3.0 is able to make far better use of more powerful hardware than Confluence 2.10 which is shown by the improved response times for key scenarios like Page view and Dashboard.

Feedback welcome

We welcome your feedback! Is this document understandable, does it cover the areas that you are most interested about? Tell us and leave comments on this page!

High Load Cluster

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	4674ms	1447ms	222%	12831ms	3822ms	235%
Commentor submit comment	584ms	442ms	31%	1948ms	1340ms	45%
Commentor view commented page	1728ms	680ms	154%	5943ms	2164ms	174%
Commentor view page	2048ms	893ms	129%	7111ms	2868ms	147%
Creator add page	838ms	245ms	241%	2333ms	562ms	314%
Creator submit new page	896ms	466ms	92%	2308ms	1181ms	95%
Creator view page	443ms	155ms	186%	1300ms	234ms	454%
Dashboard	2707ms	339ms	697%	7781ms	427ms	1722%
Editor display page	960ms	446ms	115%	2909ms	1633ms	78%
Edit Page	735ms	255ms	188%	2276ms	699ms	225%
Editor submit edit	1888ms	1108ms	70%	6513ms	4060ms	60%
Go to log in page	1525ms	256ms	494%	4650ms	524ms	786%
Log In	1278ms	406ms	214%	3712ms	598ms	520%

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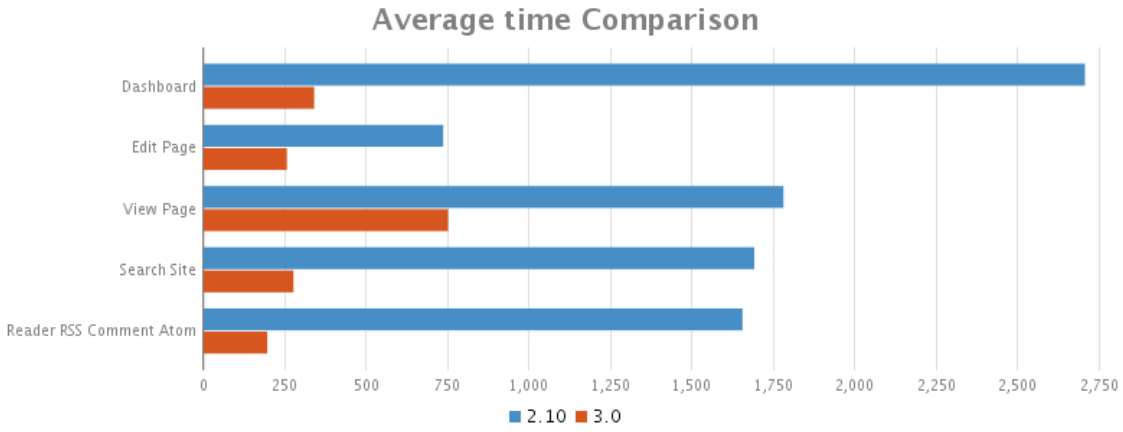
Quick Navigation Search	540ms	49ms	1000%	4292ms	95ms	4418%
Reader Not Found	882ms	413ms	113%	2151ms	813ms	164%
Reader RSS Blogpost Atom	1165ms	49ms	2245%	5052ms	72ms	6888%
Reader RSS Blogpost RSS2	1494ms	51ms	2825%	5565ms	69ms	7872%
Reader RSS Comment Atom	1655ms	195ms	748%	5990ms	763ms	684%
Reader RSS Comment RSS2	1497ms	197ms	656%	5892ms	822ms	616%
Reader RSS Page Atom	2440ms	630ms	287%	8300ms	2263ms	266%
Reader RSS Page RSS2	2562ms	685ms	273%	8027ms	2530ms	217%
View Page	1780ms	750ms	137%	5560ms	2728ms	103%
Reader for Space Page	1668ms	835ms	99%	4177ms	1976ms	111%
Search Site	1691ms	275ms	513%	5853ms	407ms	1338%



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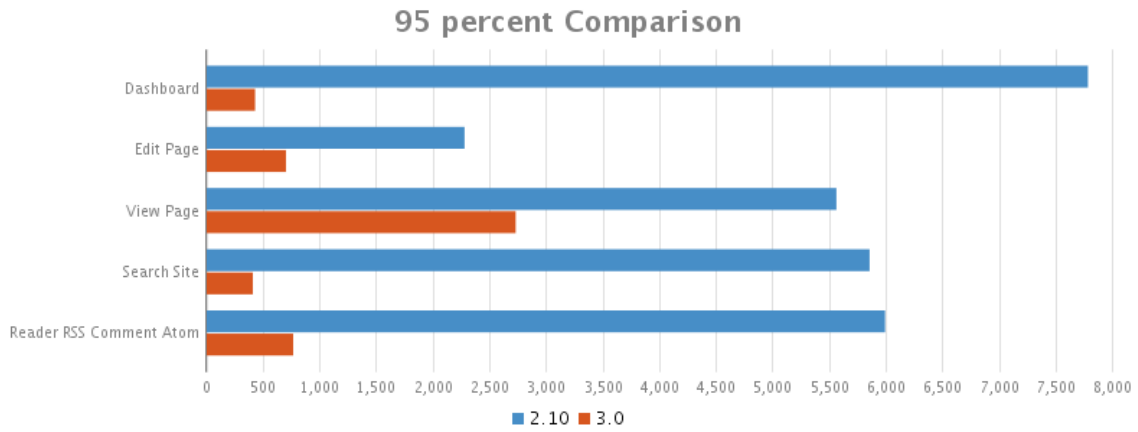

High Load Single Node

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	2389ms	1531ms	56%	6196ms	4195ms	47%
Commentor submit comment	424ms	397ms	6%	1779ms	1603ms	10%
Commentor view commented page	1211ms	815ms	48%	4729ms	2863ms	65%
Commentor view page	1402ms	912ms	53%	5284ms	3094ms	70%
Creator add page	558ms	297ms	87%	1962ms	1543ms	27%
Creator submit new page	783ms	522ms	49%	2567ms	1545ms	66%
Creator view page	443ms	284ms	55%	1845ms	843ms	118%
Dashboard	905ms	506ms	78%	2771ms	1245ms	122%
Editor display page	807ms	504ms	59%	2650ms	2165ms	22%
Edit Page	551ms	338ms	63%	1961ms	1461ms	34%
Editor submit edit	1524ms	1180ms	29%	5115ms	4189ms	22%

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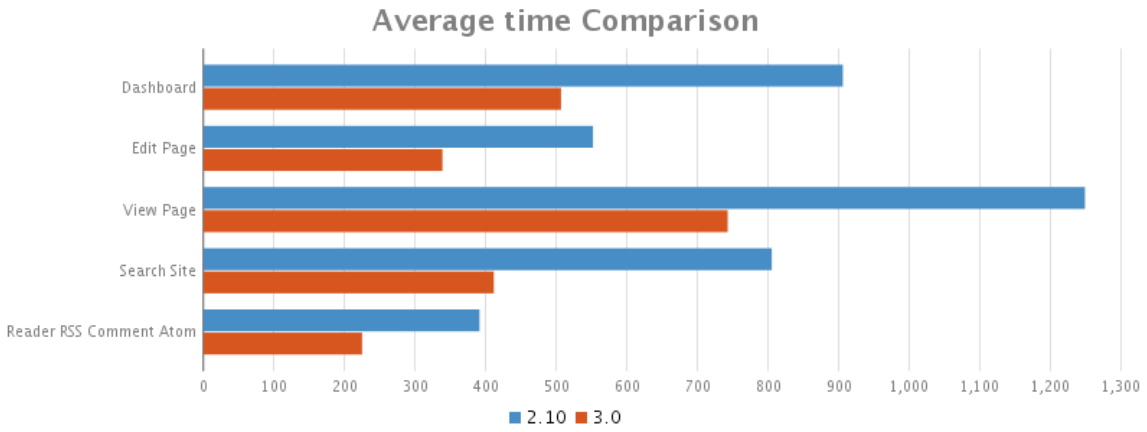
Go to log in page	409ms	419ms	-2%	1171ms	982ms	19%
Log In	520ms	346ms	50%	2124ms	700ms	203%
Quick Navigation Search	318ms	124ms	155%	1895ms	369ms	413%
Reader Not Found	866ms	492ms	76%	2439ms	1579ms	54%
Reader RSS Blogpost Atom	300ms	105ms	186%	1549ms	191ms	709%
Reader RSS Blogpost RSS2	299ms	98ms	203%	1954ms	183ms	965%
Reader RSS Comment Atom	390ms	224ms	74%	1946ms	931ms	108%
Reader RSS Comment RSS2	362ms	254ms	42%	1824ms	1196ms	52%
Reader RSS Page Atom	1098ms	777ms	41%	4804ms	2848ms	68%
Reader RSS Page RSS2	1126ms	807ms	39%	4532ms	3406ms	33%
View Page	1248ms	742ms	68%	4188ms	2839ms	47%
Reader for Space Page	1410ms	914ms	54%	3749ms	2487ms	50%
Search Site	804ms	411ms	95%	2611ms	1475ms	76%



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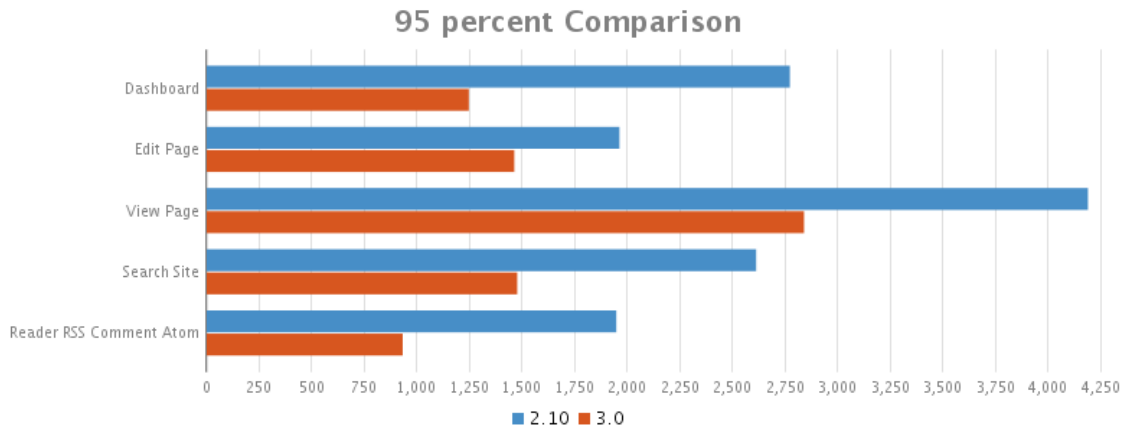

Medium Load Cluster

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	2477ms	919ms	169%	6365ms	2143ms	196%
Commentor submit comment	410ms	380ms	7%	1127ms	856ms	31%
Commentor view commented page	1029ms	595ms	72%	4193ms	1826ms	129%
Commentor view page	1367ms	786ms	73%	5264ms	2557ms	105%
Creator add page	611ms	214ms	184%	1463ms	414ms	253%
Creator submit new page	692ms	422ms	63%	1596ms	938ms	70%
Creator view page	329ms	131ms	150%	1034ms	205ms	404%
Dashboard	1319ms	395ms	234%	3787ms	556ms	581%
Editor display page	750ms	387ms	93%	2592ms	1420ms	82%
Edit Page	493ms	208ms	136%	1569ms	433ms	261%
Editor submit edit	1500ms	980ms	53%	4903ms	3435ms	42%

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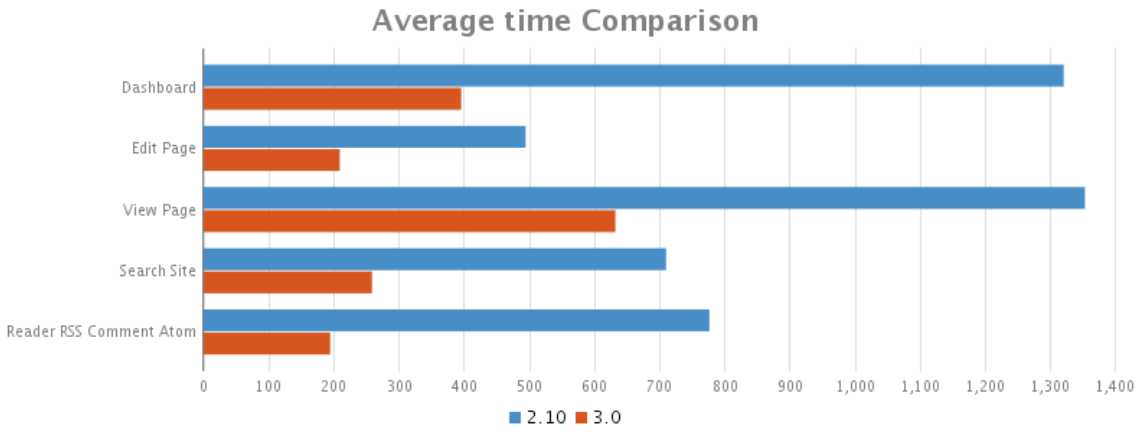
Go to log in page	854ms	357ms	138%	2898ms	547ms	429%
Log In	961ms	422ms	127%	3320ms	597ms	455%
Quick Navigation Search	183ms	56ms	226%	1178ms	107ms	1001%
Reader Not Found	663ms	351ms	89%	1562ms	554ms	181%
Reader RSS Blogpost Atom	499ms	73ms	577%	2674ms	118ms	2166%
Reader RSS Blogpost RSS2	453ms	65ms	589%	1863ms	122ms	1420%
Reader RSS Comment Atom	776ms	194ms	300%	3143ms	633ms	396%
Reader RSS Comment RSS2	742ms	186ms	297%	2930ms	576ms	408%
Reader RSS Page Atom	1378ms	618ms	122%	4693ms	2109ms	122%
Reader RSS Page RSS2	1497ms	584ms	156%	4767ms	1899ms	150%
View Page	1352ms	631ms	114%	4538ms	2246ms	102%
Reader for Space Page	1251ms	793ms	57%	3124ms	1736ms	79%
Search Site	709ms	258ms	174%	2652ms	399ms	564%



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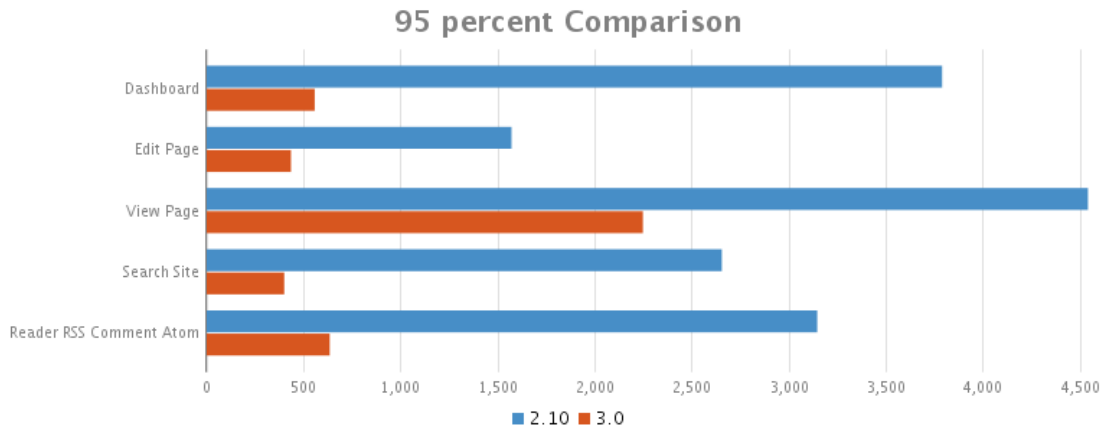

Medium Load Single Node

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	1619ms	1129ms	43%	3979ms	2387ms	66%
Commentor submit comment	306ms	338ms	-9%	805ms	794ms	1%
Commentor view commented page	737ms	628ms	17%	3386ms	1783ms	89%
Commentor view page	989ms	707ms	39%	4133ms	2168ms	90%
Creator add page	402ms	211ms	90%	765ms	391ms	95%
Creator submit new page	525ms	387ms	35%	1161ms	882ms	31%
Creator view page	256ms	233ms	9%	704ms	501ms	40%
Dashboard	554ms	382ms	44%	1685ms	634ms	165%
Editor display page	520ms	417ms	24%	1881ms	1065ms	76%
Edit Page	332ms	250ms	32%	831ms	620ms	34%
Editor submit edit	1199ms	961ms	24%	3949ms	3459ms	14%

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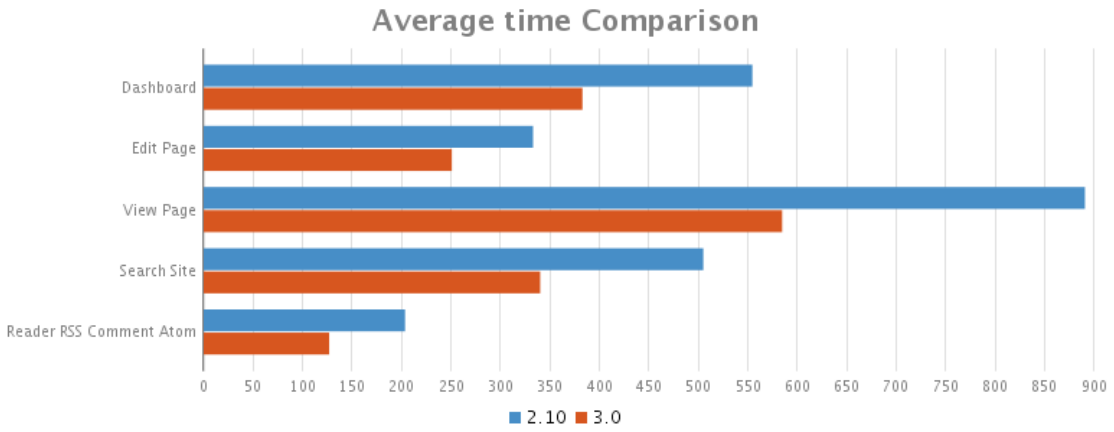
Go to log in page	274ms	456ms	-39%	486ms	2795ms	-82%
Log In	342ms	333ms	2%	774ms	480ms	61%
Quick Navigation Search	134ms	57ms	133%	597ms	110ms	439%
Reader Not Found	551ms	369ms	49%	1266ms	615ms	105%
Reader RSS Blogpost Atom	170ms	59ms	184%	637ms	67ms	838%
Reader RSS Blogpost RSS2	206ms	95ms	116%	754ms	97ms	675%
Reader RSS Comment Atom	203ms	126ms	60%	929ms	481ms	92%
Reader RSS Comment RSS2	369ms	151ms	143%	1602ms	477ms	235%
Reader RSS Page Atom	628ms	513ms	22%	2725ms	2147ms	26%
Reader RSS Page RSS2	800ms	547ms	46%	3381ms	2196ms	53%
View Page	890ms	584ms	52%	3259ms	1854ms	75%
Reader for Space Page	904ms	677ms	33%	2219ms	1566ms	41%
Search Site	505ms	340ms	48%	2006ms	598ms	235%



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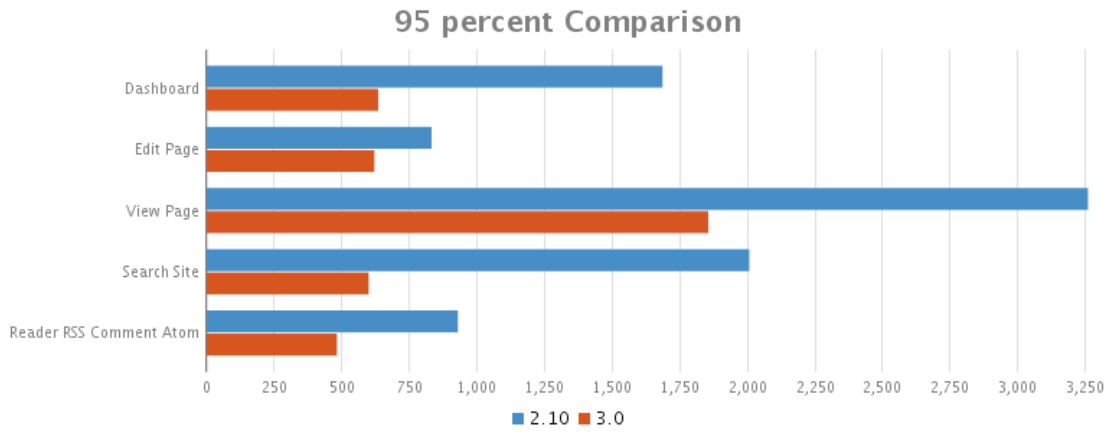

Peak Load Cluster

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	9179ms	2150ms	326%	22987ms	5695ms	303%
Commentor submit comment	999ms	859ms	16%	3175ms	2712ms	17%
Commentor view commented page	2760ms	1213ms	127%	8739ms	3908ms	123%
Commentor view page	3225ms	1672ms	92%	10941ms	5323ms	105%
Creator add page	2396ms	379ms	532%	7285ms	1487ms	389%
Creator submit new page	1913ms	858ms	122%	4850ms	2548ms	90%
Creator view page	1070ms	270ms	296%	2925ms	1130ms	158%
Dashboard	7383ms	466ms	1481%	19349ms	1429ms	1254%
Editor display page	2460ms	761ms	223%	7388ms	2737ms	169%
Edit Page	2609ms	357ms	630%	7143ms	1385ms	415%
Editor submit edit	4064ms	1821ms	123%	12599ms	6287ms	100%

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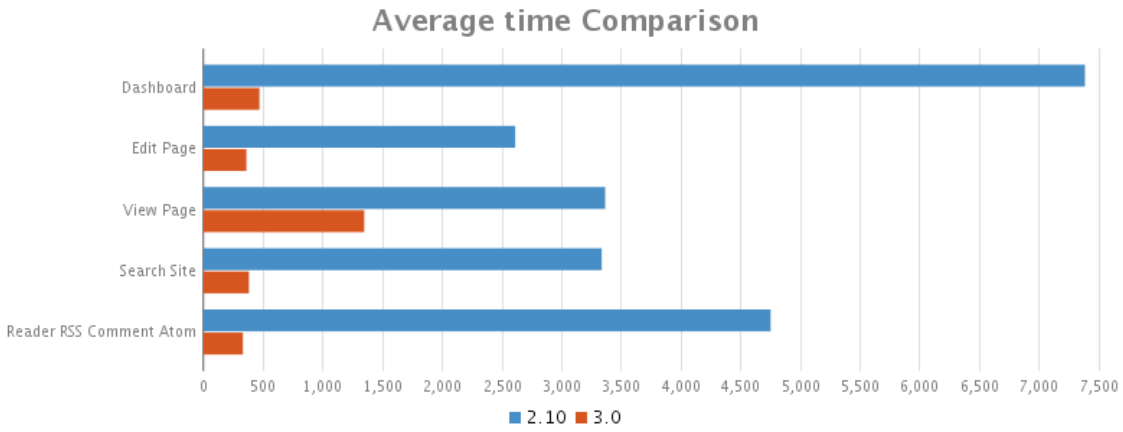
Go to log in page	3622ms	280ms	1191%	13728ms	497ms	2657%
Log In	3603ms	497ms	625%	12477ms	1045ms	1093%
Quick Navigation Search	1268ms	92ms	1273%	9515ms	435ms	2084%
Reader Not Found	1591ms	539ms	195%	3616ms	1622ms	122%
Reader RSS Blogpost Atom	4514ms	78ms	5688%	14570ms	136ms	10605%
Reader RSS Blogpost RSS2	4666ms	84ms	5416%	14554ms	134ms	10689%
Reader RSS Comment Atom	4750ms	328ms	1346%	14934ms	1545ms	866%
Reader RSS Comment RSS2	4723ms	302ms	1460%	16526ms	1412ms	1070%
Reader RSS Page Atom	6443ms	1012ms	536%	20556ms	4005ms	413%
Reader RSS Page RSS2	6287ms	1109ms	466%	17762ms	4175ms	325%
View Page	3363ms	1345ms	150%	10510ms	4717ms	122%
Reader for Space Page	3069ms	1161ms	164%	9475ms	3023ms	213%
Search Site	3334ms	378ms	780%	10560ms	1368ms	671%



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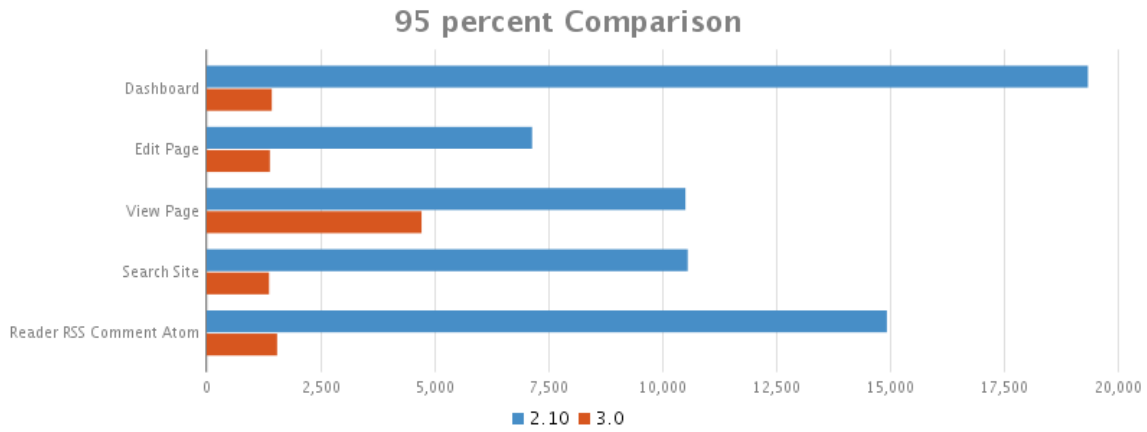

Peak Load Single Node

Scenario	Average time in 2.10	Average time in 3.0	Improvement	95 percent in 2.10	95 percent in 3.0	Improvement
Browse Label	4747ms	3207ms	47%	10951ms	7575ms	44%
Commentor submit comment	1517ms	1146ms	32%	4521ms	3611ms	25%
Commentor view commented page	3148ms	2173ms	44%	9222ms	6184ms	49%
Commentor view page	3302ms	2317ms	42%	9891ms	6410ms	54%
Creator add page	1693ms	934ms	81%	3904ms	3170ms	23%
Creator submit new page	2777ms	1959ms	41%	5812ms	5170ms	12%
Creator view page	1589ms	1065ms	49%	3523ms	3358ms	4%
Dashboard	2121ms	1420ms	49%	5492ms	3704ms	48%
Editor display page	2216ms	1502ms	47%	5081ms	4233ms	20%
Edit Page	1714ms	1062ms	61%	4008ms	3452ms	16%
Editor submit edit	3945ms	3205ms	23%	10523ms	9467ms	11%

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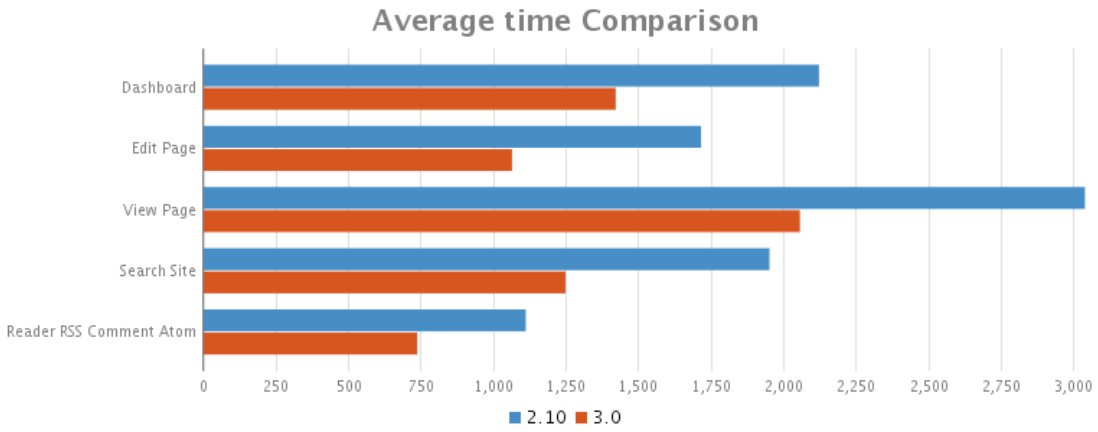
Go to log in page	934ms	818ms	14%	4544ms	4091ms	11%
Log In	807ms	913ms	-11%	2879ms	3531ms	-18%
Quick Navigation Search	1121ms	568ms	97%	4288ms	2704ms	58%
Reader Not Found	2159ms	1222ms	76%	4265ms	3472ms	22%
Reader RSS Blogpost Atom	864ms	531ms	62%	2796ms	2511ms	11%
Reader RSS Blogpost RSS2	1099ms	527ms	108%	4307ms	2691ms	60%
Reader RSS Comment Atom	1110ms	736ms	50%	3469ms	2760ms	25%
Reader RSS Comment RSS2	1159ms	863ms	34%	3959ms	3130ms	26%
Reader RSS Page Atom	2395ms	2300ms	4%	7588ms	7342ms	3%
Reader RSS Page RSS2	2661ms	2258ms	17%	8295ms	7922ms	4%
View Page	3038ms	2055ms	47%	7809ms	5702ms	36%
Reader for Space Page	3005ms	1990ms	51%	6298ms	4850ms	29%
Search Site	1950ms	1247ms	56%	4902ms	3647ms	34%



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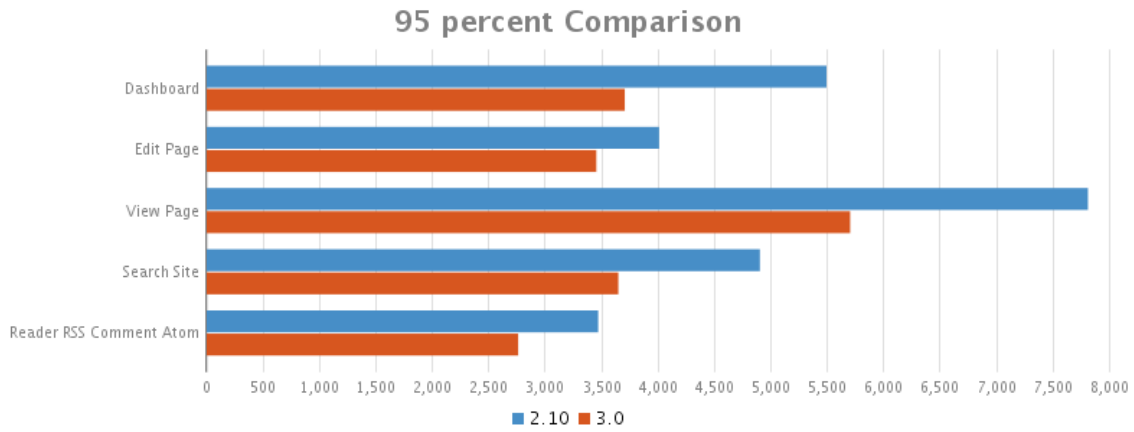

Issues Resolved in Confluence 3.0

Below are the issues resolved in Confluence 3.0, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. You can also take a look at the Confluence 3.0 Release Notes.

JIRA Issues (200 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-5853	Tables in PDF Exports have the same width for every column. Width should be appropriate to the column content.	Resolved	Fixed	96
	CONF-8436	Add support for page breaks in PDF page exports	Resolved	Fixed	25
	CONF-599	Changing header/footer of exported PDF document	Resolved	Fixed	21
	CONF-1790	Export Page Hierarchy	Resolved	Fixed	19
	CONF-6917	Include external images in PDFs	Resolved	Fixed	12
	CONF-3092	Selecting hierarchy in space during export	Resolved	Fixed	9
	CONF-6750	Custom layouts for PDF exports	Resolved	Fixed	7
	CONF-6756	Improve the Export Space pages selection to allow easy selection of a page and all it's children	Resolved	Fixed	5

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	CONF-11762	Support for DB2 9	Resolved	Fixed	1
	CONF-10692	Add logging as an audit trail for plugins being installed and enabled/disabled	Resolved	Fixed	0
	CONF-5415	Investigate performance gains of multicolumn and functional indexes in Postgres	Resolved	Fixed	0
	CONF-14181	Reduce blocking inside ognl.OgnlRuntime	Resolved	Fixed	0
	CONF-14516	Only aquire a lock for deferred operations cache if neccessary	Resolved	Fixed	0
	CONF-14533	Expose the id in content name search results	Resolved	Fixed	0
	CONF-14462	User Status	Resolved	Fixed	0
	CONF-14438	Deprecate com.atlassian.confluence.util.io.IOUtils	Resolved	Fixed	0
	CONF-14490	Add the ability to Hibernate to have more than one index per column	Resolved	Fixed	0
	CONF-13917	Improve performance by caching Userprofile-Pictures and Space-logos	Resolved	Fixed	0
	CONF-14059	synchronization inside ognl.EvaluationPool is a performance bottleneck in high load instances	Resolved	Fixed	0
	CONF-14705	Workaround for authentication login prompt	Resolved	Fixed	0

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		when editing Microsoft Office files			
	CONF-14434	Display the most recent edit by a user, even if other users edited the same pages afterwards	Resolved	Fixed	0
	CONF-15073	Add web-items plugin point on Dashboard for navigation items similar to the Page and BlogPost pages	Resolved	Fixed	0
	CONF-15647	change uploadpluin action to redirect to viewplugins.action on success	Resolved	Fixed	0
	CONF-12741	Space Permissions Screen not displayed properly on 1024x768 display	Resolved	Fixed	7
	CONF-13276	Restrict anonymous users from viewing user profiles.	Resolved	Fixed	7
	CONF-8298	Reduce the number of directories created under ${confluence.home}/attachments	Resolved	Fixed	5
	CONF-14156	Code Macro - Rich Text Editor removes spaces	Resolved	Fixed	4
	CONF-9928	WIki markup containing <tag> elements is erased when switching to the RTE	Resolved	Fixed	3
	CONF-13823	Editing a page with columns in RTE overwrites	Resolved	Fixed	2

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		columns width parameter and sets to 100%			
	CONF-11172	Line-break markup (\\) uses clear=all style, breaking blog post layout in 2.8	Resolved	Fixed	2
	CONF-14248	Exception given when Doc Import tries to create pages with duplicate names	Resolved	Fixed	1
	CONF-14798	pdf {viewfile} slide renderer creates vast amounts of garbage which lead to poor performance	Resolved	Fixed	1
	CONF-15809	Viewfile macros do not respect page restrictions	Resolved	Fixed	0
	CONF-15754	Jiraissues add icon mapping configuration is susceptible to XSS	Resolved	Fixed	0
	CONF-16184	Lock contentions in didyoumean code	Resolved	Fixed	0
	CONF-15146	Saving a page or Switching to wiki markup fails with java.lang.AbstractMethodError: getTextContent error in Weblogic	Resolved	Fixed	0
	CONF-15644	Did-you-mean search IncrementalIndexBuilder uses large amount of PermGen memory to store words	Resolved	Fixed	0
	CONF-14539	The XStream serializer only uses the plugins class loader	Resolved	Fixed	0
	CONF-15986	Page's attachments become	Resolved	Fixed	0

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		inaccessible when page is moved to a different space			
	CONF-15376	Gallery Macro XSS	Resolved	Fixed	0
	CONF-2079	More control over PDF exporting	Resolved	Fixed	232
	CONF-12836	Add ability to tune caches from the UI	Resolved	Fixed	36
	CONF-6919	Macros and plugins should be able to render themselves properly for PDF and HTML export	Resolved	Fixed	35
	CONF-986	Search inside of a tree of nested pages	Resolved	Fixed	22
	CONF-8945	Watch emails (change notifications) should contain html diffs	Resolved	Fixed	21
	CONF-8302	Allow recently updated macro to filter results by users	Resolved	Fixed	21
	CONF-8071	Generate PDF with specific cover page or custom layout	Resolved	Fixed	17
	CONF-7910	PDF Export of wide tables does not resize the table properly to fit the 'paper' size.	Resolved	Fixed	15
	CONF-1104	Allow configuration of page size and orientation in PDF Export	Resolved	Fixed	14
	CONF-5114	Provide ability to search within only part of a space	Resolved	Fixed	12
	CONF-8273	Copying a page to a new space	Resolved	Fixed	12

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		should not prepend 'Copy Of' to the copied page			
	CONF-7708	html macro loses formatting wiki markup and rich text	Resolved	Fixed	10
	CONF-6622	Ability to see all pages edited by user	Resolved	Fixed	10
	CONF-14058	Whitespace added between {section} and {column} every wysiwyg round-trip	Resolved	Fixed	9
	CONF-13524	Left navigation theme displays "news operations" instead of "page operations" when viewing the left nav main menu categories	Resolved	Fixed	9
	CONF-12083	Outlook 2007 is unable to read Confluence RSS feeds over HTTPS	Resolved	Fixed	7
	CONF-14328	Expose a remote API to set custom ordering of pages	Resolved	Fixed	7
	CONF-11552	height and width of embedded movies is changed to 32 by Rich Text Editor	Resolved	Fixed	7
	CONF-7225	PDF Export throws an exception when an unterminated macro is used in a heading	Resolved	Fixed	6
	CONF-11286	Allow ability to view a users profile after they've created a personal space	Resolved	Fixed	5
	CONF-14698	A number of	Resolved	Fixed	5

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		{{FelixOsgiContainerManager}} messages in the logs since the introduction of Atlassian Plugins 2			
	CONF-11878	PDF Customization Console	Resolved	Fixed	5
	CONF-7491	Escaped (+) and (-) in content revert to emoticons when opening for Edit	Resolved	Fixed	5
	CONF-9934	Full screen editor does not autosave to Drafts folder	Resolved	Fixed	5
	CONF-7027	Wiki markup for graphical emoticons not escaped by rich text editor	Resolved	Fixed	5
	CONF-5135	Ability to search part of the page tree	Resolved	Fixed	4
	CONF-7398	Make PDF export fonts and styles themeable	Resolved	Fixed	4
	CONF-5079	Partial terms do not return any results when searching for usernames, full names or emails in "manage users"	Resolved	Fixed	4
	CONF-14175	Confluence Macro Browser	Resolved	Fixed	4
	CONF-8034	Serve attachments, including embedded images, with cache headers	Resolved	Fixed	4
	CONF-3594	Activity report for content a user has been involved with	Resolved	Fixed	4
	CONF-11799	Editing tables with Rich Text -	Resolved	Fixed	3

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		Tab button jumps to location in Firefox 3			
	CONF-15040	Confluence 2.10.x incompatible with WebSphere - plugins do not load	Resolved	Fixed	3
	CONF-4128	Can't copy and paste text from Confluence generated PDFs	Resolved	Fixed	3
	CONF-9234	Label order in popular-labels macro changes when using a space key parameter	Resolved	Fixed	3
	CONF-14505	Wildcards in "manage user" searches cause performance problems with large LDAP repositories	Resolved	Fixed	3
	CONF-7623	PDF export is missing the title information from the code macro in the page	Resolved	Fixed	3
	CONF-14192	cut/paste row from table (move rows)	Resolved	Fixed	3
	CONF-9901	Export space to PDF or HTML fails if the space has attachments	Resolved	Fixed	3
	CONF-12321	Update attachment comment should not update last modification date of all historical versions	Resolved	Fixed	3
	CONF-14791	Confluence doesn't start up on OpenJDK because it requires com.sun.image.codec.jpeg.JPEGImageEncoder	Resolved	Fixed	2

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	CONF-5990	export to PDF truncates HTML links to external sites	Resolved	Fixed	2
	CONF-7425	Error in pdf export using content formatting macro	Resolved	Fixed	2
	CONF-12634	PDF Exporter doesn't handle situations when JTidy fails	Resolved	Fixed	2
	CONF-7209	Em-dash inserted in Rich Text Edit breaks after saving or changing to WIKI markup mode	Resolved	Fixed	2
	CONF-8709	On Space Export screen add the ability to select all children of a page for export	Resolved	Fixed	2
	CONF-4334	Escaping smileys in wiki markup doesn't work	Resolved	Fixed	2
	CONF-13094	Export page tree should be use subtree selection	Resolved	Fixed	2
	CONF-4584	Users with Acrobat Reader 7 installed cannot open PDF files in browser.	Resolved	Fixed	2
	CONF-13933	Add optional diff to email notifications and improve the diffing logic	Resolved	Fixed	2
	CONF-14072	Alphabetical listing of pages does not work when there are too many pages beginning with a letter	Resolved	Fixed	2
	CONF-6865	Side by side images will expand across	Resolved	Fixed	2

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		the bottom page margin on PDF Export.			
	CONF-3904	Hint macro not displaying correctly in page created from PDF Export	Resolved	Fixed	2
	CONF-12366	Image width and height are to 32 by wysiwyg editor for missing image files.	Resolved	Fixed	2
	CONF-13188	Code macro breaks PDF export when there is a pattern //<keyword> <keyword>	Resolved	Fixed	2
	CONF-15864	Switching between Rich text editor and Wiki markup editor causes code macro add line space	Resolved	Fixed	2
	CONF-14783	Encoding test should use a GET submission to mimic quick search	Resolved	Fixed	1
	CONF-9603	Restore recent activity to a user profile screen	Resolved	Fixed	1
	CONF-8453	Links created via the Rich Text Editor dialog lose the space character immediately after the link	Resolved	Fixed	1
	CONF-14282	Section macro loses parameters when switching between RTE and Wiki Markup	Resolved	Fixed	1
	CONF-15450	If a user has no text in their profile, XML-RPC calls	Resolved	Fixed	1

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		throw a null pointer exception (NPE)			
	CONF-14733	Exessive logging during export word page	Resolved	Fixed	1
	CONF-14724	Clicking on thumbnail images in IE prompts for download instead of opening popup with large image	Resolved	Fixed	1
	CONF-8647	Removing an entire table in Rich Text Editor is not intuitive	Resolved	Fixed	1
	CONF-12612	Menus look bad in IE7	Resolved	Fixed	1
	CONF-14128	Reduce blocking in Velocity when accessing cache	Resolved	Fixed	1
	CONF-14491	Add a system property to enable logging of Macros used.	Resolved	Fixed	1
	CONF-10166	Inconsistent escaping of emoticons in rich-text edit mode	Resolved	Fixed	1
	CONF-8320	Search macro output inconsistent with notation guide	Resolved	Fixed	1
	CONF-12894	Slow page rendering when using Confluence via HTTPS / SSL due to lack of caching	Resolved	Fixed	1
	CONF-14222	i18n support for macro browser	Resolved	Fixed	1
	CONF-3609	PDF export with png image cannot be read with Adobe Reader	Resolved	Fixed	1
	CONF-13684	Inserting a link in RTE behaves	Resolved	Fixed	1

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		inconsistently across different browsers			
	CONF-7868	PDF Export of page with user macros fail	Resolved	Fixed	1
	CONF-8322	PDF export fails under certain unfortunate naming of pages and headings	Resolved	Fixed	1
	CONF-13814	Error removing space with custom space logo and attachments stored in the database	Resolved	Fixed	1
	CONF-6445	Visual page diff tool: Only display that part of a diff that actually has changes	Closed	Fixed	1
	CONF-15120	Can't install Office Connector firefox plugin because 'Signing could not be verified'	Resolved	Fixed	1
	CONF-4211	Page doesn't get exported if its parents are not exported.	Resolved	Fixed	1
	CONF-7432	PDF export fails when uploaded font contains a space in its path	Resolved	Fixed	1
	CONF-12058	popular-labels macro doesn't order the labels alphabetically	Resolved	Fixed	1
	CONF-9736	Large embedded images are converted to a thumbnail size when exported into the PDF format	Resolved	Fixed	1
	CONF-7412	Text inside code macro displays outside boundaries in exported PDF	Resolved	Fixed	1

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	CONF-7749	Don't block index readers during index updates and optimization	Resolved	Fixed	1
	CONF-14441	PDF export of noformat-content displayed with variable font (wrongly)	Resolved	Fixed	1
	CONF-13843	Recently-Updated macro throws a BooleanQuery$TooManyClauses exception	Resolved	Fixed	1
	CONF-13769	The full screen view has no scroll bar	Resolved	Fixed	1
	CONF-13825	NullPointerException when thumbnail cannot be generated	Resolved	Fixed	1
	CONF-14029	Javascript error on "Add Members" in Manage Groups in IE	Resolved	Fixed	1
	CONF-6860	Blank lines in a table row are lost in a PDF Export of the table	Resolved	Fixed	1
	CONF-13795	Index searcher not properly closed after searches	Resolved	Fixed	1
	CONF-13663	Links within Charting Portlet displaying results inside IFrame	Resolved	Fixed	1
	CONF-14431	Write Anti-XSS documentation for plugin developers	Resolved	Fixed	0
	CONF-13846	Wildcard and range queries always converted to lower case	Resolved	Fixed	0
	CONF-14121	Use putAll() instead of put() on the	Resolved	Fixed	0

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		Coherence cache			
	CONF-14098	Remove unncessary sychronization on Hibernates UpdateTimestampsCache	Resolved	Fixed	0
	CONF-13911	Using heading formats in lists and tables inserts unwanted new lines @ cursor	Resolved	Fixed	0
	CONF-15643	Sensible default settings for Remote API and Public Sign Up	Resolved	Fixed	0
	CONF-15731	Document changes made for CONF-15643	Resolved	Fixed	0
	CONF-15703	One pagetree-macro in a pagelayout prevents another pagetree-macro on a page from working correctly	Resolved	Fixed	0
	CONF-15253	Jsonator does not encode string according to the spec	Resolved	Fixed	0
	CONF-14081	Allow disabling of JMX via a system property	Resolved	Fixed	0
	CONF-13469	Replace LuceneSmartListManager with V2SearchSmartListManager and ensure backwards compatibility	Resolved	Fixed	0
	CONF-13865	Admin users should be able to see content in all spaces when using QuickNav	Resolved	Fixed	0
	CONF-13945	History version comparison should never be a POST	Resolved	Fixed	0

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	CONF-15720	Include-Excerpt macro doesn't include excerpts until the page has been viewed	Resolved	Fixed	0
	CONF-9615	Cluster information page should tell you which node you're currently on.	Resolved	Fixed	0
	CONF-15396	Improve performance of TransactionalCacheFactory	Resolved	Fixed	0
	CONF-14272	Remove deprecated ThumbnailManager classes	Resolved	Fixed	0
	CONF-14257	Avatars should be served with proper cache control headers	Resolved	Fixed	0
	CONF-11576	Add a remove link button to the Rich Text editor	Resolved	Fixed	0
	CONF-13858	Rendering of insert table dialog poor	Resolved	Fixed	0
	CONF-14688	Improve performance of HtmlSafe annotation checking	Resolved	Fixed	0
	CONF-5782	Selecting several lines and applying the heading style produces incorrect markup	Resolved	Fixed	0
	CONF-9038	PDF Generation fails when bgcolor wiki markup is used	Resolved	Fixed	0
	CONF-15251	Remove Table Layout from Profile Pages	Resolved	Fixed	0
	CONF-15119	Update to atlassian-plugins 2.2	Resolved	Fixed	0
	CONF-15566	Upgrade atlassian xwork	Resolved	Fixed	0

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		to include XWORK-16 fix			
	CONF-15550	Remove dependency on atlassian-bucket	Resolved	Fixed	0
	CONF-14015	500page.jsp always reports Confluence User as anonymous	Resolved	Fixed	0
	CONF-15157	viewfile macro does not work for non printable PDFs	Resolved	Fixed	0
	CONF-14073	Deprecate ThumbnailInfoFactory	Resolved	Fixed	0
	CONF-15059	Deprecate com.atlassian.confluence.cache.CacheManagerKeys	Resolved	Fixed	0
	CONF-11749	Uploaded pdf fonts break when the home directory is moved.	Resolved	Fixed	0
	CONF-14689	Comment edits do not trigger email notification	Resolved	Fixed	0
	CONF-12264	Extra newline appears when converting to H2 in a new page	Resolved	Fixed	0
	CONF-13490	Attachments can be moved to a page which the user cannot access	Resolved	Fixed	0
	CONF-14969	Remove "Open Web Folder" link from attachment lists	Resolved	Fixed	0
	CONF-15484	Cache personal information objects to improve performance	Resolved	Fixed	0
	CONF-15385	Confluence runs out of file handles when running the did you mean index	Resolved	Fixed	0

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		job in our performance build			
	CONF-14318	Preview macro in macro browser	Resolved	Fixed	0
	CONF-14406	User Profile Sidebar in personal spaces	Resolved	Fixed	0
	CONF-14411	Network Macro	Resolved	Fixed	0
	CONF-15047	Users can remove pages with remove page permission via moving the page	Resolved	Fixed	0
	CONF-14339	Avoid uneccessary cluster replication of the spacekey cache	Resolved	Fixed	0
	CONF-11371	ConfluenceEncodingFilter removes Unicode dashes, quotes, bullets and ellipses	Resolved	Fixed	0
	CONF-13844	Allow plugins to indicate whether they should be subject to automatic HTML encoding	Resolved	Fixed	0
	CONF-14343	Add and display macro parameter descriptions in macro browser	Resolved	Fixed	0
	CONF-12191	Page title font should match the header fonts when printing	Resolved	Fixed	0
	CONF-14559	RTE does not deal with <foo> correctly.	Resolved	Fixed	0
	CONF-15345	Follow macro does not render the 'Full theme' (large icons) when previewing it either in the	Resolved	Fixed	0

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		Macro Browser or on the page itself in IE7.			
	CONF-14651	Improve cluster performance by avoiding cache puts for already-cached objects	Resolved	Fixed	0
	CONF-15534	Add a new search filter to allow in place pagination of search results	Resolved	Fixed	0
	CONF-14298	Last modifier and creator username gets set to null when modifying CEOs from outside a request	Resolved	Fixed	0
	CONF-14273	Reduce DB load for loading pages	Resolved	Fixed	0
	CONF-15531	BuildNumberCondition would make it easier to control display of web items in plugins	Resolved	Fixed	0
	CONF-13893	Add context menus for the RTE	Resolved	Fixed	0
	CONF-14517	Look and Feel improvements to User Profile	Resolved	Fixed	0
	CONF-14495	Remove public logger in VersionedHibernateObjectDao	Resolved	Fixed	0
	CONF-14938	viewfile causing OutOfMemoryError for Powerpoint files that contain embedded PICT file (Mac OS X)	Resolved	Fixed	0
	CONF-7484	Pages with image larger than the PDF 'paper' size will cause a failure during PDF export.	Resolved	Fixed	0

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	CONF-9519	Allow search results to be bookmarked	Resolved	Fixed	0
	CONF-14531	Add filtering/search box to macro browser	Resolved	Fixed	0
	CONF-14523	Insert macro form for macros that don't provide parameter metadata	Resolved	Fixed	0
	CONF-14093	Implement Hibernate's ReadWriteCache in a non blocking way	Resolved	Fixed	0
	CONF-14094	Confluence Support Request Improvements	Resolved	Fixed	0
	CONF-7633	Error in PDF Export after the first call of a sql-macro producing a table output	Resolved	Fixed	0
	CONF-15061	Extract build information responsibilities from GeneralUtil	Resolved	Fixed	0
	CONF-14823	Dynamic tasklist, widget macros and plugin repository don't work after upgrade to Confluence 2.10.1 or 2.10.2	Resolved	Fixed	0
	CONF-14213	Correct MySQL collation for Confluence database.	Closed	Fixed	0

Above are the issues resolved in Confluence 3.0, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker.

Confluence 3.1.1 Release Notes

27 January 2010

Confluence 3.1.1 is a recommended upgrade which fixes a number of issues.

Performance Enhancements and Fixes

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This release fixes two bugs that affected configuration of Confluence's internal caches. The first bug caused an error to be thrown when a Confluence internal cache was either increased to over 5000 elements (from under 5000) or resized when it was already over 5000 elements, via the Administration Console. The second bug caused changes made to Confluence's internal caches via the Administration Console to be lost after a Confluence restart. This meant that caches could only be resized by manually editing the cache configuration files (XML).

We identified an issue where Hibernate was not cleaning up its session correctly when closed, causing memory leaks. We have changed the way that Hibernate SessionImpl objects are stored which should fix this problem and reduce memory consumption.

A system property (`atlassian.user.experimentalMapping`) was introduced in Confluence 2.10 to fix performance problems noted when adding a local user to a local user group. We have fixed an bug with this system property that prevented users from being removed from user groups via the Administration Console, when the system property is set.

Other Fixes

We have found a bug that periodically caused an error to display when trying to view the 'Confluence Gadgets' window. This has now been fixed.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 3.1 yet?

Take a look at the new features and other highlights in the Confluence 3.1 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.1.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (46 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-18137	Updating Caches via Administration > Cache Statistics, will update the ehcache.xml file, but upon restart all the caches are set back to default.		Resolved	Fixed
	CONF-14989	Possible net.sf.hibernate.impl.SessionImpl Memory Leaks		Resolved	Fixed
	CONF-18095	macros that do not provide parameter		Resolved	Not a bug

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		information are rendered poorlt			
	CONF-18030	NullPointerException thrown while browsing/searching for users (LDAP configuration only)		Resolved	Fixed
	CONF-17898	Index Queue flush can miss entries		Resolved	Fixed
	CONF-17884	QuickNav gadget login button is missing		Resolved	Fixed
	CONF-17246	Resizing caches does not correctly update keyArray in EhCache's MemoryStore:keyArray		Resolved	Fixed
	CONF-17039	Confluence upgrade failed due to database case sensitivity		Resolved	Fixed
	CONF-12319	Adding users to a large group is slow with default (Hibernate) user management		Resolved	Fixed
	CONF-18164	The log4j properties file included in builds is incorrect		Resolved	Fixed
	CONF-18093	DefaultUserProfileService tries to modify an unmodifiable collection (PATCH)		Resolved	Fixed
	CONF-18024	Auto support requests from 3.1 are setting "affects version" to 2.5		Resolved	Fixed
	CONF-17973	Link dialog history can list blog posts as pages instead		Resolved	Fixed

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	CONF-17946	Pdf export - wrong content type.		Resolved	Fixed
	CONF-17932	Pull down menus do not appear in IE6 when the username is longer than 26 characters		Resolved	Fixed
	CONF-17864	Drag and drop plugin on edit page causes javascript memory leak in IE		Resolved	Fixed
	CONF-17847	When inserting a link to an attachment in IE without specifying alias it inserts \^attachment as an alias		Resolved	Fixed
	CONF-16643	Thumbnails not working in 3.0 for the same JPEG file as still does in 2.7.3		Resolved	Fixed
	CONF-16176	NPE given by tasklist user picker when not logged in		Resolved	Fixed
	CONF-14005	First install page links to email and forums when it should link to support.		Resolved	Fixed
	CONF-11838	Extra <html> in Custom HTML field breaks Custom HTML edit page		Resolved	Fixed
	CONF-7735	Cannot edit or remove attachments with en dash or em dash in the filename		Resolved	Fixed
	CONF-18103	Userpicker loses search term when changing pages in advance search		Resolved	Fixed

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	CONF-18100	Change 500page.jsp so it informs users where to zip log files and submit to us		Resolved	Fixed
	CONF-18043	Fix misleading text on referrers admin screen		Resolved	Fixed
	CONF-18038	Long Breadcrumbs are displayed on the next line in IE8 Standards mode		Resolved	Fixed
	CONF-18007	Debug logging contains the message 'AND YERRRRRR MAWWWWWW WWWWWWWW W' which isn't meaningful enough to be helpful		Resolved	Fixed
	CONF-17998	Unnecessary 20px Macro Browser icons in images subfolder		Resolved	Fixed
	CONF-17986	Browse: Attachments: Current sorted column is not indicated for space attachments, which is inconsistent with page attachments		Resolved	Fixed
	CONF-17984	Browse: Attachments: Sort by Creation Date is incorrect		Resolved	Fixed
	CONF-17960	Content added after setup but before the initial reindex finishes will not be in the index		Resolved	Fixed
	CONF-17896	Confluence Administrators		Resolved	Fixed

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		are unable to access the support utility			
	CONF-17877	RTE has whitespace in drafts mode where the wiki markup help used to be		Resolved	Duplicate
	CONF-17784	Include the support zip utility in the raise support request form		Resolved	Fixed
	CONF-17631	No spinner on page tree indicating progress when opening the tree in the move page dialog		Resolved	Fixed
	CONF-17273	Markup editor doesn't work nicely with IE8's "Find In This Page" feature		Resolved	Fixed
	CONF-17114	Mouse Select in the User Follow Box doesn't always work		Resolved	Fixed
	CONF-16974	Advanced macros do not accept a space as a separator for the author parameter		Resolved	Fixed
	CONF-16852	"Now following Anonymous" instead of actual user		Resolved	Fixed
	CONF-16815	Incorrect docs for {float} macro		Resolved	Not a bug
	CONF-16088	Content by label macro is missing both the 'author' and 'operator' parameters from the macro browser.		Resolved	Fixed
	CONF-16060	Space details macro doesn't display its description		Resolved	Fixed

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		correctly - instead, showing some internal code variable.			
	CONF-14494	Borders are not applied to image thumbnails		Resolved	Fixed
	CONF-13032	Download All attachments link breaks when servlet context contains capital letter		Resolved	Fixed
	CONF-10671	export throws null pointer exception when servlet context contains capital letter		Resolved	Fixed
	CONF-10653	Confluence is not able to move pages from one space to another that contain asterisks		Resolved	Fixed

If you like, you can open a report on jira.atlassian.com showing all resolved and closed issues in this release.

Confluence 3.1.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.1.1**. Confluence 3.1.1 is a recommended upgrade which fixes a number of issues. For more details, please read the Confluence 3.1.1 Release Notes.

On this page:

- Upgrade Procedure
- Useful Plugins

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 3.1.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.1.1 Release Notes.
   - If you are upgrading from 2.1 or earlier, please pay careful attention to the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see

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whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.1.2 Release Notes

3 March 2010

Confluence 3.1.2 is a recommended upgrade which fixes a number of bugs. Please see the 'Updates and Fixes in this Release' section below for details.

We identified a bug (see CONF-18437) that caused errors to be thrown whenever the macro browser was used in a theme other than the default theme. This bug also caused the preview mode to hang when the preview tab was clicked (i.e. the loading icon would spin forever without the preview mode loading). This has been fixed for all themes bundles with Confluence. If you are using a custom theme, you will need to implement a custom workaround, as described in the related JIRA issue.

Don't have Confluence 3.1 yet?

Take a look at the new features and other highlights in the Confluence 3.1 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.1.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

There's a complete list of fixes below. Click a specific issue to see details of the fix. Click here to open a report on http://jira.atlassian.com for Resolved or Closed issues in Confluence 3.1.2.

JIRA Issues (21 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-18381	NPE setting up Demo content on a custom db		Resolved	Fixed
	CONF-18218	LDAP users with uppercase usernames cannot add favourites		Resolved	Fixed
	CONF-18437	Macro browser and Preview tab appears to be broken for all themes EXCEPT shipped default theme		Resolved	Fixed

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	CONF-18207	Global colour scheme can not be applied to space-theme		Resolved	Fixed
	CONF-18202	German Umlauts break the QuickSearch		Resolved	Fixed
	CONF-17311	Reword theme descriptions		Resolved	Fixed
	CONF-16389	Mail page plugin throws null pointer due to invalid LDAP membership		Resolved	Fixed
	CONF-14820	Inherited page permissions are not wrapped correctly in UI		Resolved	Fixed
	CONF-13627	Modz Detector for Confluence - track your file system changes automatically		Resolved	Fixed
	CONF-13529	New "Configure whitelist" admin screen loses breadcrumbs		Resolved	Fixed
	CONF-7473	Confluence uses the server's locale for dates and not the default language		Resolved	Fixed
	CONF-18271	cachecontents.jsp page is broken		Resolved	Fixed
	CONF-18235	Left Nav Theme is not showing the correct text		Resolved	Fixed
	CONF-18194	viewxls macro in the macro browser does not work correctly when inserting attachments from a comment on a blog		Resolved	Fixed
	CONF-18144	Macro browser macro alias		Resolved	Fixed
	CONF-17533	Uploading new version of attachment creates duplicate		Resolved	Fixed

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		options in the Insert Image Dialog			
	CONF-17213	Warning on new license version still appears after license upgrade to v2		Closed	Cannot Reproduce
	CONF-16585	Confluence allows you to change the title of a page to whitespace, which prevents editing and access unless you know the pageid.		Resolved	Fixed
	CONF-15919	Disabled Users Can Be Followed		Resolved	Fixed
	CONF-17028	Email link should not appear for pages that the user is restricted from viewing		Resolved	Fixed
	CONF-13832	Invalid content label entries are populated in the team label entry field on the Space Admin -> Edit Space Labels screen when validation fails (& vice versa)		Resolved	Fixed

Confluence 3.1.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.1.2**. Confluence 3.1.2 is a recommended upgrade which fixes a number of bugs. For more details, please read the Confluence 3.1.2 Release Notes.

On this page:

- Upgrade Notes
- Upgrade Procedure
- Useful Plugins

Upgrade Notes

There are no upgrade tasks specific to Confluence 3.1.2. Please refer to the 'Upgrade Procedure' section below.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest

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version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 3.1.2, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.1.2 Release Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.1 Release Notes

> Confluence 3.1 fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

8 December 2009

With great pleasure, Atlassian presents Confluence 3.1.

Confluence 3.1 is a major release which presents a number of new features and enhancements. With Confluence 3.1, we introduce **OpenSocial Gadgets**, which allow you to add functionality from other web applications or websites, such as JIRA 4.0+, iGoogle or Gmail, directly into a Confluence page or blog post. Confluence also provides its own Gadgets that can be embedded into other web applications.

The new **Drag-and-Drop** feature is a major step forward in Confluence file attachment. With Drag-and-Drop, you can attach one or more files to a page or blog post simply by dragging them from your desktop onto the Confluence page. You can also embed images, Office documents and PDF files into a page or blog post while in edit mode simply by dragging and dropping them into the rich text editor.

Office 2007 documents are now fully supported in Confluence so features like document import, edit in Word and embedding documents in a page now work with Office 2007 files. With the new **Move Page** feature, you can more quickly and reliably move the page you are editing or viewing to a new parent page, even to one within a new space. An enhanced **Image Browser** lets you preview images before embedding them into a page. You can also attach image files to a page by dragging and dropping them into the Image Browser window itself. A new **Page Restrictions** dialog lets you view and apply page restrictions without editing the page. **Draft Comparisons** allow you to view changes made to a page or blog post before they are actually saved.

Other editor enhancements include **Exit Notifications** to prevent the loss of unsaved content in a page, blog post or comment, a new **Insert Menu** for the rich text editor, fields that auto-complete in the macro browser and improved rich text editor speed.

Confluence 3.1 now fully supports Internet Explorer 8, Safari 4 and Firefox 3.5. Other smaller improvements include the ability to add pages or blog posts directly from the Confluence dashboard, a facility to link to Confluence pages more easily and the ability to expand activity streams at the click of a button.

Finally, we have also introduced a simplified installation process for evaluators to help get Confluence up and

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running quickly. Simplified Confluence evaluation installers have been created for MacOS X and Windows operating systems.

Highlights of this Release:

- Introducing Gadgets
- Drag-and-Drop
- Office 2007 Support
- New 'Move Page' Feature
- Enhanced Image Browser
- Draft Comparisons
- Page Restrictions Dialog Box
- Other Editor Enhancements
  - Edit Mode Exit Notification
  - New Rich Text Editor Insert Menu
  - Macro Browser Smart Fields
  - Rich Text Editor Speed
- New Web Browser Versions Supported
- Other Improvements
  - Add Pages or Blog Posts from the Dashboard
  - New 'Link to this page' feature
  - Get 'More' from your Activity Streams
  - User Interface Performance Improvements
  - Other Small Enhancements and Improvements to Confluence

Responding to your Feedback:

300+ votes satisfied

DOWNLOAD latest version

- Thank you for all your issues and votes. Keep logging, to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

Upgrading from a previous version of Confluence
• Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*** • Please refer to the Confluence 3.1 Upgrade Notes for further essential information about **plugi ns** and other factors affecting your upgrade.

Highlights of Confluence 3.1

1

Introducing Gadgets

Gadgets are small objects that offer dynamic content and functionality which may be served by any OpenSocial-compliant web application, such as JIRA 4.0+, Confluence or non-Atlassian applications such as iGoogle and Gmail. Confluence can interact with any gadgets that support the OpenSocial specification.

- Confluence supports the use of gadgets in pages and blog posts, which are accessible through the macro browser.
- Confluence can also serve its own gadgets, for use in any other OpenSocial-compliant web application. Gadgets bundled with Confluence include:
  - **Activity Stream** — This gadget shows a list of recent activities that have occurred on the

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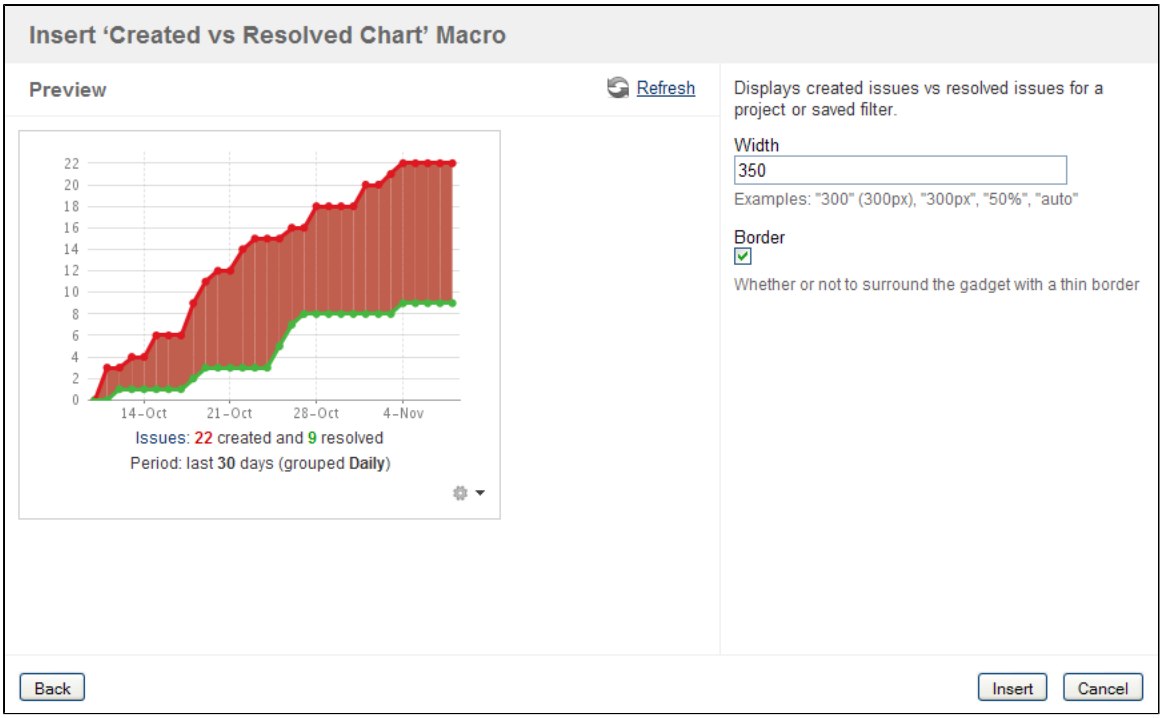
Confluence server, such as the addition of new pages, blog posts or comments, content edits, status updates and so on.

- **Quick Navigation Aid** — This gadget provides heading and content search capabilities on a Confluence server.
  Your Confluence installation can also serve these gadgets in any of its own pages or blog posts.
  For more information on using these gadgets, refer to Confluence Gadgets.

Inserting a JIRA Gadget onto a Confluence Page



2

Drag-and-Drop

The new 'drag-and-drop' feature allows you to drag one or more file(s) which are accessible from your computer and drop them directly into a Confluence page or blog post.

- Files can be attached to a page or blog post by dropping them directly onto the page view or the 'Attachments' list associated with the page.
- Image files can be attached to a page or blog post by dragging them from your computer directly onto the Image Browser.
- Image and Office files can be added directly into your Confluence page or blog post content by dropping them into the rich text editor's editor window.

For more information about this feature and on how to set it up, refer to the Drag-and-Drop documentation.

Screenshot: 'Drag-and-Drop' Images or Other Files Directly onto a Page

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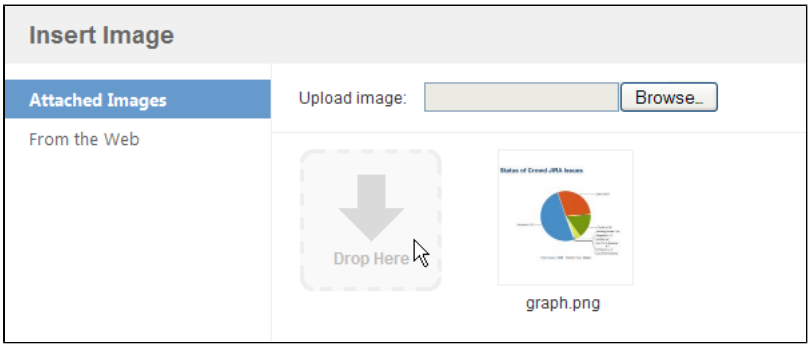
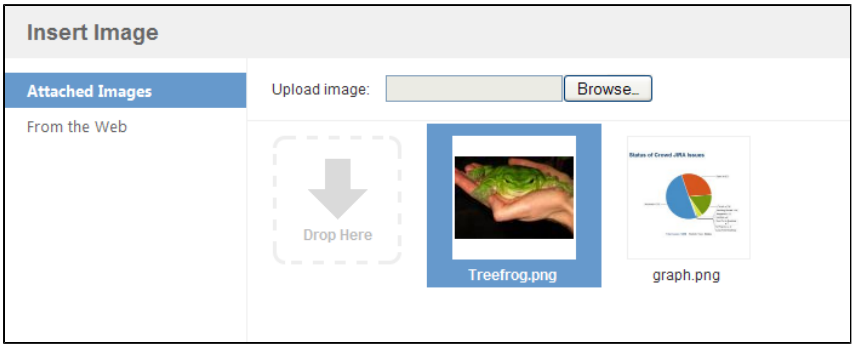
Video: Using Drag-and-Drop

app.episodic.com

Download Video

Screenshots: Attaching an Image to the Image Browser





Screenshot: Attaching Multiple Files to an 'Attachments' list

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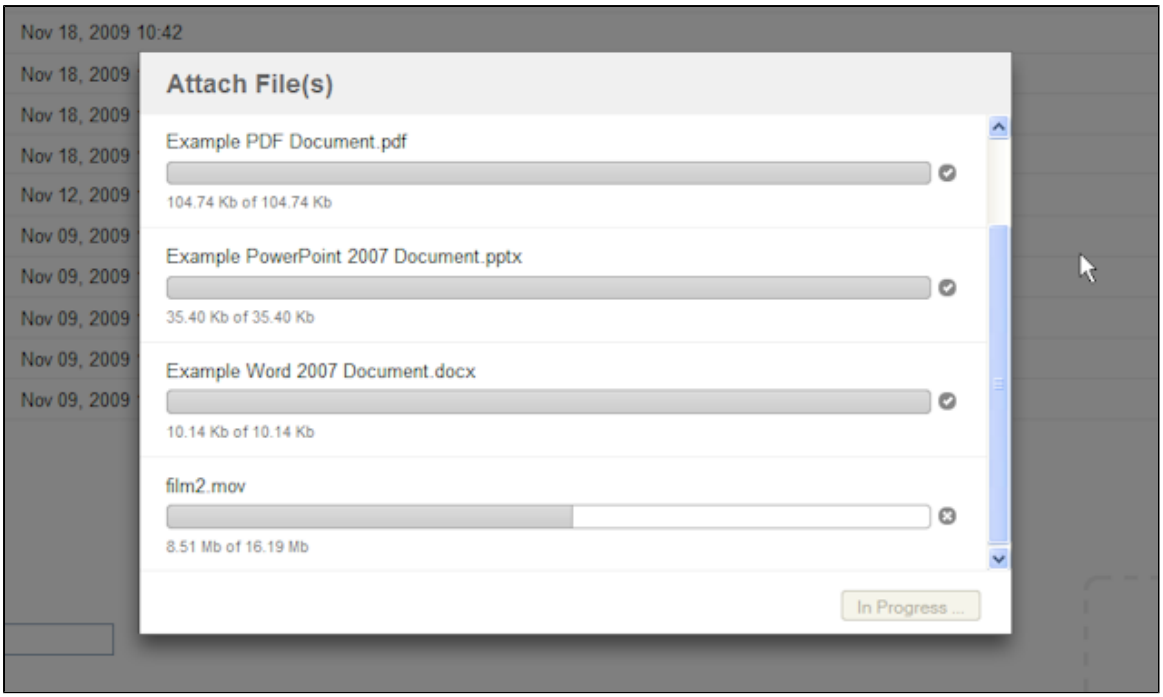


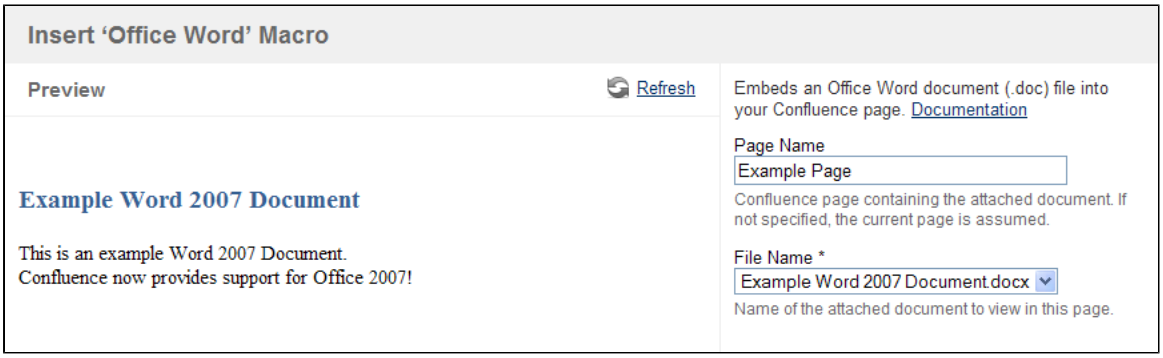
3

Office 2007 Support

Confluence now provides full support for the new Office 2007 file formats, allowing you to view and edit content from Microsoft Word 2007 (`.docx` and `.dotx`), PowerPoint 2007 (`.pptx` and `.potx`) and Excel 2007 (`.xlsx`) files.

- Along with existing Microsoft Office versions, Confluence now fully indexes Microsoft Office 2007 files and their content can be searched by Confluence.
- Using Confluence's Office connector macros, you can insert Word, PowerPoint or Excel 2007 files directly into your Confluence page or blog post.
- Office files can be edited directly from any page or blog post or their list of attachments.
  If you use the Firefox browser to work with Confluence, don't forget to reconfigure the Firefox add-on (WebDAV Launcher options) to handle the new Office 2007 file extensions. Otherwise, you will not be able to edit these new Office 2007 file formats from Confluence.

Screenshot: Embedding an Office 2007 Document



This feature uses technology licensed from Aspose.

4

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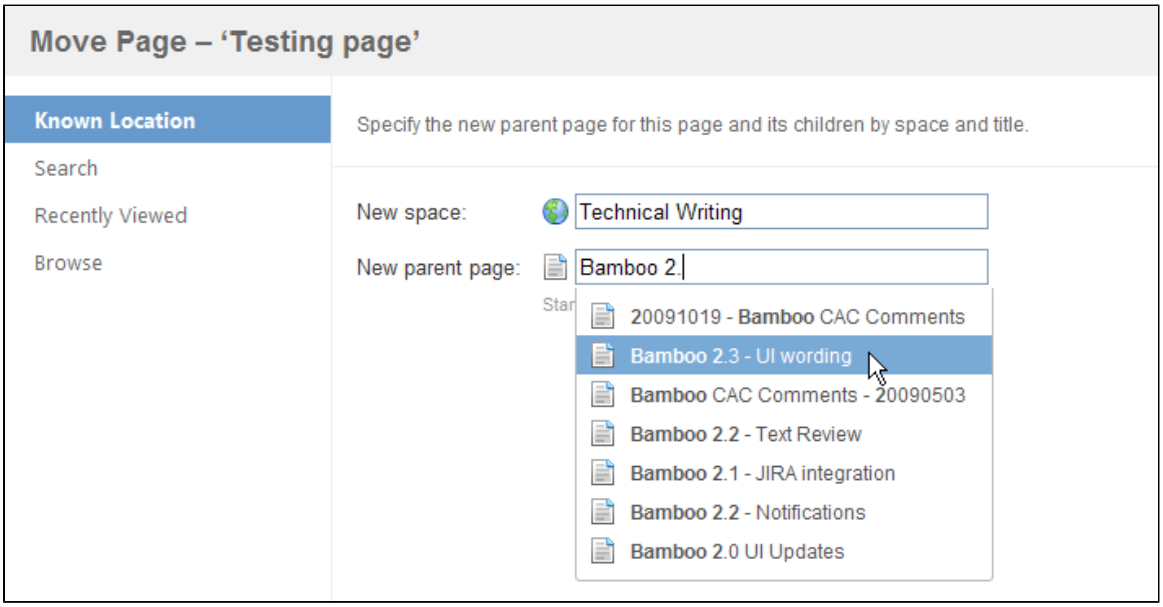
New 'Move Page' Feature

Confluence introduces a new page moving feature, that easily allows you to move the page you are currently viewing, adding or editing, to another page in the same or another space within your Confluence site. This feature is available through a new 'Move Page' dialog box, which provides the following flexible methods for moving pages:

- **Known Location** – Allows you to type the name of a space and within that space, the 'parent' page under which to move your page.
- **Search** – Allows you to search for a 'parent' page (within a selected space or set of spaces) under which to move your page.
- **Recently Viewed** – Allows you to select one of your recently viewed pages to be the 'parent' of your page to be moved.
- **Browse** – Allows you to select a space and page that will be the 'parent' of your page to be moved. Pages are browsed via a tree view.
  For more information, refer to Moving a Page.

Screenshot: Moving a Page to a Known Parent Page



5

Enhanced Image Browser

A new 'Image Browser' has been introduced to replace the old 'Insert Image' window. The image browser provides a less-cluttered and enhanced interface that allows you to:

- Preview an image in detail before inserting it into a page. This is done by hovering over any image in the browser and clicking the 'magnifying glass' icon in the lower-right corner.
- Preview an image elsewhere on the web via its URL before inserting it into a page.

Screenshot: Previewing an Image in the Image Browser

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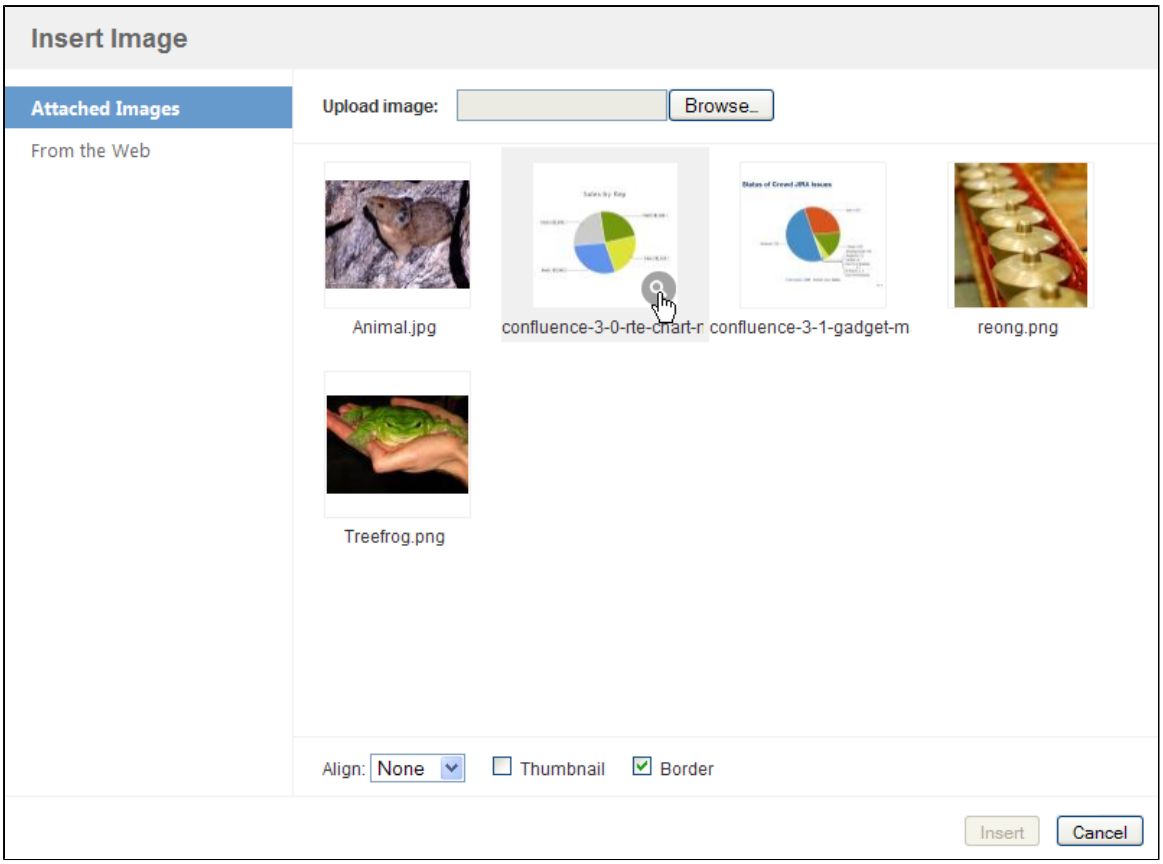

6

Draft Comparisons

Confluence's drafts feature has been enhanced, such that you can now view unsaved changes in your drafts as a 'diff' before you decide to resume editing them. This nifty 'draft comparison' feature comes in handy, particularly when other people have made subsequent changes to a page or blog post in your drafts list and you need to merge changes or resolve a conflict.

Screenshots: Accessing and Viewing Changed Content with Draft Comparisons

Title	Last Saved Date	Operations
Page with Partial Content	less than a minute ago	Resume Editing | Discard
Page with Content to Merge	2 minutes ago	View Changes | Merge and Resume Editing | Discard
Page with a Conflict	12 minutes ago	View Changes | View Conflict | Discard

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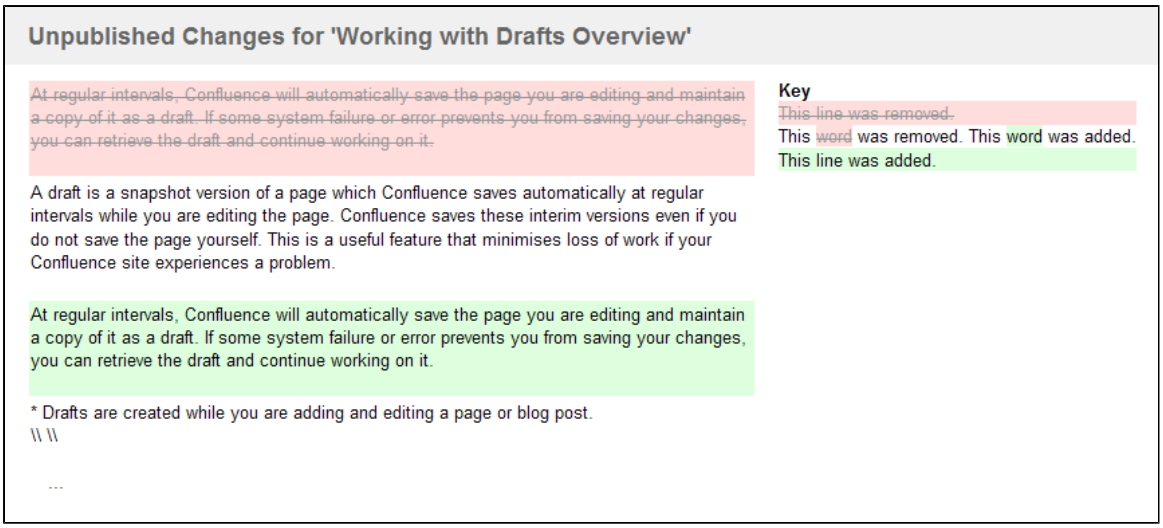


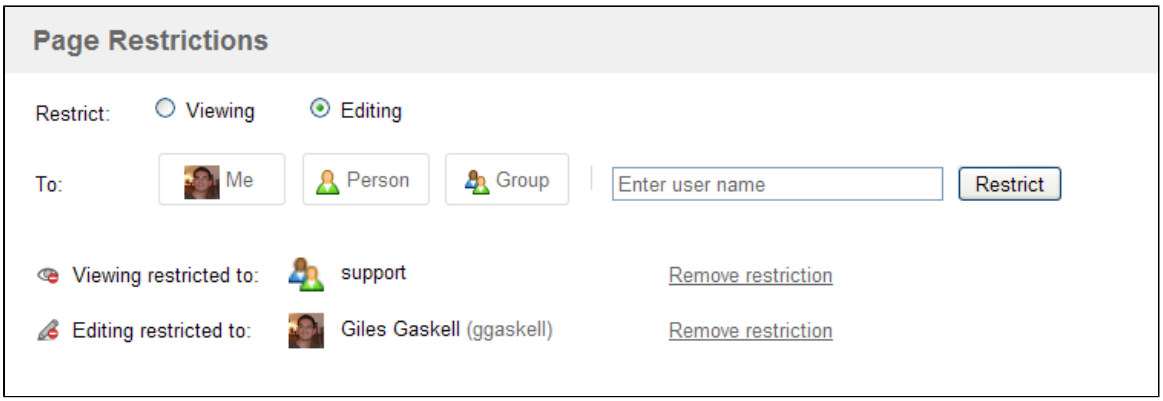
7

Page Restrictions Dialog Box

Confluence's page restrictions feature has been incorporated into a convenient and accessible dialog box, which is now easier to use than before.

- The page restrictions dialog box can be accessed from the padlock icon or the '**Tools**' -> '**Restrictions**' menu item whilst viewing any Confluence page. From this dialog box, you can see all viewing and editing restrictions associated with the current page. You no longer need to view the page's associated 'Info' page to see the page's restrictions.
- You no longer have to edit a page to modify its page restrictions. You can edit all page restrictions from this easily accessible dialog box.
  The page restrictions dialog box is still accessible when a page is in edit mode.
- In addition to user and group names, the name field also accepts a user's full name. Full names are 'auto-completed' to help you find the relevant person more rapidly.

Screenshot: The Page Restrictions Dialog Box



8

Other Editor Enhancements

Edit Mode Exit Notification

Whenever you add or edit a page, comment or blog post and then click onto another Confluence feature that

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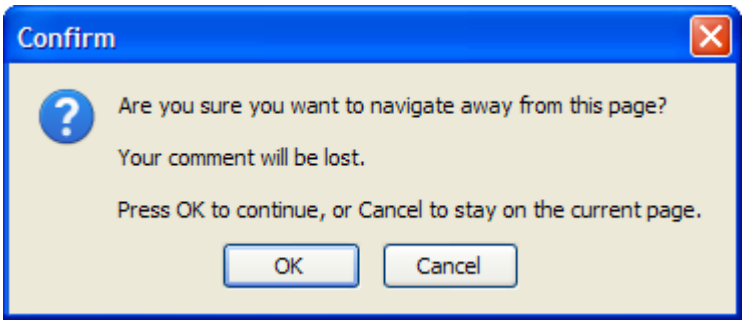
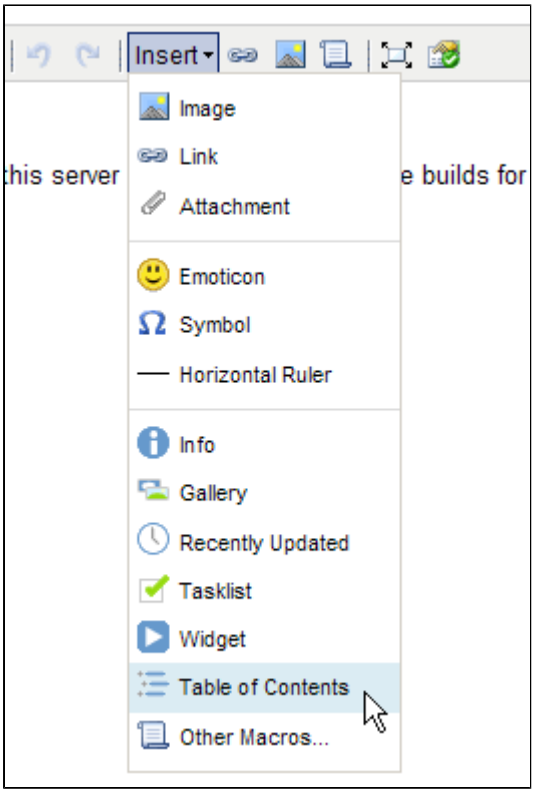
navigates away from your unsaved content, a message box appears, warning that your content will be saved as a draft (if it is a page) or lost (if a comment). This allows you to cancel out of this action if it was accidental.



New Rich Text Editor Insert Menu

Confluence's rich text editor now combines a number of its commonly used editing features into a new convenient '**Insert**' menu.

- The Horizontal line, Insert Symbol and Insert Emoticon Toolbar icons have been moved into the new insert menu.
- The functionality to insert images, links or attachments into a page can now also be accessed from this menu.
- The macro browser, as well as a number of commonly-used macros are conveniently accessible from this menu too.



Macro Browser Smart Fields

When using the Macro Browser, an 'auto-complete' feature is now provided on any parameters that require the entry of a single item, such as a page title, username or space key. This greatly facilitates the customisation of macros and minimises the need to know the exact item names in advance.

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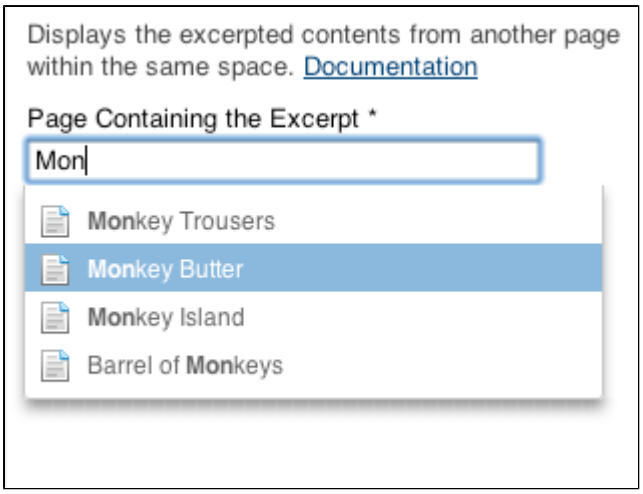

Rich Text Editor Speed

Thanks to many individual technical improvements, the rich text editor opens up a lot faster than in previous Confluence releases. In a local network environment, the rich text editor is accessible almost instantly. When accessing a Confluence server on a different continent, the rich text editor still opens up rapidly. In our Sydney office for instance, accessing the rich text editor from our Confluence server in the US takes less than 3 seconds.

9

New Web Browser Versions Supported

Confluence 3.1 now fully supports the following recent web browser versions:

- Internet Explorer 8
- Safari 4
- Firefox 3.5

Confluence now provides full usability with these recent browser versions as many bugs associated with these browsers have been fixed.

10

Other Improvements

Add Pages or Blog Posts from the Dashboard

You can now add pages or blog posts directly from the Dashboard without having to browse to a specific space first. To do this, click on either the '**Add Page**' or '**Add Blog Post**' buttons to open the pop-up balloon, which allows you to choose the space in which to add the new page or blog post and in the case of pages, a template on which to base the page content.

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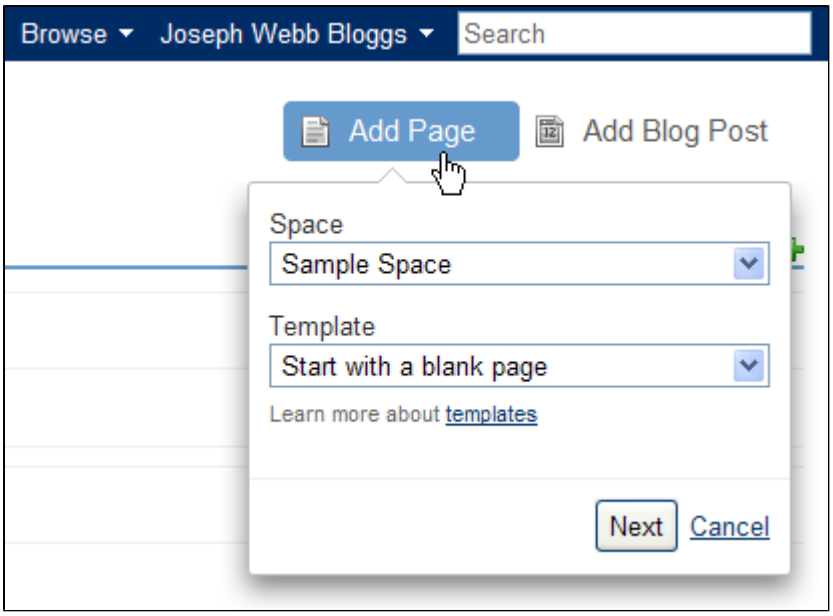
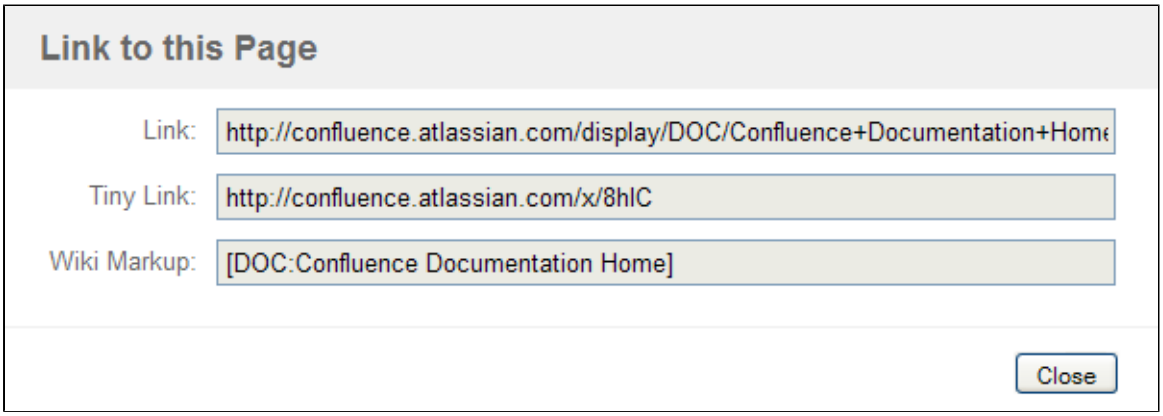


New 'Link to this page' feature

If you wish to link to a Confluence page from any other location on the web, use the convenient '**Link to this Page**' feature (available from any page's or blog post's '**Tools**' menu). Upon selecting this feature, the 'Link to this Page' dialog box opens, from which you can copy three versions of the link to embed elsewhere:

- **Link** – Standard URL which should work from any other accessible location on the web.
- **Tiny Link** – A reduced-length version of the 'Link', which can be used in text fields of limited length, such as tweets or Confluence Status Updates.
- **Wiki Markup** – A wiki markup version of the link, which can be used in any other location within your Confluence site.



Get 'More' from your Activity Streams

A 'More' feature has been added to various activity streams throughout the Confluence interface, including the user profile sidebar, user profile page and recently updated macro. Clicking 'More' expands the list of results, providing a convenient means of accessing progressively more distant user activities.

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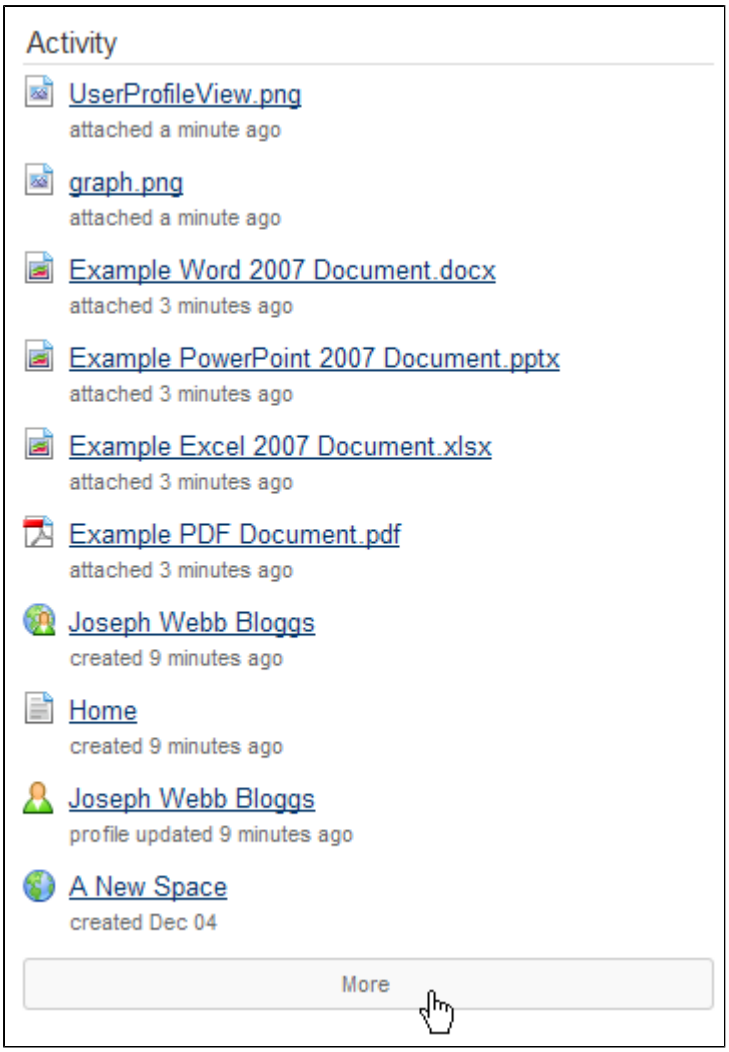

User Interface Performance Improvements

Most JavaScript and Cascading Style Sheet (CSS) files are now downloaded in one batch, greatly improving the performance of Confluence's editing features and general page rendering.

Other Small Enhancements and Improvements to Confluence

- Support for OAuth — With the introduction of gadgets (above) in this release, Confluence 3.1 now allows you to establish OAuth relationships with other web applications such as JIRA 4.0+, iGoogle, Gmail etc., thereby allowing them to share resources via gadgets.
- New Log In and Log Out screens.
- In an aim to minimise confusion, 'News Items' are now consistently called 'Blog Posts' throughout the Confluence interface and a list of blog posts is collectively referred to as a 'Blog'.
- Macro developers are now able to specify whether the macro body should or should not be displayed in Rich Text editor. For more information, please refer to CONF-12149.
- Other minor interface improvements.

Known Issues in this Release

We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release and report any problems so that we can fix them quickly.

We value this feedback, which means that we can tell you about some minor known issues in Confluence 3.1. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the important technical advisories on the front page of the Knowledge Base.

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A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.1 Team

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Confluence 3.1 Known Issues

Below are some known issues associated with Confluence 3.1.

On this page:

- JIRA/Crowd and Confluence deployment
- JIRA Gadgets in Confluence
- Bamboo integration
- PDF exports only render gadgets as links
- Problematic Confluence Gadgets window when running Confluence on Java 6
- Other issues

JIRA/Crowd and Confluence deployment

Confluence will not start up or will display strange behaviour (drop down menus not working) if JIRA 4.0/4.0.1 or Crowd 2.0.x is running on the same application server installation, for example, by attempting to run Confluence and JIRA 4.0 in the same Apache Tomcat server installation. This problem results from a bug in JIRA (tracked as JRA-19894) that is scheduled to be fixed in JIRA 4.0.2. Crowd will be fixed in the 2.1 release. In the meantime, please read our KB article on how to resolve this issue.

In the meantime, you can run JIRA or Crowd and Confluence in different 'instances' of the same application server, for example two separate Apache Tomcat server installations. If you already do so, or have installed both the Confluence distribution and JIRA 4.0 distribution, or Crowd 2.0.x, you can ignore this known issue.

JIRA Gadgets in Confluence

As of Confluence 3.1, users can embed gadgets into Confluence pages. When integrating JIRA gadgets into

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Confluence pages, you may encounter UI problems like a missing "Login"-button which is required to make the gadget authenticate with the JIRA server. This problem can be circumvented by setting up JIRA and Confluence to use Trusted Apps communication (since it removes the need for manual authentication). See KB article for details.

Bamboo integration

Our continuous integration product Bamboo exposes gadgets which can be embedded into Confluence pages. However, some of these exhibit problems once embedded onto a Confluence page:

- BAM-4900 : Unable to edit Bamboo gadgets in Confluence
- BAM-4890 : Bamboo gadget added in JIRA dashboard is not saving the preferences

These bugs are being fixed in Bamboo 2.5, which will ship in January 2010.

PDF exports only render gadgets as links

If you place any gadget on a Confluence page and export the page to PDF, the gadget output will not be rendered in the PDF output. Instead, each gadget is rendered on a page as a box containing the name of the gadget, the latter of which is hyperlinked. Clicking this hyperlink, opens the gadget contents itself in a new browser window or tab.

Problematic Confluence Gadgets window when running Confluence on Java 6

The Confluence Gadgets window may indicate that '**An error has occurred while trying to load the Gadget Directory**' and prevent you from accessing the URLs of your Confluence gadgets. This problem can occur if you are running Confluence on Java 6. After you install Confluence 3.1 or upgrade an existing Confluence installation to this version, please check the Confluence Gadgets window immediately after starting the Confluence server.

If you see this error message and cannot access your Confluence gadgets, it can be resolved by restarting Confluence. (You may need to do this more than once.)

For more information about this issue, please refer to CONF-17417.

Other issues

Refer to our JIRA site for a list of Confluence 3.1-specific bugs.

Confluence 3.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.1**. For details of the new features and improvements in this release, please read the Confluence 3.1 Release Notes.

On this page:

- Upgrade Notes
  - New License Key Requirements for Confluence 3.1
  - Upgrading an Existing Confluence License for Confluence 3.1 Compatibility
  - Custom layouts must be re-implemented after upgrading Confluence
  - Customers running Confluence on Weblogic are required to specify the `prefer-web-inf-classes` element in the `weblogic.xml` file prior to upgrading Confluence
  - The Drag-and-Drop feature disables the ability to drag and drop links or text in Firefox 3.0
  - Clarification of supported user management configurations in Confluence
- Upgrade Procedure
- Checking for Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

Upgrade Notes

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New License Key Requirements for Confluence 3.1

In order to continue using Confluence, you must upgrade your Confluence license to Atlassian's new license key format.

We have undertaken this change to enhance and improve the support we provide our customers. Bear in mind that this license upgrade will not incur any additional costs and does not change Confluence's functionality in any way.

Upgrading an Existing Confluence License for Confluence 3.1 Compatibility

This procedure can only be performed by Confluence Administrators.

To upgrade your existing license to the new license key format, which will be required for continued use of Confluence 3.1:

1. Visit the license upgrade area in your account at my.atlassian.com.
2. Enter your Atlassian account details (email address and password) to access and manage your Atlassian product licenses.
3. If your Confluence license is already associated with a Confluence Server ID (that is, most customers running recent versions of Confluence), follow procedure **b** below. If my.atlassian.com prompts you to enter a Server ID before upgrading your license, follow procedure **a**:

    a. **Procedure for associating a Confluence license with your Confluence Server ID:**

        i. If you have not already upgraded your Confluence installation to version 3.1, go to your Confluence installation's License Details page to access the Server ID associated with your Confluence license. Make a note of this Server ID.

        ii. If you have already upgraded your Confluence installation to version 3.1 and cannot access your Confluence installation's License Details page, open the `confluence.cfg.xml` file (located inside the Confluence Data Directory) in a text editor and make a note of your Confluence installation's Server ID from the `confluence.setup.server.id` property in this file.

        iii. If you cannot access the Server ID in your Confluence installation using either of the two methods above, then please contact our customer support team for further assistance. This issue may occur when upgrading from a very old version of Confluence.

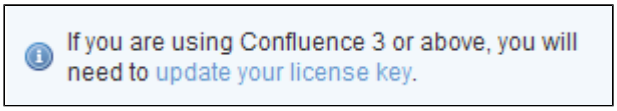
        iv. Follow the remaining prompts on my.atlassian.com to enter your Server ID and then upgrade your Confluence license.

    b. **Procedure for upgrading a Confluence license associated with a Server ID:**

        i. Select the appropriate Confluence license to expand its details.

        ii. In the 'info' note below your license on the right-hand side of the page, click the '**update your license key**' link (as shown in screenshot 1 below). Once this is done, the note changes to that shown in screenshot 2 below.

        Screenshot 1: License Key Upgrade Function



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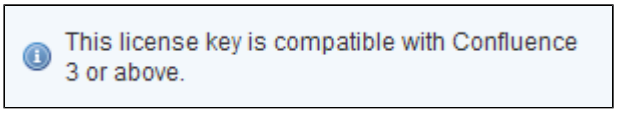
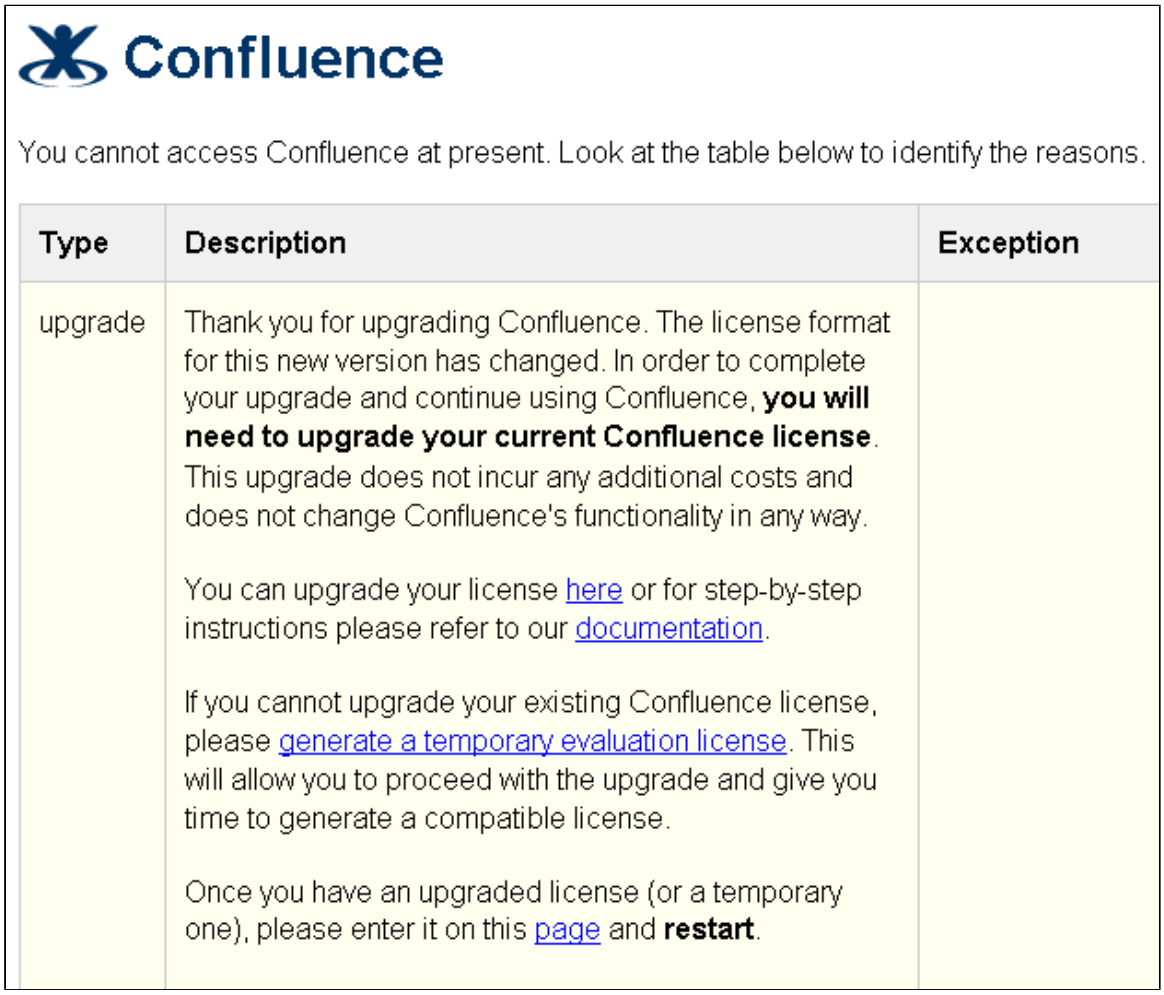
Screenshot 2: Upgraded License Key Note



iii. Copy the new license from the text box above this message to your clipboard.

4. Ensure your upgraded Confluence installation has been started, enter your Confluence site's URL into a web browser and on the Confluence license upgrade screen, click the '**page**' link in the 'Description' field to begin updating Confluence with your upgraded Confluence license to open the 'Update Confluence License' page.

   Screenshot: Confluence License Upgrade Screen



5. On the 'Update Confluence License' page, paste your new license details into the 'License' field.

6. Enter the *Confluence administrator* account's username and password details and click the '**Save**' button.

   Screenshot: Update Confluence License Page

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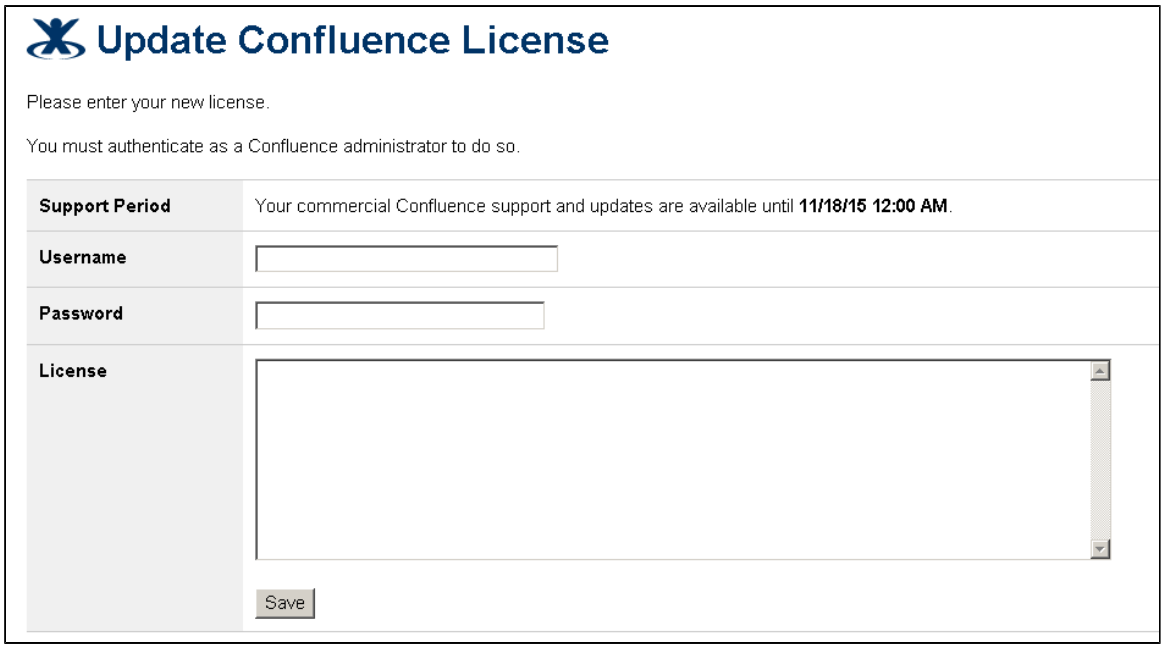
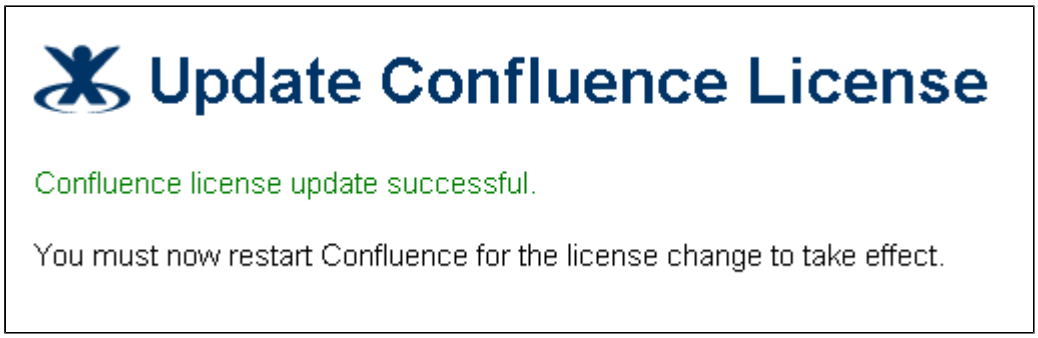


7. If your license update was successful, you will be prompted to restart Confluence.

   Screenshot: Successful Confluence License Update Screen



Custom layouts must be re-implemented after upgrading Confluence

If you have customised your Main Layout on either the space or the global level, or if you have a custom theme plugin, the new Link to this Page, Page Restrictions and 'Move Page' dialog box features in Confluence 3.1 will not immediately work for you.

To resolve these issues, you will need to re-implement your custom layouts or reset these custom layouts back to the Confluence default settings.

Other Issues:

The following other issues may occur prior to resolving these issues:

- The Atlassian Confluence footer may appear fixed on the page and obscure content that extends below the length of the web page.
- Some pages may not render at all.

Depending on the version of Confluence you upgraded from and the customisations that had been implemented, other user interface problems or problems with Confluence's functionality may be found.

Re-implementing custom layouts:

To re-implement your custom layouts, please refer to Upgrading Customised Site and Space Layouts for details on retrieving the customisations made to your layouts and re-implementing them into your upgraded version of

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Confluence.

Customers running Confluence on Weblogic are required to specify the `prefer-web-inf-classes` element in the `weblogic.xml` file prior to upgrading Confluence

If you are a customer running Confluence on Weblogic, then before upgrading to Confluence 3.1, you must ensure that the `prefer-web-ing-classes` element in the `weblogic.xml` file has been specified with the content value of `true`. For more information, please refer to Installing Confluence EAR-WAR on Weblogic.

To do this:

1. Ensure that Confluence and Weblogic have been stopped.
2. Open the `weblogic.xml` file in a text editor. (This file is located in the `<confluence install directory>\confluence\WEB-INF` directory.)
3. Ensure that `<prefer-web-inf-classes>true</prefer-web-inf-classes>` has been added as a child element of the `<container-descriptor>` element, such that your `<container-descriptor>` element looks something like:

   ```
   <container-descriptor>
   <prefer-web-inf-classes>true</prefer-web-inf-classes>
   </container-descriptor>
   ```

   ⚠️ Your particular `weblogic.xml` may have other child elements of the `<container-descriptor>` el ement, so leave these intact.
4. Save any changes made to the `weblogic.xml` file.
5. Follow the upgrade procedure.

The Drag-and-Drop feature disables the ability to drag and drop links or text in Firefox 3.0

Some browsers like Firefox and Safari allow Confluence users to create links easily by dragging and dropping hyperlinks from other web pages directly into the rich text editor window. This browser-specific feature also allows the rearrangement of text when editing Confluence wiki page content, by highlighting text and dragging and dropping it elsewhere.

However, the Confluence 3.1 Drag-and-Drop feature is not compatible with these link creation and text rearrangement features of Firefox 3.0 and setting up Confluence's Drag-and-drop feature will disable these Firefox 3.0 features.

To allow the Confluence 3.1 Drag-and-Drop feature to work together with these link creation and text rearrangement features of Firefox, upgrade your Firefox browser to version 3.5.

Clarification of supported user management configurations in Confluence

In Confluence 3.1, Atlassian is clarifying our support for user management configurations and code-level customisations. This is being done so that we can deliver significant improvements in our user management performance and configuration in a future release.

Confluence is fully supported with the following configurations provided and documented by Atlassian:

- Built-in user management with Atlassian-User Hibernate managers ("default user management")
- Built-in user management, with OSUser LDAP authentication (deprecated since 2.7, moving to Atlassian-User LDAP is recommended)
- External user management with read-only JIRA JDBC providers ("JIRA delegated user management")
- External user management with Atlassian-User LDAP providers ("standard LDAP user management")
- External user management with Atlassian Crowd.

Unfortunately, we cannot offer complete support for code-level customisations in our user management system.

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The following caveats apply to customers who are using extensions to our user management systems:

- Custom implementations of Atlassian-User managers are supported for problems which are not related to user management.
- Custom Seraph authenticators are supported for problems which are not related to user management or authentication.
- Custom implementations of OSUser providers are not supported with Confluence. The OSUser APIs required for implementing custom providers were deprecated in Confluence 2.7, so customers with custom OSUser implementations will need to migrate their code to the Atlassian-User API to have support for their Confluence instance.

Advance warning: In Confluence 3.2, Atlassian will be removing functionality required for custom OSUser providers. From this point, custom OSUser providers will not work correctly with Confluence 3.2, so we recommend porting any custom OSUser providers to the Atlassian-User interfaces as part of your Confluence upgrade process.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.

2. If your version of Confluence is earlier than 3.0.x, then please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.) Furthermore:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Checking for Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will assist you through the process.

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Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.1 Release Notes

Issues Resolved in Confluence 3.1

Below are the top 100 issues resolved in Confluence 3.1, ordered by number of votes. For the full list of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 3.1 Release Notes for the new features in Confluence 3.1.

JIRA Issues (0 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**

Above are the issues resolved in Confluence 3.1, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker.

Confluence 3.2.1 Release Notes

> This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

4 May 2010

Confluence 3.2.1 is a recommended upgrade which fixes some security flaws and other bugs.

As part of the security update we have made changes to Confluence functionality, including some parts of the Administration Console. Please refer to the security advisory for a summary of changed behaviour. We have updated the documentation where relevant.

We have also fixed a bug that caused an out of memory error when attempting to display an Excel spreadsheet on a Confluence page. Before this fix, the error might occur if the spreadsheet has a large number of empty cells. Confluence now limits the number of spreadsheet cells it will display. By default, the maximum is 10000 cells. The Confluence administrator can adjust this value in the Office Connector configuration screen, as described in the documentation.

Purging items from a space's trash can was very slow and blocked all other database updates. This is now fixed.

A bug introduced in Confluence 3.2 prevented people from adding a page when using the Left Navigation theme. We have fixed this too.

In Confluence 3.2, we mistakenly introduced the words '**Needs to be updated**' into the French and German translations of the UI text in the left navigation theme. We have now removed the extra text. The UI wording is still in English, not translated into French or German, but at least it no longer calls attention to this fact.

Don't have Confluence 3.2 yet?

Take a look at the new features and other highlights in the Confluence 3.2 Release Notes.

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Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.2.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (30 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-19441	XSS in page renderer		Resolved	Fixed
	CONF-19404	XSS vulnerability in some JSPs under admin section		Resolved	Fixed
	CONF-19403	XSS vulnerability in Advanced Macros plugin		Resolved	Fixed
	CONF-19382	XSS vulnerability in search		Resolved	Fixed
	CONF-19381	XSS Bookmark vulnerabilities		Resolved	Fixed
	CONF-19402	Only strings are encoded		Resolved	Fixed
	CONF-19398	SOAP and XML-RPC APIs return too much information		Resolved	Fixed
	CONF-19397	Path for daily backup is configurable through WEB UI		Resolved	Fixed
	CONF-19388	Possible XSS injection in attachment upload		Resolved	Fixed
	CONF-19384	XSS vulnerability in Colour Scheme settings		Resolved	Fixed
	CONF-19331	Allow write configuration of certain fields in administration section		Resolved	Fixed
	CONF-19416	Semi-colon separator used to work for		Resolved	Not a bug

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		image properties, but doesn't in 3.2.1 which causes broken images on CAC			
	CONF-19401	BootstrapManager exposed in layout templates should be read only		Resolved	Fixed
	CONF-19395	The list of Confluence administrators is accessible via a URL		Resolved	Fixed
	CONF-19393	Remove the download link for XML site backups		Resolved	Fixed
	CONF-19142	Can't add pages while using Left Nav theme in Confluence 3.2		Resolved	Fixed
	CONF-18972	Searching for a link using auto-complete replaces your link text with the search result		Resolved	Fixed
	CONF-18626	UWC Link in Confluence Administration is broken		Resolved	Fixed
	CONF-17718	Downloading a .docx file in IE7/WinXP gives it a .zip extension (technically true but the average end-user wouldn't know that).		Resolved	Fixed
	CONF-15946	I18NBean getText method spamming EAC logs		Resolved	Fixed
	CONF-14677	Jira portlet macro contains huge gap		Resolved	Fixed
	CONF-19392	Mail support request accepts		Resolved	Fixed

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		any e-mail address			
	CONF-19391	Anonymise config files in support zip		Resolved	Fixed
	CONF-19390	Not all error strings are encoded		Resolved	Fixed
	CONF-19159	Prevent NPE being thrown on recently updated dashboard.		Resolved	Fixed
	CONF-19073	Print footer got lost in new footer for 3.2		Resolved	Fixed
	CONF-19045	Downloading an Excel Microsoft Office 2007 file in IE7/WinXP gives it a .zip extension.		Resolved	Fixed
	CONF-19028	Fixed Width Theme: Attachments macro content overlaps the personal space sidebar on IE7		Resolved	Fixed
	CONF-18887	Indexing excel files with lots of cells can lead to OOM errors		Resolved	Fixed
	CONF-17292	Previewing Excel files with thousands of rows and/or columns can result in OutOfMemoryError		Resolved	Fixed

Confluence 3.2.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.2.1**. Confluence 3.2.1 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence 3.2.1 Release Notes.

On this page:

- Upgrade Notes
- Upgrade Procedure
- Useful Plugins

Upgrade Notes

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As part of the security update we have made changes to Confluence functionality, including some parts of the Administration Console. Please refer to the security advisory for a summary of changed behaviour. We have updated the documentation where relevant.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**.
   ℹ️ The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'.
   Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.2, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.2 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.2 Release Notes

24 March 2010

With great pleasure, Atlassian presents the seemingly omniscient, drop dead gorgeous **Confluence 3.2**.

Highlights of this Release:

- Autocomplete for Inserting Links
- Autocomplete for Embedding Images and Documents
- A Link Browser that's Smarter, Smoother, Faster
- New Documentation Theme
- New Easy Reader Theme
- Template Bundles
- Reordering while Moving a Page
- New Keyboard Shortcuts and Editor Hints
- User Interface Enhancements
- And Even More Improvements

Responding to your Feedback:
⭐ **100+** votes satisfied

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DOWNLOAD latest version

- Thank you for all your issues and votes. Keep logging issues to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

Upgrading from a previous version of Confluence

- Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.***
- Please refer to the Confluence 3.2 upgrade notes for further essential information about **plugins** and other factors affecting your upgrade.

Highlights of Confluence 3.2

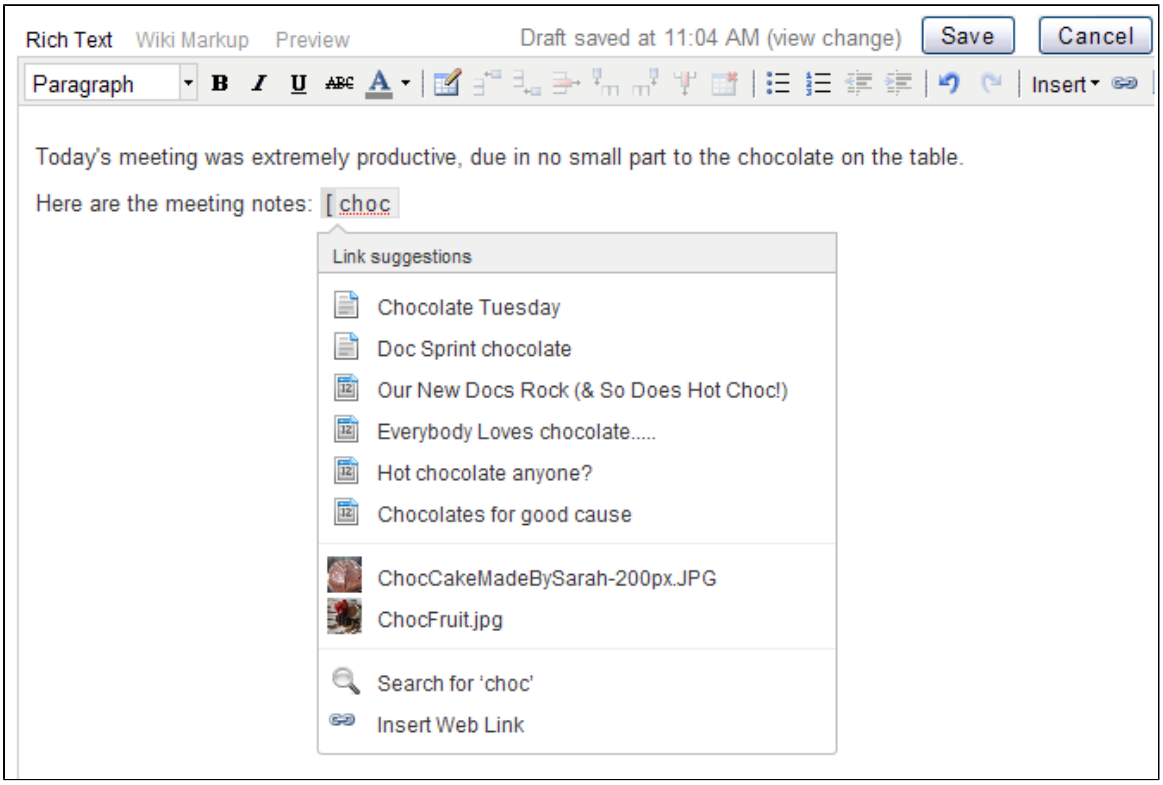
1

Autocomplete for Inserting Links

Wouldn't it be awesome to have the WYSIWYG ease of a rich text editor combined with the speed of a wiki markup editor? We're working towards that sweetness. In the rich text editor you can now enter a trigger character to call up a list of suggested links to add to your page. A keyboard shortcut does it too.

Quick guide:

- Enter '**[**' and start typing to see the suggested links that match your text.
- Or press Ctrl+Shift+K to convert text to a link.



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More....

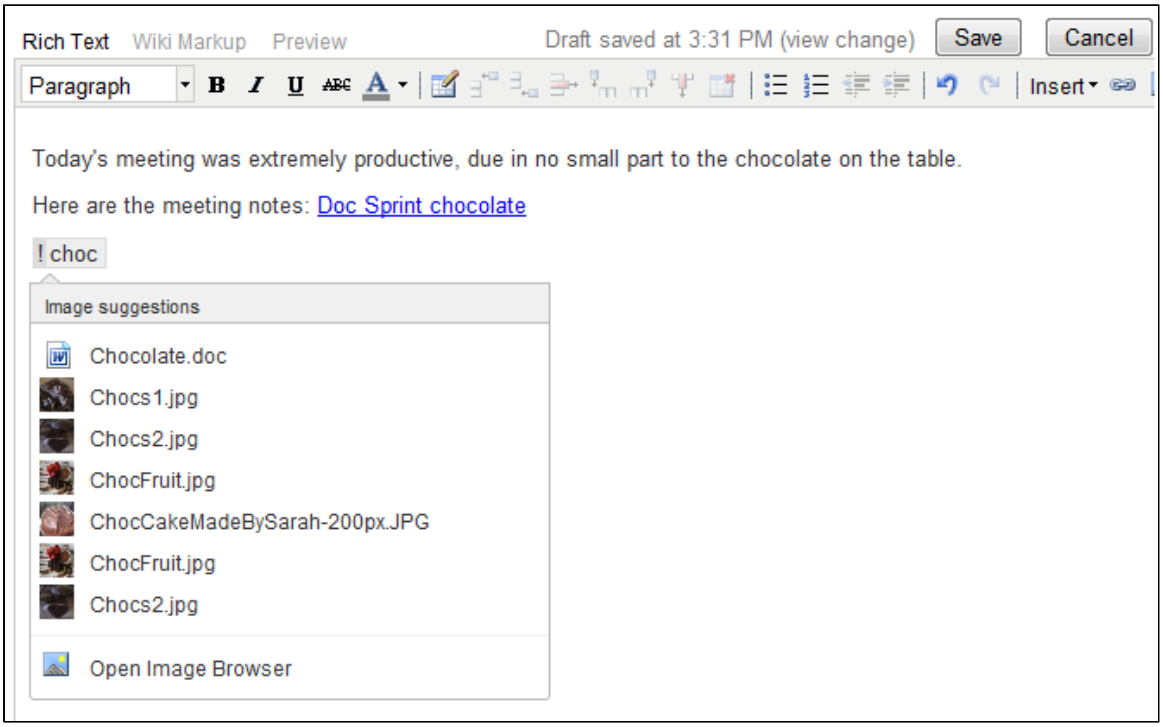
2

Autocomplete for Embedding Images and Documents

The new autocomplete also offers a quick way of adding images and documents to your page.

In the rich text editor:

- Enter '**!**' and start typing, to see a matching list of images and documents.
- Or press Ctrl+Shift+M immediately after a word or highlighted phrase.



More....

3

A Link Browser that's Smarter, Smoother, Faster

Do you think the autocomplete is sweet? Good, because it's in the new link browser too. We've also made it easier and faster to link to images, attachments and recently-viewed pages. The link browser pops up when you click the 'Insert Link' icon in the editor toolbar.

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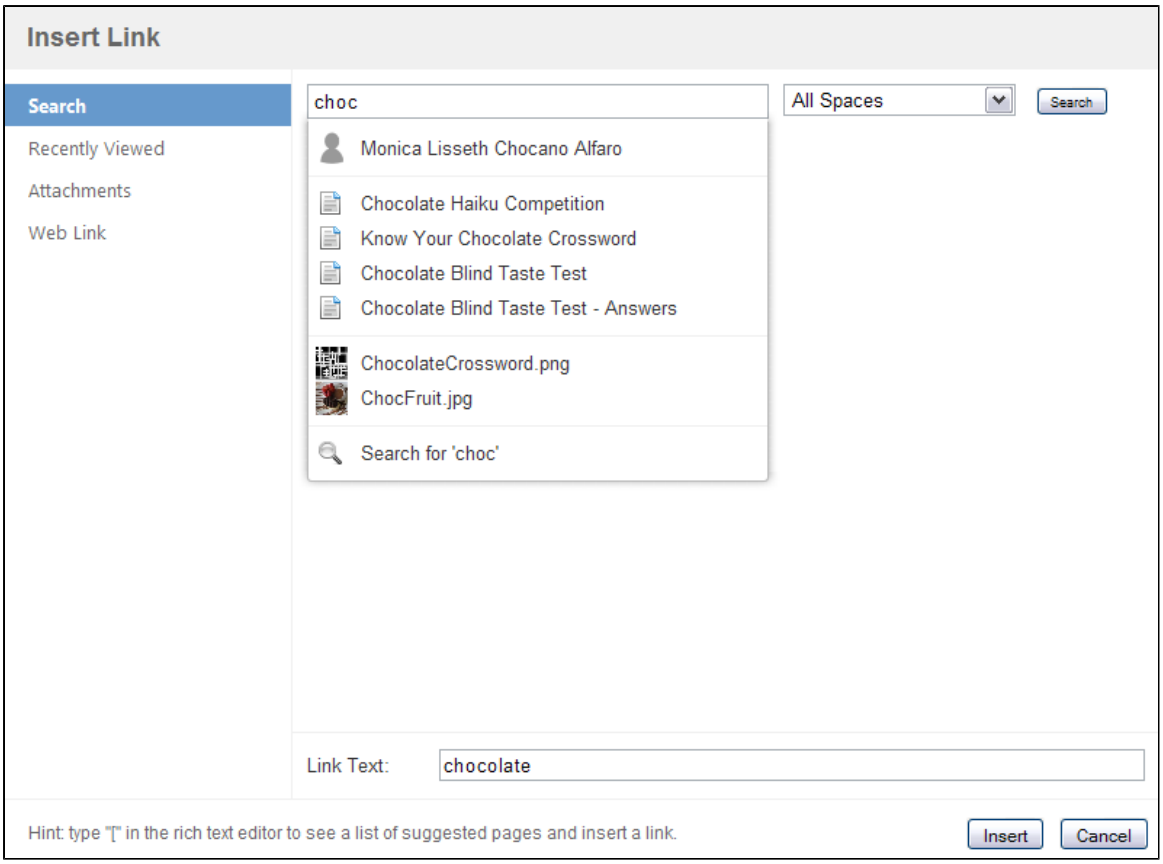

More...

New Documentation Theme

Want an inbuilt table of contents for your wiki space? Lusting after a configurable header and footer? Hankering for sophisticated styling? You got it!

Features in a nutshell:

- Configurable left-hand panel. By default, the panel contains a search box and a table of contents (page tree).
- Resizable panels. People viewing the page can drag the thick bar between the left-hand panel and the content. They can also remove the panel altogether, by clicking the sidebar icon at top right.
- Customisable page header and footer.
- Text styles designed to enhance the content typically found in a documentation space.
- The Space Jump macro for linking from a page in one wiki space to a page with the same name in another space.
- Easy upgrade path from now on. Because the left-hand panel is part of the theme, it will be upgraded whenever Confluence is upgraded. There is no need to remove and then re-apply your customisations on each upgrade, as you would do if you added your own left-hand navigation bar.

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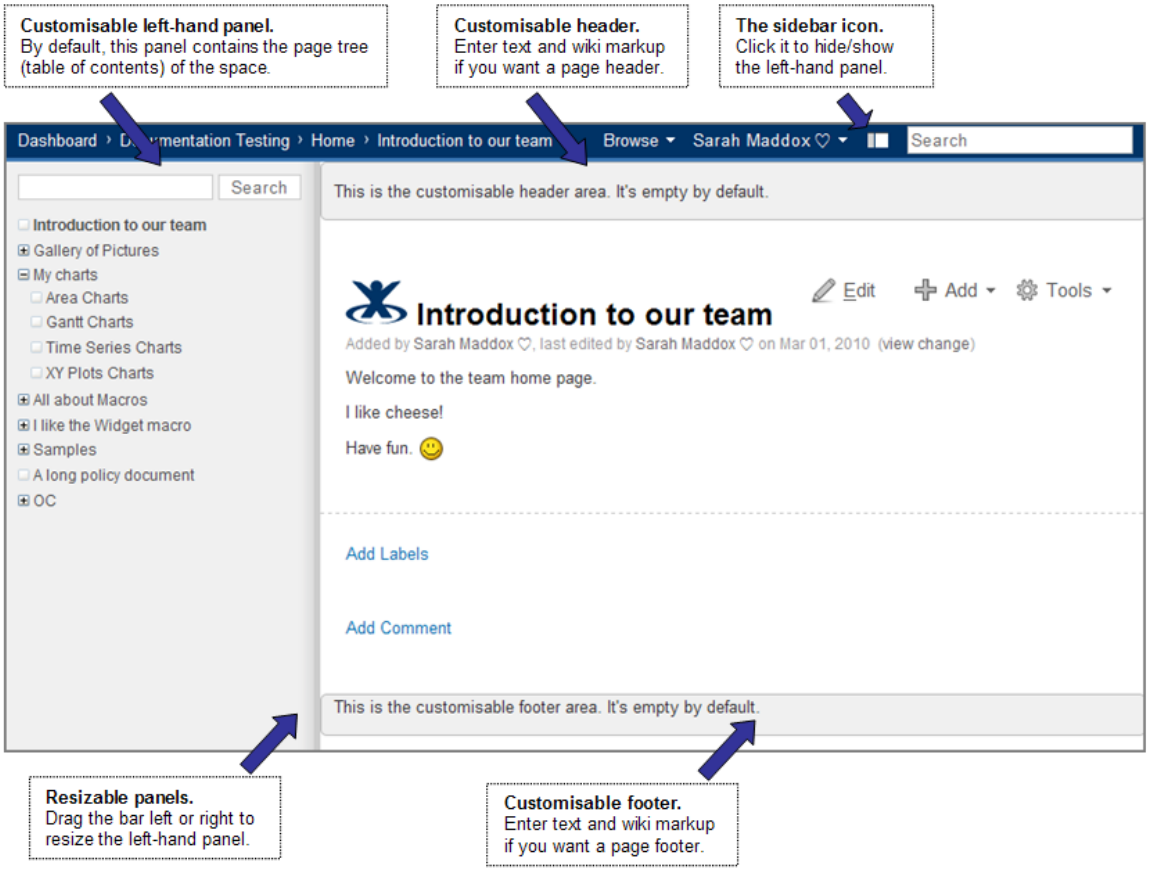

More...

5

New Easy Reader Theme

With today's huge monitors, it can become hard to read text that spans the width of the screen. Confluence 3.2 introduces the Easy Reader theme that uses only a portion of the screen, to make reading easier. Many websites are formatted this way. The Easy Reader theme is a fixed-width variation of the default Confluence theme. Its larger fonts, smooth gradient background and comfortable line length make it ideal for displaying and reading longer documents.

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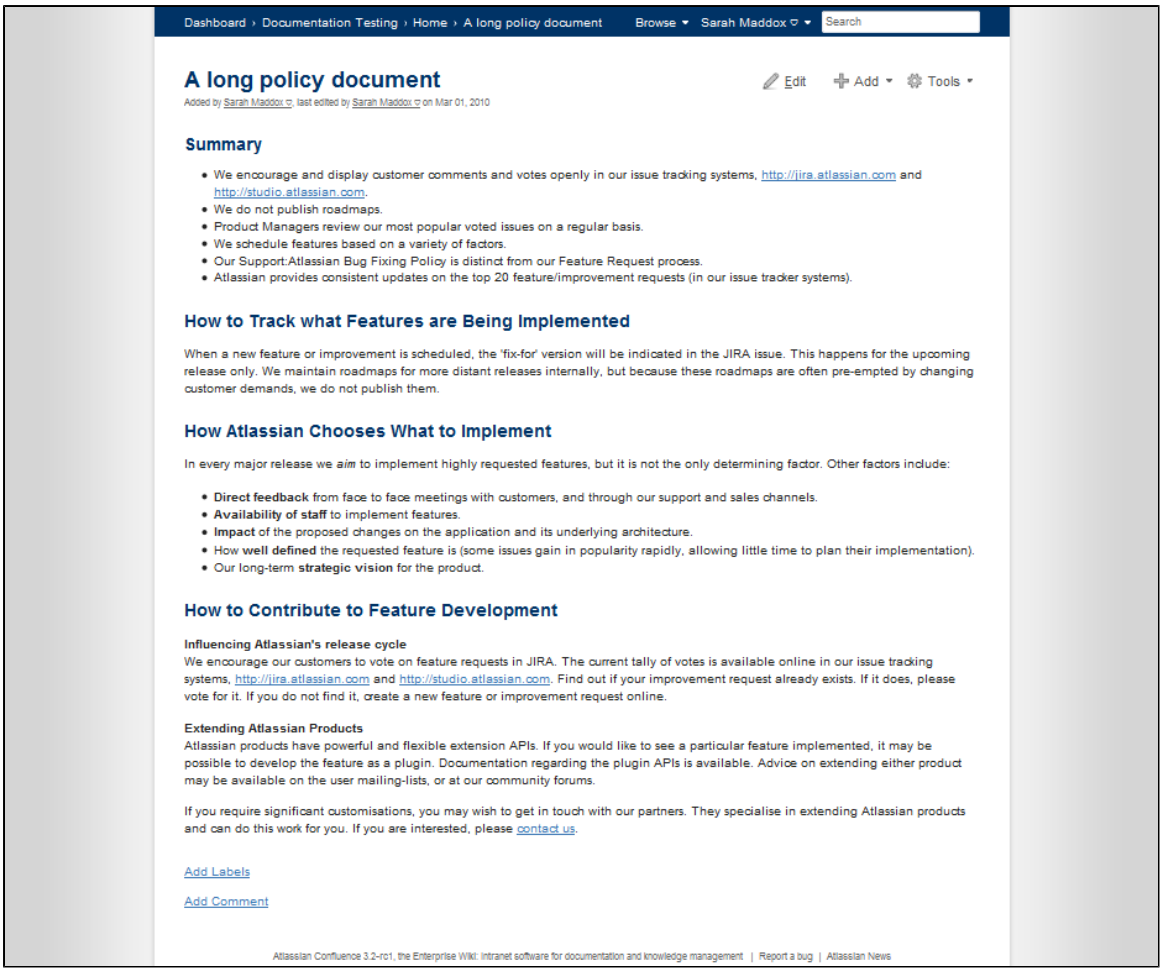

More...

6

Template Bundles

Confluence page templates make it easy for people to collaborate, yet maintain a consistent document format. We've extended the template functionality in this release so that you can import templates from template bundles via the Confluence Administration Console. Confluence administrators will be able to preview templates before importing them to a specific space or as global templates.

Template bundles are built as plugins, so developers should find it easy to whip up a new template bundle. Confluence 3.2 also ships with a default template bundle. Just import the templates from the default template bundle and your users will have access to a number of handy page templates.

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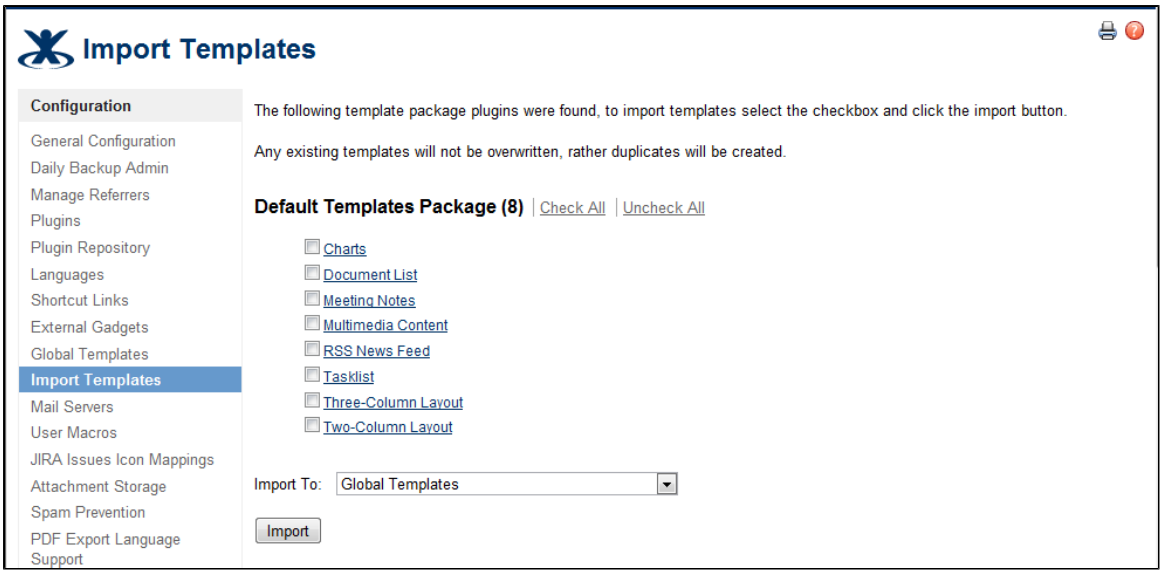
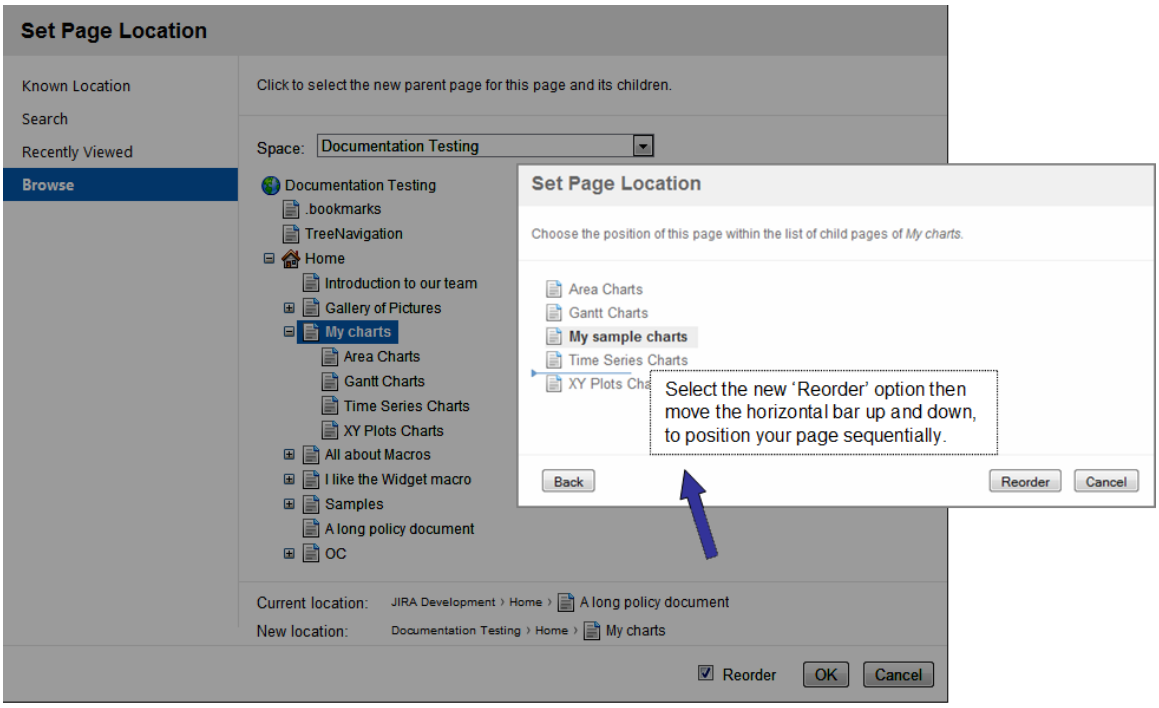


More...

7

Reordering while Moving a Page

You can now move a page and position it sequentially amongst its siblings at the same time. In earlier versions of Confluence this was only possible on the space's page tree view, accessed via the browse pages menu. The page tree is problematic in big spaces, so some people could not reorder pages at all. Now you can select the new 'Reorder' option when moving a page, and then drag a horizontal bar to put your page in the right spot amongst the other child pages.



More...

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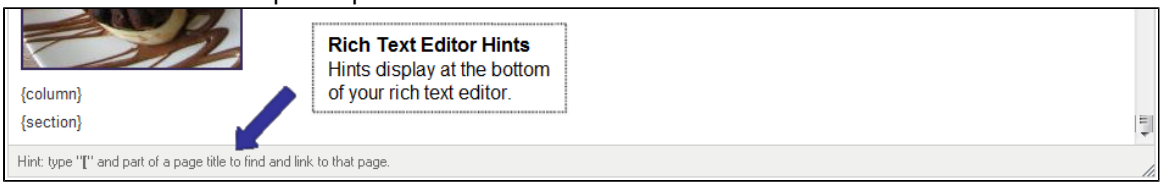
8

New Keyboard Shortcuts and Editor Hints

We're on a mission to improve your editing experience. We've added a number of new keyboard shortcuts for the rich text editor in this release. Format text into bulleted/numbered lists, manipulate tables, open the macro browser and more, with a few simple key presses. Check out the new keyboard shortcuts below:

Keystroke	Action (Rich Text Editor)
Ctrl+Shift+A	Opens the macro browser
Ctrl+Shift+B	Formats text as a bullet list
Ctrl+Shift+K	Autocomplete for links. Calls up a list of suggested pages or other locations to link to from your page. More...
Ctrl+Shift+M	Autocomplete for embedding images and files. Calls up a list of suggested images, documents and other files to embed in your page. More...
Ctrl+Shift+N	Formats text as a numbered list
Ctrl+Shift+S	Formats text with a strike through
Ctrl+Shift+C	Copies a table row
Ctrl+Shift+X	Cuts a table row
Ctrl+Shift+V	Pastes a table row
Ctrl+Shift+I	Inserts a table

The rich text editor will also display handy hints along the bottom of the screen, including common keyboard shortcuts and autocomplete tips.



9

User Interface Enhancements

- **Image Previews in Search Results.** Confluence 3.2 helps you search more efficiently by displaying thumbnail image previews in your search results. You can also opt to display images attached to pages/blog posts in your search results. We've also made the rendering of search results in Confluence pluggable. If you are a developer, you may wish to write your own search result renderer to change how

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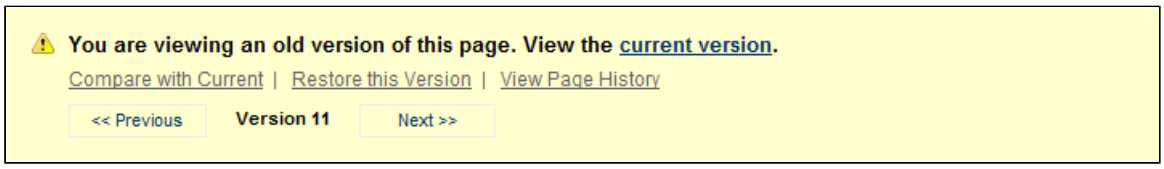
the search results are displayed.

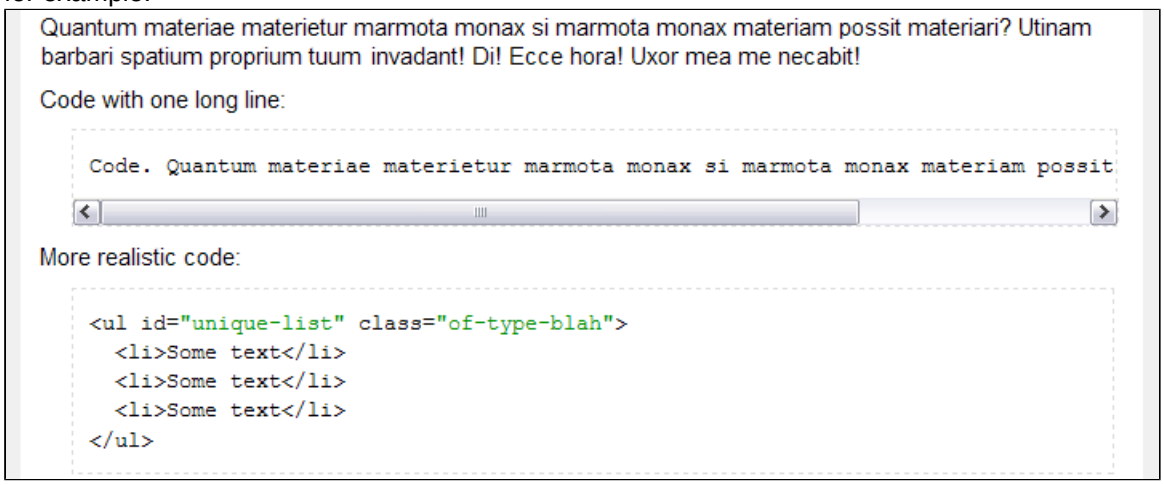
More...

- **Improved page history.** We've redesigned the header for the page history to make it easier to use. Check it out!



More...

- **Handling of oversized content.** Taking advantage of modern browsers, the new Easy Reader theme includes CSS to handle common types of oversized content. Specific sections of a page will now have a localised scroll bar instead of making the whole page scroll. You will see this in action in the code macro, for example.



- **Better RSS feeds.** We have improved and simplified the RSS feed builder. As before, you can choose to include either pages or blog posts or both in your feed. Now you can also choose to include comments from pages and/or comments from blog posts independently. Similarly, you can choose attachments from pages and/or blog posts. In addition, if you filter by label you can now track updates to labelled pages and

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comments on those pages.

More...

- **Fixed colour scheme issue.** We have removed the hard-coded colours that prevented colour schemes from applying correctly.
- **Fixed editor issue.** We've also fixed an issue that caused white space to overlap the right-hand side of the editor. This has now gone, making more space available to the editor.

10

And Even More Improvements

- **Hot installation of language packs.** You can now install language packs without restarting the server. More...
- **Purging the trash is now incremental and logged.** Purging the deleted items from the Confluence trash has caused problems for people with a large number of items in the trash. The operation is slow and prevents other database updates while in progress. Confluence now breaks the operation into separate transactions and tracks progress in the logs.
- **More REST resources.** If you are a plugin developer or use our APIs in some other way, you'll find the REST API improvements in this release useful. The previous release of Confluence introduced a prototype REST API. With Confluence 3.2, we have added the following REST resources: attachments, recently viewed pages, search and user history. There are other small improvements too. More...
- **Important Bug Fixes:**
  - **Custom PDF stylesheets are unique to spaces.** We've addressed an issue that caused changes made in one space's custom stylesheet to be reflected in the stylesheets for all other spaces. For more information, please see CONF-18843.
  - **Full index rebuilds now work correctly.** A Confluence bug caused a database exception to be thrown during full index rebuilds, which prevented further indexing jobs from being run correctly. This has now been fixed. For more information, please see CONF-18452.
  - **Confluence now upgrades correctly when using Crowd integration.** If you have integrated your Confluence instance with Atlassian's Crowd, you can now upgrade to this version of Confluence without the manual workaround required for Confluence 3.1. For more information, please see CONF-18150.
  - **Circular references are no longer possible with the {excerpt-include} macro.** The {excerpt-include} macro could previously be used to create circular references that would crash Confluence. This has been fixed. For more information, please see CONF-15247.
  - **Confluence upgrades do not disable enabled plugins.** Plugins that are disabled by default would previously be disabled during a Confluence upgrade, even if they had been enabled prior to the upgrade. This has been fixed. For more information, please see CONF-18417.

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Known Issues in this Release

We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release and report any problems so that we can fix them quickly.

We value this feedback, which means that we can tell you about some minor known issues in Confluence 3.2. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the important technical advisories on the front page of the Knowledge Base.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.2 Team

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Confluence 3.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.2**. For details of the new features and improvements in this release, please read the Confluence 3.2 release notes.

On this page:

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- Upgrade Notes
  - Clickr Theme and Left Navigation Theme are now Deprecated
  - End of Support for JBoss, Firefox 2 and Safari 2
  - Advance Notice of End of Support for Oracle Weblogic, IBM Websphere, Caucho Resin, DB2 8.2, Java Platform 5 (JDK/JRE 1.5) and Internet Explorer 6
  - Link Browser will Remove Tooltips
- Upgrade Procedure
- Troubleshooting the Upgrade
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

Upgrade Notes

Clickr Theme and Left Navigation Theme are now Deprecated

Confluence 3.2 introduces two new themes, the Documentation theme and the Easy Reader theme. At the same time, we are announcing the deprecation of the following two themes:

Deprecated Theme	Description	Suggested Replacement
Clickr theme	This theme was inspired by the Flickr user interface, with Confluence content centred on the page. Please note that some features of Confluence 3.x are not fully supported by this theme.	Easy Reader theme
Left Navigation theme	This theme provides a navigation bar on the left hand side of the screen. Please note that some features of Confluence 3.x are not fully supported by this theme.	Documentation theme

We recommend that you move to a different theme as soon as possible. In the table above, we have suggested new themes that will give you similar and better-supported functionality.

> **Advance Notice --- Clickr Theme and Left Navigation Theme will not be bundled with Confluence 3.3**
>
> Please note, the Clickr Theme and Left Navigation Theme will not be bundled with Confluence 3.3. We will not support these themes from Confluence 3.3 onwards.

End of Support for JBoss, Firefox 2 and Safari 2

As previously announced, we are no longer providing support for:

- JBoss (all versions) **from this release onwards**.
- Firefox 2 and Safari 2 **from this release onwards**.

Please see End of Support Announcements for Confluence for further details.

Advance Notice of End of Support for Oracle Weblogic, IBM Websphere, Caucho Resin, DB2 8.2, Java Platform 5 (JDK/JRE 1.5) and Internet Explorer 6

As previously announced, we are planning on ending support for:

- Oracle Weblogic, IBM Websphere and Caucho Resin **in Confluence 3.3**.

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- DB2 version 8.2 **in Confluence 3.3**. DB2 9.7 will still be supported.
- Java Platform 5 (JDK/JRE 1.5) **in Confluence 3.3**.
- Internet Explorer 6 **in Confluence 3.3 or 13 July 2010, whichever is sooner**.

Please see End of Support Announcements for Confluence for further details.

Link Browser will Remove Tooltips

In Confluence 3.2 and later, the link browser no longer offers the option to include a tooltip for your link. If you have existing links with tooltips, the tooltip will disappear if you edit the link with the link browser. The tooltip will remain if you edit the link using wiki markup. See issue CONF-18668.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.

2. If your version of Confluence is earlier than 3.1.x, then please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.) Also:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the upgrade guide.

Troubleshooting the Upgrade

This section lists some specific issues that may occur during or as a result of the upgrade process, and guidelines on fixing the problem if it does happen to you.

- **Left-hand navigation bar in Documentation theme is empty.** If your existing Confluence installation already has the Documentation theme plugin installed, you may find that after upgrading to Confluence 3.2 the left-hand navigation bar is empty in the spaces that use the theme. The fix is to enable all modules of the Documentation theme plugin. See the knowledge base article.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

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- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.
- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.2 Release Notes

Issues Resolved in Confluence 3.2

Below are the top 100 issues resolved in Confluence 3.2, ordered by number of votes. For the full list of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 3.2 release notes for the new features in Confluence 3.2.

JIRA Issues (98 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-11469	Improve usability of page tree for moving and ordering pages	Resolved	Fixed	65
	CONF-7745	RSS Feed should incude only comments of content included in feed	Resolved	Fixed	22
	CONF-16115	Confluence is extremely slow to load pages when network latency is significant	Resolved	Fixed	7
	CONF-18180	RSS Feeds: Do not render computationally intensive macros in RSS Feeds due to frequent rendering to RSS Readers	Resolved	Fixed	6
	CONF-16884	Connie needs pretty and functional clothes -	Resolved	Fixed	6

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		Bundled Themes Require Attention			
	CONF-7496	livesearch returns no results for complete words - only part words	Resolved	Fixed	6
	CONF-18774	Drag & Drop does not work on Firefox 3.6	Resolved	Fixed	5
	CONF-17971	'Move Page' dialog box cannot rearrange/reorder pages like the old page moving feature in 3.0 did.	Resolved	Fixed	4
	CONF-9312	RSS feeds that filter on labels should include comments of pages that match the label	Resolved	Fixed	4
	CONF-18437	Macro browser and Preview tab appears to be broken for all themes EXCEPT shipped default theme	Resolved	Fixed	3
	CONF-14435	Edit Link dialog does not handle accented characters correctly	Resolved	Fixed	3
	CONF-19422	Error when restoring version 3.2 XML backup	Resolved	Fixed	2
	CONF-18881	Modz Detector is broken in 3.1.2	Resolved	Fixed	2
	CONF-17341	After Draft Timed Out, user is stuck without being able to save their work due to NPE in ListItemConverter.convertNode(ListItemConverter.java:50)	Resolved	Fixed	2
	CONF-16540	Attachment view	Resolved	Fixed	2

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		shows filenames with double spaces turned into single spaces			
	CONF-11551	Link Properties shows additional character in "Alias"	Resolved	Fixed	2
	CONF-18751	PermittedSpacesScope may decrease the BooleanQuery maxClauseCount	Resolved	Fixed	1
	CONF-18381	NPE setting up Demo content on a custom db	Resolved	Fixed	1
	CONF-17311	Reword theme descriptions	Resolved	Fixed	1
	CONF-15180	Class Cast Exception being thrown when error encountered during mail queue flushing	Resolved	Fixed	1
	CONF-12134	Group templates together	Resolved	Fixed	1
	CONF-3938	Linking to page's files within a comment	Resolved	Fixed	1
	CONF-2545	Macros in #includePage calls cannot access the current HttpServletRequest object	Resolved	Fixed	1
	CONF-21559	Auto filled link alias.	Resolved	Fixed	0
	CONF-20375	Hard to escape links	Resolved	Fixed	0
	CONF-19501	"Cancel" button name on "Move Page" dialog is hardcoded and can not be localized	Resolved	Fixed	0
	CONF-19069	Children pages don't get returned in the	Resolved	Fixed	0

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		correct order when requested through rest			
	CONF-18647	UnsupportedOperationException thrown when saving a page edit after logging out in another tab when a draft already exists.	Resolved	Fixed	0
	CONF-18630	Improve UI of "Rss Feed Builder"	Resolved	Fixed	0
	CONF-18607	Using Dashboard Actions before logging in can cause an IllegalArgument Exception	Resolved	Fixed	0
	CONF-18600	Improve usage of Atlassian-User APIs	Resolved	Fixed	0
	CONF-18588	Move Page Dialog has a memory leak in IE on the browse tab	Resolved	Fixed	0
	CONF-18586	Add more keyboard shortcuts for the RTE	Resolved	Fixed	0
	CONF-18561	Allow language packs to be bundled plugins rather than in WEB-INF/lib	Resolved	Fixed	0
	CONF-18554	ChildPositionComparator deprecated without alternative	Resolved	Fixed	0
	CONF-18538	IE stylesheets defined in Themes don't get served with IE conditional comments	Resolved	Fixed	0
	CONF-18536	Add service for getting i18n from plugins	Resolved	Fixed	0

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	CONF-18489	The Download All as zip is using the wrong mime type	Resolved	Fixed	0
	CONF-18485	Webdavloader.xpi not compatible with FireFox 3.6	Resolved	Fixed	0
	CONF-18452	Site indexing stops when a db exception occurs	Resolved	Fixed	0
	CONF-18446	Display editor hints in the status bar of the RTE	Resolved	Fixed	0
	CONF-18417	Enabled plugins that are disabled by default don't stay enabled after Confluence upgrades	Resolved	Fixed	0
	CONF-18399	Replace ReverseDatabinder with better factored import code	Resolved	Fixed	0
	CONF-18390	Rest Plugins have no Transactions	Resolved	Fixed	0
	CONF-18309	NPE when clicking 'PDF Stylesheet' in space admin when not global administrator	Resolved	Fixed	0
	CONF-18303	Rest Search Service	Resolved	Fixed	0
	CONF-18284	Pressing tab on autcomplete drop downs (such as quick nav) in Firefox causes the text to go white	Resolved	Fixed	0
	CONF-18271	cachecontents.jsp page is broken	Resolved	Fixed	0
	CONF-18240	New Fixed Width Theme	Resolved	Fixed	0
	CONF-18235	Left Nav Theme is not showing the correct text	Resolved	Fixed	0
	CONF-18216	{plugins-supported} macro is not	Resolved	Fixed	0

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		working correctly after upgraded from 2.10 to 3.1			
	CONF-18206	Need to remove hard-coded instances of blue	Resolved	Fixed	0
	CONF-18199	Dropdown doesn't work nicely with long usernames	Resolved	Fixed	0
	CONF-18195	Impossible to select a user using mouse from an autocomplete dropdown box in a search filter "Who"	Resolved	Fixed	0
	CONF-18194	viewxls macro in the macro browser does not work correctly when inserting attachments from a comment on a blog	Resolved	Fixed	0
	CONF-18150	Cannot upgrade to Confluence 3.1 when using Crowd integration	Resolved	Fixed	0
	CONF-18098	Fix license action requires authentication, can't be used if user migration fails	Resolved	Fixed	0
	CONF-18072	Improve caching of language preference when user is using site default language	Resolved	Fixed	0
	CONF-18045	Make notification to display consistent display name	Resolved	Fixed	0
	CONF-18036	Add plugin extension point for search result rendering	Resolved	Fixed	0
	CONF-18027	Missing internationalisati	Resolved	Fixed	0

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		on when number of user licenses is exceeded			
	CONF-17898	Index Queue flush can miss entries	Resolved	Fixed	0
	CONF-17860	Extra white space on the right when adding a page @ 1024 x768	Resolved	Fixed	0
	CONF-17659	Excerpt generation misses first character	Resolved	Fixed	0
	CONF-17519	Inconsistent functionality between menus (themes)	Resolved	Fixed	0
	CONF-17382	MacroMetadata Parser ignores all attributes for macros without parameters	Resolved	Fixed	0
	CONF-17281	Improve Page History Navigation UI	Resolved	Fixed	0
	CONF-17265	Improve Widget connector macro description wording	Resolved	Fixed	0
	CONF-17203	Extraneous <p> tag in space.vmd	Resolved	Fixed	0
	CONF-17153	Space on the end of a database connection URL during setup can cause connection to fail.	Resolved	Fixed	0
	CONF-17077	Message about exceeding the number of licenced users contains a simple counting error	Resolved	Fixed	0
	CONF-17028	Email link should not appear for	Resolved	Fixed	0

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		pages that the user is restricted from viewing			
	CONF-17024	Improve instructions on the Confluence error page (500.jsp)	Resolved	Fixed	0
	CONF-16578	When Confluence license is invalid in confluence.cfg.xml, Confluence fails with "Upgrade failed" in the browser	Resolved	Fixed	0
	CONF-16389	Mail page plugin throws null pointer due to invalid LDAP membership	Resolved	Fixed	0
	CONF-16058	CreateRssFeedAction doesn't handle multiple RSS types in request nicely	Resolved	Fixed	0
	CONF-15919	Disabled Users Can Be Followed	Resolved	Fixed	0
	CONF-15915	Macro Browser - Chart Macro - "X-axis" and "Y-axis" labels are not immediately understood	Resolved	Fixed	0
	CONF-15756	Edit Attachment Storage page has escaped tags	Resolved	Fixed	0
	CONF-15528	Spelling errors and missing information in the online documentation (i.e. the notation guide)	Resolved	Fixed	0
	CONF-15317	Edit User Groups unreadable in Firefox	Resolved	Fixed	0
	CONF-15262	Add Keyboard shortcut for the	Resolved	Fixed	0

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		macro browser			
	CONF-15185	Control+i takes you to the page info when your trying to use the shortcut for italics in the RTE of a Page/Blog comment	Resolved	Fixed	0
	CONF-15031	More useful filenames for PDF Exports	Resolved	Fixed	0
	CONF-14875	Link Browser	Resolved	Fixed	0
	CONF-14669	Tables don't initially look like tables when inserted in the RTE	Resolved	Fixed	0
	CONF-14636	On the search screen, add help text to "Who" field	Resolved	Fixed	0
	CONF-14565	In Browse Labels screen, Recent Labels and Popular Labels boxes on the right should be aligned with the current (future) styling.	Resolved	Fixed	0
	CONF-14558	Change "Children" to "Child Pages"	Resolved	Fixed	0
	CONF-13763	Moving attachments may silently fail to move the actual file	Resolved	Fixed	0
	CONF-13529	New "Configure whitelist" admin screen loses breadcrumbs	Resolved	Fixed	0
	CONF-13423	Insert Link popup needs to be cleaned up	Resolved	Fixed	0
	CONF-13392	Creating a page with RTE has whitespace where the	Resolved	Fixed	0

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		notation guide is in wiki markup mode			
	CONF-13196	list of users includes options to view more users per page even if the number of users less than 10	Resolved	Fixed	0
	CONF-12179	Link a page in the rich-text editor.	Resolved	Fixed	0
	CONF-5805	Add keyboard shortcut for preview tab	Resolved	Fixed	0
	CONF-4475	Removing the last item in a dynamic task list don't work proparly	Resolved	Fixed	0
	CONF-2577	Auto-completion of likely words in edit dialogs	Resolved	Fixed	0

Above are the issues resolved in Confluence 3.2, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker.

Confluence 3.3.1 Release Notes

17 August 2010

Confluence 3.3.1 is a recommended upgrade which fixes some security flaws and other bugs.

We have fixed a security flaw in this release that compromised the Secure Administrator Sessions (WebSudo) feature that was introduced in Confluence 3.3. Read the security advisory for more details.

Don't have Confluence 3.3 yet?

Take a look at the new features and other highlights in the Confluence 3.3 Release Notes.

Download Latest Version

Release Notices

Security Advisory

This release fixes a security flaw. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.3.1 Upgrade Notes. We *str ongly recommend* that you back up your `confluence.home` directory and database before upgrading.

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Updates and Fixes in this Release

JIRA Issues (32 issues)					
Type	Key	Summary	Priority	Status	Resolution
	CONF-21455	Implement/configure HTTP only session cookies.		Resolved	Fixed
	CONF-20526	Doc Theme is incompatible with Page Restrictions		Resolved	Fixed
	CONF-20508	Secure Administrator Sessions feature can be bypassed		Resolved	Fixed
	CONF-20400	Restoring a XML site backup into 3.3 fails with "No enum const class..." exception		Resolved	Fixed
	CONF-20342	System Error when entering plugin support mode in Confluence 3.3		Resolved	Fixed
	CONF-20318	NetworkAndSiteNotificationTypesUpgradeTask fails when upgrading to 3.3 on Oracle (and probably others)		Resolved	Fixed
	CONF-20244	Release OfficeConnector and update Confluence to use the new version		Resolved	Fixed
	CONF-18403	Users with a whitespace in username cannot add favourites or apply page restriction		Resolved	Fixed
	CONF-20288	Web Sudo: "Drop access" link does not work when language is set to german		Resolved	Fixed
	CONF-20044	Page Gadet			Fixed

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		tools menu grows white space and is not styled correctly		Resolved	
	CONF-19956	Page Gadget error message for inaccessible content needs to be tidied up		Resolved	Fixed
	CONF-19313	Cannot execute Tools -> Restrictions from Personal Spaces of users with whitespace in their user name		Resolved	Fixed
	CONF-19169	Word footnotes import in Doc Import is broken		Resolved	Fixed
	CONF-18892	Office Connector Freezes Confluence When Loading Excel 2007 File With Date Macro		Resolved	Fixed
	CONF-18853	Doc Import stuck in loop when duplicate titles are included in the Word Document		Resolved	Fixed
	CONF-18430	Usernames with spaces do not work with page restriction auto-complete		Resolved	Fixed
	CONF-20553	Read only users is able to add non personal labels		Resolved	Fixed
	CONF-20338	Upgrade Dashboard Macros plugin to 1.14		Resolved	Fixed
	CONF-20275	Setup footer contains the "print-only" message		Resolved	Fixed
	CONF-20254	Null PE from plugin-status macro		Resolved	Fixed
	CONF-20181	Headings in		Resolved	Fixed

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		Page Gadgets scroll sideways with the page			
	CONF-20127	Increasing 502 exceptions on EAC		Resolved	Obsolete
	CONF-20027	Page Gadget missing scroll bars in IE8		Resolved	Fixed
	CONF-20021	Apostrophes are double escaped in the Page Gadget title		Resolved	Fixed
	CONF-20012	The gadget tools menu and the scroll bar overlap in Safari		Resolved	Fixed
	CONF-19932	Confluence page gadget viewfile macro requires a refresh to re-size correctly		Resolved	Fixed
	CONF-19694	Left curly brace shouldn't trigger Macro Autocomplete if an existing macro is selected		Resolved	Fixed
	CONF-19285	[Doc import] Importing document of size bigger than attachment limit yields "Page Not Found" error		Resolved	Fixed
	CONF-19157	Graphs don't display properly when using sheet parameter in viewfile		Resolved	Fixed
	CONF-17414	Doc Import allows empty title		Resolved	Fixed
	CONF-16876	"Expected 'xref' at start of table" when rendering PDF file version 1.4 and later in viewfile macro		Resolved	Fixed
	CONF-12421	Don't use distrbuted cache for storing		Resolved	Fixed

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		Captcha's in a cluster			

Confluence 3.3.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.3.1**. Confluence 3.3.1 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence 3.3.1 Release Notes.

On this page:

- Upgrade Notes
- Upgrade Procedure
- Useful Plugins

Upgrade Notes

- We have fixed a security flaw in this release that compromised the Secure Administrator Sessions (WebSudo) feature that was introduced in Confluence 3.3. Read the security advisory for more details.
- There is known issue in this release where you will not be able to add permissions to a page when copying it. We are addressing this issue. In the meantime, you can work around this by creating a new page, copying the wiki markup from the page that you want to copy and applying permissions to the new page. See CONF-20584 for more information.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**.
   ℹ️ The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'.
   Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.3, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.3 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.3.3 Release Notes

21 September 2010

Confluence 3.3.3 is a recommended upgrade which fixes some security flaws and other bugs. Note that

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Confluence 3.3.2 was an internal release only.

- **Security fixes in Confluence 3.3.3.** Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- **Office Connector temporary storage location.** When configuring the temporary storage location for the Office Connector's View File macro, you can no longer enter a specific file location via the Confluence Administration Console. Instead, the Administration Console offers three options, as described below. If you have previously entered a specific file location, the location will still be valid. However, if you want to change the location you will need to choose one of the three options described below, to hold the temporary file:
  - In memory.
  - In your Confluence Home directory.
  - In a file location that you can specify in the `directories.properties` file, located in the Office Connector JAR. Instructions are in the documentation.
- **Preview pane now shows full content.** When previewing a wiki page in Firefox, the preview pane will now show the entire content of the page. This fixes a problem experienced with Firefox 3.6.7 and later, caused by a change in Firefox.
- **Other noteworthy fixes.** The complete list of bug fixes is at the bottom of this page. Highlights:
  - You can now set page restrictions when copying a page.
  - Confluence will retain your setting when you turn on the 'Did You Mean' feature in the search.
  - When you edit a wiki page in Word, your changes are now saved.

Don't have Confluence 3.3 yet?

Take a look at the new features and other highlights in the Confluence 3.3 Release Notes.

Download Latest Version

Release Notices

- **Security advisory:** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- **Upgrading from a previous version of Confluence:** Upgrading Confluence should be fairly straightforward. Please read the Confluence 3.3.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (20 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21905	CLONE - Editor preview doesn't expand to show complete content		Resolved	Tracked Elsewhere
	CONF-20671	XSRF vulnerability in the Mail Page plugin		Resolved	Fixed
	CONF-20670	XSS vulnerability in the Office Connector		Resolved	Fixed
	CONF-20669	Confluence should not allow		Resolved	Fixed

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		configuration of Office Connector temporary storage location			
	CONF-20668	Path traversal vulnerability in various Confluence actions		Resolved	Fixed
	CONF-20441	Editor preview doesn't expand to show complete content		Resolved	Fixed
	CONF-20584	Cannot set page restrictions when copying a page		Resolved	Fixed
	CONF-20487	Did You Mean option not retained in 3.3		Resolved	Fixed
	CONF-20339	Edit in "Page" word feature causes nullpointer exception.		Resolved	Fixed
	CONF-19738	bootstrapPlugin Manager is still available to plugins system - is not thrown away.		Resolved	Fixed
	CONF-20738	Ziputility adds files with wrong name		Resolved	Fixed
	CONF-20616	Edit in Word does not work when a custom authenticator is configured		Resolved	Fixed
	CONF-20298	NullPointerException error logged by scheduled office connector cleanup job at 02:00		Resolved	Fixed
	CONF-12571	JIRA Issue Macro displays too wide, doesn't auto-scroll properly		Resolved	Fixed
	CONF-20754	License Details: Links in error		Resolved	Fixed

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		message are broken.			
	CONF-20617	Cannot build REST documentation for Confluence 3.3.1		Resolved	Fixed
	CONF-20575	Update Jira Macros Plugin to version 2.8.20, 2 issues fixed in this update		Resolved	Fixed
	CONF-20343	sudo is decorated with global decorator		Resolved	Fixed
	CONF-14628	pages/create(blogpost|page).action with a spaceKey containing the null character causes org.springframework.dao.DataIntegrityViolationException		Resolved	Fixed
	CONF-25256	SCN > Wiki: The mark and the description for the font options are intersected		Resolved	Fixed

Confluence 3.3.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.3.3**. Confluence 3.3.3 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence 3.3.3 Release Notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.3, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.3 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

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Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.3 Release Notes

7 July 2010

With great pleasure, Atlassian presents Confluence 3.3 now with more ways to integrate with JIRA and an even faster and simpler editor.

Highlights of this Release:

- Confluence Page Gadget
- Autocomplete for Inserting Macros
- Property Panels for Links
- Property Panels for Images
- Manage Watchers
- Email Notifications for Network Activity and Blogs
- Blog Improvements
- Context-Sensitive Help Links
- Security Features
- Infrastructure Changes
- Even More Improvements

More:

- Thank you for all your issues and votes. Keep logging issues to help us keep improving!
- Read the release notices for important information about this release.
- Attached is the full list of issues resolved in this release.

Video of What's New:

app.episodic.com

Responding to your Feedback:

Over **200** votes satisfied

DOWNLOAD latest version

Highlights of Confluence 3.3

1

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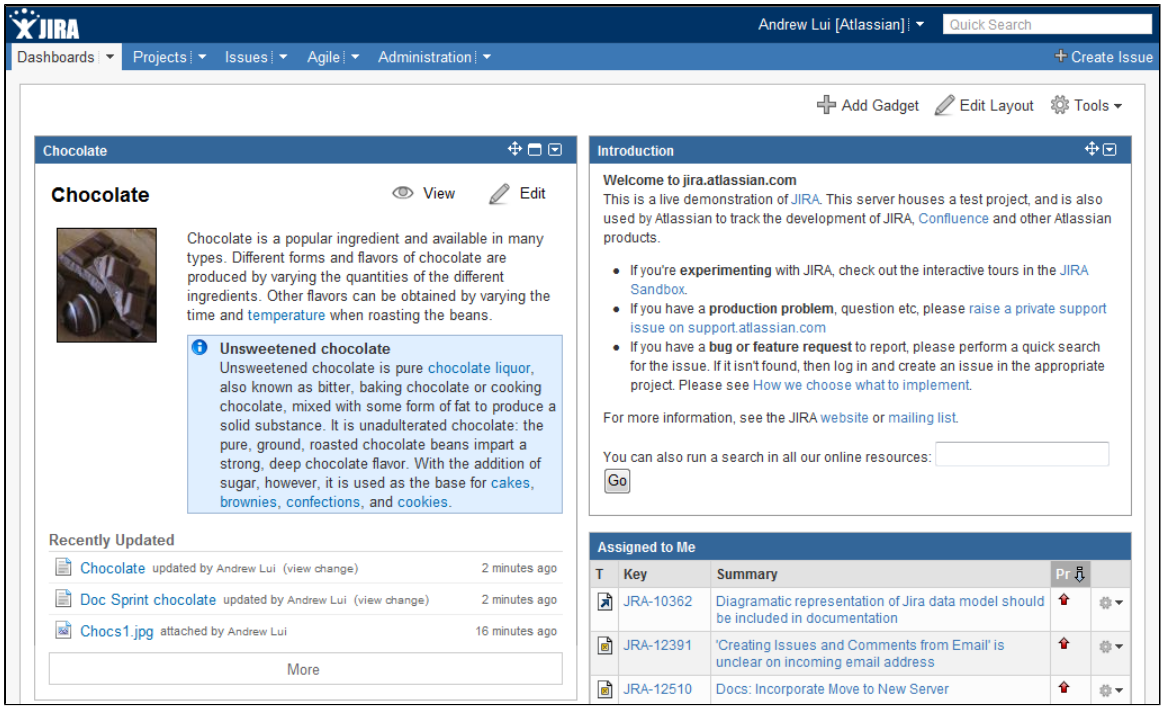
Confluence Page Gadget

You wanted to display Confluence content in other applications and we've delivered. The Confluence Page Gadget is the newest addition to our suite of gadgets. You can specify a Confluence page or blog post to be shown in the gadget, which you can then add to your JIRA dashboard or even another Confluence site. The gadget also renders macros from your Confluence page or blog post, allowing you to embed rich content like tasklists, spreadsheets, videos and more, in your applications via the gadget.



More....

2

Autocomplete for Inserting Macros

Confluence 3.3 builds on the autocomplete for links and autocomplete for attachments features introduced in Confluence 3.2. You can now take advantage of the speed and convenience of autocomplete to insert macros via the rich text editor. Just enter '{' and start typing to see the suggested macros that match your text.

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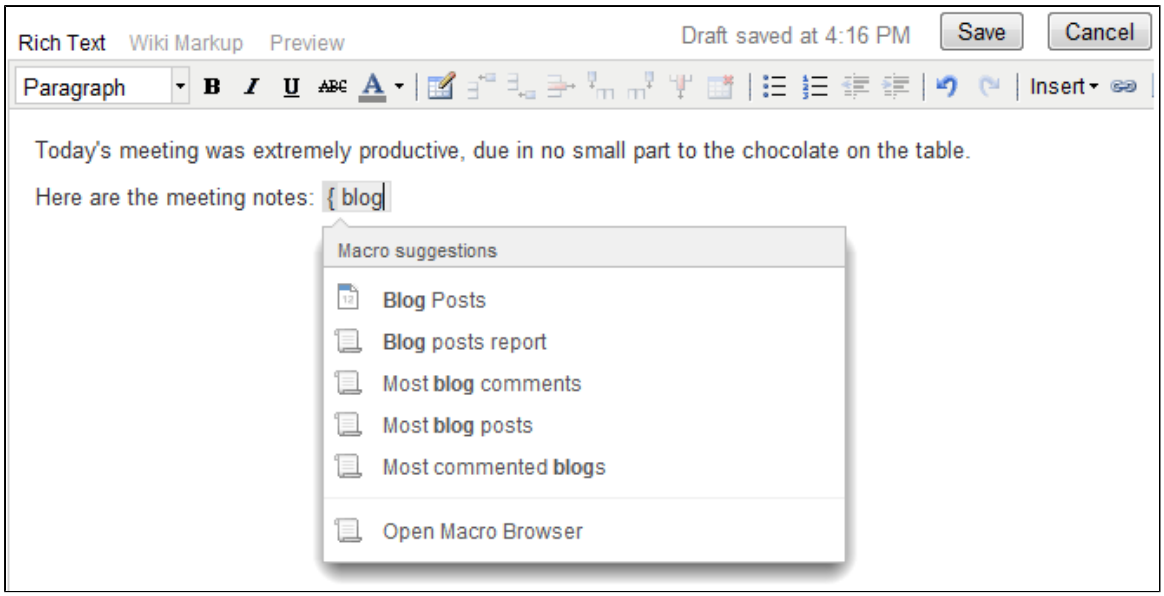
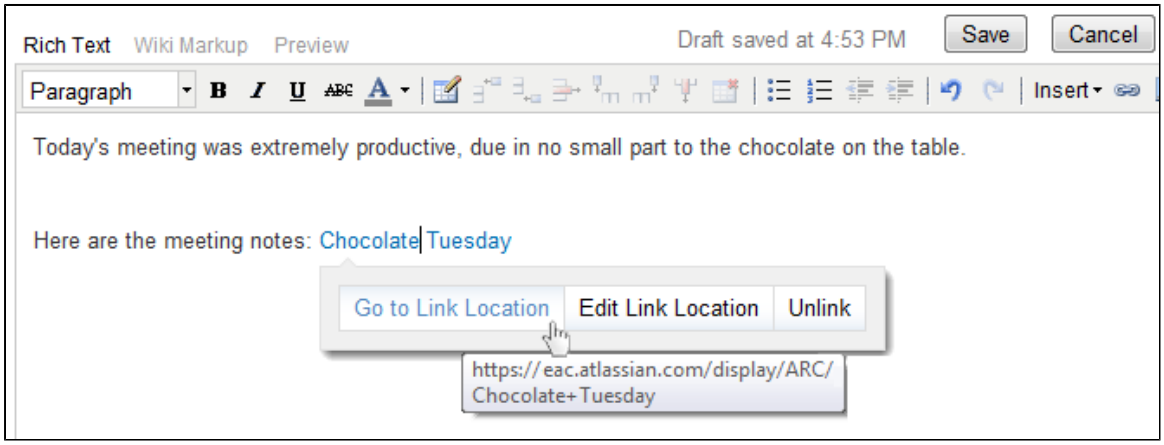


More....

3

Property Panels for Links

Keep common link functions at your fingertips with property panels for links. You no longer need to leave the ri text editor to see where a link is pointing to, or to remove the link. Click a link and a properties panel will appea Simply click the appropriate button to view/go to the link location, edit the link or unlink it.



More...

4

Property Panels for Images

Property panels have also been added for images. You no longer need to leave the rich text editor to resize an

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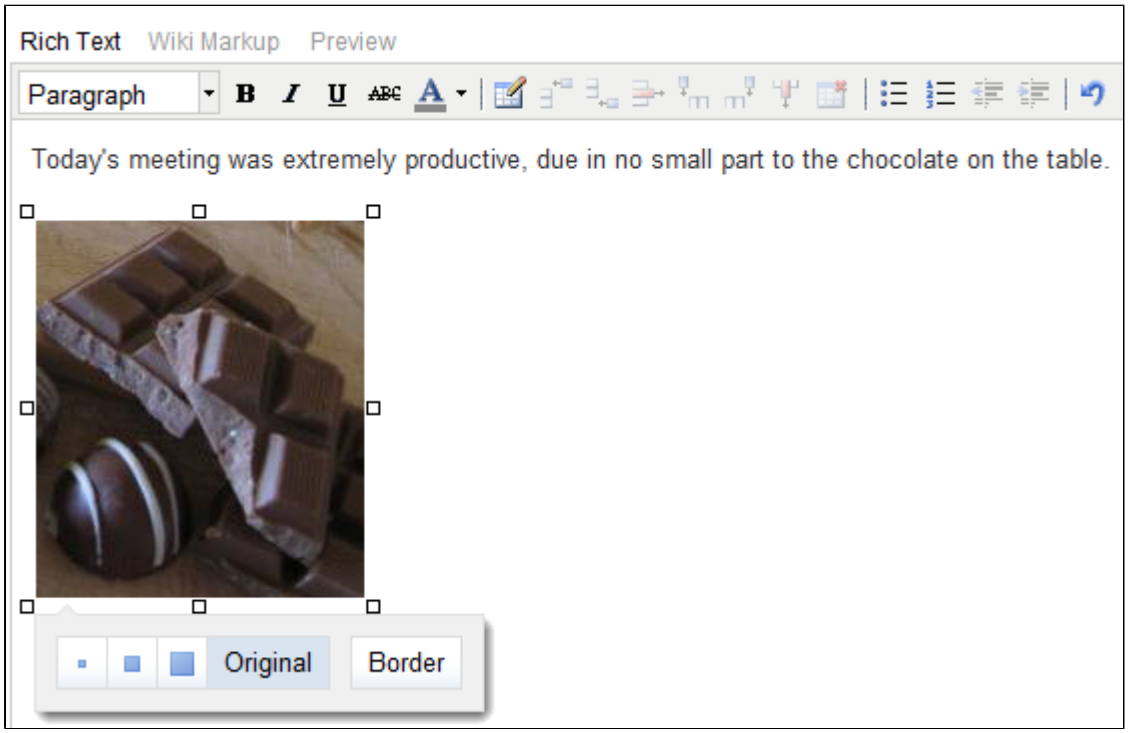
image or add a border. You can easily perform these functions via the property panel.

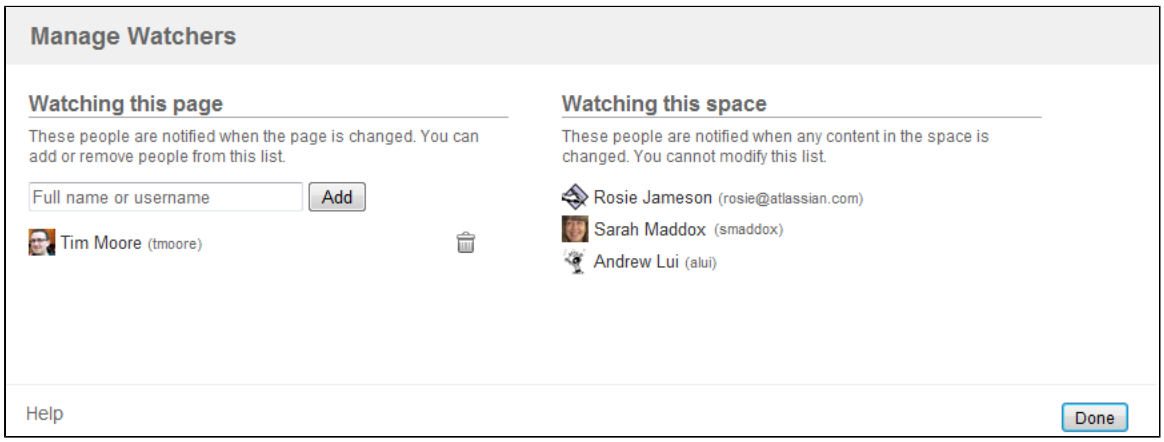


More...

5

Manage Watchers

Confluence 3.3 now allows you to manage the watchers for all pages and blog posts in a space, if you are a space administrator for that space. You can view, add and remove watchers of a page or blog post, as well as view all watchers of the space on a single screen.



More....

6

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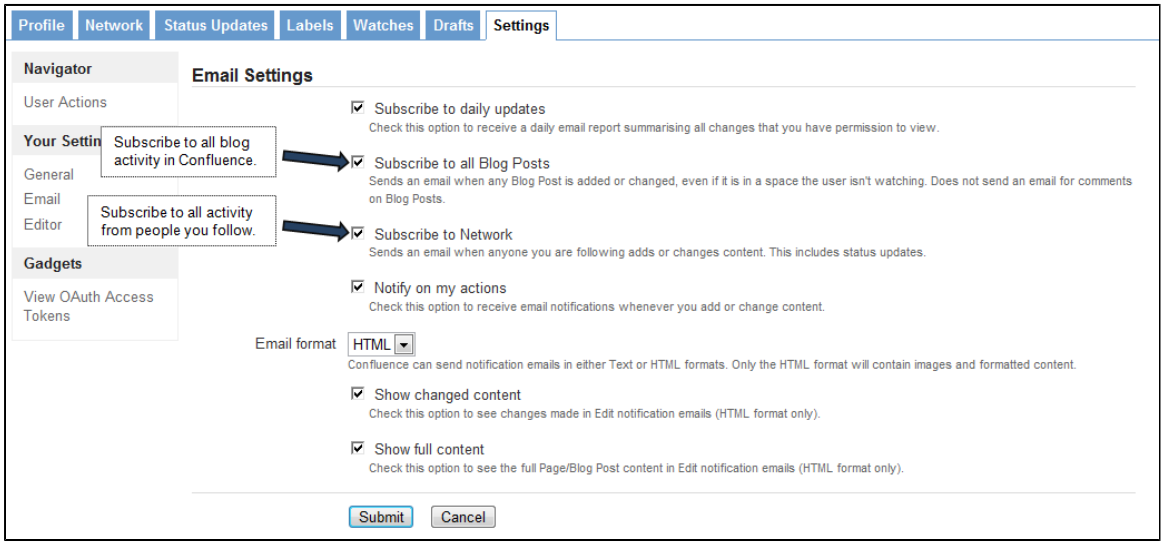
Email Notifications for Network Activity and Blogs

We've extended the email notifications functionality in Confluence. You can now subscribe to email notification for all blog activity in your Confluence site and all activity by people that you follow.



More....

7

Blog Improvements

A number of improvements have been made to Confluence blogs in this release.

- **Change Comments in Blog Posts** — We've implemented change comments on blog posts, so you car comment on the updates you make to blog posts, in the same way as you can for pages.
- **Blog Navigation Improvements** — The blog view has also been redesigned to present more informatic with less clutter. The old calendar has been replaced with a new sidebar listing blog posts for the month and you can now see the profile pictures of the bloggers in posts.

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More....

8

Context-Sensitive Help Links

Context-sensitive help links are now available in Confluence. These links will redirect you to the appropriate online documentation for the version of Confluence that you are using. You can also use this feature to configu your own local Confluence documentation, e.g. if your deployment is in an environment without an Internet connection.

More....

9

Security Features

- **Confluence secure administrator sessions.** Confluence has another line of defence against hijackers of administrator sessions. All features in the Administration section of Confluence (and some in the Spac Administration section) will require the user to validate their credentials before proceeding. After validating, a message at the top of each page reminds you of your temporary administrator session. The temporary session will expire after 10 minutes of administrator inactivity and can also be terminated manually.
  More....
- **Login CAPTCHA.** Confluence now requires the user to answer a CAPTCHA question after a given number of failed login attempts. This security mechanism protects not only the login page but the

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RPC-interface as well. After a configurable number of failed login attempts via the RPC interface, the us is required to log in using the web interface which then presents the CAPTCHA image.
More...

- **XSRF protection on comment creation.** An XSRF token is now required to be present when adding a comment. Don't worry though, a system is in place so that your session will not expire and you can take your time to write the perfect comment! All the bundled themes have been updated to use this feature, b you can disable it if you are using a custom theme.
More...
- **Login information.** Confluence now captures metadata about login attempts, including the dates of the last failed and successful login and the number of failed logins. A Confluence administrator can also res the number of failed logins for a particular user.
More...

10

Infrastructure Changes

We've made a number of infrastructure changes to aid plugin development:

- DWR deprecated. See the Confluence 3.3 Upgrade Notes for more details.
- Upgraded to Atlassian User Interface (AUI) 3.0.5. See the features in AUI 3.0.
- Upgraded to Shared Access Layer (SAL) 2.1.
- Upgraded to Atlassian Events 2.0.1
- Upgraded to Atlassian REST Module 2.0.0
- Upgraded to Atlassian Plugin Framework 2.5.1. See the features in Atlassian Plugin Framework 2.5, including:
  - New web panel and web panel renderer plugin modules, allowing you to add sections of HTML tc Confluence page.
  - Trigger control for your servlet filters, allowing you to specify the conditions under which your serv et filter plugin module is triggered.
  - Additional contexts in web resources, so that Confluence now supports the standard contexts provided by the plugin framework as well as the existing Confluence contexts.
- Upgraded to Bandana 2.0. See our documentation on persistence in Confluence, including:
  - Custom context objects.
  - Key enumeration.
  - Item removal.
  - Custom serialisation.

11

Even More Improvements

- **Streamlined 'Import Word Document' wizard.** The screens in the 'Import Word Document' wizard hav been redesigned to make this feature much more intuitive.
- **Redesigned default dashboard.** We've made a number of minor improvements to the default dashboard, including new buttons and a new welcome message.
- **Improved 'General Configuration' user interface.** The General Configuration screen in the Administration Console has been given a face lift.

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- **Accessibility Improvements.** We've added labels, legends and skip links so that Confluence now complies with more of the Section 508 Web Accessibility Standards. We still have a long way to go, but these pages should now be more screen-reader friendly:
  - Dashboard
  - General pages
  - Profiles
  - Set your Password
  - Attachments
  - People Directory
  - User Status

Release Notices

Security advisory

This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

Upgrading from a previous version of Confluence

- Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.***
- Please refer to the Confluence 3.3 upgrade notes for further essential information about **plugins** and other factors affecting your upgrade.

Known Issues

We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release and report any problems so that we can fix them quickly.

We value this feedback, which means that we can tell you about some minor known issues in Confluence 3.3. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the important technical advisories on the front page of the Knowledge Base.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.3 Team

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Stefan Saasen

Editor Improvements
Agnes Ro
Dmitry Baranovskiy
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Small Improvements
Brian Nguyen
Xu-Heng Tjhin

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Gerry Claps
Matthew Erickson
Niraj Bhawnani

Plugin Updates
David Chui

Build and Release Engineering
Don Willis

Special Projects (not shipping in this release)
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Paul Curren
Charles Miller
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Confluence 3.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.3**. For details of the new features and improvements in this release, please read the Confluence 3.3 release notes.

On this page:

- Upgrade Notes
  - End of Support for WebSphere, WebLogic, Resin, Internet Explorer 6 and Java Platform 5 (JDK/JRE 1.5)
  - DWR Deprecation Notice
- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

Upgrade Notes

End of Support for WebSphere, WebLogic, Resin, Internet Explorer 6 and Java Platform 5 (JDK/JRE 1.5)

As previously announced, we are no longer providing support for:

- IBM WebSphere (all versions) **from this release onwards**.
- Oracle WebLogic (all versions) **from this release onwards**.
- Caucho Resin (all versions) **from this release onwards**.

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- Internet Explorer 6 **from this release onwards**.
- Java Platform 5 (JDK/JRE 1.5) **from this release onwards**.

Please see End of Support Announcements for Confluence for further details.

DWR Deprecation Notice

We have replaced DWR with XWork actions (returning JSON, implementing the Beanable interface). The DWR servlet still works, however the client-side JavaScript files are not embedded into pages anymore. Support for the client side Javascript proxies has been moved into the Confluence Legacy Web Resources plugin. This plugin is disabled by default.

If you need any of the following web resources you will need to enable the Confluence Legacy Web Resources plugin:

- DWR framework
- DWR Javascript proxies for label (add, remove, suggest) or editor operations (heartbeat, draft saving, editor preferences)

You will also need to make the following resource a required resource in your view template: `legacy.confluence.web.resources:dwr-confluence`
This will embed the DWR client-side JavaScript files in your plugin's view output.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.2.x, then please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.) Also:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the upgrade guide.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

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- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.3 Release Notes

Issues Resolved in Confluence 3.3

Below are the top 100 issues resolved in Confluence 3.3, ordered by number of votes. For the full list of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 3.3 release notes for the new features in Confluence 3.3.

JIRA Issues (100 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-3703	Assign page watches to individuals or groups.	Resolved	Fixed	91
	CONF-5032	Add the ability to view & manage watchers of content	Resolved	Fixed	62
	CONF-15946	I18NBean getText method spamming EAC logs	Resolved	Fixed	35
	CONF-18704	Cannot generate PDFs of pages with certain symbols in the title	Resolved	Fixed	25
	CONF-16866	Page Restriction design does not scale well due to re-indexing of all sub-pages	Resolved	Fixed	18
	CONF-13310	Support for Oracle 11g	Resolved	Fixed	17
	CONF-8622	Minify JavaScript and CSS files	Resolved	Fixed	16
	CONF-9889	Monospace text {{ }} is not	Resolved	Fixed	13

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		rendered when next to macros, links or images			
	CONF-11416	Confluence help links should point to the appropriate version of the docs	Resolved	Fixed	9
	CONF-18059	Page footer renders incorrectly	Resolved	Fixed	8
	CONF-12779	Request to use 'Site Title' instead of 'Confluence' on Login page	Resolved	Fixed	8
	CONF-4076	Allow attaching of images or files when writing comments	Resolved	Fixed	7
	CONF-19435	Scrolling within Documentation Theme is broken for iPad	Resolved	Fixed	6
	CONF-17567	Search function cannot filter by special character (~, *, #, @, etc) in Who field.	Resolved	Fixed	5
	CONF-12753	Some sections in the Space Admin page are broken in IE 6	Resolved	Fixed	5
	CONF-3851	Last login date is not updated when Remember-me is used	Resolved	Fixed	5
	CONF-19675	Flying PDF plugin uses locale dependent names when creating files	Resolved	Fixed	4
	CONF-19425	Confluence automatic indexing fails	Resolved	Fixed	4
	CONF-19145	creates "plugins-temp" directory, fails to	Resolved	Fixed	4

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		start if current directory is not writeable			
	CONF-15233	Purging Trash is Slow and Blocks DB Writes	Resolved	Fixed	4
	CONF-11554	Alternative 500page.jsp with minimal information	Resolved	Fixed	4
	CONF-5000	Allow excerpts when listing content with a particular label	Resolved	Fixed	4
	CONF-19209	Quicknav gadget has display problems	Resolved	Fixed	3
	CONF-19065	First row of editor is hidden underneath wiki markup toolbar in IE7 and IE6	Resolved	Fixed	3
	CONF-19038	Allow search-results to retain theme when paging through results	Resolved	Fixed	3
	CONF-18949	Viewfile macro performance problems	Resolved	Fixed	3
	CONF-19873	Plugin Repository is not working on QA-EAC	Resolved	Fixed	2
	CONF-19229	livesearch macro doesn't work properly on IE6 , IE7 and IE8	Resolved	Fixed	2
	CONF-19127	Templates with variables fails sometimes	Resolved	Fixed	2
	CONF-18551	Ability to edit existing images with the new image browser	Resolved	Fixed	2
	CONF-15247	Java quits or exits - Seg Fault due to recursive ExcerptInclude Macro	Resolved	Fixed	2
	CONF-12915	Allow user to enter change	Resolved	Fixed	2

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		comment when editing news item/blog post			
	CONF-7063	Dynamic Tasklist Macro cannot be used while creating a page from a template	Resolved	Fixed	2
	CONF-20664	Macro Browser could not display search field when browser is minimized (and even after maximized later) in IE	Resolved	Fixed	1
	CONF-19856	Thumbnail Images: Only one image on a page can be viewed one time	Resolved	Fixed	1
	CONF-19562	Links to attachments from within comments work in preview and wysiwyg, but not when saved and displayed	Resolved	Fixed	1
	CONF-19531	Broken "Enable Profiling" button if button value contains special characters	Resolved	Fixed	1
	CONF-19217	Upgrade bundled plugins	Resolved	Fixed	1
	CONF-18951	Fix mime type for attachment file uploads.	Resolved	Fixed	1
	CONF-18846	Getting java.lang.NullPointerException when tried to view a pptx file	Resolved	Fixed	1
	CONF-18442	{viewfile} error message	Resolved	Fixed	1
	CONF-18292	Atlassian Plugin Repository keeps loading and never finishes	Resolved	Fixed	1
	CONF-18110	Link to PAC	Resolved	Fixed	1

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		Themes from Space admin choose theme screen			
	CONF-18082	Create MySQL tables using InnoDB engine by default	Resolved	Fixed	1
	CONF-17780	Replace welcome message for 3.1 and improve welcome message mechanism	Resolved	Fixed	1
	CONF-17334	Keyboard shortcuts not working under Mac OSX (Snow Leopard)	Resolved	Fixed	1
	CONF-16621	Error using Doc Import in News.	Resolved	Fixed	1
	CONF-14928	System error when removing a username containing a space from a group in Manage Groups page	Resolved	Fixed	1
	CONF-23149	contentbylabel macro does not sort ASCII characters properly	Resolved	Fixed	0
	CONF-20229	Online help link in Setup Wizard leads nowhere	Resolved	Fixed	0
	CONF-20206	Removing a page watcher in IE throws a javascript error	Resolved	Fixed	0
	CONF-20182	Added a page watcher displays '…'	Resolved	Fixed	0
	CONF-20164	Some text describing the web sudo setting would be helpful to have in the security config sidebar	Resolved	Fixed	0
	CONF-20155	For an email	Resolved	Fixed	0

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		address link, clicking "go to link" from property panel generates a windows error			
	CONF-20144	Update French Language Pack to v1.21, 1 issue resolved	Resolved	Fixed	0
	CONF-20143	Update Office Connector to v1.10, 3 bugs fixed	Resolved	Fixed	0
	CONF-20142	Office Connector 1.9 vendor name/description is incorrect	Resolved	Fixed	0
	CONF-20141	Update German Language Pack to v1.16, 2 issues resolved	Resolved	Fixed	0
	CONF-20140	Remove dotted border around image property panel buttons	Resolved	Fixed	0
	CONF-20132	Page Gadget: fields in Macro Browser are screwed up when using the gadget on IE8	Resolved	Fixed	0
	CONF-20126	XSS vulnerability in Clickr theme	Resolved	Fixed	0
	CONF-20125	XSS vulnerability in Contributors Summary macro	Resolved	Fixed	0
	CONF-20122	XSS vulnerability in Contributors macro	Resolved	Fixed	0
	CONF-20121	XSS vulnerability in PDF export	Resolved	Fixed	0
	CONF-20119	XSS vulnerability in Tasklist macro	Resolved	Fixed	0
	CONF-20108	Autocomplete for links page title not appearing	Resolved	Fixed	0
	CONF-20090	Editor Properties Panel: Doesn't handle email address well	Resolved	Fixed	0

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	CONF-20079	Page Gadget cannot be authenticated after configuration	Resolved	Fixed	0
	CONF-20073	Text "All Spaces" should disappear when user focuses on the text box to type in a space name in Page Gadget	Resolved	Fixed	0
	CONF-20070	Hard-coded help link on PDF Layout screen should use the new configurable linking design	Resolved	Fixed	0
	CONF-20069	Special characters in resource urls are throwing errors	Resolved	Fixed	0
	CONF-20067	When user does not have a profile picture set blog post macro and browse space blogs log errors	Resolved	Fixed	0
	CONF-20058	Remove special pre-mysql 4.1 handling in query to fetch orphaned pages (which is really slow for large spaces)	Resolved	Fixed	0
	CONF-20055	Web sudo fails with NoSuchMethodException for constructor-injected plugin actions	Resolved	Fixed	0
	CONF-20020	Dropdown images are clipped in the Page gadget	Resolved	Fixed	0
	CONF-20018	The page gadget space picker is confusing	Resolved	Fixed	0
	CONF-20016	Errors appear in	Resolved	Fixed	0

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		Safari console when using the Page Gadget			
	CONF-20015	Edit Document link doesn't work in the Page Gadget	Resolved	Fixed	0
	CONF-20014	Viewing a long page in the Page Gadget resulted in 'Script stack trace quote is exhausted'	Resolved	Fixed	0
	CONF-20010	Page Gadget failed to load in Safari	Resolved	Fixed	0
	CONF-20007	Upgrade ThreadDump plugin	Resolved	Fixed	0
	CONF-20002	Full screen mode cannot be toggled off in safari and IE7	Resolved	Fixed	0
	CONF-19997	No way to add a link with links browser or autocomplete in Clickr 2.10	Resolved	Fixed	0
	CONF-19996	Update Confluence gadgets to 1.1-beta2 - 11 bugs fixed	Resolved	Fixed	0
	CONF-19994	Update tasklist plugin to 3.3-beta2 - fixed 2 bugs	Resolved	Fixed	0
	CONF-19986	Update Advanced Macros to v1.9, 2 issues fixed in this release	Resolved	Fixed	0
	CONF-19984	JavaScript error when selecting a macro in Macro Browser where the first parameter field is a select	Resolved	Fixed	0
	CONF-19980	Update Clickr Theme to v2.10, 2 issues fixed in	Resolved	Fixed	0

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		this release			
	CONF-19968	Create space javascript broken by CONF-19803	Resolved	Fixed	0
	CONF-19967	Exception viewing security configuration page	Resolved	Fixed	0
	CONF-19966	Page gadget does not have a "view" button in Safari	Resolved	Fixed	0
	CONF-19959	Page Gadget space text box does not find my personal space or even any space named "Home" or "home"	Resolved	Fixed	0
	CONF-19952	Drag drop does not work in BETA-2	Resolved	Fixed	0
	CONF-19951	Upgrade page tree macro to 1.18	Resolved	Fixed	0
	CONF-19947	atlassian-plugin.xml: trim white spaces	Resolved	Fixed	0
	CONF-19931	Confluence page gadget edit link doesn't work for blogs	Resolved	Fixed	0
	CONF-19926	Page gadget dialog combo box for selecting a page does not have a bottom	Resolved	Fixed	0
	CONF-19921	Page gadget dialog "you must select a page" remains after page is selected.	Resolved	Fixed	0
	CONF-19913	Closing links dialog with escape key causes IE Javascript error	Resolved	Fixed	0
	CONF-19912	Links browser link text should not change when link is changed	Resolved	Fixed	0

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Above are the issues resolved in Confluence 3.3, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker.

Confluence 3.4.1 Release Notes

1 November 2010

Confluence 3.4.1 is a bug-fix release. The full list of fixes is at the bottom of this page. Here are the highlights:

- **Edit in Word on Windows 7.** This release fixes a problem where the 'Edit in Word' functionality did not work on Windows 7. Before this fix, opening a Confluence page as a Word document would cause the document to be loaded in read-only mode for users running Windows 7.
- **Word wrap for long words in PDF exports.** A bug caused long words, or text without spaces, to be cut off in PDF exports. This is now fixed, so that long words are wrapped onto the next line. This is particularly relevant for languages where text does not contain spaces, such as Chinese and Japanese.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (6 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21084	Plugin Administration Page link should point to UPM rather than legacy plugin manager		Resolved	Fixed
	CONF-21099	XSS vulnerability in Attachments macro		Resolved	Fixed
	CONF-21098	XSS vulnerability in Code macro		Resolved	Fixed
	CONF-18174	Edit in word read only in Windows 7		Resolved	Fixed
	CONF-20712	Episodic Videos not working with widget connector		Resolved	Fixed
	CONF-16833	Long words fail to wrap in PDF		Resolved	Fixed

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		exports			

Confluence 3.4.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.1**. For details of the fixes in this release, please read the Confluence 3.4.1 Release Notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.2 Release Notes

15 November 2010

Confluence 3.4.2 is a bug-fix release. The full list of fixes is provided at the bottom of this page.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

- **Security advisory:** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

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JIRA Issues (3 issues)					
Type	Key	Summary	Priority	Status	Resolution
	CONF-21162	Security Vulnerability in Confluence Remote API		Resolved	Fixed
	CONF-21145	Inserting a macro in IE8, inserts it in the header of the page instead of the editor		Resolved	Fixed
	CONF-20985	The default template packages are not available		Resolved	Fixed

Confluence 3.4.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.2**. Confluence 3.4.2 is a recommended upgrade which fixes some security flaws as well as other bugs. For more details, please read the Confluence 3.4.2 Release Notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.3 Release Notes

29 November 2010

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Confluence 3.4.3 is a bug-fix release. The list of fixes is at the bottom of this page.

In addition to releasing Confluence 3.4.3, we have also updated the code for the **Expand user macro** so that the body of the macro now visible in PDF exports. To take advantage of this improvement, please copy the macro '**template**' from this documentation page: Writing the Expand User Macro. Note that you do not need to upgrade to Confluence 3.4.3 in order to use the updated macro. Simply updating your macro template is enough.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (10 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21179	Allow Opera users to edit in Rich Text mode		Resolved	Fixed
	CONF-21207	Disabling the global theme prevents users from logging in due to getThemeJsResources problem		Resolved	Fixed
	CONF-21128	RTE changes are lost when using the Save shortcut (Control-S) in Full Screen mode		Resolved	Fixed
	CONF-21258	Wrong error handling in FileSystemAttachmentDataDao.getDeleteErrorReason()		Resolved	Fixed
	CONF-21153	Login link from password reset confirmation 404s		Resolved	Fixed
	CONF-21092	Body of the 'Expand' user		Resolved	Fixed

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		macro is not included in a PDF export			
	CONF-17366	ConfluenceGroupJoiningAuthenticator does not add users to confluence-users group, if they already have "Can Use" permission via another group		Resolved	Fixed
	CONF-20127	Increasing 502 exceptions on EAC		Resolved	Obsolete
	CONF-18236	Pagetree macro is causing the page to constantly reload for a non-admin user		Resolved	Fixed
	CONF-17958	Widget Connector is not displaying content for Episodic on IE7 and IE8		Resolved	Fixed

Confluence 3.4.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.3**. For details of the fixes in this release, please read the Confluence 3.4.3 Release Notes.

Upgrade Notes

We have updated the code for the Expand user macro, so that the body of the macro now visible in PDF exports. To take advantage of this improvement, please copy the macro '**template**' from this documentation page: Writing the Expand User Macro.

Note that you do not need to upgrade to Confluence 3.4.3 in order to use the updated macro. Simply updating your macro template is enough.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:

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- Please read the Confluence 3.4 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.5 Release Notes

15 December 2010

Confluence 3.4.5 is a bug-fix release. Please see the list of updates and fixes below.

Note that Confluence 3.4.4 was an internal release and was not made available to customers.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.5 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (13 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21323	Logging during rendering of items in an rss feed should say what item was being rendered		Resolved	Fixed
	CONF-21394	XSS vulnerability in Create Space Button macro		Resolved	Fixed
	CONF-21393	XSS vulnerability in Pagetree macro		Resolved	Fixed
	CONF-21392	XSS vulnerability in Recently		Resolved	Fixed

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		Updated macro			
	CONF-21391	XSS vulnerability in Global Reports macro		Resolved	Fixed
	CONF-21390	XSS vulnerability in Bookmarks macro		Resolved	Fixed
	CONF-21317	Demonstration space uses macros that are not included in a default install		Resolved	Fixed
	CONF-20895	Some macros don't render in Macro browser or preview tab when using Internet Explorer ('AJS' is undefined error)		Resolved	Fixed
	CONF-21428	"Favourite Pages" section on the dashboard has missing "star" image		Resolved	Fixed
	CONF-21376	AttachmentRenderSupport does lots of unnecessary work		Resolved	Fixed
	CONF-21144	Copy and paste of emoticons is broken in the RTE		Resolved	Fixed
	CONF-21325	"Page Level Permissions" headline is missing		Resolved	Fixed
	CONF-20804	"Download All" fails with "Too many open files"		Resolved	Fixed

Confluence 3.4.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.5**. For details of the fixes in this release, please read the Confluence 3.4.5 Release Notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

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1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.6 Release Notes

4 January 2011

Confluence 3.4.6 is a bug-fix release. Please see the list of updates and fixes below.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.6 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (10 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21508	XSS vulnerability in Documentation Link macro		Resolved	Fixed
	CONF-21462	Upgrade plugin framework dependency from 2.6.1 to 2.6.4		Resolved	Fixed

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	CONF-21374	Setting of space home page is not retained, causing home page to be set to blank when you edit space details		Resolved	Fixed
	CONF-21201	Bug in seraph breaks custom authenticators		Resolved	Fixed
	CONF-8118	Link Tip shows up as Undefined Pages		Resolved	Fixed
	CONF-4962	Outgoing Link Bug for MouseOver Text		Resolved	Fixed
	CONF-3935	Incorrect outgoing links when using mouse over text		Resolved	Fixed
	CONF-21315	Body of the 'Expand' user macro is not included in the HTML export		Resolved	Fixed
	CONF-21283	Plugin info can't be obtained if the vendor URL is invalid		Resolved	Fixed
	CONF-13988	Incoming Links and Outgoing Links not picking up links with tooltip		Resolved	Fixed

Confluence 3.4.6 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.6**. For details of the fixes in this release, please read the Confluence 3.4.6 Release Notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:

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- Please read the Confluence 3.4 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.7 Release Notes

27 January 2011

Confluence 3.4.7 is a bug-fix release.

This release solves a problem that caused the Confluence index build to fail without reporting any errors. Symptoms of the problem included missing blog posts, and missing pages in the list returned by the Content by Label macro. This is now fixed.

We have also fixed some issues experienced when editing a page or document in Word.

- When using Firefox, editing pages in Word failed if the page title contained special characters.
- Editing pages in Word failed for long path names. This problem could occur when the combination of Confluence space name and page title exceeded a certain number of characters. (The exact number depended on your environment.) Editing attachments with long path names in Office also failed.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.7 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (9 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21606	XSS vulnerability in Activity Stream gadget		Resolved	Fixed
	CONF-21604	XSS vulnerability in Include Page macro		Resolved	Fixed

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	CONF-21500	Index rebuild fails silently due to uncaught exceptions in the DefaultObjectQueueWorker		Resolved	Fixed
	CONF-20506	Edit in Office fails for long path names (combination of space name and page title/breadcrumb)		Resolved	Fixed
	CONF-16594	Edit in Word with Firefox plugin fails with non-english page titles - WebDav launcher does not support nonenglish symbols in URL		Resolved	Fixed
	CONF-21411	Edit in Office using Office 2010 will change Mime Type to Text/XML - causing attachment download problem		Resolved	Fixed
	CONF-20886	Bookmarks macro gives a ClassCastException when used in a comment		Resolved	Fixed
	CONF-21195	The 'Choosing a database configuration' screen in set up has a broken link to http://localhost:8080/confluence/setup/null in the 'embedded database' section.		Resolved	Fixed
	CONF-18135	edit in office fail for attachments when page title		Resolved	Fixed

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		contains certain alpha numeric characters			

Confluence 3.4.7 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.7**. For details of the fixes in this release, please read the release notes.

Upgrade Notes

This release solves a problem that caused the Confluence index build to fail without reporting any errors. Symptoms of the problem included missing blog posts, and missing pages in the list returned by the Content by Label macro. This is now fixed.

If you experienced this problem, you should re-index Confluence after performing the upgrade. See Content Index Administration and CONF-21500.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

Confluence 3.4.8 Release Notes

7 February 2011

Confluence 3.4.8 is a bug-fix release.

This release adds OpenOffice MIME type handling capabilities to Confluence file uploads. Hence, if you now upload any OpenOffice file to Confluence and then download it, the file will be downloaded with the correct file extension instead of `.zip`.

We also fixed a bug in the spaces list macro, which caused this macro to fail on Confluence instances with large

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numbers of spaces.

Finally, if your Confluence site was started with the `password.confirmation.disabled` system property set to false, a bug in Confluence prevented site administrators from saving configuration changes made to any of the fields on the Edit Security Configuration page. This bug, which has now been resolved, will most likely only affect Confluence sites configured with a custom authenticator.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notes

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.8 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (4 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21706	Add OpenOffice mime type for attachment file uploads.		Resolved	Fixed
	CONF-21766	XSS vulnerability in the action links of Confluence's attachments lists.		Resolved	Fixed
	CONF-21414	Space macro broken on instances with large number of spaces and some databases		Resolved	Fixed
	CONF-21692	Security configuration cannot be updated using custom authenticator or password.confirmation.disabled		Resolved	Fixed

Confluence 3.4.8 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.8**. For details of the fixes in this release, please read the release notes.

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Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.4.9 Release Notes

21 February 2011

Confluence 3.4.9 is a bug-fix release.

Don't have Confluence 3.4 yet?

Take a look at the new features and other highlights in the Confluence 3.4 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.4.9 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (7 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21819	XSS vulnerability in Table of Contents (toc) macro		Resolved	Fixed
	CONF-19049	Confluence performance / installation issue when using Java 6 u18 - u22		Resolved	Fixed
	CONF-8441	Rich Text Editor messes up formatting of pages that use the {html} tag		Resolved	Fixed
	CONF-21791	Mac Evaluation			Fixed

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		installer: Log file in CONFLUENCE_HOME isn't created properly.		Resolved	
	CONF-21724	404 on a missing resource /images/icons/view_16.png on the edit restrictions page		Resolved	Fixed
	CONF-21439	Content must not be null error when uploading global logo		Resolved	Fixed
	CONF-20586	Work around JIT compiler bug that causes OutOfMemory error		Resolved	Fixed

Confluence 3.4.9 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4.9**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.4, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.4 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.4 Release Notes

DOWNLOAD latest version

12 October 2010

With great pleasure, Atlassian presents Confluence 3.4, with more ways to extend your wiki, manage your plugins and go places quickly.

Highlights of this Release:

- New Keyboard Shortcuts, Mac-Friendly Too
- Keyboard Shortcut Dialog

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- User Macros in Macro Browser and Autocomplete
- New Plugin Manager
- Improved Performance
- Other Improvements
- Infrastructure Changes

More:

- Read the release notices for important information about this release.
- See the full list of issues resolved in this release.

Responding to your Feedback:

- Over **180** votes satisfied.
- Thank you for all your issues and votes. Keep logging issues to help us keep improving!

Video of What's New:

Highlights of Confluence 3.4

1

New Keyboard Shortcuts, Mac-Friendly Too

Confluence has a number of new keyboard shortcuts to aid both navigation and editing. If you are already usin JIRA 4.1, you will notice that we have made an effort to be as consistent as possible. Confluence shortcuts nov support the standard Mac 'Cmd' key.

Some examples of shortcuts to use when viewing a page or blog post:

c	Create a child page.
b	Create a blog post.
m	Comment on a page or a blog post.
e	Open the editor.

Try these from within the Rich Text Editor:

Ctrl+s or **Cmd+s**	Save the page.
Ctrl+Alt+7 or **Cmd+Alt+7**	Apply the default paragraph style.

Read more about keyboard shortcuts.

2

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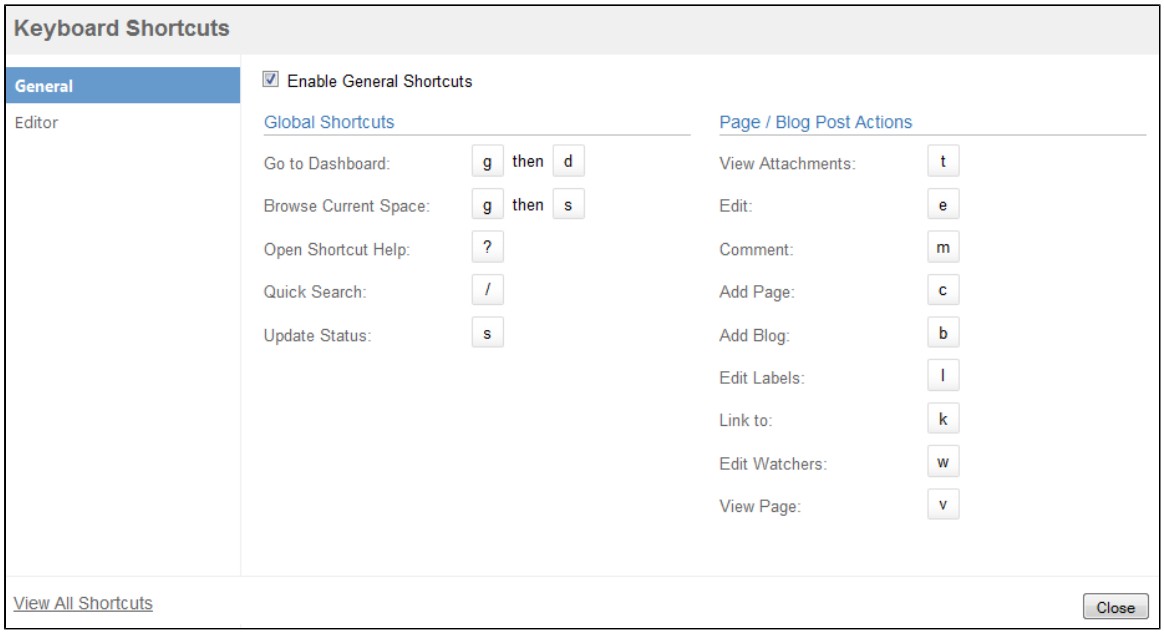
Keyboard Shortcut Dialog

Confluence has many useful keyboard shortcuts. Now it's easy to discover them. Select 'Keyboard Shortcuts' from the 'Browse' menu or just press '?' on your keyboard. The new keyboard shortcut dialog shows shortcut keys for the editor as well as for general use.



See the documentation on keyboard shortcuts.

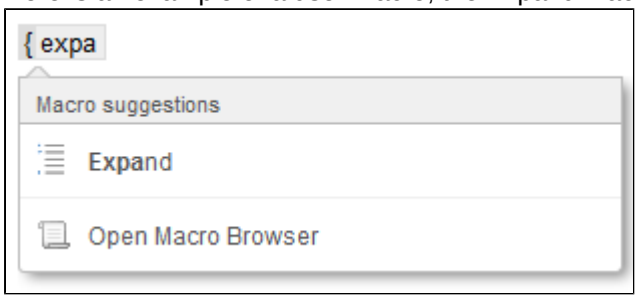
3

User Macros in Macro Browser and Autocomplete

Looking for a macro to add to your page?

- **User macros easy to find.** User macros are short pieces of code that perform an often-used function o add some custom formatting to a page. You can now choose which of your user macros are visible to everyone in the macro browser and autocomplete.
- **New options for writing user macros.** It's easy to create a user macro. Just go to the Confluence Administration Console and enter the details. Confluence 3.4 offers new options for making your macro look good in the macro browser. Read all about writing user macros. You can specify the macro categor link to an icon, define the parameters that the macro browser will use to prompt the user for information, and more.
- **Working examples of user macros.** To help you get started, we have documented the Expand and Sta us user macros. These are working examples that you can add to your Confluence site.

Here is an example of a user macro, the Expand macro, appearing in the autocomplete dropdown:



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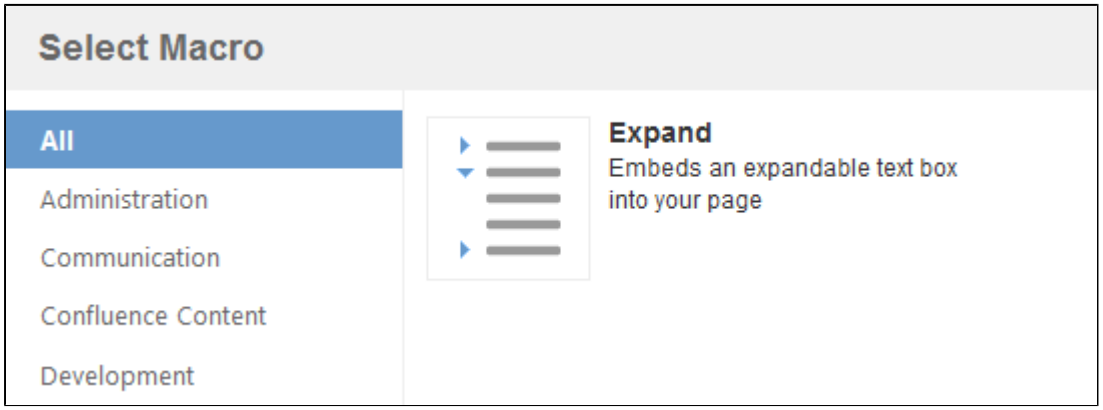
It looks like this in the macro browser:



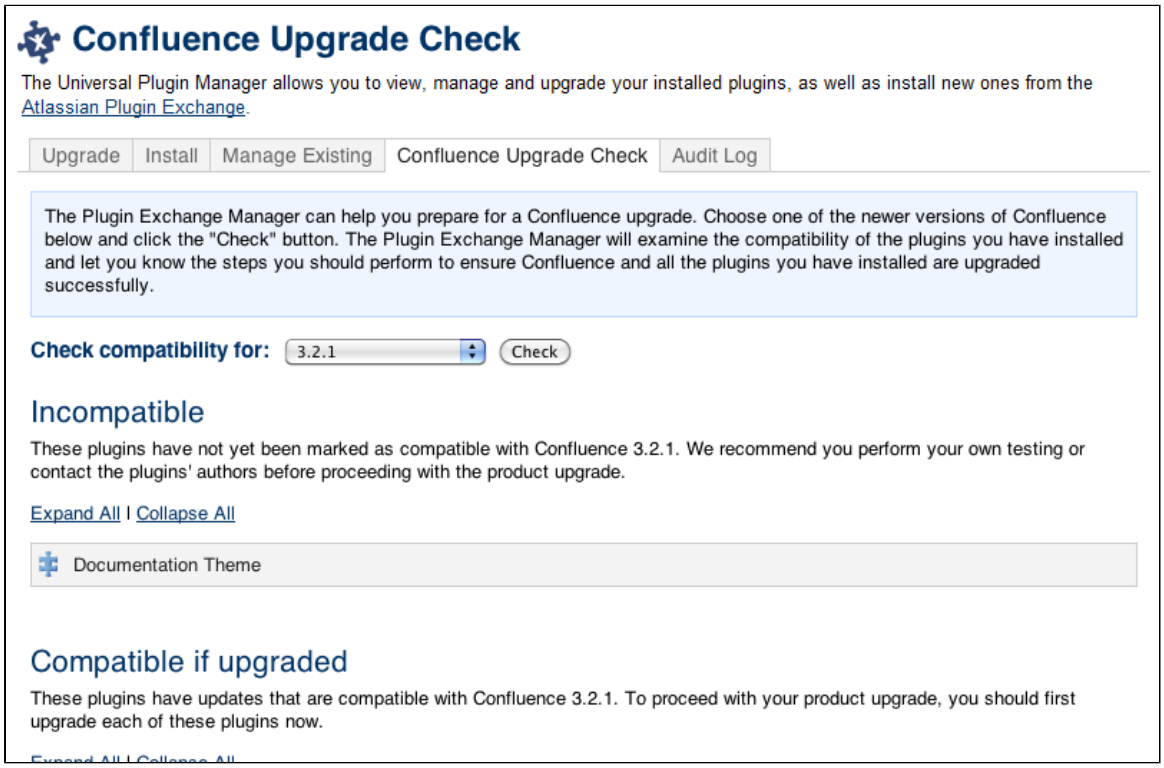
Read about the macro browser and autocomplete.

4

New Plugin Manager

Managing plugins and performing Confluence upgrades is now much easier with the brand new plugin manage The Universal Plugin Manager (UPM) is now bundled with Confluence and will soon make its way into our othe tools, including JIRA. With the UPM you can:

- Perform a plugin compatibility check before upgrading Confluence.
- Install new plugins from the Atlassian Plugin Exchange.
- Manage existing plugins.
- With just one click, upgrade all plugins that have updates available.
- View and track updates via the audit log.



See the documentation on managing plugins. Discover, download and install new plugins from the Atlassian

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Plugin Exchange without leaving Confluence.

5

Improved Performance

Confluence is faster in a couple of ways.

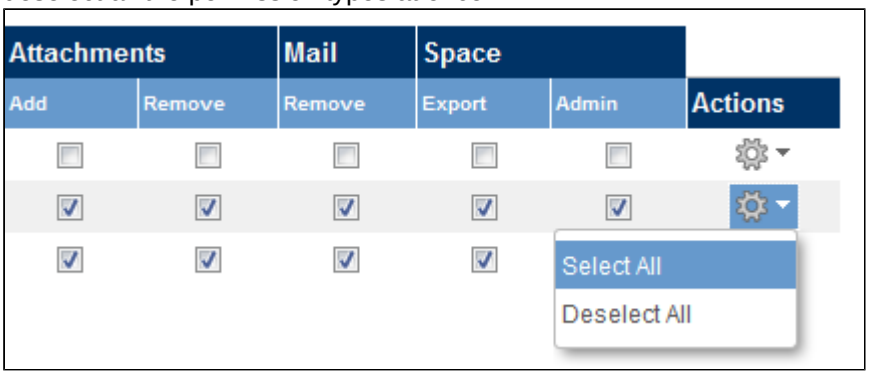
- **Loading of the dashboard.** If your Confluence site has a large number of spaces, you may notice that the dashboard now loads much faster. For details, see issue CONF-5446.
- **Daily email updates.** The performance of the job that sends the daily email updates has been improvec significantly. The job may run up to 100 times faster depending on your configuration. For details, see issue CONF-13875.

6

Other Improvements

We have made a number of small improvements to Confluence screens and other functionality described belov

- **Space permissions.** A new dropdown menu on the space permissions screen enables you to select or deselect all the permission types at once.



- **Dashboard 'Recently Updated' section.** The list of recent updates on the dashboard now tells you wha action the user performed (for example, created, updated or commented) and has a timestamp for each activity.
- **Permissions for PDF stylesheets.** Space administrators can now edit the PDF stylesheets and layouts Previously, you had to be a system administrator to have access to these options in the space administration screen.
- **Space details and space exports.** The space details screen has a new, fresh look. Similarly, we have redesigned the screen for PDF, HTML and XML exports.
- **Database Support.**We have added support for the following database servers:
  - Microsoft SQL Server 2008.
  - PostgreSQL 8.4.

  See the page about supported platforms.
- **Improved security for users.** This release brings an improved workflow for resetting your password. Confluence now requires an additional confirmation check before allowing a password change. We have also tightened the security of the 'remember me' functionality. As an additional security measure, Confluence will prompt you for your password when you change your email address.

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7

Infrastructure Changes

Plugin developers will find some improvements in this release too.

- **Atlassian User Interface (AUI).** We have upgraded to AUI 3.2, bringing jQuery live events and redesigned drop shadows. See AUI 3.1 Release Notes and AUI 3.2 Release Notes.
- **Plugin Framework.** Now with the Atlassian Plugin Framework 2.6, you have easy access to plugin objects, the plugin module tracker, ChainingClassLoader and more. See Plugin Framework 2.6 Release Notes. Confluence now also bundles the Web Resource Transformer plugin module.
- **Shared Access Layer.** SAL 2.2 includes support for secure administrator sessions ('WebSudo') and a cross-application API for accessing user profiles. See Shared Access Layer 2.2 Release Notes.
- **REST plugin module.** We have upgraded from version 2.0 to version 2.2 of the Atlassian REST Plugin. Now you have more reliable detection of automatic logout, the ability to include JSON examples in your documentation, and support for secure administrator sessions ('WebSudo'). See REST Plugin 2.1 Release Notes and REST Plugin 2.2 Release Notes.
- **Atlassian Plugin Development Platform.** With Confluence 3.4 comes the first public announcement of the Atlassian Plugin Development Platform. Using Atlassian's plugin development tools, developers can create plugins that extend the functionality of Atlassian applications such as JIRA, Confluence and other The Atlassian Plugin Development Platform defines the set of tools a plugin developer can use. See Plu n Development Platform 2.8 Release Notes.

Release Notices

- **Security advisory.** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- **Upgrading from a previous version of Confluence.** Upgrading Confluence should be fairly straightforward. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.* Please refer to the Confluence 3.4 upgrade notes for further essential information about **plugins** and other factors affecting your upgrade.
- **Known Issues.** We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release and report any problems so that we can fix them quickly. We value this feedback, which means that we can tell you about any minor known issues in Confluence 3.4. Please check the important technical advisories on the front page of the Knowledge Base.

  A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.4 Team

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Small Improvements
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Confluence 3.4 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.4**. For details of the new features and improvements in this release, please read the Confluence 3.4 release notes.

On this page:

- Upgrade Notes
  - Visibility of User Macros in the Macro Browser
  - Crowd 2.0.7 Upgrade Required if your Confluence is Integrated with Crowd
  - Configuration Option for Disabling Password Confirmation (Useful if Using a Custom Authenticator)
  - Existing 'Remember Me' Cookies No Longer Valid
  - End of Support for Oracle 10g and Safari 3 and 3.1
  - Advance Notice of End of Support for PostgreSQL 8.1 and Firefox 3.0
  - Clickr Theme and Left Navigation Theme No Longer Bundled with Confluence
  - Plugin Repository Macros No Longer Work

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    - Wiki Markup in Space Description No Longer Rendered
- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

Upgrade Notes

Visibility of User Macros in the Macro Browser

As stated in the release notes, the Confluence Macro Browser and autocomplete can now show user macros as well as other macros. If your Confluence site already has some user macros, when you upgrade to Confluence 3.4 the upgrade task will set all existing user macros to be **visible only to system administrators**.

After upgrading, you will need to set each macro individually to be **visible to all users**, depending on your requirements. See the documentation on writing user macros.

Crowd 2.0.7 Upgrade Required if your Confluence is Integrated with Crowd

If your Confluence installation is integrated with Atlassian Crowd for user management and single sign-on, you will need to upgrade to **Crowd 2.0.7** when upgrading to Confluence 3.4. Note also that for Confluence 3.4, there is a new Seraph authenticator to be specified in the `CONFLUENCE-INSTALLATION/confluence/WEB-INF/classes/seraph-config.xml` file.

```
<authenticator
class="com.atlassian.crowd.integration.seraph.v22.ConfluenceAuthenticator"/>
```

Please follow the Crowd integration guide for complete instructions, including the update to the Seraph authenticator configuration. See our knowledge base article for symptoms of the problem that occurs if Crowd is not upgraded. And here are the Crowd 2.0.7 release notes.

Configuration Option for Disabling Password Confirmation (Useful if Using a Custom Authenticator)

This section is relevant to Confluence installations that use a *custom authentication mechanism*. You may run into problems with the Confluence security measure that requires password confirmation for administrative actions, change of email address and Captcha for failed logins.

If necessary, you can set the `password.confirmation.disabled` system property to disable the password confirmation functionality. See Recognised System Properties. We provide this configuration option as a workaround for issue CONF-20958.

Existing 'Remember Me' Cookies No Longer Valid

We have tightened the security of Confluence's 'remember me' functionality. As a result of this change, any existing 'remember me' cookies will be invalid after you upgrade your Confluence installation. When accessing Confluence for the first time after the upgrade, users will be prompted to log in as usual.

End of Support for Oracle 10g and Safari 3 and 3.1

As previously announced, we no longer offer support for:

- Oracle 10g **from this release onwards**.
- Safari 3 and 3.1 **from this release onwards**.

Please see End of Support Announcements for Confluence.

Advance Notice of End of Support for PostgreSQL 8.1 and Firefox 3.0

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We are planning on ending support for:

- PostgreSQL 8.1 **in Confluence 3.5**.
- Firefox 3.0 **in Confluence 3.5**.

Please see End of Support Announcements for Confluence.

Clickr Theme and Left Navigation Theme No Longer Bundled with Confluence

Confluence 3.2 introduced two new themes, the Documentation theme and the Easy Reader theme. At the same time, we announced the deprecation of the following two themes:

Deprecated Theme	Description	Suggested Replacement
Clickr theme	This theme was inspired by the Flickr user interface, with Confluence content centred on the page.	Easy Reader theme
Left Navigation theme	This theme provided a navigation bar on the left hand side of the screen.	Documentation theme

Please note the following:

- The Clickr theme and Left Navigation theme are no longer bundled with Confluence and are not supported from Confluence 3.4 onwards.
- When you upgrade your Confluence installation to Confluence 3.4, the upgrade process will automatically migrate your spaces to the following themes:
  - Spaces using the Left Navigation theme will be converted to the Documentation theme.
  - Spaces using the Clickr theme will be converted to the Easy Reader theme.
- If you do not wish your spaces to be migrated, you can start Confluence with the following JVM parameter to prevent the conversion of the space themes:

  ```
  -Dconfluence.theme.skip.migration=true
  ```

  During the upgrade, the Left Navigation and Clickr themes will be removed from your Confluence site but, if you specify the above parameter, your spaces will still expect to use those themes. After the upgrade, you will need to download and install the Left Navigation and Clickr themes from the Atlassian Plugin Exchange so that your spaces can continue to use them. If you do not reinstall those themes, the affected spaces will use the default theme.
- If the upgrade process converts your spaces to the new themes and you later decide to revert to the old themes, you can get some help from the Confluence logs written during the upgrade process. The logs contain a SQL query that you can run to revert the theme migration. The relevant part of the log file looks like this:

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```
2010-08-05 15:13:22,572 INFO [main]
[confluence.upgrade.upgradetask.ClickLeftNavMigrationUpgradeTask]
doInTransaction To rollback the migration of spaces with Left
Navigation Theme theme execute the following SQL:
update BANDANA set BANDANAVALUE = '<map>\n  <entry>\n
<string>theme.key</string>\n
<string>com.atlassian.confluence.themes.leftnavigation:leftnavigati
on</string>\n  </entry>\n</map>' where BANDANACONTEXT in
('~SPACE-KEY1', 'SPACE-KEY2', 'SPACE-KEY3') and BANDANAKEY =
'atlassian.confluence.theme.settings'

2010-08-05 15:13:22,573 INFO [main]
[confluence.upgrade.upgradetask.ClickLeftNavMigrationUpgradeTask]
doInTransaction To rollback the migration of spaces with Clickr
theme execute the following SQL:
update BANDANA set BANDANAVALUE = '<map>\n  <entry>\n
<string>theme.key</string>\n
<string>com.atlassian.confluence.themes.clickr:clickr</string>\n
</entry>\n</map>' where BANDANACONTEXT in ('SPACE-KEY4',
'SPACE-KEY5', 'SPACE-KEY6') and BANDANAKEY =
'atlassian.confluence.theme.settings'
```

The words '~SPACE-KEY1', 'SPACE-KEY2', etc represent the keys of the spaces that were converted. If you run the SQL statements and install the Left Navigation and Clickr themes (see below), your spaces will be in the same state as before the upgrade task ran.

- If you restore a space from an XML backup at some time after upgrading to Confluence 3.4, the space will not be migrated to a new theme. You will need to apply a different theme manually. See Applying a Theme to a Space. Alternatively, you can download and install the Left Navigation and Clickr themes from the Atlassian Plugin Exchange if you wish to continue to use them.

Plugin Repository Macros No Longer Work

Some macros were never intended for external use, and we have always recommended that you do not add them to a wiki page. Nevertheless, it is possible that some Confluence sites have these macros on some pages. Please note that these macros no longer work in Confluence 3.4 onwards. They were part of the Plugin Repository, which we have now replaced with a new plugin manager.

These macros no longer work:

- {repository-plugin}
- {recentlyupdated-plugins}
- {popular-plugins}
- {download-stat}
- {confluence-status}
- {plugin-status}
- {plugin-repository}
- {plugins-supported}

Wiki Markup in Space Description No Longer Rendered

Please note that the space description no longer renders wiki markup. If your space descriptions include wiki markup, the markup will display as plain text.

Upgrade Procedure

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> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.3.x, then please read the Upgrade Notes Overview and the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.) Also:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the upgrade guide.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.
- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.
- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.4 Release Notes

Issues Resolved in Confluence 3.4

Below are the issues resolved in Confluence 3.4, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 3.4 release notes for the new features in Confluence 3.4.

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JIRA Issues (103 issues)

Type	Key	Summary	Status	Resolution	Votes
	CONF-2294	User macros should self-document similar to Java macros	Resolved	Fixed	31
	CONF-16876	"Expected 'xref' at start of table" when rendering PDF file version 1.4 and later in viewfile macro	Resolved	Fixed	27
	CONF-12571	JIRA Issue Macro displays too wide, doesn't auto-scroll properly	Resolved	Fixed	24
	CONF-16655	Display user macros in the macro browser	Resolved	Fixed	16
	CONF-16525	Errors indexing PDF documents	Resolved	Fixed	16
	CONF-3322	Userlister online and offline status broken	Resolved	Fixed	16
	CONF-20318	NetworkAndSiteNotificationTypesUpgradeTask fails when upgrading to 3.3 on Oracle (and probably others)	Resolved	Fixed	6
	CONF-18892	Office Connector Freezes Confluence When Loading Excel 2007 File With Date Macro	Resolved	Fixed	6
	CONF-16383	Dynamic Tasklist V2 fails in IE7	Resolved	Fixed	6
	CONF-20496	Can't uncheck Macro has a body in the user macro screen	Resolved	Fixed	5
	CONF-20398	French translations for some of Rich Text Editor's features are not reflected	Resolved	Fixed	5
	CONF-20765	Page gadget	Resolved	Fixed	4

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		doesn't render preview or content			
	CONF-16067	Restore fails with "Too many open files" error	Resolved	Fixed	4
	CONF-13875	Confluence Daily Mail Notification eats up CPU performance	Resolved	Fixed	4
	CONF-9818	"Forgot password" function allows easy misuse	Resolved	Fixed	4
	CONF-7825	Create a Notation Guide section for User Macros	Resolved	Fixed	4
	CONF-20958	Confluence features that require password confirmation (websudo, captcha) do not work with custom authentication	Resolved	Fixed	3
	CONF-20633	Spaces cannot be unmarked as favourites	Resolved	Fixed	3
	CONF-19313	Cannot execute Tools -> Restrictions from Personal Spaces of users with whitespace in their user name	Resolved	Fixed	3
	CONF-18430	Usernames with spaces do not work with page restriction auto-complete	Resolved	Fixed	3
	CONF-17414	Doc Import allows empty title	Resolved	Fixed	3
	CONF-15594	Hover Profile and People Directory look rubbish when the Profile macro has been disabled	Resolved	Fixed	3

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	CONF-13082	Database Connection Transaction Isolation level is not displaying at all and the Database Driver Version for jtds-1.2.2.jar is incorrect in System Information page	Resolved	Fixed	3
	CONF-11475	Combine Left nav theme with default 2.8.0 looks	Resolved	Fixed	3
	CONF-5446	Lots of spaces, particularly new or favourite spaces (> 100) causes dashboard to be slow	Resolved	Fixed	3
	CONF-20288	Web Sudo: "Drop access" link does not work when language is set to german	Resolved	Fixed	2
	CONF-19285	[Doc import] Importing document of size bigger than attachment limit yields "Page Not Found" error	Resolved	Fixed	2
	CONF-19118	Keyboard Shortcuts Dialog	Resolved	Fixed	2
	CONF-14619	Gmail-like hotkeys for Confluence	Resolved	Fixed	2
	CONF-9077	Update Confluence Installation Guide - Support SQL Server 2005	Resolved	Fixed	2
	CONF-7075	Provide Keyboard Shortcut for adding a new page	Resolved	Fixed	2
	CONF-24022	Confluence	Resolved	Fixed	1

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		password regex does not match the password regex set in Crowd			
	CONF-20715	User link hovering does not work in the recent changes macro	Resolved	Fixed	1
	CONF-20400	Restoring a XML site backup into 3.3 fails with "No enum const class..." exception	Resolved	Fixed	1
	CONF-20339	Edit in "Page" word feature causes nullpointer exception.	Resolved	Fixed	1
	CONF-20298	NullPointerException error logged by scheduled office connector cleanup job at 02:00	Resolved	Fixed	1
	CONF-20274	Make real request and response objects available during Word export	Resolved	Fixed	1
	CONF-20060	Embed User Macros in Macro Autocomplete	Resolved	Fixed	1
	CONF-19169	Word footnotes import in Doc Import is broken	Resolved	Fixed	1
	CONF-6840	Override browser keyboard shortcuts to act like a desktop app (ex: Ctrl-S should save page on Windows)	Resolved	Fixed	1
	CONF-23149	contentbylabel macro does not sort ASCII characters properly	Resolved	Fixed	0

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	CONF-21455	Implement/configure HTTP only session cookies.	Resolved	Fixed	0
	CONF-21157	Recently-Updated macro does not show user information when added to a page in Confluence 3.3 and 3.3.3	Resolved	Fixed	0
	CONF-21046	Upgrade to Confluence 3.4 throws NoSuchMethodError when using Crowd SSO	Resolved	Fixed	0
	CONF-21000	a link in the admin screen to the knowledge base regarding theServer Base Url change returns no result	Resolved	Fixed	0
	CONF-20991	The modification detection (Modz detector) is not working.	Resolved	Fixed	0
	CONF-20964	XSS vulnerability in Tasklist macro	Resolved	Fixed	0
	CONF-20963	XSS vulnerability in Office Connector	Resolved	Fixed	0
	CONF-20898	Gadgets Malformed Security Token	Resolved	Fixed	0
	CONF-20831	IE8 and IE7 crash if you click Add Page and Add Blog too fast multiple times	Resolved	Fixed	0
	CONF-20793	Confluence logs a ClassCastException Tomcat 6.0.27 or later when accessing Oracle.	Resolved	Fixed	0
	CONF-20740	XSS vulnerability in Confluence Space Names	Resolved	Fixed	0
	CONF-20738	Ziputility adds files with wrong	Resolved	Fixed	0

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		name			
	CONF-20726	Unable to search for word that is followed by a number for filenames separated by underscores	Resolved	Fixed	0
	CONF-20683	Default Theme: Breadcrumbs hidden in IE	Resolved	Fixed	0
	CONF-20616	Edit in Word does not work when a custom authenticator is configured	Resolved	Fixed	0
	CONF-20575	Update Jira Macros Plugin to version 2.8.20, 2 issues fixed in this update	Resolved	Fixed	0
	CONF-20526	Doc Theme is incompatible with Page Restrictions	Resolved	Fixed	0
	CONF-20508	Secure Administrator Sessions feature can be bypassed	Resolved	Fixed	0
	CONF-20487	Did You Mean option not retained in 3.3	Resolved	Fixed	0
	CONF-20483	Add new component for OSGi plugins to get the active Hibernate session	Resolved	Fixed	0
	CONF-20424	Add warning in Mail Archive that adding mail account will delete email even for IMAP	Resolved	Fixed	0
	CONF-20348	Reformat http://confluence.atlassian.com/display/DOC/Adding+SSL+for+Secure+Logins+and+Page+Security	Resolved	Fixed	0

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	CONF-20338	Upgrade Dashboard Macros plugin to 1.14	Resolved	Fixed	0
	CONF-20321	EmbeddedCrowd migration does not create directories in the correct order	Resolved	Fixed	0
	CONF-20311	Best Practice Code revisions	Resolved	Fixed	0
	CONF-20302	EmbeddedCrowd migration does not merge user and group DNs correctly	Resolved	Fixed	0
	CONF-20301	ObjectQueue handles is not syncronized causing: ConcurrentModificationException	Resolved	Fixed	0
	CONF-20275	Setup footer contains the "print-only" message	Resolved	Fixed	0
	CONF-20266	Logging from plugin framework does not get sent to log file, instead goes to standard error with unusual format	Resolved	Fixed	0
	CONF-20264	Performance improvement: Lazy evaluation of Velocity context	Resolved	Fixed	0
	CONF-20255	Space details form improvements and minor changes	Resolved	Fixed	0
	CONF-20218	TinyMceInsertMenuTest fails across builds	Resolved	Fixed	0
	CONF-20200	Macro Browser doesn't handle browser zooming well	Resolved	Fixed	0
	CONF-20189	Logout Button /	Resolved	Fixed	0

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		Option Missing for some LDAP user accounts			
	CONF-20181	Headings in Page Gadgets scroll sideways with the page	Resolved	Fixed	0
	CONF-20068	Blog post macro and the browse space blogs should use the same template	Resolved	Fixed	0
	CONF-20040	Widget Connector does not render all of Wufoo widget	Resolved	Fixed	0
	CONF-20021	Apostrophes are double escaped in the Page Gadget title	Resolved	Fixed	0
	CONF-19932	Confluence page gadget viewfile macro requires a refresh to re-size correctly	Resolved	Fixed	0
	CONF-19552	Remove group confirmation screen logs error when trying to display members	Resolved	Fixed	0
	CONF-19482	Restoring a personal space still gives user menu choice to create personal space causes collision of space keys	Resolved	Fixed	0
	CONF-19157	Graphs don't display properly when using sheet parameter in viewfile	Resolved	Fixed	0
	CONF-19060	Edit in Word function adds // for blank lines inside code and noformat macros, which are then visible in output	Resolved	Fixed	0
	CONF-18903	Why don't we make SQL	Resolved	Fixed	0

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		server use the UNICODE character by default?			
	CONF-18866	Upgrade standalone to use latest version of Tomcat 6.0.x	Resolved	Fixed	0
	CONF-18853	Doc Import stuck in loop when duplicate titles are included in the Word Document	Resolved	Fixed	0
	CONF-17462	The Permission screen "Cancel"-button should be called "Close" until an actual change has been made	Resolved	Fixed	0
	CONF-17231	Language pack related warning messages in logs when editing user preferences	Resolved	Fixed	0
	CONF-17217	Left Navigation Theme does not include the "Custom HTML : At end of the BODY" in the output HTML	Resolved	Fixed	0
	CONF-16686	Prevent administrators disabling macro plugins which are part of core application functionality	Resolved	Fixed	0
	CONF-16490	Blog Posts macro - the Content Type parameter does not work as expected	Resolved	Fixed	0
	CONF-16371	Keyboard shortcut for link to this page dialog	Resolved	Fixed	0
	CONF-15122	Create a	Resolved	Fixed	0

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		functionality to allow customers check the compatibility of their currently enabled plugins against the version of Confluence they want to upgrade			
	CONF-14667	In the RTE, Shortcut keys aren't intuitive for Mac users	Resolved	Fixed	0
	CONF-14628	pages/create(blogpost|page).action with a spaceKey containing the null character causes org.springframework.dao.DataIntegrityViolationException	Resolved	Fixed	0
	CONF-14515	Change the "My" Spaces tab on the dashboard to say "Favourite" and "All" to "Global".	Resolved	Fixed	0
	CONF-13836	Plugin Repository's "Installed Plugins" filter shows non-installed plugins	Resolved	Fixed	0
	CONF-13819	Compound database index missing for ATTACHMENTDATA table	Resolved	Fixed	0
	CONF-12421	Don't use distrbuted cache for storing Captcha's in a cluster	Resolved	Fixed	0
	CONF-7896	Reinstate original version of bundled plugin when an	Resolved	Fixed	0

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		upgraded version is uninstalled			
	CONF-4805	Reusable show more/less component for content lists	Resolved	Fixed	0
	CONF-4182	NPE in SpaceHelper borks page....	Resolved	Fixed	0

Confluence 3.5 Release Notes

DOWNLOAD latest version

16 March 2011

With great pleasure, Atlassian presents Confluence 3.5. Discover what's happening to your content and share with your colleagues. Let people see for themselves what's new after a Confluence upgrade. Get cosy with LDAP and intimate with JIRA. Love that HTML5 drag-and-drop and more!

Highlights of this Release:

- Easy, Powerful Connections to Active Directory, LDAP and Crowd
- Improved JIRA Integration
- Drag-and-Drop for HTML5 Browsers
- Autowatch and Improved Notification Settings
- Sharing Pages and Blog Posts
- Enhanced Code Macro
- More Administrative Improvements
- "What's New" Feature Tour
- Categories, a New Way of Organising Spaces
- Embedding Audio and Video with the Multimedia Macro
- Other Improvements
- Infrastructure Changes

More:

- Read the release notices for important information about this release.
- See the full list of issues resolved in this release.

Responding to your Feedback:

- More than **1,000** votes satisfied.
- Thank you for all your issues and votes. Keep logging issues to help us keep improving!

Video of What's New:

Previous Releases:

- Confluence 3.4
- Confluence 3.3
- Release Summaries

Highlights of Confluence 3.5

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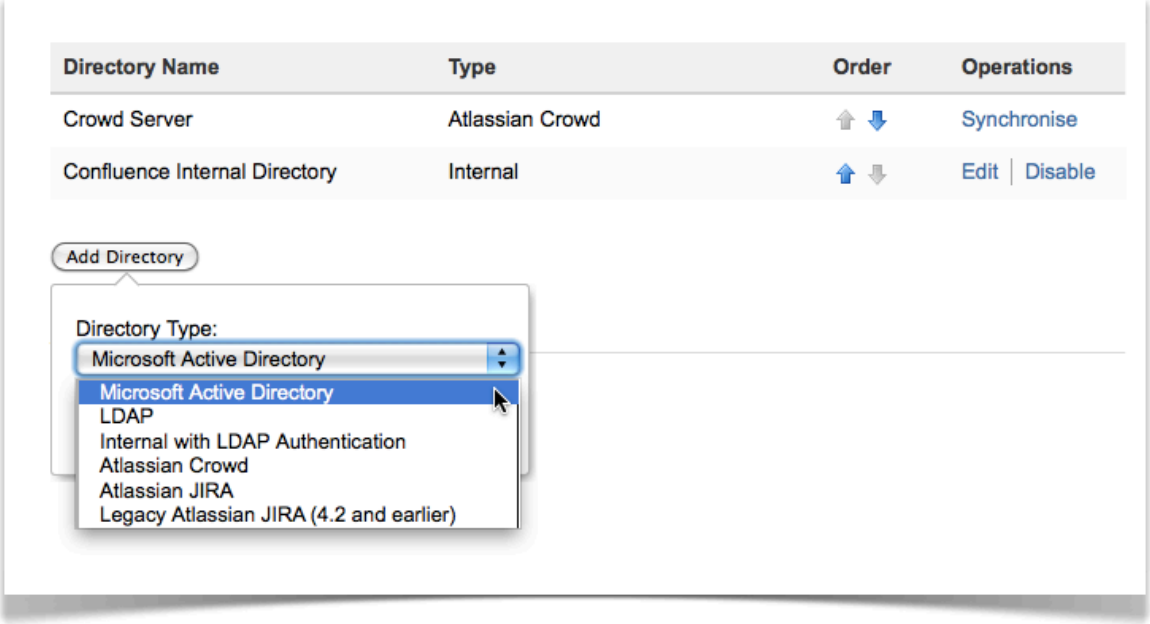
1

Easy, Powerful Connections to Active Directory, LDAP and Crowd

Connecting Confluence to an external user directory used to be painful, whether it was Active Directory, other LDAP servers or Atlassian Crowd. You had to edit XML files, and the configuration options were limited. Confluence 3.5 brings a simple, powerful and flexible directory management interface:

- Choose from a list of supported directory types, including Microsoft Active Directory and ten other popul LDAP schemas.
- Add as many directory servers as you need. Connect directory servers of different types, including the internal directory (default), LDAP, Crowd and/or JIRA.
- Configure all your LDAP settings via the Confluence Administration Console: Permissions, server and schema settings. We pre-populate the fields with default values depending on your choice of directory type. Choose the LDAP permissions to suit your needs: Read/write, read only, local groups or authentication only. Make use of the caching and copy-as-required configurations to optimise the performance of your LDAP searches. More...
- Turn on support for nested groups.
- Configure your LDAP connection pool.
- For larger and more complex installations, you may need to install Atlassian Crowd. If so, you will now enjoy the simple, quick setup via the Confluence and Crowd administration consoles. Clever synchronisation and caching ensure the best response times. More...
- Are your users already in JIRA? Confluence 3.5 offers a much improved integration with JIRA for user management. See below.



2

Improved JIRA Integration

Integrating Confluence and JIRA has just become much easier. Watch a short overview video.

- **Connect JIRA and Confluence via application links.** It's now so much easier to set up a trust

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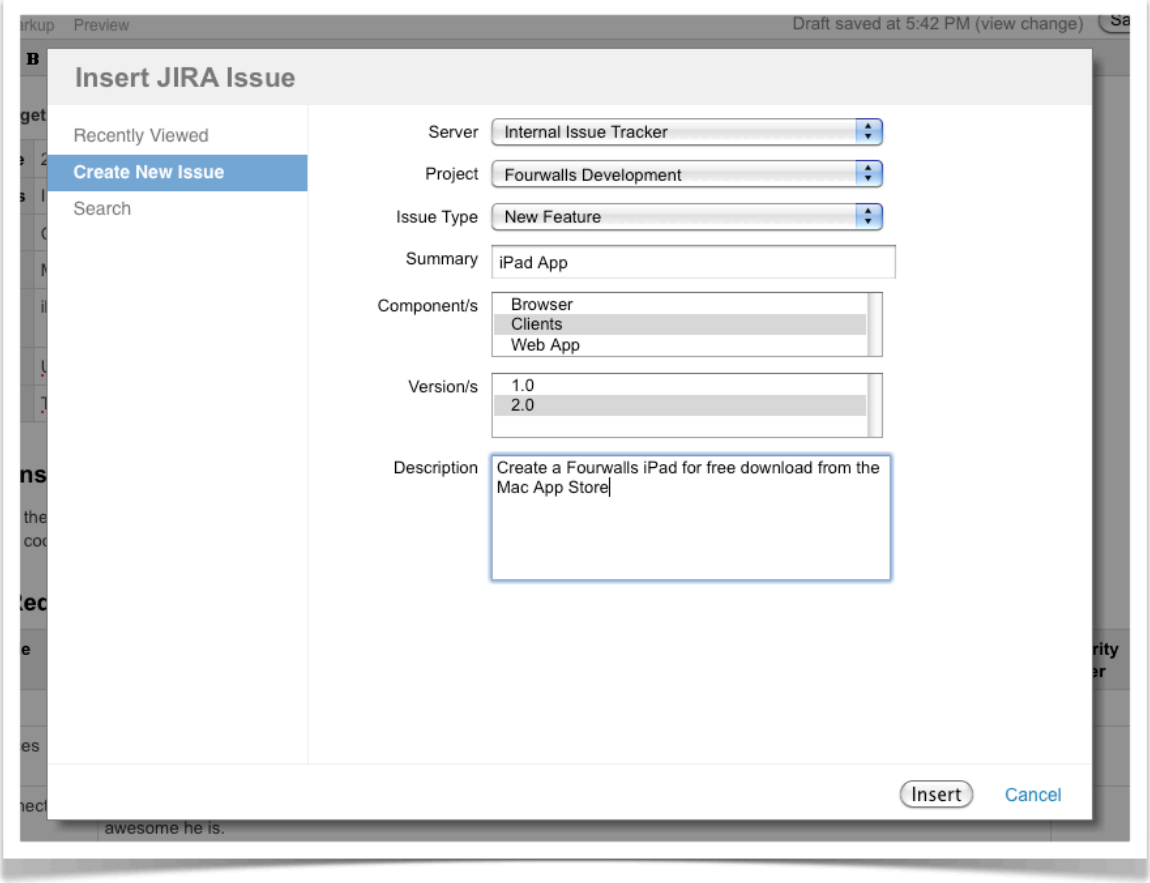
relationship between JIRA and Confluence, then share information across your applications. More...

- **Create, find and insert JIRA issues.** The new 'Insert JIRA issue' option in the editor toolbar offers a number of methods for displaying JIRA issues on a Confluence page or blog post. Insert individual issue within the text. Generate a list of issues using JIRA Query Language (JQL) or by specifying each issue individually on the page or blog post. You can also use this option to create an issue in JIRA and insert i within the text. More...
- **Connect to JIRA for user management.** JIRA 4.3 offers a powerful user management capability. JIRA now able to act as your directory manager, interacting with one or more user directories and ensuring th you have the same set of users and groups across both applications. Confluence 3.5 can connect direct to JIRA's new directory management feature. Clever synchronisation and caching ensure the best response times for your directory searches. More...



3

Drag-and-Drop for HTML5 Browsers

Confluence's drag-and-drop feature now supports HTML5 in preference to Google Gears. If your browser fully supports HTML5 and you no longer need the Google Gears browser add-on for anything else, you can uninstal this add-on without any loss of functionality in Confluence. The following browsers support HTML5-based drag-and-drop:

- Firefox 3.6
- Safari 5
- You can try it with Chrome too. (Official Chrome support coming soon!)

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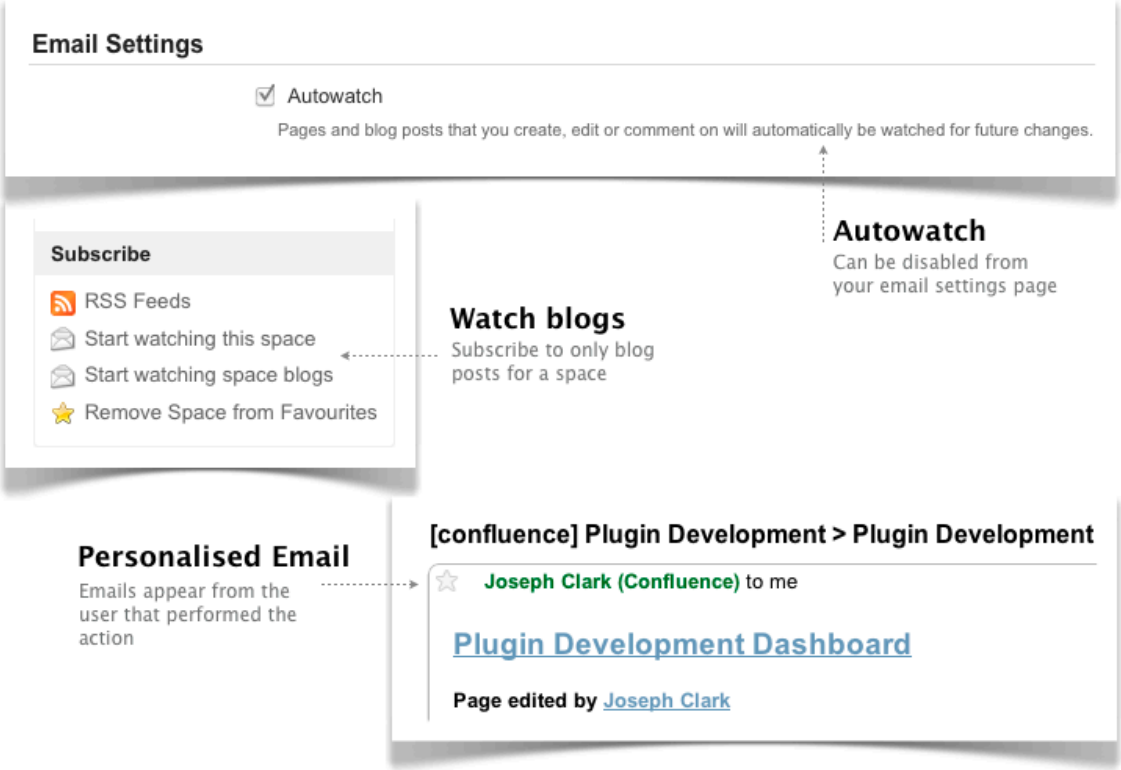
4

Autowatch and Improved Notification Settings

Confluence's new autowatch makes it easier than ever to keep track of pages and blog posts that interest you.

Other improvements help you optimise your notifications. Watch a short overview video.

- **Watch your own content automatically.** With autowatch turned on, you will receive an email notificatic each time someone edits or comments on a page that you added or updated. You can turn autowatch o or off by editing the email settings in your user profile.
- **Adjust your settings directly from the email notification.** The notification email message has useful links to help you manage your notifications and watches.
- **Watch for new blog posts only.** If you have subscribed to all blog posts on the Confluence site, you wi now receive notification for *new* blog posts only. Earlier versions of Confluence sent a notification for every change to existing blog posts, and for all comments on blog posts too. More...
- **Watch blog posts in a space.** Would you like to know when someone adds a blog post in a space, without having to see all other updates too? Now you can! More...
- **Configure the from address in email notifications.** Your Confluence administrator can configure the Confluence mail server so that the 'From' field of the email notification contains the full name or email address of the Confluence user who made the change. More...



5

Sharing Pages and Blog Posts

Want to email a Confluence page or blog post quickly? Simply visit that page or blog post, click the new '**Share** button and specify the people you want to share the page with. Add an optional note then click '**Share**'. More...

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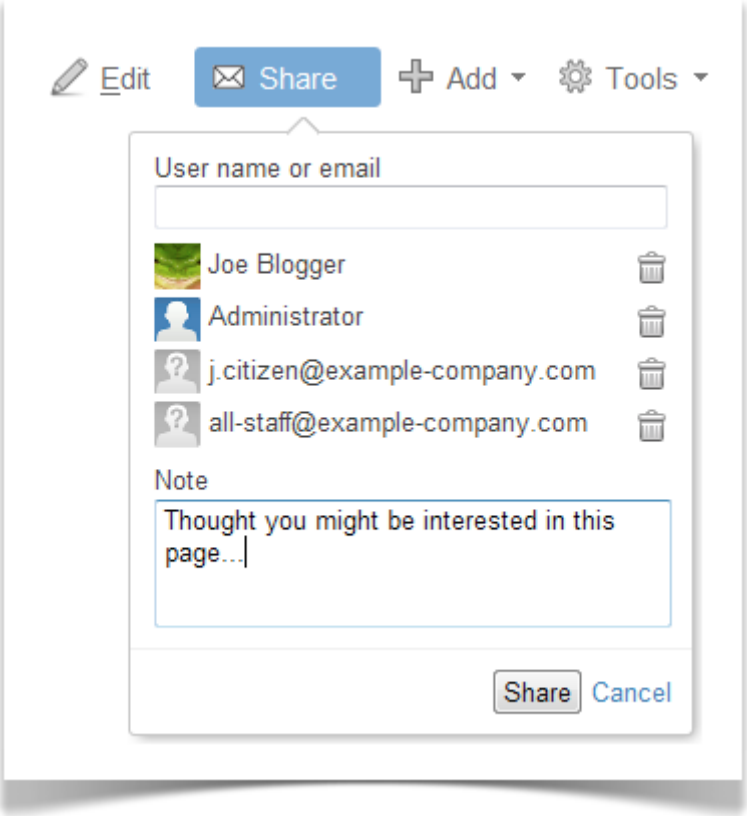

6

Enhanced Code Macro

The code macro offers several new options.

- More language and environment support for syntax highlighting.
- Expandable code blocks.
- Wrap long lines of code into a new line.
- Sequential line numbering.
- Themed colour schemes.
- More...

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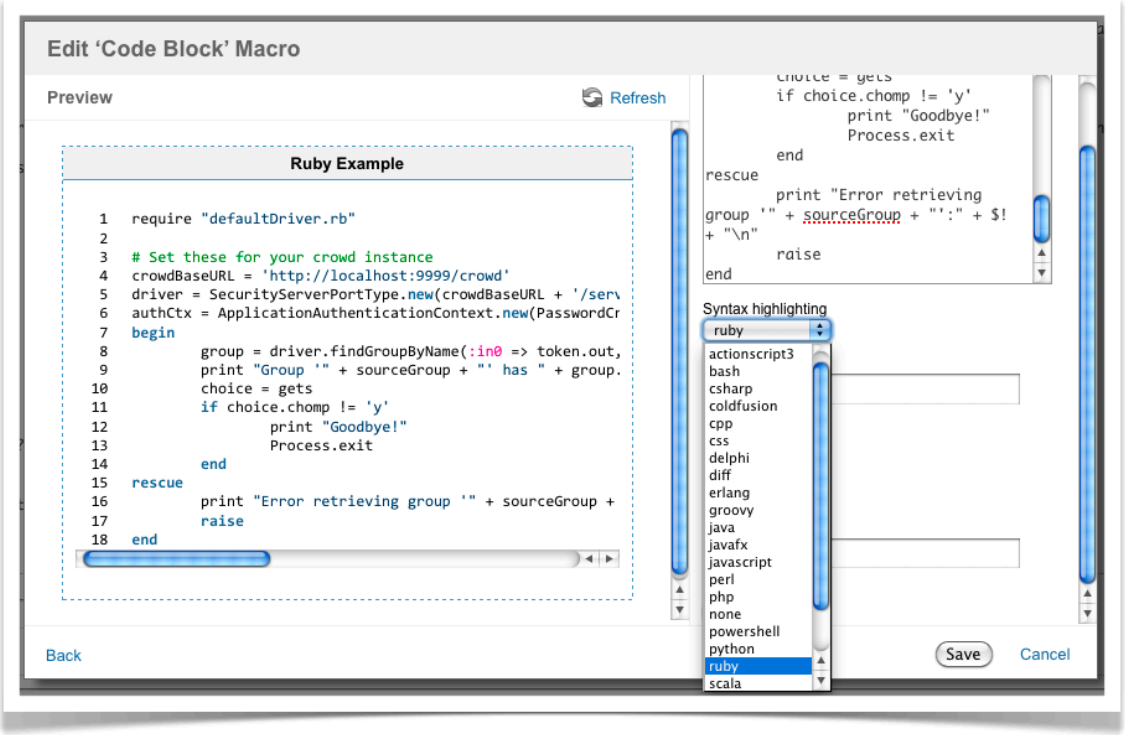
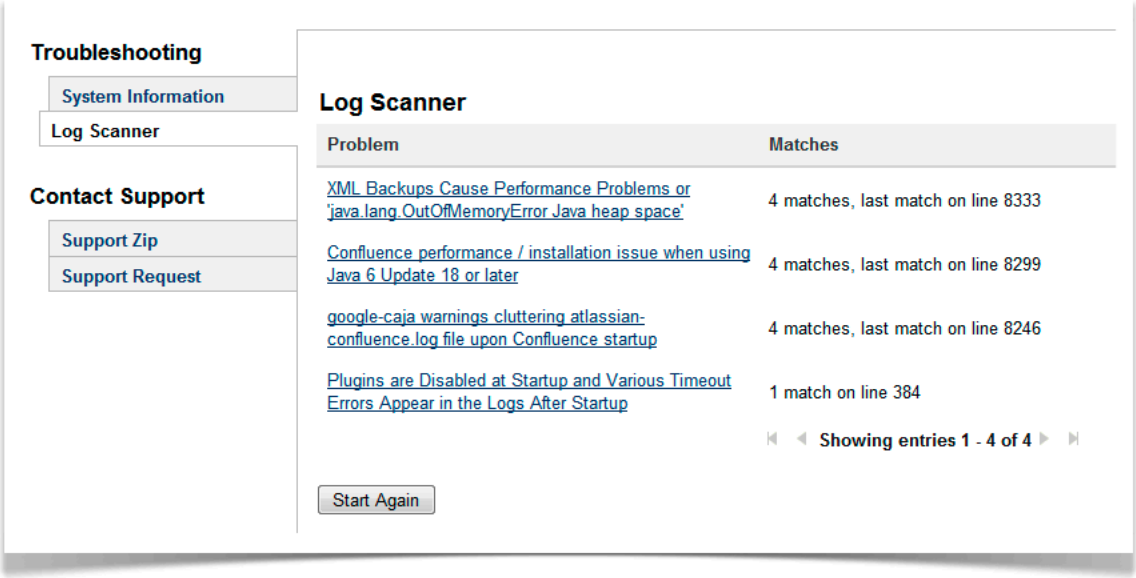


7

More Administrative Improvements

- **Scheduled jobs.** Gone are the days of having to shut down your Confluence site to change a job's schedule! From the administration console you can execute jobs, configure job schedules, disable or re-enable jobs and view the execution history. More...
- **Log scanner and improved support request form.** The Support Tools plugin is now bundled with Confluence. It includes Hercules the Atlassian support bot, a superhero with extraordinary powers dedicated to protecting the public against known bugs. Hercules will scan your logs for error messages, matching them to existing bug reports and knowledge base articles. With the power of Hercules, you car find solutions in seconds. The plugin also provides a new, simple support request form with clear information about the details that will be sent to Atlassian when you submit a support request. More...



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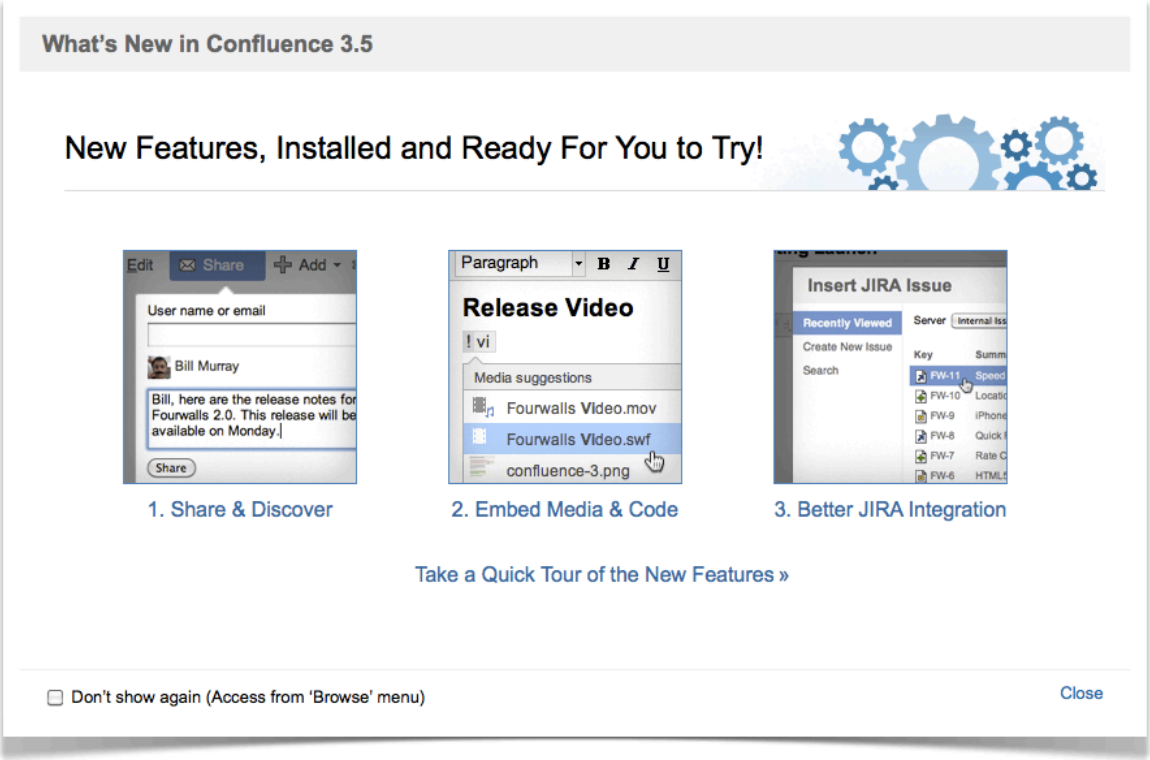
8

"What's New" Feature Tour

Managing change when rolling out a new software release can be a challenge. We've automated some of the work for you with the "What's New" feature tour in Confluence 3.5. The first time a user logs in after a major Confluence upgrade, the "What's New" window pops up showing screenshots, videos and links to documentation. We've designed this feature as a plugin, so you can change where the popup gets its information from or disable it altogether. More...



9

Categories, a New Way of Organising Spaces

Categorise your spaces then view and manage them in the new space directory. As an alternative to the dashboard, the space directory displays a list of all the global and personal spaces in the Confluence site that you have permission to see. You can choose to see all spaces, the spaces you have marked as favourite, or th spaces in a specific space category. (Space categories were previously known as 'team labels'.) You can furth restrict the list to spaces containing a given word or words in the space name or description. More...

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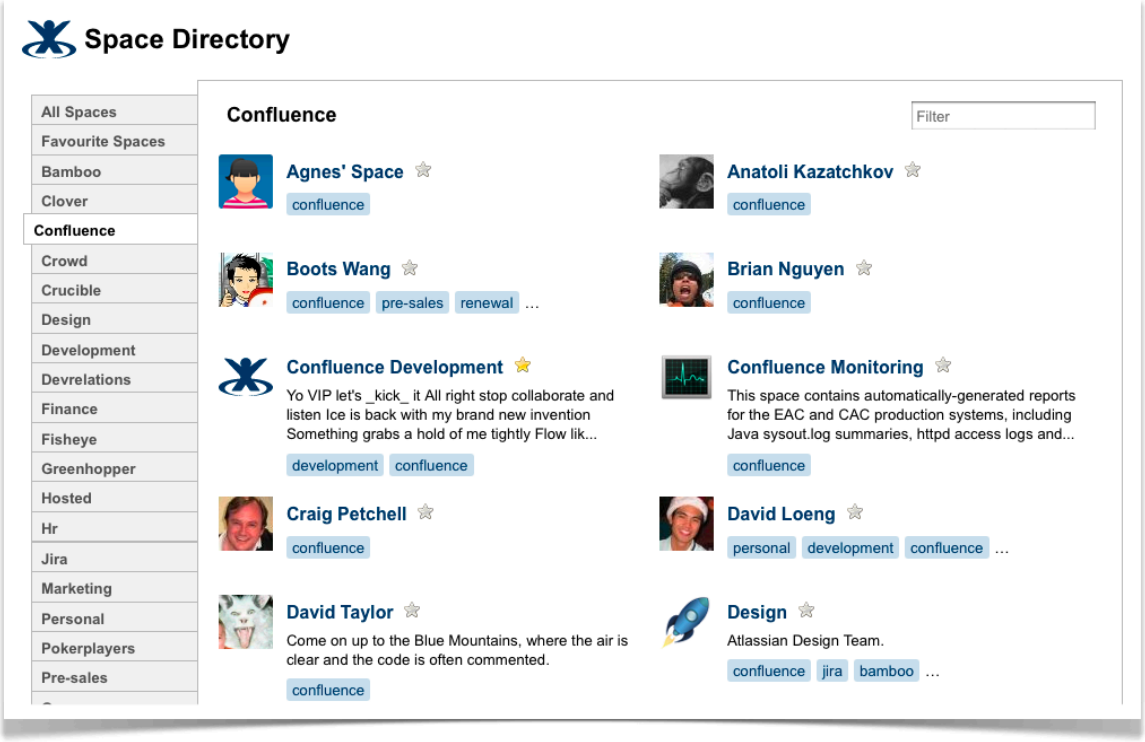

10

Embedding Audio and Video with the Multimedia Macro

Use the new Multimedia macro to display movies, videos and animations and embed audio files in a Confluenc page. Before now, the only way to display multimedia content was using Wiki Markup. Now it's simple – just dra and drop the multimedia file into the Rich Text Editor. Confluence will attach the file and add the Multimedia macro for you. Alternatively, add the Multimedia macro via autocomplete or the macro browser, and tell it whicl file to display. Watch a short overview video. More...

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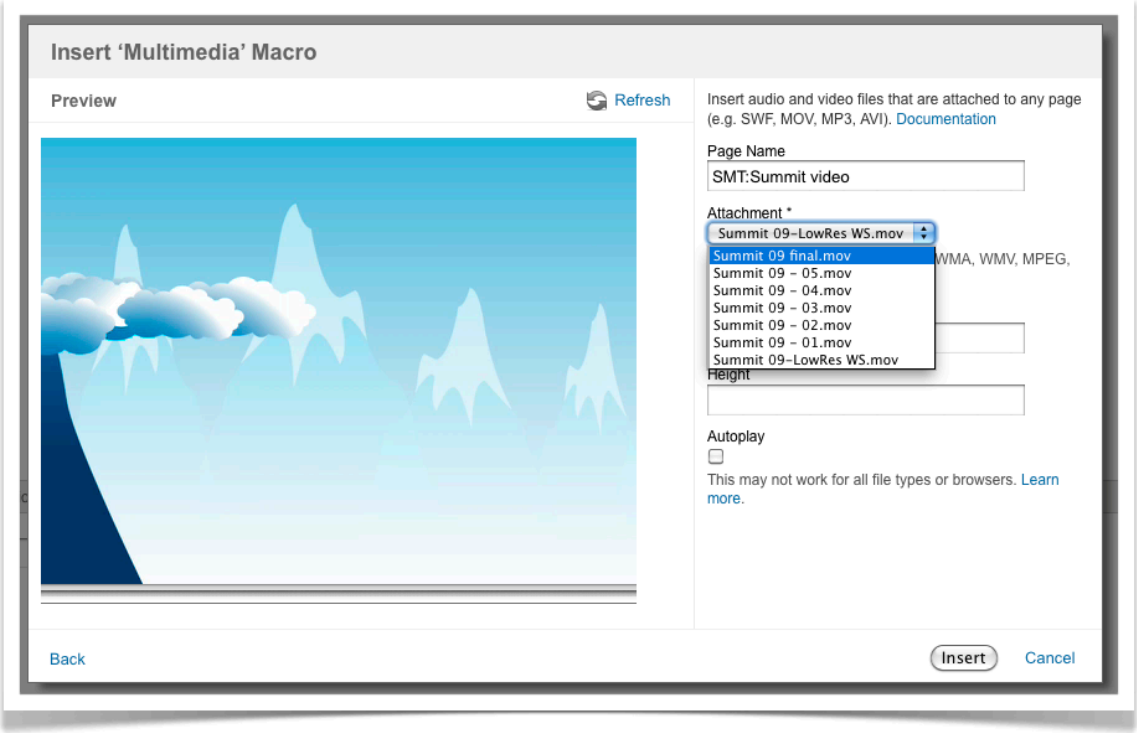

11

Other Improvements

As always, we have made a number of small improvements to Confluence screens and functionality.

- **Keyboard shortcut and restricted search in the Documentation theme.** The Documentation theme (ers a few new goodies for our technical documentation fans.
  - Press '**[**' on your keyboard to show/hide the left-hand navigation bar.
  - Configure the Documentation theme to show quick search results from all spaces (default) or fror the current space only. People can override this restriction when entering their search term.
- **Colour in panel titles.** The Panel macro has a new parameter, allowing you to choose the colour of the text in the title as well as the background colour.

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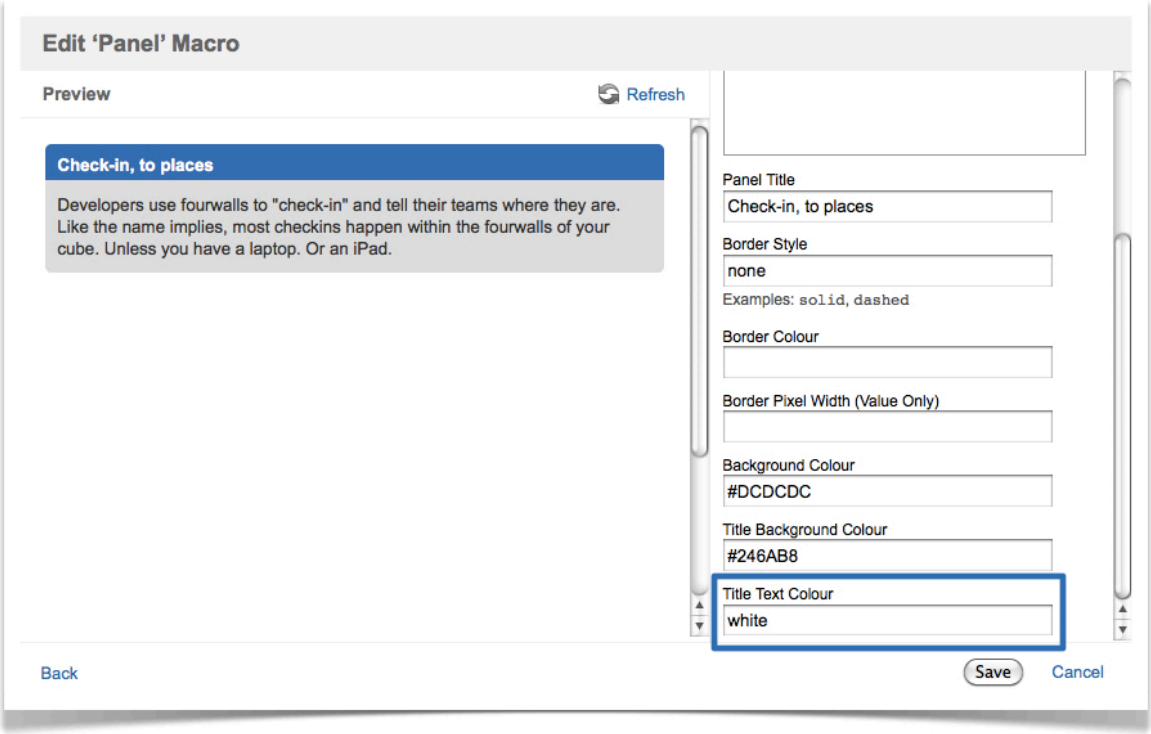
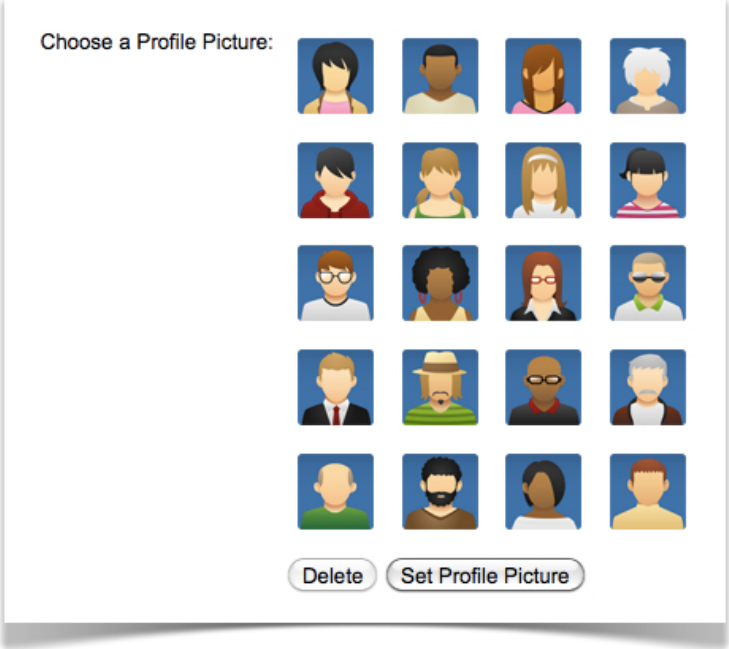


- **Embedding blog posts into pages.** The Include Page macro now accepts blog posts as well as pages for embedding into other pages or blog posts.
- **Cool new avatars.** Take a look at the fresh design of the profile pictures that come standard with Confluence. Below are just a few of them. Of course, you can still upload your own picture too.



- **Improved filtering on the Confluence dashboard.** The list of recent updates on the right of the dashb rd now offers separate tabs, allowing you to view recent content updates from all spaces you have permission to see, your favourite spaces only, or spaces belonging to specific space categories. The list of spaces on the left is no longer tied to your list of recent content updates on the right. You can now use these dashboard features independently of one another.
- **Automatic language detection.** Flummoxed by a Confluence site in a foreign language? Confluence w now detect your language preference from your browser and offer you UI text and messages in that language. Alternatively, you can click the handy new option on the Confluence login screen to set your personal default language. Once you have logged in, Confluence will look at the language preference in your user profile too.

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12

Infrastructure Changes

This release includes a number of improvements in the APIs and under the covers too.

- **Support for Safari 5.** We now offer support for Safari 5 in Confluence 3.5. See the upgrade notes for more information about browser support.
- **HTML5, character encoding and IE rendering.** Confluence's DOCTYPE declaration has been switche from 'HTML 4.01 Strict' to 'HTML5', which is automatically strict. In addition, 'X-UA-Compatible' is now explicitly set to 'EDGE', to ensure that Internet Explorer attempts to render the page in the latest standards mode. (If the browser is set to 'Compatibility View', that will override the 'X-UA-Compatible' setting.) Character encoding is now set at the document level, based on the encoding setting in the General Configuration section of the Confluence Administration Console.
- **Additions to the remote API.**
  - Trash management. Confluence's RPC API offers new space management methods (`getTrash` `ontents`, `purgeFromTrash`, `emptyTrash`) and data objects (`ContentSummaries`, `Content` `ummary`). These make purging trash across a large number of spaces much easier. You can list a trash items for a given space, purge a given page, and purge all pages from a space's trash.
  - Watching and managing watchers. New notification methods in the remote API mimic the watch functionality exposed through the UI: `watchPage`, `watchSpace`, `watchPageForUser`, `getWat` `hersForPage`, `getWatchersForSpace`. You can watch a page, blog post or space, or add a watch on behalf of another user. You can check whether a user is watching a page or space, and return the watchers for a page or space.
  - Blog post retrieval. The new method `getBlogEntryByDateAndTitle` allows you to look up an blog post by specifying its date and title.
- **New WebDAV Resource plugin module.** Plugin developers can use the WebDAV Resource module to define new kinds of content that can be accessed remotely via the Confluence WebDAV plugin. Expose your own custom entities over WebDAV, or expose existing Confluence content that is not currently accessible via WebDAV. This plugin module is available in Confluence 3.4 too, but we forgot to let you know about it until now.
- **Search engine upgraded.** We have upgraded from Lucene 2.2.0 to 2.9.3.
- **New version of the Atlassian User Interface.** Confluence 3.5 ships with AUI 3.3.1. See the AUI 3.3 release notes.

Release Notices

- **Upgrading from a previous version of Confluence.** Upgrading Confluence should be fairly straightforward. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.* Please refer to the Confluence 3.5 upgrade notes for further essential information about **plugins** and other factors affecting your upgrade.
- **Known Issues.** We have an enthusiastic and dedicated group of testers and customers who jump in there, try out the new Confluence release and report any problems so that we can fix them quickly. We value this feedback, which means that we can tell you about any minor known issues in Confluence 3.5. Please check the important technical advisories on the front page of the Knowledge Base.

  A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

The Confluence 3.5 Team

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Confluence 3.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5**. For details of the new features and improvements in this release, please read the Confluence 3.5 release notes.

On this page:

- Upgrade Notes
  - Autowatch Turned On by Default
  - New Profile Pictures
  - Team Labels (Now Called 'Space Categories') May Need Tidying Up
  - New Support Tools Plugin
  - Changes to User Management in Confluence
    - For Customers with Internally Managed Users
    - For Customers using LDAP for User Management
    - For Customers Using JIRA for User Management
    - For Customers Using Crowd for User Management and SSO
    - For Customers Using Custom Authenticators
    - For Customers Using Custom Directory Connectors
  - Trusted Apps and OAuth Superseded by Unified Application Links
  - Upgrade Task Will Reindex Confluence Automatically
  - Changes to Recognised System Properties
  - Connections to MySQL Databases
  - Deprecation of Functionality
    - Converting a Global Space to a Personal Space
    - The 'Mail Page' Feature
  - Notes about Supported Platforms and Libraries
    - End of Support for PostgreSQL 8.1, Firefox 3.0
    - Advance Notice of End of Support for MySQL 5.0, Firefox 3.5, Safari 4, Internet Explorer 7
    - Added Support for Safari 5
    - Lucene Upgraded – Some Methods Now Deprecated
    - Scriptaculous and Prototype JavaScript Libraries Removed
    - X11 Dependencies/Libraries No Longer Required
- Upgrade Procedure
- Checking for Other Known Issues and Troubleshooting the Confluence Upgrade
- Useful Plugins

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Upgrade Notes

Autowatch Turned On by Default

This release includes the new 'autowatch' feature, as described in the release notes. With autowatch turned on, you will receive an email notification each time someone edits or comments on a page that you added or updated.

Note that autowatch is enabled by default for **all new and existing users** on upgrade. We recommend that you **let all Confluence users know** that autowatch will be turned on for their usernames when you upgrade to Confluence 3.5. People can turn autowatch off by editing the email settings in their user profile.

New Profile Pictures

This release brings a fresh set of profile pictures. After you have upgraded to Confluence 3.5, the old set will no longer be available for selection. Users who have already chosen one of the old pictures will keep that picture. If they later choose a new picture or upload their own picture, they will not be able to go back to the old picture again.

Team Labels (Now Called 'Space Categories') May Need Tidying Up

In Confluence 3.5, we have changed the term 'team labels' to the more descriptive term 'space categories'. These are keywords that you can apply to spaces, in order to group logically-related spaces.

Confluence 3.5 also introduces a new space directory that displays a list of spaces and offers them grouped by space category.

If your Confluence site has a number of team labels (now called space categories) already applied to the spaces, you may want to tidy up the categories to optimise your space directory.

More information:

- The Confluence 3.5 release notes describe the new space directory.
- The documentation explains how to use space categories.

New Support Tools Plugin

As mentioned in the release notes, the Atlassian Support Tools plugin is now shipped with Confluence. If you installed the earlier version of the plugin, you will need to **uninstall it** before upgrading Confluence.

Changes to User Management in Confluence

The way Confluence stores, accesses and manages users and groups is completely different in Confluence 3.5. You will notice many improvements, as described in the release notes. When you upgrade to Confluence 3.5, the upgrade process will automatically migrate your data by doing the following:

- Copying the configuration data from the existing OSUser or Atlassian User XML files into the Confluence database.
- Migrating your user and group data into the new database tables. It will not destroy the old data. The old tables remain in the database.
- Migrating internal and external user preferences. So if an LDAP user has logged in to Confluence before, all the same preferences will be there on next login after upgrade.

The sections below describe the upgrade considerations for each supported configuration type.

For Customers with Internally Managed Users

If your Confluence installation currently manages its users and groups in the Confluence database then there are no actions required on upgrade. This applies to Confluence sites that are not connected to Crowd, JIRA, LDAP or a custom directory for user management.

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For Customers using LDAP for User Management

If your Confluence currently uses the standard method of connecting to an LDAP server for authentication and user management then the upgrade process will migrate the configuration.

To ensure that the upgrade process can migrate your configuration, please follow the Confluence upgrade guide . In particular, make sure that you:

- Copy the following files from your old Confluence installation to your new Confluence installation:

```
<Installation-Directory>/confluence/WEB-INF/classes/atlassian-user.
xml
<Installation-Directory>/confluence/WEB-INF/classes/osuser.xml
```

Please follow these steps after the upgrade is complete:

- Ensure that the LDAP connection is correctly configured. See Connecting to an LDAP Directory and Connecting to an Internal Directory with LDAP Authentication.
- Ensure that the directory order is set to match your environment and requirements. See Managing Multiple Directories.
- Enable nested groups, if required in your organisation. To understand the performance ramifications of this, see Managing Nested Groups.
- Note that people will need to wait until the automatic synchronisation task has copied their user and group information from the LDAP directory to the internal cache before they can log in. The synchronisation task will start automatically in the background when the directory is configured. If someone tries to log in to Confluence before the synchronisation task has finished, the user authentication will fail. See Synchronising Data from External Directories.

If you are using a legacy LDAP configuration (such as OSUser with LDAP authentication only), you'll need to reconfigure your LDAP support as covered on Connecting to an LDAP Directory and Connecting to an Internal Directory with LDAP Authentication. In case you encounter an issue, please refer to Upgrade to Confluence 3.5 with OSUser LDAP Authentication Fails for more details.

For Customers Using JIRA for User Management

If you are already using JIRA to manage your Confluence users, via the JDBC connection to the JIRA database, you must **upgrade Confluence to version 3.5 before upgrading JIRA to version 4.3**.

JIRA 4.3 has a significantly different database schema and exposes a new REST interface, which Confluence will depend on for continued JIRA user management. If you upgrade to JIRA 4.3 before upgrading to Confluence 3.5, your Confluence users will no longer be able to log in once you upgrade to Confluence 3.5.

Confluence 3.5 does not ship with an OSUser migrator, and it will not recognise the OSUser definition in your `atlassian-user.xml` file. When upgrading Confluence:

1. **Do not copy** the modified `atlassian-user.xml` and `osuser.xml` to your Confluence 3.5 installation directory.
2. Ensure that previous Confluence's `server.xml` file is copied to your Confluence 3.5 installation directory, in order to retain the JIRA datasource.
3. Upgrade to Confluence 3.5.

Please follow these steps after the upgrade is complete:

- Log in to Confluence 3.5.x using the administration username and password you used prior to configuring JIRA user management in Confluence. (Confluence is not yet configured to point to JIRA, so your JIRA credentials will not work.)
    - If you cannot remember or do not have a password which allows you to log in, reset the

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administrator's password in the database and restart Confluence to log in.

- Ensure that the JIRA connection is correctly configured:
  - If you plan to connect to JIRA 4.2 or earlier, set up the 'Legacy JIRA Database Connector'. See Connecting to JIRA 4.2 or Earlier for User Management.
  - When you upgrade to JIRA 4.3 or later, set up the new JIRA server connection. See Connecting to Crowd or JIRA for User Management.
- Ensure that the directory order is set to match your environment and requirements. See Managing Multiple Directories.

For Customers Using Crowd for User Management and SSO

If you are using Confluence with Atlassian Crowd for user management and SSO:

- You will need to upgrade to Crowd 2.1 or later, before upgrading to Confluence 3.5. Earlier versions of Crowd are not compatible with Confluence 3.5. Confluence 3.4 and earlier will work with Crowd 2.1.
- Copy the following files from your old Confluence installation to your new Confluence installation:

```
<Installation-Directory>/confluence/WEB-INF/classes/atlassian-user.
xml
```

- You no longer need to copy the Crowd integration JAR files into Confluence's `WEB-INF/lib/` directory.
- If you are using `com.atlassian.crowd.integration.seraph.v22.ConfluenceAuthenticator` for SSO (defined in `$CONFLUENCE$/WEB-INF/classes/seraph-config.xml`), please use the newer version instead: `com.atlassian.confluence.user.ConfluenceCrowdSSOAuthenticator`. Specifically, change this:

```
<authenticator
class="com.atlassian.crowd.integration.seraph.v22.ConfluenceAuthent
icator"/>
```

  to this

```
<authenticator
class="com.atlassian.confluence.user.ConfluenceCrowdSSOAuthenticato
r"/>
```

- After the upgrade, you may notice a difference when first connecting Confluence to Crowd: People will need to wait until a synchronisation task has copied their user and group information from Crowd to the internal cache before they can log in. If someone tries to log in to Confluence before the synchronisation task has finished, the user authentication will fail.
- Ensure that the directory order is set to match your environment and requirements. See Managing Multiple Directories.

See Connecting to Crowd or JIRA for User Management.

For Customers Using Custom Authenticators

Custom authenticators, as defined in `seraph-config.xml`, are not affected and should work in the same way as in earlier versions of Confluence.

For Customers Using Custom Directory Connectors

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Custom directory types are **not** possible and not supported in Confluence 3.5 and later. If you have custom providers defined in OSUser or in Atlassian-User, thus defining your own storage for users and groups, the upgrade procedure will prevent you from starting Confluence.

Please see if one of the following solutions will work for you:

- If you have written a custom provider to support an LDAP schema not natively supported by Confluence 3.4 or earlier, you may no longer need your custom directory connector. Please check the supported LDAP schemas to see if you can use the new LDAP connectors supplied with Confluence 3.5.
- If you have written a custom provider to support nested groups, you can now use the new directory connectors supplied with Confluence 3.5. See Managing Nested Groups.
- If you have written a custom provider to connect to your own database, please consider loading the data into Confluence via the database instead. You will then need to flush the relevant caches in the application.

If you need to keep the custom directory connection, please consider whether Atlassian Crowd meets your requirements. See the documentation on developing a custom directory connector for Crowd.

Trusted Apps and OAuth Superseded by Unified Application Links

Confluence 3.5 includes the Unified Applications Link (UAL) plugin which manages trust relationships. Authentication for trust relationships, such as Trusted Apps and OAuth, is now configured via Application Links in your administration console. When you first navigate to the Application Links screen, you will be prompted to upgrade your existing Trusted Apps and OAuth trust relationships to application links.

For instructions on how to upgrade your links, see Upgrading an Application Link.

Please note, there is a known issue with the upgrade dialog. This will affect you if you have set up two different types of authentication (e.g. Trusted Apps and OAuth) to the same remote server. The upgrade message displayed on your Application Links screen will prompt you to upgrade two application links. However, you actually only need to have one application link with two authentication types configured, i.e. upgrade one application link and then configure the missing authentication type on that upgraded link.

Upgrade Task Will Reindex Confluence Automatically

We have upgraded the Confluence search engine from Lucene 2.2.0 to 2.9.3. As a result, a reindex is highly recommended when you upgrade. The search will continue to work after upgrade even without a reindex, but you will see exceptions in the logs and reduced capabilities.

When you upgrade to Confluence 3.5, an upgrade task will run automatically to rebuild the index. During the rebuild task, the upgrade process will require three times the size of the index on disk in order to perform the upgrade task. This space will be freed up when the upgrade process has finished.

If you would prefer to rebuild your index later, you can pass the following argument to Confluence when starting up after the upgrade:

```
-Dconfluence.skip.reindex=true
```

The initial startup will show an error message from `ConfluenceSearcherInitialisation` in the logs, because the warming query is run before the upgrade task. This is not a problem.

Changes to Recognised System Properties

We have removed the following system property: `confluence.import.use-legacy-importer`. Specifying this property will no longer have any effect in Confluence. See Recognised System Properties. (See the Confluence 3.3 documentation for the behaviour in earlier versions of Confluence.)

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Connections to MySQL Databases

If your Confluence installation is connected to a MySQL database, please ensure that this database uses the 'READ-COMMITTED' transaction isolation level. MySQL's default transaction isolation mode:

- will cause issues with missing LDAP and other remote directory user permissions.
- is no longer supported in Confluence 3.5.

See the last step of the MySQL server installation procedure for details.

Deprecation of Functionality

This section provides advanced warnings of features in Confluence 3.5 that will be deprecated in Confluence 4.0 (a future release of Confluence).

Converting a Global Space to a Personal Space

Confluence 4.0 will no longer support the ability to convert a global space to a personal space. Our research has shown that this feature is used very little. Hence, we have decided to remove this feature as part of our ongoing mission to simplify Confluence where possible.

The 'Mail Page' Feature

In Confluence 4.0, the 'Mail Page' plugin will no longer be bundled with Confluence. This means that the 'Mail Page' feature for e-mailing a page will not be available in Confluence (out of the box) and the Share button will be the recommended method for e-mailing pages to others.

Notes about Supported Platforms and Libraries

End of Support for PostgreSQL 8.1, Firefox 3.0

As previously announced, **from this release onwards** we no longer offer support for:

- PostgreSQL 8.1.
- Firefox 3.0.

Please see End of Support Announcements for Confluence.

Advance Notice of End of Support for MySQL 5.0, Firefox 3.5, Safari 4, Internet Explorer 7

We are planning to end support for the following database and browsers **in Confluence 4.0**:

- MySQL 5.0.
- Firefox 3.5.
- Safari 4.
- Internet Explorer 7 (IE7).

Please see End of Support Announcements for Confluence.

Added Support for Safari 5

We now offer support for:

- Safari 5 **in Confluence 3.5**.

Lucene Upgraded – Some Methods Now Deprecated

This section is of interest to plugin developers. As stated above, we have upgraded the Confluence search engine from Lucene 2.2.0 to 2.9.3. A number of Lucene methods are now deprecated. These methods will be listed when you compile your plugin. We recommend that you consult the Lucene documentation and replace these methods as soon as possible. They will no longer be available when Confluence upgrades to Lucene 3. This further upgrade is not yet scheduled, but we plan to do it sometime.

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Scriptaculous and Prototype JavaScript Libraries Removed

jQuery is the supported JavaScript library for plugin developers.

We first announced the deprecation of other JavaScript libraries with Confluence 2.8. Please note that we have now removed the following libraries from Confluence:

- Prototype
- Scriptaculous

X11 Dependencies/Libraries No Longer Required

X11 dependencies/libraries on Unix-/Linux-based operating systems are no longer required by Confluence 3.5 or later. Hence, these libraries do not need to be installed for your Confluence 3.5 upgrade or when installing a new instance of Confluence 3.5 or later.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 3.4.x, then please read the Upgrade Notes Overviewand the Upgrade Notes for each version of Confluence listed on that page. (There are hyperlinks to each one.) Also:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.x first, confirm the upgrade was successful, then upgrade again from version 2.7.x to the latest. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the upgrade guide.

Checking for Other Known Issues and Troubleshooting the Confluence Upgrade

After you have completed the steps required to upgrade your Confluence installation, check all the items on the **Confluence post-upgrade checklist** to ensure that everything works as expected. If something is not working correctly, please check for known Confluence issues and try troubleshooting your upgrade as described below:

- **Check for known issues**. Sometimes we find out about a problem with the latest version of Confluence after we have released the software. In such cases we publish information about the known issues in the Confluence Knowledge Base. Please check the known issues for the relevant release on this page of the Knowledge Base and follow the instructions to solve the problem.

- **Did you encounter a problem during the Confluence upgrade?** Please refer to the guide to troubleshooting upgrades in the Confluence Knowledge Base.

- If you encounter a problem during the upgrade and cannot solve it, please create a support ticket and one of our support engineers will help you.

Useful Plugins

Before installing a plugin into your Confluence site, please check the plugin's information page to see whether it is supported by Atlassian, by another vendor, or not at all. See our guidelines on plugin support.

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- Appfire's Upgrade Assistant for Confluence (UAC) is a commercial plugin that simplifies the upgrade process into an easy-to-use wizard.

RELATED TOPICS

Confluence 3.5 Release Notes

Issues Resolved in Confluence 3.5

Below are the issues resolved in Confluence 3.5, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. Please also take a look at the Confluence 3.5 release notes for the new features in Confluence 3.5.

JIRA Issues (179 issues)					
Type	**Key**	**Summary**	**Status**	**Resolution**	**Votes**
	CONF-17150	Support nested groups	Resolved	Fixed	317
	CONF-6478	News watching	Resolved	Fixed	112
	CONF-9993	Prevent multimedia attachments from autoplaying when embedded in a Confluence page	Resolved	Fixed	52
	CONF-1646	Support for More Languages via the {code} macro	Resolved	Fixed	50
	CONF-6794	Add titleColor to panel macro	Resolved	Fixed	43
	CONF-1747	Link to single JIRA issue macro	Resolved	Fixed	39
	CONF-17366	ConfluenceGroupJoiningAuthenticator does not add users to confluence-users group, if they already have "Can Use" permission via another group	Resolved	Fixed	37
	CONF-10697	Code macro should wrap	Resolved	Fixed	37
	CONF-21980	Support memberOf attribute on LDAP users for group membership	Resolved	Fixed	34
	CONF-10654	The ability to	Resolved	Fixed	33

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		translate local membership into external membership for initial LDAP integration			
	CONF-19508	Google Gears is no longer supported so we need to Migrate to HTML 5	Resolved	Fixed	30
	CONF-6029	Automatically add LDAP users to confluence-users (or other databse-stored group)	Resolved	Fixed	29
	CONF-14104	Deleting users from LDAP, does not remove their 'Can-Use' permission	Resolved	Fixed	28
	CONF-12882	Allow users to create Jira issues from Confluence pages.	Resolved	Fixed	27
	CONF-11926	LDAP performance degrades the more LDAP groups a user belongs too	Resolved	Fixed	17
	CONF-8925	Multiple LDAP User Lookups during Login	Resolved	Fixed	16
	CONF-20811	Printing a Confluence page using the Documentation Theme in Internet Explorer will only print the first page of data	Resolved	Fixed	14
	CONF-19431	Crowd+Confluence nested groups fail	Resolved	Fixed	14
	CONF-19039	Drag and drop upload doesn't work in Google Chrome	Resolved	Fixed	14
	CONF-14444	Default authors	Resolved	Fixed	13

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		to watch the pages they author			
	CONF-6559	Sort LDAP groups and users alphabetically on administrative pages	Resolved	Fixed	13
	CONF-13420	LDAP users can be cached as non-existant / not permitted to login if the LDAP repository is not available	Resolved	Fixed	11
	CONF-9326	Code macro: Syntax-highlight C++ code	Resolved	Fixed	11
	CONF-10557	LDAP queries are submitting too many bind / unbind requests to the LDAPserver.	Resolved	Fixed	10
	CONF-8441	Rich Text Editor messes up formatting of pages that use the {html} tag	Resolved	Fixed	10
	CONF-733	Grouped/Classified spaces	Resolved	Fixed	10
	CONF-14484	Manipulation of Trash content via the Remote API	Resolved	Fixed	9
	CONF-10785	Slow performance due to excessive calls to getUser (particular where LDAP is used for user management).	Resolved	Fixed	9
	CONF-6932	User interface for administering LDAP	Resolved	Fixed	9
	CONF-16639	Officially provide support for postgresql 8.4 and 8.3	Resolved	Fixed	8
	CONF-3593	Automatically	Resolved	Fixed	8

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		watch pages I edit user preference			
	CONF-20475	Improve performance of DefaultSpacePermissionManager#hasPermissionViaGroups by reversing the way permissions are checked.	Resolved	Fixed	7
	CONF-9135	Searching for user with complete name in "Full Name" field doesn't work on LDAP	Resolved	Fixed	7
	CONF-6560	Manage Groups lists groups from LDAP and Confluence in a meaningless way	Resolved	Fixed	7
	CONF-18451	Offer support for POSIX Style LDAP	Resolved	Fixed	6
	CONF-11207	Current Confluence version looks very ugly if a Helvetica font is installed	Closed	Fixed	6
	CONF-8675	Support for thousands of groups needs improvement	Resolved	Fixed	6
	CONF-8404	Send email notification when new news item is released	Resolved	Fixed	6
	CONF-21981	Group membership search breaks with Active Directory's automatic range limiting for large groups	Resolved	Fixed	5
	CONF-20398	French translations for some of Rich Text Editor's	Resolved	Fixed	5

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		features are not reflected			
	CONF-16198	Notify Feature	Resolved	Fixed	5
	CONF-5365	Deactivate User link is not available in user profile	Resolved	Fixed	5
	CONF-2459	Need to use NVARCHAR columns in SQL Server to support Unicode	Resolved	Fixed	5
	CONF-21502	Users can log in with old and new password when using LDAP Integration	Resolved	Fixed	4
	CONF-17991	Gadgets in the macro browser should always display their providers name/URL	Resolved	Fixed	4
	CONF-16736	Long text is not wrapped in noformat and code macros inside a table	Resolved	Fixed	4
	CONF-16144	Bundle new Code macro	Resolved	Fixed	4
	CONF-12219	Implement paging for LDAP search requests	Resolved	Fixed	4
	CONF-8477	Don't change my code, especially when it is within an {html} macro!	Resolved	Fixed	4
	CONF-18723	Confluence failed with too many open files when an admin tries to see all users	Resolved	Fixed	3
	CONF-17499	Diffs take too long to execute sometimes	Resolved	Fixed	3
	CONF-14864	LDAP Key should map automatically to ldap cache name	Resolved	Fixed	3
	CONF-12131	Robust logging	Resolved	Fixed	3

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		for SOAP and XML-RPC login requests			
	CONF-11739	Daily backup scheduler	Resolved	Fixed	3
	CONF-6924	Allow users to change their password when using LDAP user management	Resolved	Fixed	3
	CONF-5866	Create a method in the remote API which allows for watching a space or a page	Resolved	Fixed	3
	CONF-5307	Include page macro should be able to include blog posts/news, not just pages	Resolved	Fixed	3
	CONF-3130	Thumbnailing of animated gifs is broken	Resolved	Fixed	3
	CONF-2794	Support Bash script syntax highlighting in {code} macro	Resolved	Fixed	3
	CONF-20712	Episodic Videos not working with widget connector	Resolved	Fixed	2
	CONF-20489	Upgrades: Errors thrown by upgrade tasks should be reported to the end user, not ignored	Resolved	Fixed	2
	CONF-20486	User Status updates have "anonymous" tags in recently-updated -dashboard macro	Resolved	Fixed	2
	CONF-20219	Fixversion column renders empty content if there are multiple Fix Version/s selected in JIRA	Resolved	Fixed	2
	CONF-19286	Users of LDAP	Resolved	Fixed	2

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		groups not shown			
	CONF-16875	Rename Doc Import to "Import Word Doc"	Resolved	Fixed	2
	CONF-15812	Support python syntax highlighting in {code} macro	Resolved	Fixed	2
	CONF-14853	IllegalTransactionStateException due to trying to rollback a transaction that has already been rolled back.	Resolved	Fixed	2
	CONF-14100	Adding "copy to clipboard" functionality into code macro	Resolved	Fixed	2
	CONF-10301	LDAP authentication module does not iterate users/groups under CN-s	Resolved	Fixed	2
	CONF-10002	Brackets in code leads to undefined pages	Resolved	Fixed	2
	CONF-9116	Confluence LDAP (atlassian-user.xml) should support referral property	Resolved	Fixed	2
	CONF-5305	Non-existent users in groups cause problems when using LDAP	Resolved	Fixed	2
	CONF-5146	Links to an external URL containing spaces do not work	Resolved	Fixed	2
	CONF-3589	Configurable sender for notification emails	Resolved	Fixed	2
	CONF-1294	Line numbering in code macro.	Resolved	Fixed	2
	CONF-21630	Lots of errors in	Resolved	Fixed	1

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		server logs: Cannot generate thumbnail for SWF/PDF files			
	CONF-21138	List of attachments in Link Browser are not sorted	Resolved	Fixed	1
	CONF-20822	Add Support for Basic Unix Shell Scripting for 'code' Tag	Resolved	Fixed	1
	CONF-20812	jiraissues macro fails with confusing/invalid error message when trying to fetch restricted project	Resolved	Fixed	1
	CONF-20586	Work around JIT compiler bug that causes OutOfMemory error	Resolved	Fixed	1
	CONF-19515	Improve the queries used to fetch users via the Search Users screen to prevent Wiki threads from being blocked for long periods of time	Resolved	Fixed	1
	CONF-18832	duplicate username in confluence and ldap causes confluence to read group membership from local user instead of ldap user	Resolved	Fixed	1
	CONF-18347	Adding LDAP User to a large internal group (e.g. confluence-users) is slow	Resolved	Fixed	1
	CONF-17001	Improve the ConfluenceGroupJoiningAuthenticator such that it	Resolved	Fixed	1

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		only adds authenticated LDAP users to the confluence-users group			
	CONF-16737	Integrate 'automatically add users to confluence-users' as an option from the UI	Resolved	Fixed	1
	CONF-14182	Code macro doesn't highlight "order" in SQL	Resolved	Fixed	1
	CONF-12201	Race condition issue with DefaultHibernateUser	Resolved	Fixed	1
	CONF-9140	Simplify user management configuration by integrating it into Confluence administration area	Resolved	Fixed	1
	CONF-8183	Distinguish between US and British English Language Pack	Resolved	Fixed	1
	CONF-7590	Embedded Flash - cannot stop auto-play	Resolved	Fixed	1
	CONF-7139	Group searches repeat the groupSearchFilter criteria	Resolved	Fixed	1
	CONF-6903	Allow reactivation of deactivated users	Resolved	Fixed	1
	CONF-6631	Code macro doesn't correctly handle empty strings	Resolved	Fixed	1
	CONF-5792	For watched page update notifications, set 'from' to user who did update.	Resolved	Fixed	1
	CONF-5463	Group filtering is case sensitive	Resolved	Fixed	1

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	CONF-5047	Images not working with templates	Resolved	Fixed	1
	CONF-4816	Syntax highlighting in {code:xml} broken	Resolved	Fixed	1
	CONF-3987	Support mail disable switches	Resolved	Fixed	1
	CONF-3558	Reopening CONF-1324 about username with uppcase letters	Resolved	Fixed	1
	CONF-1553	Better handling of java comments in code marco	Resolved	Fixed	1
	CONF-814	Gate blog posts to mail address(es)	Resolved	Fixed	1
	CONF-23149	contentbylabel macro does not sort ASCII characters properly	Resolved	Fixed	0
	CONF-22565	XSRF vulnerability in the Social Bookmarking plugin	Resolved	Fixed	0
	CONF-22261	"What's new in Confluence 3.5" banner fails	Resolved	Fixed	0
	CONF-21939	In the search screen filtering for username first then add a search string generates an exception	Resolved	Fixed	0
	CONF-21930	Welcome message in dashboard is escaped	Resolved	Fixed	0
	CONF-21899	New Bookmark via the bookmarklet is not defaulting to my personal space	Resolved	Fixed	0
	CONF-21855	AD/Crowd	Resolved	Fixed	0

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		authenticated administrators using Confluence-controlled password (not the AD one)			
	CONF-21832	Find a way of finding and purging all shadowed users from Confluence	Resolved	Fixed	0
	CONF-21823	PDF export can't export text inside code macro	Resolved	Fixed	0
	CONF-21807	UserInterfaceState.getDashboardTab() is removed in Confleunce 3.5-beta1	Resolved	Fixed	0
	CONF-21791	Mac Evaluation installer: Log file in CONFLUENCE_HOME isn't created properly.	Resolved	Fixed	0
	CONF-21754	Error when saving a page if parent page's title is changed	Resolved	Fixed	0
	CONF-21724	404 on a missing resource /images/icons/view_16.png on the edit restrictions page	Resolved	Fixed	0
	CONF-21692	Security configuration cannot be updated using custom authenticator or password.confirmation.disabled	Resolved	Fixed	0
	CONF-21682	Missing localization localisation in the user settings	Resolved	Fixed	0
	CONF-21637	Wrong icons position while using space macro on IE	Resolved	Fixed	0
	CONF-21612	Log user who is executing RPC	Resolved	Fixed	0

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		requests			
	CONF-21516	Install "Source-code Formatter" Macro Plugin for C-Sharp	Resolved	Fixed	0
	CONF-21500	Index rebuild fails silently due to uncaught exceptions in the DefaultObjectQueueWorker	Resolved	Fixed	0
	CONF-21457	Behaviour of users with default profile pic varies between two implementations of ConfluenceUserProfile.getProfilePictureUri	Resolved	Fixed	0
	CONF-21439	Content must not be null error when uploading global logo	Resolved	Fixed	0
	CONF-21406	Improve client performance by enabling HTTP caching for i18n REST resources	Resolved	Fixed	0
	CONF-21376	AttachmentRendererSupport does lots of unnecessary work	Resolved	Fixed	0
	CONF-21350	Dropdown menu text colour is dark grey when using keyboard to select menu item	Resolved	Fixed	0
	CONF-21342	Tooltips with more than 1 tip contain apple and windows commands	Resolved	Fixed	0
	CONF-21339	Breadcrumbs: Text in tooltip is messed up	Resolved	Fixed	0
	CONF-21323	Logging during rendering of items in an rss	Resolved	Fixed	0

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		feed should say what item was being rendered			
	CONF-21317	Demonstration space uses macros that are not included in a default install	Resolved	Fixed	0
	CONF-21258	Wrong error handling in FileSystemAttachmentDataDao.getDeleteErrorReason()	Resolved	Fixed	0
	CONF-21207	Disabling the global theme prevents users from logging in due to getThemeJsResources problem	Resolved	Fixed	0
	CONF-21195	The 'Choosing a database configuration' screen in set up has a broken link to http://localhost:8080/confluence/setup/null in the 'embedded database' section.	Resolved	Fixed	0
	CONF-21093	Make the TestNG report format more readable	Resolved	Fixed	0
	CONF-21086	Confluence is including an old version of package-scanner, rather than the version required/built/tested with the plugin framework.	Resolved	Fixed	0
	CONF-21084	Plugin Administration Page link should point to UPM rather than legacy plugin manager	Resolved	Fixed	0

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	CONF-21062	Sort caches by display name in cache config screen	Resolved	Fixed	0
	CONF-21059	Date format in comments is misleading	Resolved	Fixed	0
	CONF-20914	Confluence user list shows duplicate 'native' and LDAP users with same username	Resolved	Fixed	0
	CONF-20886	Bookmarks macro gives a ClassCastException when used in a comment	Resolved	Fixed	0
	CONF-20804	"Download All" fails with "Too many open files"	Resolved	Fixed	0
	CONF-20734	Logging thread-local diagnostic context not cleared on Quartz threads	Resolved	Fixed	0
	CONF-20589	LDAP user details in LDAP group browser are incorrect if there is a mismatch on membership attribute DN and usernameAttribute	Resolved	Fixed	0
	CONF-20452	Malformed labels always report that the label name is too long	Resolved	Fixed	0
	CONF-20214	Attaching an attachment directly after upload does not insert the link - in the link browser	Resolved	Fixed	0
	CONF-19688	Code macro inserts semi-colon	Resolved	Fixed	0
	CONF-19359	Configuring the time for daily backups is not	Resolved	Fixed	0

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		possible through the GUI			
	CONF-18375	When LDAP server is down, Confluence permission breaks	Resolved	Fixed	0
	CONF-18073	Cache result of isSuperUser check in permission handling	Resolved	Fixed	0
	CONF-17861	Wrong german translation in edit window: "unter" --> "um"	Resolved	Fixed	0
	CONF-17774	Concurrent not synchronized access to hashmap in OgnlUtil class leads to infinite loop and high cpu	Resolved	Fixed	0
	CONF-17525	Powerpoint icon does not show up in the macro browser - but Word and Excel do	Resolved	Fixed	0
	CONF-17511	Bundled plugin loading mechanism leads to larger than necessary memory use	Resolved	Fixed	0
	CONF-17291	Emails from a watched page do not show diff content when entire paragraphs are removed	Resolved	Fixed	0
	CONF-16986	Wiki markup content is deleted when editing/saving an unsupported thumbnail format	Resolved	Fixed	0
	CONF-16201	Confluence 'allows' to delete a user from an LDAP group	Resolved	Fixed	0

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	CONF-14921	{code}-formatted text nearly unreadable	Resolved	Fixed	0
	CONF-14880	Unable to add user to LDAP group	Resolved	Fixed	0
	CONF-13284	Formatting lost with {code} element	Resolved	Fixed	0
	CONF-13189	Strange group behaviour when user is member of groups Confluence cannot see	Resolved	Fixed	0
	CONF-10948	Want to be be able to list recently joined users, to identify _when_ they joined.	Resolved	Fixed	0
	CONF-10430	LDAP Integration on flat domains	Resolved	Fixed	0
	CONF-9483	error saving document in the Rich Text editor	Resolved	Fixed	0
	CONF-8905	Need a method to "Select All" or "Select None" for multiple check boxes	Resolved	Fixed	0
	CONF-8596	{toc} macro not working with double byte symbols in headings	Resolved	Fixed	0
	CONF-8262	Put a direct "unwatch this page" link in notification emails	Resolved	Fixed	0
	CONF-8174	On Firefox, Confluence table (using standard wiki markup) does not format column width when column contains {code} macro	Resolved	Fixed	0
	CONF-7199	Confluence should fall back	Resolved	Fixed	0

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		to displaying username when no defined name attributes are available in LDAP			
	CONF-6802	Ability to use the e-mail address from the LDAP server (possibly imported when logging in?)	Resolved	Fixed	0
	CONF-6682	Username links exported wrong in HTML	Resolved	Fixed	0
	CONF-6584	individual user can be added as "user group" under "permissioning"	Resolved	Fixed	0
	CONF-6290	Bucket's DefaultUserAccessor has dodgy error handling	Resolved	Fixed	0
	CONF-5502	Browse groups throws ClassCastException if there are LDAP groups that have the same name as Confluence goups	Resolved	Fixed	0
	CONF-5330	Auto-save links "resume editing" and "discard" do not work on copied pages	Resolved	Fixed	0
	CONF-5229	'Copy Page' page behaves like 'Add Page' from drafts POV	Resolved	Fixed	0
	CONF-3857	Undefined Page Report does not hide create page link from users without permission	Resolved	Fixed	0
	CONF-3663	Dollar signs in template break on insert variable step	Resolved	Fixed	0
	CONF-3540	Move contextual	Resolved	Fixed	0

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		help in General Configuration closer to the options it relates to			
	CONF-1416	Allow user to filter spaces visible to him	Resolved	Fixed	0
	CONF-950	Incorporate external user management cleanly into setup process.	Resolved	Fixed	0

Confluence 3.5.1 Release Notes

1 April 2011

Confluence 3.5.1 is a bug-fix release. It includes fixes for LDAP and user management, with several improvements for customers upgrading from versions earlier than Confluence 3.5.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.1 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (24 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22314	Membership sync with LDAP can run twice in some situations		Resolved	Fixed
	CONF-22103	Validate upgrades before making any changes		Resolved	Fixed
	CONF-22090	Provide option to manually migrate LDAP-local group memberships if there is no		Resolved	Fixed

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		atlassian-user.xml during upgrade to 3.5			
	CONF-22047	Make user management upgrade errors meaningful		Resolved	Fixed
	CONF-22008	Support for anonymous bind to LDAP user management		Resolved	Fixed
	CONF-21371	Page move fails with deep page hierarchy		Resolved	Fixed
	CONF-21820	LDAP migration fails to set appropriate page limit for queries		Resolved	Fixed
	CONF-19914	Removing a page permission triggers a page delete operation		Resolved	Fixed
	CONF-22085	When upgrading plugins that provide plugin points, the clients don't come up properly		Resolved	Fixed
	CONF-21972	Nested Groups should not be given as an option for the Confluence Internal Directory		Resolved	Fixed
	CONF-21955	JIRA user directory configuration page has incorrect title		Resolved	Fixed
	CONF-17582	Missing attachments causes Confluence page move to other space to fail		Resolved	Fixed
	CONF-11507	Syntax Error in build.xml		Resolved	Fixed
	CONF-5729	getUsersWithConfluenceAccess() is very slow		Resolved	Fixed
	CONF-22029	The What's New		Resolved	Fixed

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		popup doesn't appear by default			
	CONF-22010	Can't install plugin in Confluence with PostgreSQL 9.0		Resolved	Fixed
	CONF-21998	Re-add backup tip linking to schedule admin, as it could not be included in 3.5 as messages had been translated.		Resolved	Fixed
	CONF-21993	Schedule Admin error pages aren't fully i18n'd		Resolved	Fixed
	CONF-21975	Upgrade UAL to 3.3		Resolved	Duplicate
	CONF-21967	Confluence macro browser does not allow you to hide macros from macro autocomplete		Resolved	Fixed
	CONF-21831	Duplicate LDAP user gets counted towards the license even when they do not have a can use permission		Resolved	Fixed
	CONF-21645	Daily report stops functioning when user is removed directly from LDAP server		Resolved	Fixed
	CONF-21553	Some of the cascade rules in the ContentPermission and ContentPermissionSet hibernate mapping files could be changed to "save-update" instead of "all"		Resolved	Duplicate
	CONF-19174	Improve		Resolved	Fixed

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		getNumberOfLicensedUsers so that it does not need to fetch every user in order to count the number of licensed users.			

Confluence 3.5.1 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.1**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.2 Release Notes

18 April 2011

Confluence 3.5.2 is a bug-fix release.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.2 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (15 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22293	Upgrade to		Resolved	Fixed

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		Lucene 2.9.4			
	CONF-22143	Improve Log reporting for PartialResultsException after upgrade.		Resolved	Fixed
	CONF-22122	Auto Group Adder should only add groups on first login from a user		Resolved	Fixed
	CONF-22102	Failed upgrades lead to NullPointerException in ConfluenceGroupJoiningAuthenticator		Resolved	Fixed
	CONF-22094	Site Default Language broken in Confluence 3.5		Resolved	Fixed
	CONF-21973	Unhandled exceptions when performing operations on a Crowd server and it doesn't have permissions to execute		Resolved	Fixed
	CONF-21970	UPM data can exceed database length limits for Bandana (UPM-1061)		Resolved	Fixed
	CONF-14199	Document added General Configuration option to limit the maximum number of RSS items in a feed		Resolved	Fixed
	CONF-11759	If directories associated with Confluence do not allow adding of users or groups, an UnsupportedOperationException is thrown		Resolved	Fixed
	CONF-22246	List All Space		Resolved	Fixed

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		Templates ... lo			
	CONF-22139	Duplicate Key Violates Unique Constraint 'os_propertyentry_pkey' exception is being thrown on Upgrade to 3.5.x		Resolved	Fixed
	CONF-22123	Add database constraints to prevent duplicate content permission entries		Resolved	Fixed
	CONF-22116	Build and release 3.5.1		Resolved	Fixed
	CONF-21971	Unhandled exceptions when performing operations and LDAP server is down.		Resolved	Fixed
	CONF-21968	Exception while trying to update my profile settings with Crowd and read-only LDAP		Resolved	Fixed

Confluence 3.5.2 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.2**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.3 Release Notes

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5 May 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.3**.

This release introduces the option to configure the synchronisation interval for Crowd and JIRA user directory types. The synchronisation interval is set to an hour by default. In previous releases of Confluence, you could change the default setting for LDAP directories only. Now you can set the interval for directories managed in Crowd and JIRA too. Details are in the documentation.

We have also fixed a number of bugs. The complete list of fixes is at the bottom of this page.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.3 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (11 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22278	Allow configuration of sync interval for Crowd and JIRA directory types		Resolved	Fixed
	CONF-22164	Many page operations: move, restricting, deleting, etc. fail with Oracle, DB2 or SQL Server		Resolved	Fixed
	CONF-22374	Some permissions cannot be added in SQL Server and Oracle		Resolved	Fixed
	CONF-22479	XSS vulnerability in doeditmysettings.action		Resolved	Fixed
	CONF-22402	XSS vulnerability in login.action		Resolved	Fixed
	CONF-22356	Upgrading to 3.5.2 fails with Oracle 11		Resolved	Fixed
	CONF-22157	Custom			Fixed

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		authenticators which subclass ConfluenceAuthenticator are broken in Confluence 3.5		Resolved	
	CONF-22048	LDAP: Automatically refine user search filter when upgrading to Confluence 3.5		Resolved	Fixed
	CONF-22014	lucene-query-mapper plugin modules are not getting loaded properly upon server restart		Resolved	Fixed
	CONF-22341	Upgrade of user plugin causes it to be re-installed on every subsequent other plugin install		Resolved	Fixed
	CONF-22318	Confluence should not create new jar files for user installed plugins in osgi-plugins-cache on every startup		Resolved	Fixed

Confluence 3.5.3 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.3**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.

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- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.4 Release Notes

17 May 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.4**, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.4 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (6 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22087	Keyboard shortcuts dialogue - General tab should use uppercase		Resolved	Fixed
	CONF-22266	Seraph in Confluence 3.5 environment no longer able to instantiate custom authenticator		Resolved	Answered
	CONF-22410	User directory synchronisation can hang when synchronising a user with updated details and new memberships		Resolved	Fixed
	CONF-22295	Group memberships are lost after upgrading from		Resolved	Fixed

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		OSUser with LDAP for authentication			
	CONF-22480	Users and groups with multiple page permissions cannot be deleted on Oracle and SQL Server		Resolved	Fixed
	CONF-19920	Incorrect error message prompted for "Link to this Page..."		Resolved	Fixed

Confluence 3.5.4 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.4**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.5 Release Notes

1 June 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.5**, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

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Release Notices

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Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.5 upgrade notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (11 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22455	Adding more logging around the upgrade process		Resolved	Fixed
	CONF-22528	Confluence 3.5.4 database setup fails if the server cannot reach the internet		Resolved	Fixed
	CONF-15965	While viewing an old version of a page menu items have the old version's page id		Resolved	Fixed
	CONF-22487	Confluence 3.5.x upgrade failed for SQL Server with case sensitive collation during ContentPermissionConstraintsUpgradeTask		Resolved	Fixed
	CONF-22414	Dashboard is slow to display with nested groups and LDAP		Resolved	Fixed
	CONF-22342	Synchronising LDAP/Crowd can completely fail because transactions are not properly rolled back in Hibernate2BatchProcessor		Resolved	Fixed
	CONF-22563	Members of confluence-administrators receive notifications for comments and attachments on restricted pages		Resolved	Fixed

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	CONF-22522	Typo in error message		Resolved	Fixed
	CONF-22481	PDF space export shows over 100% progress, download link is never rendered		Resolved	Fixed
	CONF-22355	Fix failing DB2 build		Resolved	Fixed
	CONF-22346	Typos in the default language resource		Resolved	Fixed

Confluence 3.5.5 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.5**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.6 Release Notes

20 June 2011

The Atlassian Confluence team is pleased to announce the release of Confluence 3.5.6, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence

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3.5.6 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (10 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22903	Ignore PartialResultException if referrals are not configured		Resolved	Fixed
	CONF-22071	Use MySQL transaction isolation level per session		Resolved	Fixed
	CONF-22631	Null pointer when detecting duplicate memberships while synchronising		Resolved	Fixed
	CONF-22588	Add Outlook MSG to mime.types		Resolved	Fixed
	CONF-22572	Cannot view history due to NullPointerException in ContentMetadataJsonator		Resolved	Fixed
	CONF-22541	Unique membership constraints ignored on MySQL		Resolved	Fixed
	CONF-22415	popular Macro (from usage tracking plugin) throws error for anonymous users		Resolved	Fixed
	CONF-22305	Incorrect pdf mimetype with REST API		Resolved	Fixed
	CONF-22073	Transaction isolation override in confluence.cfg.xml does not apply to bootstrap checks		Resolved	Fixed

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	CONF-22152	Long-term Expires header is only 8 hours		Resolved	Fixed

Confluence 3.5.6 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.6**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.7 Release Notes

30 June 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.7**. This release contains fixes for Atlassian JIRA Studio and hosted Confluence customers. It is a recommended upgrade for all Confluence customers.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.7 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (1 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-15553	IE prompts for download instead of		Resolved	Fixed

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		opening thumbnail images containing non-ASCII characters			

Confluence 3.5.7 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.7**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.9 Release Notes

27 July 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.9**, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Note that Confluence 3.5.8 was not a public release, as problems were discovered with it during final testing. Issues marked as fixed in 3.5.8 are available for the first time in this release.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.9 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

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JIRA Issues (22 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-22899	Decrease re-indexing time		Resolved	Fixed
	CONF-22800	MySQL isolation level check does not work for JNDI datasources		Resolved	Fixed
	CONF-22469	Editing "User Directories" configuration is not possible for ORACLE DB user due to DataIntegrityViolationException		Resolved	Fixed
	CONF-21986	Database deadlock during initialisation of plugins		Resolved	Fixed
	CONF-22664	OutOfMemoryError when indexing Excel files		Resolved	Fixed
	CONF-19673	Twitter widget		Resolved	Fixed
	CONF-22891	Share Page plugin set "from" address to the users email address instead of using "reply-to"		Resolved	Fixed
	CONF-22890	Attachment comment is not retained after Edit in Office		Resolved	Fixed
	CONF-22881	GeneralUtil.htmlEscapeQuotes should be annotated HtmlSafe		Resolved	Fixed
	CONF-22876	New Code Macro still doesn't wrap in some situations		Resolved	Fixed
	CONF-22865	Going to a password reset screen contains an i18n key instead of an actual link		Resolved	Fixed
	CONF-22863	Schema upgrade			Fixed

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		task validation succeeds even if errors are found		Resolved	
	CONF-22834	Clashing of features between Mail Page Plugin & Share Plugin		Resolved	Fixed
	CONF-22793	Fix german translation for "custom"		Resolved	Fixed
	CONF-22421	websudo does not work with Confluence when it's integrated with Crowd SSO		Resolved	Fixed
	CONF-22151	Missing german translation on labels page		Resolved	Fixed
	CONF-22086	Edit labels icon doesn't show up in IE7		Resolved	Fixed
	CONF-21985	Bandana table has no index on context + key		Resolved	Fixed
	CONF-21385	Plugin notifications fail after cache manager has been shut down, logging switches to NOPLoggerRepository		Resolved	Fixed
	CONF-21031	Move Page dialog: Text is cut off when language is set to german		Resolved	Fixed
	CONF-19091	German translation of Link Location causes a UI problem in the Link Browser		Resolved	Fixed
	CONF-7787	Bandana can contain duplicate rows		Resolved	Fixed

Confluence 3.5.9 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.9**. For details of the fixes in this release,

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please read the release notes.
As of Confluence 3.5.9, the queue that backs the re-indexing workers has been improved to remove contention. This means two important changes.

1. Re-indexing is now more CPU-bound. This means that if you had previously adjusted the indexing thread count you may want to revisit that number as it can put significant load on your server if this number is too high.
2. Each thread will make use of a connection to the database. If the number of threads are configured to a high number this means that there will be a significantly bigger load on the database.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.11 Release Notes

25 August 2011

The Atlassian Confluence team is pleased to announce the release of **Confluence 3.5.11**, which is a bug-fix release.

The complete list of fixes is at the bottom of this page.

Note that Confluence 3.5.10 was not publicly released. Issues marked in JIRA as fixed in 3.5.10 are available for the first time in this release.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.11 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (8 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**

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	CONF-22910	Add remote API support to read and write user profile settings		Resolved	Fixed
	CONF-22463	Support migration of pre-3.5 groups and memberships of external users to 3.5+ "Internal with LDAP authentication" directory		Resolved	Fixed
	CONF-21461	Selection of pages is not working for XML space export		Resolved	Fixed
	CONF-23028	Improve error handling when rebuilding index		Resolved	Fixed
	CONF-23027	Simplify upgrades with Active Directory and a custom username attribute		Resolved	Fixed
	CONF-22280	Unhandled exception when adding LDAP directory with the same name as existing		Resolved	Fixed
	CONF-20435	Reindexing threads should use shorter transactions		Resolved	Fixed
	CONF-18733	Exception thrown while indexing a .csv document		Resolved	Fixed

Confluence 3.5.11 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.11**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration

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information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.

2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.13 Release Notes

6 September 2011

The Atlassian Confluence team is pleased to announce the release of Confluence 3.5.13, which is a bug-fix release.

Internal directories with LDAP authentication ("delegated LDAP authentication") can now update a user's membership information when they log in, in addition to the user's information. This is now our recommended configuration for connecting Confluence to LDAP servers with very large numbers of users, groups or memberships.

Note that Confluence 3.5.12 was not publicly released. Issues marked in JIRA as fixed in 3.5.12 are available for the first time in this release.

The complete list of fixes is at the bottom of this page.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

> ⚠ If you are upgrading from Confluence 3.5.2 and using Microsoft SQL server, please refer to this workaround to prevent errors in the upgrade progress

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.13 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (14 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-22779	Allow configuration of Lucene search		Resolved	Fixed

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		weighting.			
	CONF-22709	Add on the fly group sync for delegated LDAP authentication.		Resolved	Fixed
	CONF-19124	Encountered NullPointerException due to dangling permission left after an LDAP group or user is deleted from the LDAP server		Resolved	Fixed
	CONF-23115	Adding pages with a lot of sibling pages performs poorly		Resolved	Fixed
	CONF-23058	Constraint violation failure when importing on SQL Server due to content permission nulls		Resolved	Fixed
	CONF-23040	XML import failed with ConstraintViolationException in SQL Server or Oracle		Resolved	Fixed
	CONF-22884	Empty atlassian-gzipfilter HTTP response headers - does not conform to RFC2616		Resolved	Fixed
	CONF-22242	Impossible to empty Additional User DN or Additional Group DN once filled in		Resolved	Fixed
	CONF-23102	Null pointer when recording failures due to duplicate memberships while synchronising		Resolved	Fixed
	CONF-23093	SOAP notification service throws NPE.		Resolved	Fixed

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		IllegalStateException when querying for non-existent pages			
	CONF-23007	Export to PDF mangles {jira} macro images		Resolved	Fixed
	CONF-22595	Duplicate memberships can prevent synchronisation from working on DB2		Resolved	Fixed
	CONF-22377	Members of confluence-administrators cannot edit page restrictions on restricted pages		Resolved	Fixed
	CONF-13525	Setup styles don't include progress bar styles		Resolved	Fixed

Confluence 3.5.13 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.13**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.16 Release Notes

17 May 2012

Confluence 3.5.16 is a bug-fix release. The full list of fixes is provided at the bottom of this page.

Don't have Confluence 3.5 yet?

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Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notices

- **Security advisory:** This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.
- Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.16 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (2 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-25077	XML Vulnerability in Confluence		Resolved	Fixed
	CONF-20631	Viewfile throws ConversionException when field has currency format		Resolved	Fixed

Confluence 3.5.16 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.16**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 3.5.17 Release Notes

25 June 2012

The Atlassian Confluence team is pleased to announce

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the release of Confluence 3.5.17. This release fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment, and mitigation strategies.

Note: This release contains the same fixes as Confluence 3.5.16. The difference is that we have backdated this release so that customers can upgrade even if their maintenance license has expired.

Don't have Confluence 3.5 yet?

Take a look at the new features and other highlights in the Confluence 3.5 Release Notes.

Download Latest Version

Release Notes

Upgrading from a previous version of Confluence should be fairly straightforward. Please read the Confluence 3.5.17 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (2 issues)

Type	Key	Summary	Priority	Status	Resolution
	CONF-25077	XML Vulnerability in Confluence		Resolved	Fixed
	CONF-20631	Viewfile throws ConversionException when field has currency format		Resolved	Fixed

Confluence 3.5.17 Upgrade Notes

Below are some important notes on upgrading to **Confluence 3.5.17**. For details of the fixes in this release, please read the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the Confluence 3.5 Upgrade Notes.

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    - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence 3.5.x.
4. Follow the instructions in the Confluence 3.5 Upgrade Guide.

Confluence 2.x.x Releases

- Confluence 2.6.1 Release Notes
    - Confluence 2.6.1 Upgrade Guide
- Confluence 2.6.2 Release Notes
    - Confluence 2.6.2 Upgrade Guide
- Confluence 2.6.3 Release Notes
- Confluence 2.6 Release Notes
    - Confluence 2.6 Upgrade Guide
    - Issues resolved in Confluence 2.6
- Confluence 2.7.1 Release Notes
    - Confluence 2.7.1 Upgrade Guide
- Confluence 2.7.2 Release Notes
    - Confluence 2.7.2 Upgrade Guide
- Confluence 2.7.3 Release Notes
    - Confluence 2.7.3 Upgrade Guide
- Confluence 2.7.4 Release Notes
- Confluence 2.7 Release Notes
    - Issues Resolved in Confluence 2.7
    - Confluence 2.7 Upgrade Guide
- Confluence 2.8.1 Release Notes
    - Confluence 2.8.1 Upgrade Notes
- Confluence 2.8.2 Release Notes
    - Confluence 2.8.2 Upgrade Notes
- Confluence 2.8.3 Release Notes
- Confluence 2.8 Beta Release Notes
- Confluence 2.8 Release Notes
    - Issues resolved in Confluence 2.8
    - Confluence 2.8 Screen and Menu Changes
    - Confluence 2.8 Upgrade Notes
- Confluence 2.9.1 Release Notes
    - Confluence 2.9.1 Upgrade Notes
        - Enabling Contributor Filtering for Search
        - Restoring Inherited Page Permissions After 2.9 Upgrade
- Confluence 2.9.2 Release Notes
    - Confluence 2.9.2 Upgrade Notes
- Confluence 2.9.3 Release Notes
- Confluence 2.9 Release Notes
    - Confluence 2.9 Upgrade Notes
    - Issues resolved in Confluence 2.9
- Confluence 2.10.1 Release Notes
    - Confluence 2.10.1 Upgrade Notes
- Confluence 2.10.2 Release Notes
    - Confluence 2.10.2 Upgrade Notes
- Confluence 2.10.3 Release Notes
    - Confluence 2.10.3 Upgrade Notes
- Confluence 2.10.4 Release Notes
- Confluence 2.10 Release Notes
    - Confluence 2.10 Upgrade Notes
    - Issues resolved in Confluence 2.10
    - Workaround For Enabling MySQL 4.1.x with Confluence 2.10
- Release Notes 2.0
    - Issues Resolved for 2.0

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- Release Notes 2.0.1
  - Issues resolved for 2.0.1
- Release Notes 2.0.2
  - Issues resolved for 2.0.2
- Release Notes 2.0.3
  - Issues resolved for 2.0.3
- Release Notes 2.1
  - Issues Resolved for 2.1
- Release Notes 2.1.1
  - Issues resolved for 2.1.1
- Release Notes 2.1.2
  - Issues resolved for 2.1.2
- Release Notes 2.1.3
  - Issues resolved for 2.1.3
- Release Notes 2.1.4
  - Issues resolved for 2.1.4
- Release Notes 2.1.5
  - Issues resolved for 2.1.5
- Release Notes 2.2
  - Issues Resolved for 2.2
- Release Notes 2.2.1
  - Issues resolved for 2.2.1
- Release Notes 2.2.2
  - Issues resolved for 2.2.2
- Release Notes 2.2.3
  - Issues resolved for 2.2.3
- Release Notes 2.2.4
  - Issues Resolved for 2.2.4
- Release Notes 2.2.5
  - 2.2.5 Security Patch
- Release Notes 2.2.6a
  - Issues Resolved for 2.2.6a
- Release Notes 2.2.7
  - Issues Resolved for 2.2.7
- Release Notes 2.2.8
  - Issues Resolved for 2.2.8
- Release Notes 2.2.9
  - Issues Resolved for 2.2.9
- Release Notes 2.2.10
- Release Notes 2.3
  - FileAppender log4j.properties
  - Issues Resolved for 2.3
- Release Notes 2.3.1
- Release Notes 2.3.2
- Release Notes 2.3.3
- Release Notes 2.4
  - Changes to the Page Permission API in Confluence 2.4
- Release Notes 2.4.1
- Release Notes 2.4.2
  - Issues Resolved for 2.4.2
- Release Notes 2.4.3
- Release Notes 2.4.4
- Release Notes 2.4.5
- Release Notes 2.5
  - Issues Resolved for 2.5
- Release Notes 2.5.1
- Release Notes 2.5.2

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- Release Notes 2.5.3
- Release Notes 2.5.4
- Release Notes 2.5.5
  - Upgrade Guide 2.5.5
- Release Notes 2.5.6
  - Upgrade Guide 2.5.6
- Release Notes 2.5.7
  - Upgrade Guide 2.5.7
- Release Notes 2.5.8
  - Upgrade Guide 2.5.8

Confluence 2.6.1 Release Notes

9 November 2007

Atlassian is proud to announce the release of Confluence 2.6.1. This is a **highly recommended** upgrade from 2.6, because it fixes some security flaws which may affect Confluence instances in a public environment. We will release more details of the security fixes within a few days, giving our customers a chance to upgrade before the details are made public. This point release also includes more than 40 other fixes and improvements.

We're especially glad that anonymous comments will no longer show the profile picture of the previous commenter, and newly-created spaces no longer seem to have been created by an anonymous user. The {excerpt} and {excerpt-include} macros now behave better. And we've fixed some issues with internationalisation.

There's a complete list of fixes below.

You can download Confluence 2.6.1 from the download centre.

> **Security Advisory 19 November 2007**
>
> We have now published the details of the security vulnerabilities, which are fixed in Confluence 2.6.1. Please refer to the security advisory for more information.

Upgrading from a previous version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the upgrade instructions. *We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*

Updates and fixes in this release

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Confluence 2.6.1 Upgrade Guide

9 November 2007

Atlassian is proud to announce the release of Confluence 2.6.1. This is a **highly recommended** upgrade from 2.6, because it fixes some security flaws which may affect Confluence instances in a public environment. We will release more details of the security fixes within a few days, giving our customers a chance to upgrade before the details are made public. This point release also includes more than 40 other fixes and improvements.

We're especially glad that anonymous comments will no longer show the profile picture of the previous commenter, and newly-created spaces no longer seem to have been created by an anonymous user. The {excerpt} and {excerpt-include} macros now behave better. And we've fixed some issues with internationalisation.

Upgrade Procedure

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If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 2.6.0, read the release notes and upgrade guides for all releases between your version and the latest version. In particular:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from a version earlier than 2.6.0, please read the 2.6 upgrade notes.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Confluence 2.6.2 Release Notes

27 November 2007

Atlassian is proud to announce the release of Confluence 2.6.2. This is a **highly recommended** upgrade, because it fixes some security flaws which may affect Confluence instances in a public environment. These flaws are XSS (cross-site scripting) vulnerabilities in some of Confluence's macros and Wiki Markup, which potentially allowed a user to insert malicious HTML tags or script into a Confluence page. Please refer to the Security Advisory for details.

This point release also includes more than 20 other fixes and improvements.

As part of our drive to tighten up the security in Confluence, we have removed support for the 'style' attribute in the Wiki Markup for images. This was an undocumented feature, which is now no longer available. To help those who may have used the 'style' tag to add coloured borders, we have added a new 'bordercolor' attribute to the image markup.

The PDF and HTML space exports are now more reliable than in Confluence 2.6.0 and 2.6.1. We've fixed the failure to send daily digest email notifications. (This problem occurred when the Confluence instance contained draft pages.) This release also contains some improvements in the wiki's support of internationalisation. And you'll be delighted to see that the plus and minus buttons are back, next to the 'Recently Updated' section of the Dashboard – so you can now increase or decrease the number of items you see in that section.

There's a complete list of fixes below. You can download Confluence 2.6.2 from the download centre.

Upgrading from a previous version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the upgrade instructions. *We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*

Updates and fixes in this release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.6.2 Upgrade Guide

27 November 2007

Atlassian is proud to announce the release of Confluence 2.6.2. This is a **highly recommended** upgrade, because it fixes some security flaws which may affect Confluence instances in a public environment. These flaws are XSS (cross-site scripting) vulnerabilities in some of Confluence's macros and Wiki Markup, which potentially allowed a user to insert malicious HTML tags or script into a Confluence page. Please refer to the Security Advisory for details.

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This point release also includes more than 20 other fixes and improvements.

As part of our drive to tighten up the security in Confluence, we have removed support for the 'style' attribute in the Wiki Markup for images. This was an undocumented feature, which is now no longer available. To help those who may have used the 'style' tag to add coloured borders, we have added a new 'bordercolor' attribute to the image markup.

The PDF and HTML space exports are now more reliable than in Confluence 2.6.0 and 2.6.1. We've fixed the failure to send daily digest email notifications. (This problem occurred when the Confluence instance contained draft pages.) This release also contains some improvements in the wiki's support of internationalisation. And you'll be delighted to see that the plus and minus buttons are back, next to the 'Recently Updated' section of the Dashboard – so you can now increase or decrease the number of items you see in that section.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 2.6.1, read the release notes and upgrade guides for all releases between your version and the latest version. In particular:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from a version earlier than 2.6.0, please read the 2.6 upgrade notes.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Confluence 2.6.3 Release Notes

Confluence 2.6.3 is the **standard edition** version of Confluence 2.6.x. This version of Confluence is equivalent to Confluence version 2.6.2, but it does not include Oracle's Coherence technology. Due to licensing changes with Oracle over the Coherence clustering and distributed caching technology, Atlassian is no longer able to distribute this technology to customers without a Confluence clustered license.

Therefore, Atlassian has released 'standard editions' for each previous major version of Confluence back to 2.6, which includes Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3. Confluence 2.6.3 will be the only Confluence 2.6.x version available to customers with a non-clustered Confluence license.

For its caching functionality, Confluence 2.6.3 utilises Ehcache. This functionality was provided by the Coherence technology in previous Confluence 2.6.x versions.

For more information about the features, updates and fixes in Confluence 2.6.2, please refer to the Confluence 2.6.2 Release Notes.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.6.2 Upgrade Notes. However, if you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read the Confluence 3.0.1 Upgrade Notes for important information about transferring your caching layer customisations from Coherence to Ehcache.

We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Confluence 2.6 Release Notes

The Atlassian Confluence team is delighted to present Confluence 2.6.

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Confluence 2.6 brings many popular features which save you time and improve the your wiki's usability. Upgrading to Confluence 2.6 is free for all customers with active Confluence software maintenance as at 27th September 2007.

A new theme brings a fresh, clean look and feel. This is for our customers who have asked for a friendlier interface and improved readability. We've included more social networking features, to enhance the sense of community in your wiki. For example, author photos are now shown in comments and in the 'Recent Updates' on the Dashboard. And the Social Bookmarking plugin is now shipped with Confluence, allowing you to share bookmarks with your team.

Other popular new features include default content for spaces, labels on templates, the ability to backdate or rename news items (blog posts), official MySQL 5.0 support and PDF export of images.

- Many thanks for your issues and votes. They help us keep improving our products.
- We've highlighted the main features of this release below.
- Attached is a full list of issues resolved in 2.6.

Upgrading to Confluence 2.6
• Upgrading Confluence should be fairly straightforward. Please refer to the upgrade instructions and notes . ***We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*** • All draft pages will be destroyed during the upgrade process. Confluence administrators should warn users of the Confluence site that drafts will not survive the upgrade. • If you are using any **third-party plugins**, please test them thoroughly before rolling 2.6 into production.

Responding to your feedback:
5 new feature requests implemented
275 votes satisfied

Highlights of this release:

- Fresh look for the Default theme
- Personalised comments and Dashboard
- Space description on Dashboard
- Labels on templates
- Default content for space home pages
- Social Bookmarking plugin now bundled with Confluence
- Back-dating and renaming news items
- Plus over 90 other fixes and improvements
- Special thanks

Highlights of Confluence 2.6

1

Fresh look for the Default theme

- Default font now Arial instead of Verdana.
- Fresh, clean look and feel - these release notes are an example of the new style.
- If you prefer the original Confluence look and feel, select the **Confluence Classic Theme** when creating a space.
- Improved layouts for email and RSS feeds, helping you to skim-read and classify information quickly.

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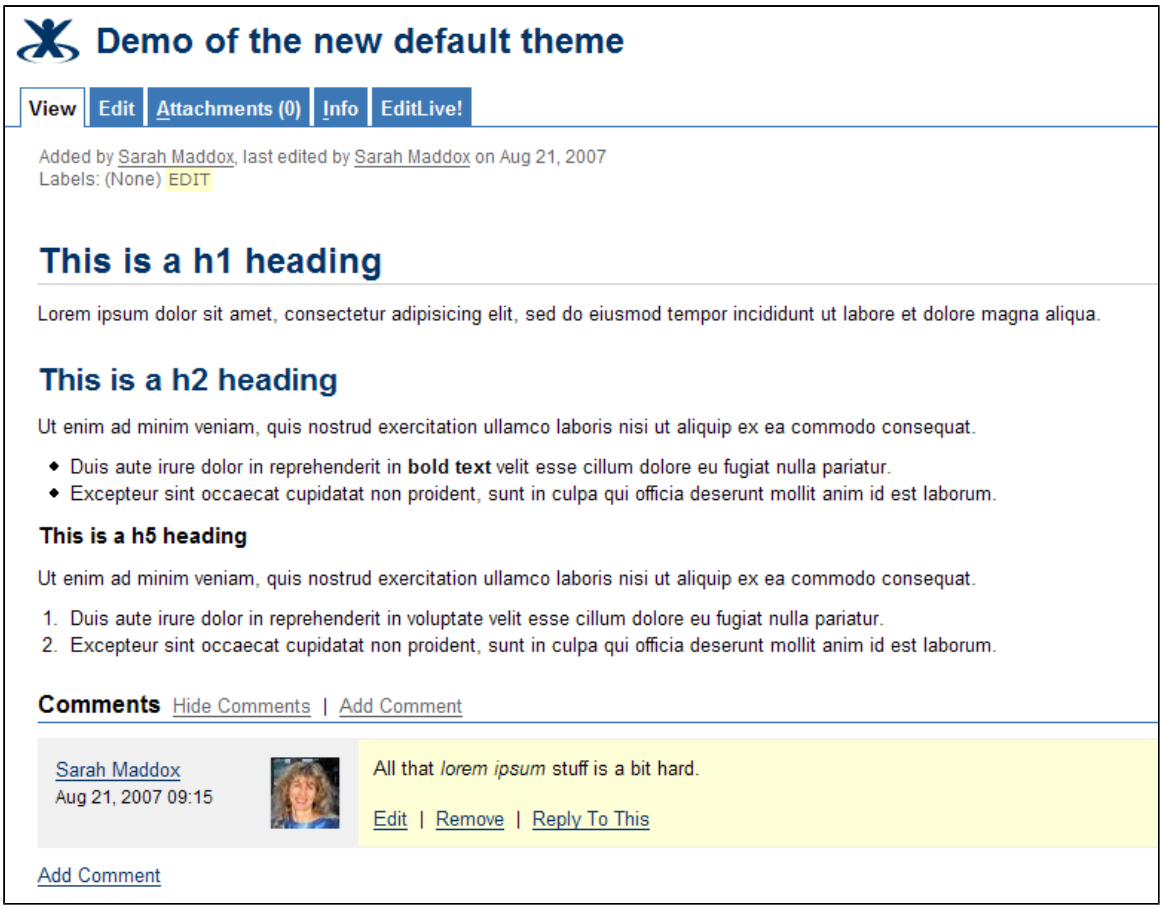
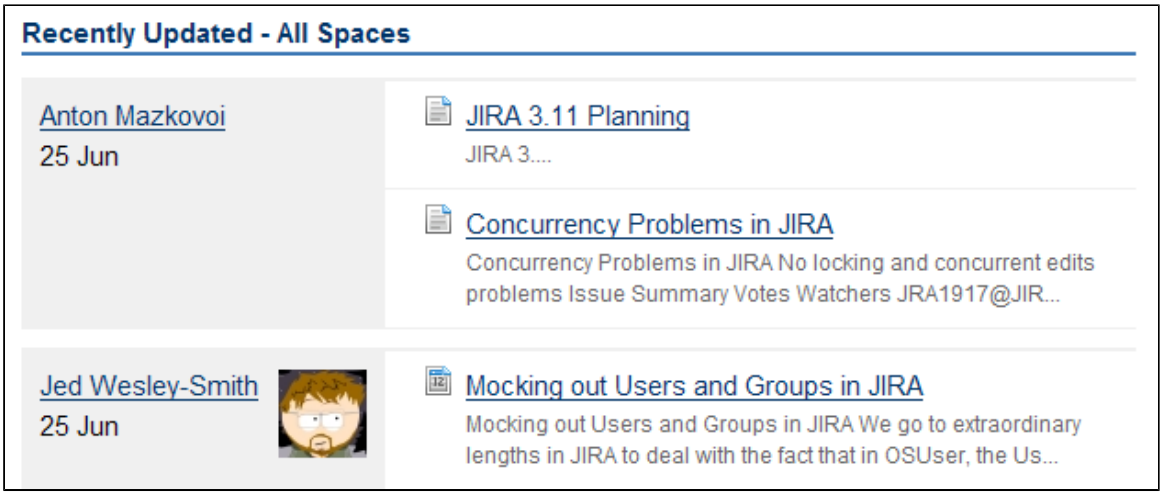


2

Personalised comments and Dashboard

- In the new themes (Confluence Default and Clickr), comments now include the user's profile picture. (Se screenshot above.)
- 'Recently Updated' section on Dashboard includes profile picture and a summary of the change.



3

Space description on Dashboard

- List of spaces on the Dashboard now includes a short description of the space.

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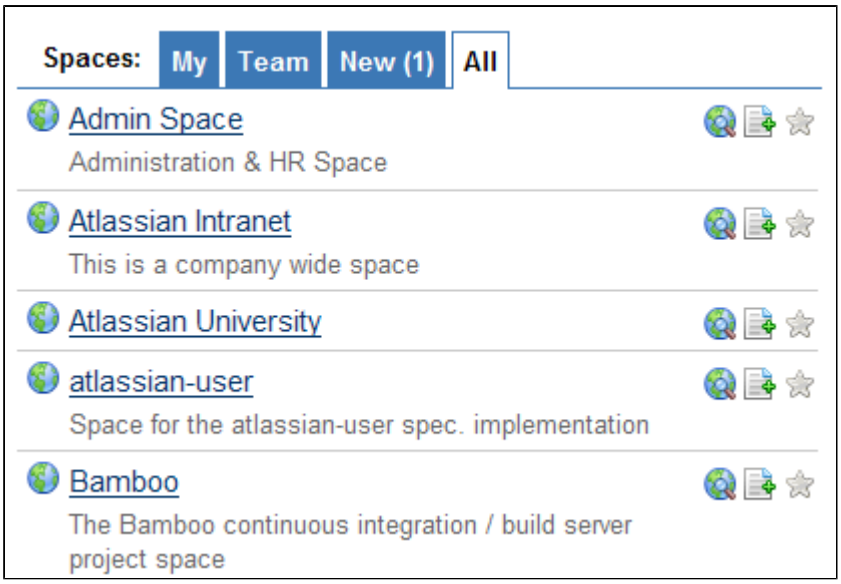
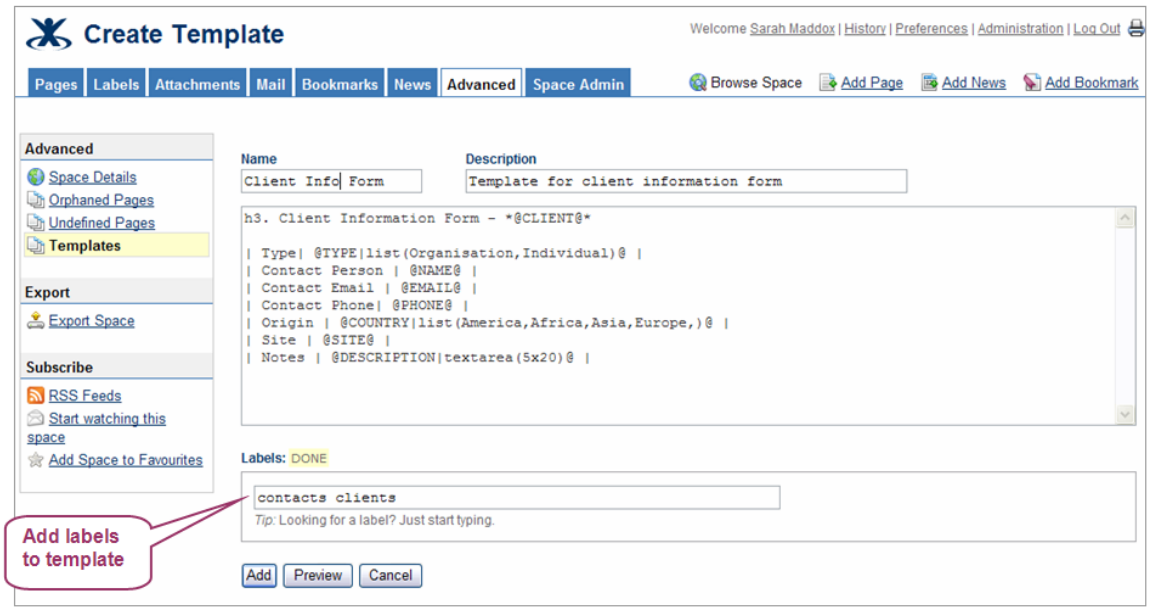


4

Labels on templates

- You can include labels when adding a page template.
- New pages based on the template will automatically include the labels.
- Read the documentation.



5

Default content for space home pages

- Confluence site administrators can define default content for a space.
- Home page for newly-added spaces will include the default content.
- Read the documentation.

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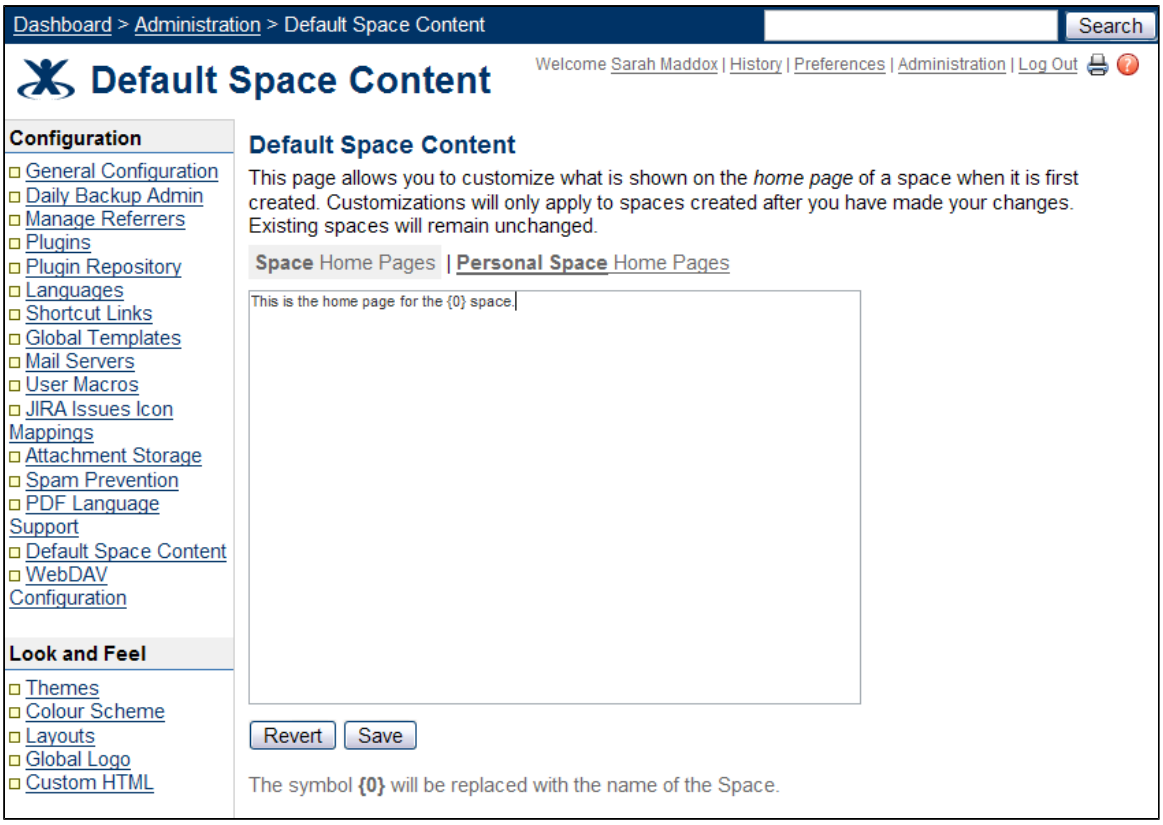
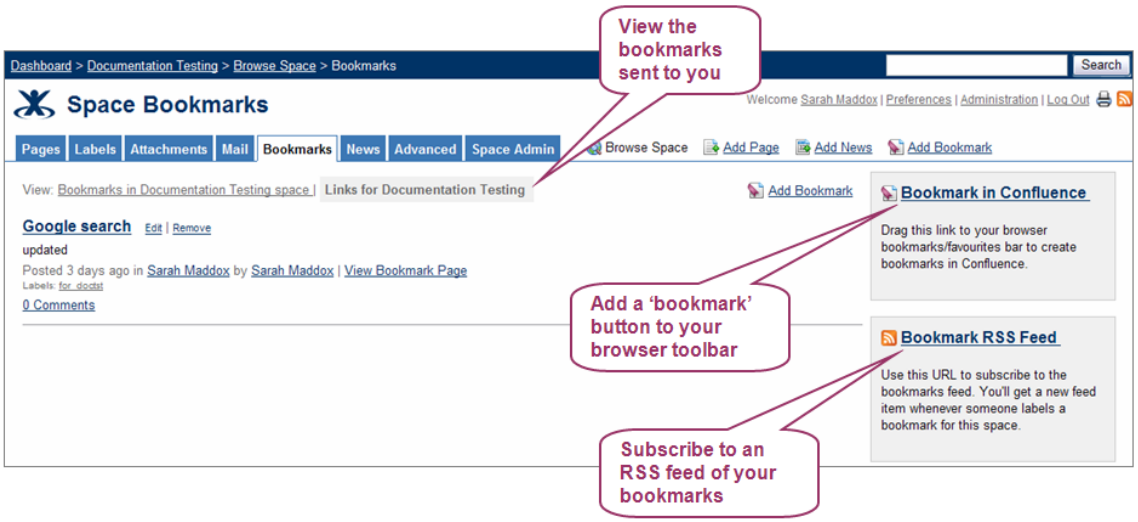


6

Social Bookmarking plugin now bundled with Confluence

- Use Confluence to share bookmarks with your team.
- Plugin will be **enabled** by default.
- You can create a bookmark for any space in which you have 'create page' permission.
- To view your bookmarks, go to the '**Bookmarks**' tab under '**Browse Space**'.
- Drag the bookmarklet from the 'Bookmarks' tab onto your browser toolbar to create bookmarks any time
- Use the bookmarks macro to display a list of bookmarks anywhere in Confluence.
- Subscribe to an RSS feed for your bookmarks.
- Read the documentation.



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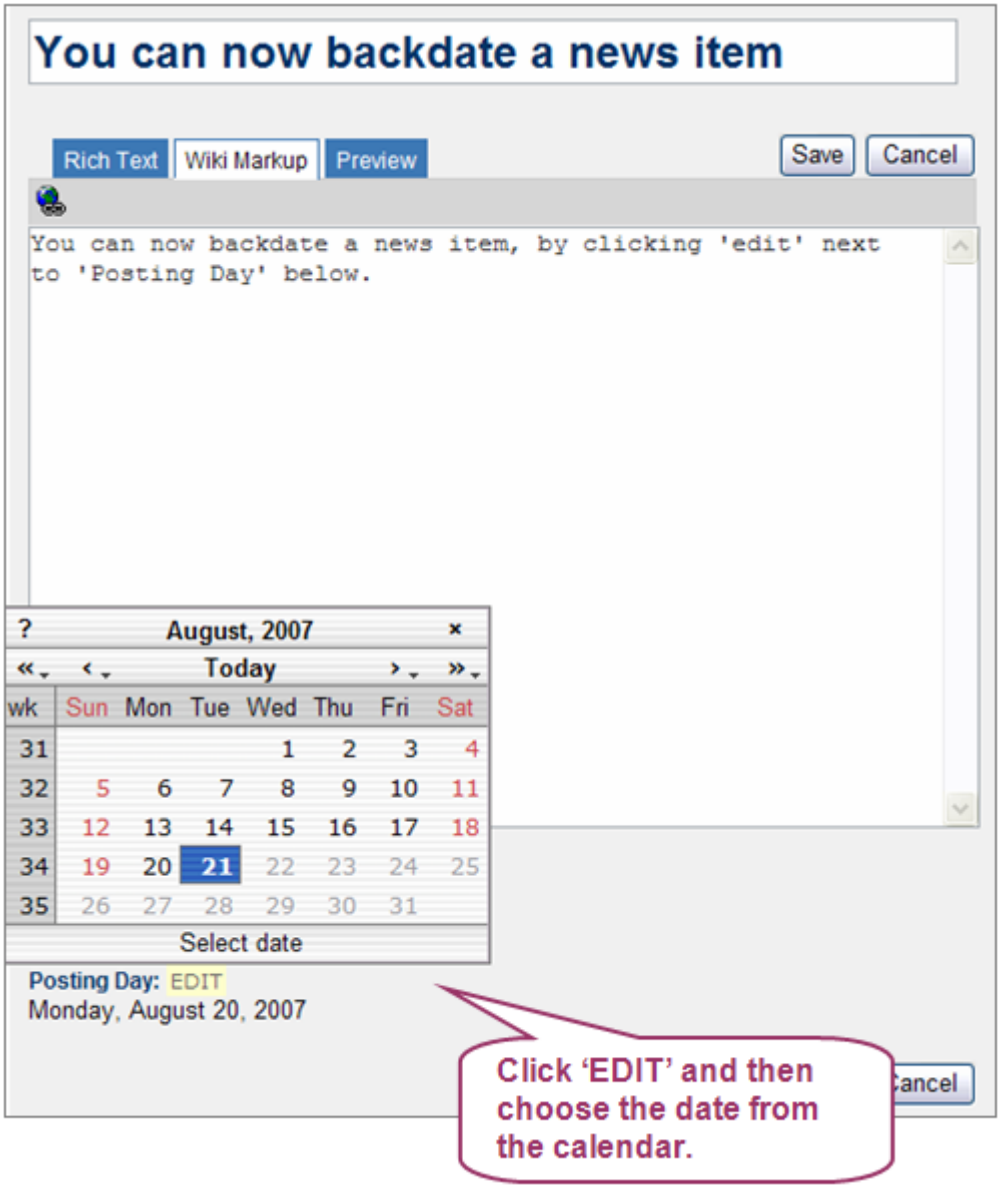
7

Back-dating and renaming news items

- Rename a news item at any time.
- When creating a news item, you can now set the posting date to earlier than today.
- Backdating is also supported by the RPC interface - useful for migrating blog posts from other systems.



8

Plus over 90 other fixes and improvements

- **MySQL 5.0** is officially supported, when used with Confluence 2.5 and above.
- Images generated by macro plugins will now **export to PDF**, .doc and .html formats.
- For plugin developers, the Joda-time library has been upgraded from 0.98 to 1.4 in Confluence 2.6. Plugins that use the date formatting or parsing functionality of Joda-time will need to be recompiled to work with Confluence 2.6.
- Administrators can configure a non-standard port for the Confluence outgoing mail server. The host address can now be specified as **hostname:port**.
- Improved **user migration** when integrating with LDAP: If you have existing Confluence users with the

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same usernames as LDAP users, you can now avoid duplicate users by configuring the LDAP repository before running the migration. The migration will then ignore users who have the same username as an LDAP user. Read the documentation.
- And more.

Special thanks

We'd like to thank some of our valued community members whose contributions to the open source plugin library have made this version of Confluence even stronger:

- Shannon Krebs, for the BloggingRPC plugin, the Contributors plugin and the Social Bookmarking plugin.
- David Peterson and Bob Swift for the Chart Plugin.
- David Peterson for the IM Presence Plugin, and the Table of Contents plugin.
- Dan Hardiker & Adaptavist for the Plugin Repository Client.

The Confluence 2.6 team

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Confluence 2.6 Upgrade Guide

Confluence 2.6 brings many popular features which save you time and improve the your wiki's usability. Upgrading to Confluence 2.6 is free for all customers with active Confluence software maintenance as at 27th September 2007.

A new theme brings a fresh, clean look and feel. This is for our customers who have asked for a friendlier interface and improved readability. We've included more social networking features, to enhance the sense of community in your wiki. For example, author photos are now shown in comments and in the 'Recent Updates' on the Dashboard. And the Social Bookmarking plugin is now shipped with Confluence, allowing you to share bookmarks with your team.

Other popular new features include default content for spaces, labels on templates, the ability to backdate or rename news items (blog posts), official MySQL 5.0 support and PDF export of images.

Upgrade Notes

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Draft Pages

All draft pages will be discarded during the upgrade process. Confluence administrators should warn users of the Confluence site that drafts will not survive the upgrade.

Plugins

If you are using any third-party plugins, please test them thoroughly before rolling 2.6 into production.

For plugin developers: the Joda-time library has been upgraded from 0.98 to 1.4 in Confluence 2.6. Plugins that use the date formatting or parsing functionality of Joda-time will need to be recompiled to work with Confluence 2.6.

Custom Themes

Custom Confluence 2.5.x themes are expected to be compatible with 2.6 without authors needing to make any change to their existing themes. This is because Confluence will, by default, include all Confluence 2.5.x specific styles automatically. But if you would like to upgrade your theme to use the latest Confluence 2.6 style and typography, you will need to update the way you include stylesheets in your theme. You can read full instructions here.

Custom Page Layout

1. If a space uses a custom decorator page layout, the new Confluence 2.6 decorator is not applied. This may causes GUI oddities, such as:
    - On a page, the View, Edit, Info and Attachments tabs are shown as a vertical bulleted list instead of tabs.
    - Comments do not show properly.
      Fix: Apply the Default Page Layout, then re-insert the custom code.
2. In addition, if you are using pagetree navigation to form a table of contents on the left, you may find that your wiki text becomes *italic* after upgrading to Confluence 2.6.
    - Cause: To create the left-hand panel, you have probably inserted a chunk of HTML/CSS in the space's page layout. The chunk of code may use a `<blockquote>` element to align the body of the page and draw a blue line on its left. Confluence 2.6 stylesheets apply the italic style to blockquotes.
    - Fix: Use a new format for your left-hand panel. One possible example is given here.

Steps in detail:

1. Go to the Space Admin screen and click 'Edit' to view your customised Page Layout.
2. Copy the customised code.
3. Cancel the edit.
4. Click 'Reset Default' to apply the new Confluence 2.6 default page layout.
5. If you are using the `pagetree` navigation panel, edit your customised code as described above.
6. On the Space Admin screen, click 'Create Custom' to create a custom page layout.
7. Reinsert your customised code and click 'Save'.

Upgrade Procedure

Upgrading Confluence should be pretty easy. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

You can get the latest version of Confluence here.

If you are upgrading from Confluence 2.2.x or a later version, you can find instructions here.

If you are upgrading directly from 2.1 or earlier, you should also read the 2.2 Release Notes for warnings about the 2.1 -> 2.2 upgrade.

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Issues resolved in Confluence 2.6

Below is the full list of issues resolved by Confluence 2.6. You can read the release notes here.

JIRA Issues				
Type	Key	Summary	Status	Resolution
		Authenticate to retrieve your issues		

Confluence 2.7.1 Release Notes

24 January 2008

Presented with pleasure by the Atlassian Confluence team: **Confluence 2.7.1** is a recommended upgrade which fixes a security flaw and other bugs, and brings a couple of improvements.

We have identified and fixed an XSS (cross-site scripting) security flaw which may affect Confluence instances in a public environment. For details, please refer to the security advisory.

Recording of authorship and history for page attachments is improved, so that attachment history is now retained after operations such as editing the attachment or moving it to a new page.

A new option on the Export Space screen allows administrators to export all pages to XML even when page-restrictions deny the administrator access to some of the pages.

This release also fixes problems in the following areas:

- The SOAP API, which was broken in Confluence 2.7.0.
- Logging.
- Internationalisation (support for different languages).
- Case-sensitivity for usernames and group names when using LDAP integration, and problems with upper-case letters in usernames when applying space permissions.

There's a complete list of fixes below. Click a specific issue to see details of the fix, and to download any patches where relevant.

Confluence 2.7.1 is available from the download centre.

Upgrading from a previous version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the upgrade instructions. *We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*

Updates and fixes in this release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.7.1 Upgrade Guide

Confluence 2.7.1 is a recommended upgrade which fixes a security flaw and other bugs, and brings a couple of improvements. You'll find details of the fixes in the release notes.

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Upgrade Notes

As part of the fix for case-sensitivity in usernames and group names when using LDAP integration (CONF-9469) , an upgrade task will consolidate permissions for the same user or groups where they differ only by case.

Depending on the size of your Confluence installation (number of spaces and the permissions applied to them) the upgrade task could result in a longer-than-usual delay when starting Confluence for the first time after the upgrade. Please be patient while this happens — it could take a few minutes.

During this process there will be regular progress reports in the log, something like this:

```
[atlassian.confluence.upgrade.ConsolidatePermissionsUpgradeTask]
doUpgrade Consolidating SpacePermissions for Space Monkeys in a Barrel
(key=MONBAR)
```

Backup essential, because permissions will be modified

The upgrade task will modify permissions in your Confluence database. So that our usual 'strong recommendation' to back up the database becomes even stronger.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.7.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.7 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.7.2 Release Notes

6 March 2008

Confluence 2.7.2 is a recommended upgrade which fixes a security flaw and other bugs.

We have fixed a security flaw which allowed users who have 'View' permission (or higher) on a space to purge any page in that space. For details, please refer to the security advisory and related JIRA issue.

Other good fixes in this point release:

- The Rich Text editor no longer breaks links to pages in other spaces.
- Some customers have reported problems with permissions after upgrading to Confluence **2.7.1**, where some space permissions or global permissions were lost if using a case-sensitive database. From Confluence **2.7.2**, the space permissions and global permissions screens will display a message highlighting any case-sensitivity problems. We have also provided a routine to fix existing permissions affected by this issue — read the detailed instructions on running the routine.
- The JIRA Portlet macro now displays correctly when using trusted communication between JIRA and Confluence.

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- Confluence 2.7.2 also clarifies the procedures around renewing your license before upgrading.

There's a complete list of fixes below. Click a specific issue to see details of the fix, and to download patches where relevant.

Don't have Confluence 2.7 yet?
Take a look at the new features and other highlights in the Confluence 2.7 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.7.2 Upgrade Guide. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.7.2 Upgrade Guide

Confluence 2.7.2 is a recommended upgrade which fixes a security flaw and other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.7.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.7 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.7.3 Release Notes

19 March 2008
Confluence 2.7.3 is a recommended upgrade which focuses on fixing a number of security flaws. Please refer to the security advisory for details of the vulnerabilities, risk assessment and mitigation strategies.
There's a complete list of fixes below. Click a specific issue to see details of the fix, and to download patches where relevant.

Don't have Confluence 2.7 yet?
Take a look at the new features and other highlights in the Confluence 2.7 Release Notes.

Download Latest Version

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Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.7.3 Upgrade Guide. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.7.3 Upgrade Guide

Confluence 2.7.3 is a recommended upgrade which focuses on fixing a number of security flaws. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 2.7.2, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.7 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Confluence 2.7.4 Release Notes

Confluence 2.7.4 is the **standard edition** version of Confluence 2.7.x. This version of Confluence is equivalent to Confluence version 2.7.3, but it does not include Oracle's Coherence technology. Due to licensing changes with Oracle over the Coherence clustering and distributed caching technology, Atlassian is no longer able to distribute this technology to customers without a Confluence clustered license.

Therefore, Atlassian has released 'standard editions' for each previous major version of Confluence back to 2.6, which includes Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3. Confluence 2.7.4 will be the only Confluence 2.7.x version available to customers with a non-clustered Confluence license.

For its caching functionality, Confluence 2.7.4 utilises Ehcache. This functionality was provided by the Coherence technology in previous Confluence 2.7.x versions.

For more information about the features, updates and fixes in Confluence 2.7.3, please refer to the Confluence 2.7.3 Release Notes.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.7.3 Upgrade Notes. However, if you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read the Confluence 3.0.1 Upgrade Notes for important information about transferring your caching layer customisations from Coherence to Ehcache.

We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Confluence 2.7 Release Notes

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12 December 2007: With great pleasure, the Atlassian Confluence team presents Confluence 2.7.

Confluence 2.7 has improvements for administrators and end-users alike. Administrators can set up trusted communication between Confluence and JIRA. The result? The JIRA Issues and JIRA Portlet macros will show only the issues which the Confluence user is authorised to see. You no longer need to include a username and password in the markup code.

The two-tier administrator permissions allow system administrators to delegate some functions to team leaders or managers. Logging is simplified, and administrators can change logging levels at runtime. The improved user management framework speeds up your user searches.

Sorting of images is now possible in the Gallery macro. And when creating a page or news item, you can attach images or files immediately, without waiting until you have saved the page.

- Upgrading to Confluence 2.7 is free for all customers with active Confluence software maintenance as at 12 December 2007.
- Thank you for all your issues and votes. Keep on logging!
- We've highlighted our favourite bits of this new release below.
- And there's more.

Upgrading to Confluence 2.7
Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*** Please refer to the upgrade instructions. There you will find instructions on upgrading, and details of the following: • If you are using any third-party plugins, please test them thoroughly before rolling 2.7 into production. • If you are using the Resin application server, you will need to configure Resin to use an XML parser that is XSD-aware. • When upgrading, you should consider turning off the new JIRA/Confluence trusted communication feature and/or warnings. • Your users will be automatically migrated to AtlassianUser during the Confluence upgrade process. • All users and groups with the old 'Administer Confluence' permission will be converted to the new 'System Administrator' permission. • By default, all installations of Confluence will now write log messages to the Confluence home directory instead of the application server's log file. • Java 1.4 will be deprecated after Confluence 2.8. • Read more information.

Responding to your feedback:

4 new feature requests implemented

380 votes satisfied

DOWNLOAD latest version

Highlights of this release:

- JIRA Issues and Portlet macros use new trusted authentication
- Two-tier administrator permissions
- Inserting images and attaching files during page creation
- Sorting of images in Gallery macro
- Simplified and improved logging
- Performance, maintainability and administration
- Plus over 90 fixes and improvements

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Highlights of Confluence 2.7

1

JIRA Issues and Portlet macros use new trusted authentication

- The JIRA Issues macro and the JIRA Portlet macro allow you to display a list of JIRA issues on your Confluence page.
- Prior to Confluence 2.7, you had to include a username and password in the markup code if you needed to display issues with restricted viewing. This release and JIRA 3.12 solve the problem.
- Read more about trusted communication.

Example markup– User will see the issues they are authorised to see (provided trusted communication is enabled):

```
{jiraissues:url=CONTENT|columns=type;key;summary}
```

Example markup– User will see only the issues authorised for anonymous viewing:

```
{jiraissues:url=CONTENT|columns=type;key;summary|anonymous=true}
```

2

Two-tier administrator permissions

- The original 'Administer Confluence' permission is now called 'System Administrator'.
- A new permission level, called 'Confluence Administrator', is similar to 'System Administrator' but excludes the functions which may compromise the security of the Confluence system.
- You can delegate administrator privileges to project managers or team leaders while preserving the security of your Confluence site, by granting the managers the new 'Confluence Administrator'

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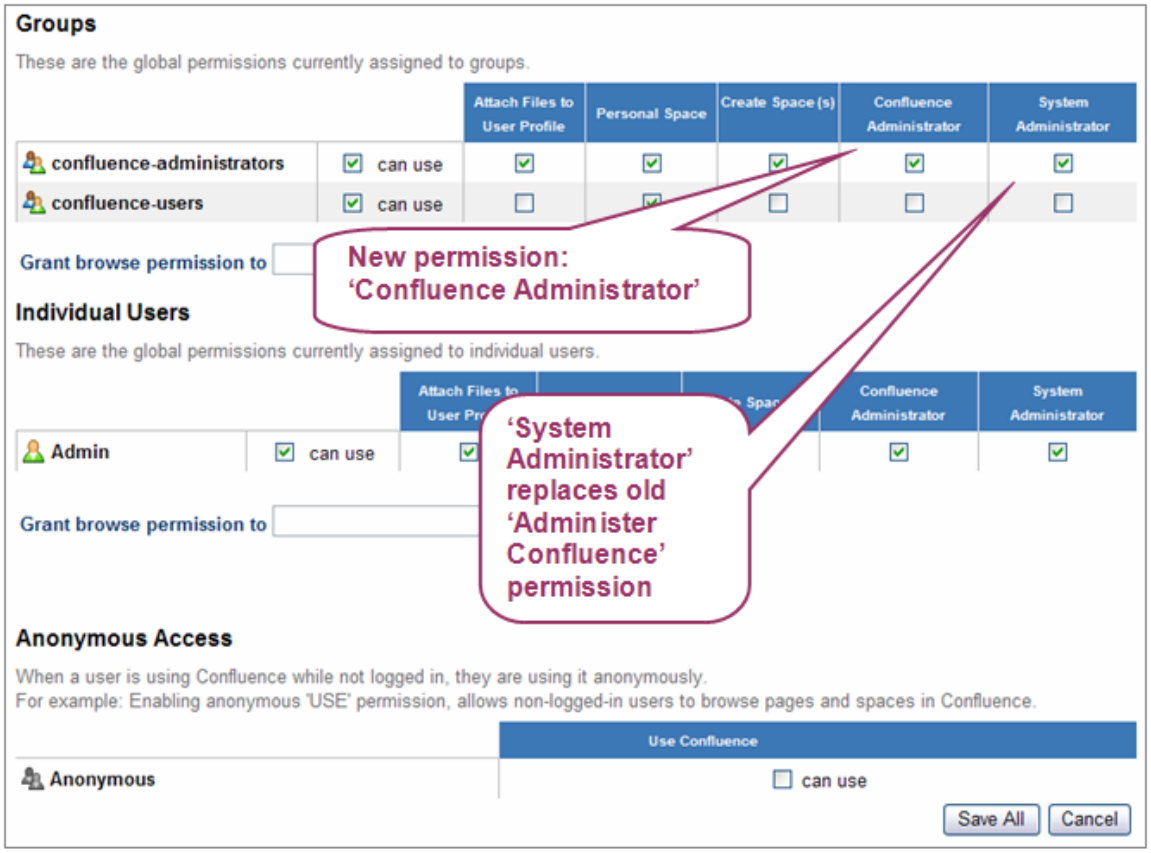
permission.
- Read the documentation.



3

Inserting images and attaching files during page creation

- You can now attach an image or other file during creation of new page – before you have saved the pag
- This applies to pages and news items.
- We have standardised the options for Wiki Markup mode and the Rich Text editor:
  - The 'Insert Image' popup allows you to select thumbnails and alignment.
  - The 'Insert Link' popup allows aliases and tooltips.
- Read more about inserting an image and attaching a file to a page.

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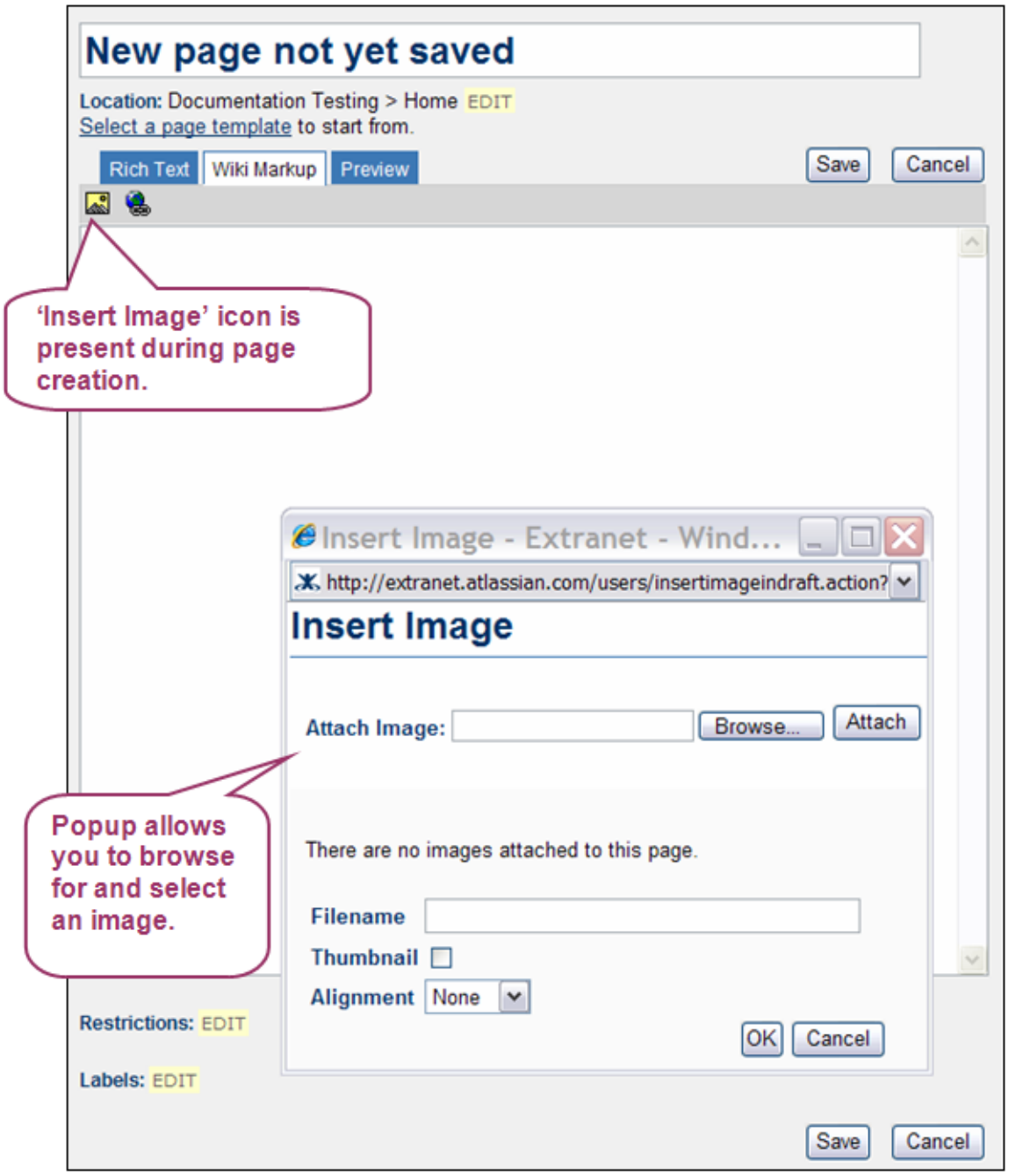

4

Sorting of images in Gallery macro

- The new 'sort' argument allows you to order the images by file name, comment or date last modified.
- Read the documentation.

Example: Sorting the images by file name

```
{gallery:title=Some office photos, and a waterfall|sort=name}
```

Example: Sorting the images by date and showing the most-recently-modified first

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```
{gallery:title=Some office photos, and a waterfall|sort=date|reverseSort}
```

5

Simplified and improved logging

- Confluence now writes its logs to the Confluence home directory. Both the Confluence and Confluence EAR/WAR distributions behave in the same way. For more information, see the logging documentation.
- We have rationalised the reporting to the different levels (ERROR, INFO, WARN, etc) and removed mar unnecessary exceptions and stacktraces from the logs.
- You can change the logging levels while Confluence is running. Read more information.

6

Performance, maintainability and administration

- If you are currently using the standard configuration for user management, your users will be automatically migrated to the AtlassianUser framework on upgrade to Confluence 2.7. See the upgrade notes. This will result in a dramatic increase in the speed of user searches.
- Confluence now supports Java 6, allowing you to take advantage of its performance improvements.
- A further set of improvements to the stability of your Confluence system.

7

Plus over 90 fixes and improvements

- You'll no longer see those annoying browser messages when you click the browser's 'Back' button, for example after viewing search results.
- We've fixed some problems with the image and file attachment popups, and made them behave in the same way for both the Rich Text Editor and Wiki Markup.
- See the list of features, improvements and bug fixes.

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Issues Resolved in Confluence 2.7

Below is the full list of issues resolved by Confluence 2.7. You can read the release notes here.

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Confluence 2.7 Upgrade Guide

Confluence 2.7 has improvements for administrators and end-users alike. Administrators can set up trusted communication between Confluence and JIRA. The result? The JIRA Issues and JIRA Portlet macros will show only the issues which the Confluence user is authorised to see. You no longer need to include a username and password in the markup code.

The two-tier administrator permissions allow system administrators to delegate some functions to team leaders or managers. Logging is simplified, and administrators can change logging levels at runtime. The improved user management framework speeds up your user searches.

Sorting of images is now possible in the Gallery macro. And when creating a page or news item, you can attach images or files immediately, without waiting until you have saved the page.

Refer to the release notes for details of the features, improvements and bug fixes in this release.

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On this page:

- Upgrade notes
  - Plugins
  - Configuring Resin
  - Trusted communication between JIRA and Confluence
  - WebDAV attachment manager deprecated
  - User migration
  - System Administrator and Confluence Administrator permissions
  - Location of Confluence logs
  - Java versions
- Upgrade procedure

Upgrade notes

Plugins

If you are using any third-party plugins, please test them thoroughly before rolling 2.7 into production.

Configuring Resin

This note applies if you are using the Resin application server. Due to an upgrade to one of the core components of Confluence (namely Spring), it will no longer work against an out-of-box configuration of Resin. To resolve this, you will need to configure Resin to use an XML parser that is XSD-aware. More information:

- Troubleshooting a Resin configuration
- Spring Framework documentation

Trusted communication between JIRA and Confluence

Confluence 2.7 provides a new trusted communication protocol, to allow secure authentication for the JIRA Issues and JIRA Portlet macros.

When upgrading, consider whether to **disable warning messages or turn off trusted communication altogether**. You may like to do this if you have a number of existing JIRA Issues or JIRA Portlet macros in your Confluence pages, and you do not intend to set up trusted communications soon. Read more about configuring trusted communications.

By default, trusted communication will be enabled when you upgrade to Confluence 2.7. This will affect your existing macros as follows:

- If the macro markup contains a username and password, the functionality is unchanged.
- If you have already set up trusted communication with a JIRA instance, the macro output will be as described in the guide on trusted communication.
- If the macro markup does not contain a username and password and you have not set up trusted communication with a JIRA instance, your Confluence pages will show a warning message above the macro output. See more information on troubleshooting.

WebDAV attachment manager deprecated

The option to store Confluence **attachments** on a WebDAV server has never worked in a useful fashion, and has not been maintained for many versions.

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The WebDAV attachment manager is **deprecated** from Confluence 2.7, and will be removed from a future version of Confluence. If you store attachments on external WebDAV servers, we recommend that you migrate to file-system or database-backed attachment storage immediately. Refer to CONF-9313 and CONF-2887.

This DOES NOT affect the operation of the WebDAV plugin.

User migration

Confluence 2.7 replaces OSUser with AtlassianUser as the underlying user management framework, greatly improving performance. Read more information about Managing Confluence Users.

When you upgrade from an earlier version of Confluence to release 2.7.0 or later, your users will be automatically migrated to AtlassianUser (but see the exceptions in the next paragraph). You may notice that your upgrade takes longer than usual, due to this migration process.

Automatic migration will **not** occur if any of the following is true:

- You have delegated user management to either JIRA or LDAP, or you have changed your user management from the standard configuration. If this is the case, you should upgrade as usual, ensuring that you retain your existing `atlassian-user.xml` or `osuser.xml` file.
- You have already migrated to AtlassianUser.

The progress of the migration will be shown in your log files. For example, a successful migration will show:

```
2007-10-08 21:33:07,979 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
userMigrationStarted Starting user migration. 12288 users to migrate.
2007-10-08 21:33:09,784 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
userMigrated 100 users migrated out of 12288.
...
2007-10-08 21:36:18,304 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
userMigrated 12100 users migrated out of 12288.
2007-10-08 21:36:20,112 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
userMigrated 12200 users migrated out of 12288.
2007-10-08 21:36:21,562 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
userMigrationComplete User migration complete.
2007-10-08 21:36:35,957 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
groupMigrationStarted Group migration started. 44 groups to migrate.
2007-10-08 21:36:35,960 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
groupMigrated 10 groups migrated out of 44.
..
2007-10-08 21:36:38,055 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
groupMigrated 40 groups migrated out of 44.
2007-10-08 21:36:38,208 INFO [main]
[atlassian.confluence.upgrade.OSUserToAtlassianUserMigrationUpgradeTask]
groupMigrationComplete Group migration complete.
```

System Administrator and Confluence Administrator

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permissions

Confluence 2.7 brings two administrator-level permissions in place of one. The new permissions are '**System Administrator**' and '**Confluence Administrator**'. Refer to the documentation for details.

When you upgrade to version 2.7, all users and groups with the old 'Administer Confluence' permission will be converted to the new 'System Administrator' permission. The powers of the 'confluence-administrators' group remain unchanged.

Location of Confluence logs

Confluence's default logging behaviour has changed with Confluence 2.7. Both the Confluence and Confluence EAR/WAR distributions follow the same default behaviour:

- When you start Confluence, log entries will be sent to the application server logs until Confluence has completed its initial bootstrap. Any log entries will be repeated into the `<confluence-home>` log described below.
- Once the initial startup sequence is complete, all logging will be to `<confluence-home>/logs/atlassian-confluence.log`. For example: `c:/confluence/data/logs/atlassian-confluence.log`.
  Note that the default location is now the Confluence **home directory** instead of the **application server's log file**.

Java versions

Confluence 2.7 supports Java 1.4, Java 5 and Java 6. We recommend Java 6 because of its increased performance and easier troubleshooting, due to enhanced memory dump and profiling capabilities.

Advance notice: Java 1.4 will be deprecated in a future release. Confluence 2.8 will be the last version that supports Java 1.4.

Upgrade procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.6.x, read the release notes and upgrade guidesfor all releases between your version and the latest version. In particular:
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from a version earlier than 2.6.0, please read the 2.6 upgrade notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.8.1 Release Notes

21 May 2008
Confluence 2.8.1 is a recommended upgrade which fixes some security flaws as well as other bugs in Confluence 2.8. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

Two of the bug fixes resolve problems with rendering a wiki page in Internet Explorer 6. Additionally, these fixes will significantly improve performance in some configurations of Confluence 2.8.

We have created some performance testing scripts, which will be particularly useful for large or mission-critical

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Confluence installations.

Using a custom space logo caused some problems, particularly with Resin application server, where the page would sometimes hang and then display incorrectly. This is now fixed.
There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.8 yet?

Take a look at the new features and other highlights in the Confluence 2.8 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.8.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.8.1 Upgrade Notes

Confluence 2.8.1 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.8.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.8 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.8.2 Release Notes

3 July 2008

Confluence 2.8.2 is a recommended upgrade which fixes some security flaws and other bugs. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

This release fixes the 'remember me' problem encountered when using Confluence with Tomcat 5.5.26 or Tomcat 6, where logins are not remembered.

Confluence administrators will see a new link on the user profile screen, allowing them to move directly to the us

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er management screen for that user.

This release also addresses some performance bugs:

- Label links, as well as the label summary pages, now include the 'nofollow' attribute to prevent search engines like Google from indexing them.
- We have increased the size of the UI templates cache, which should reduce the number of times Confluence needs to load resources.
- CSS caching has been improved. (Refer to CONF-11755 if you'd like to know the details.)
- When generating a URL for the multiple label filter, Confluence now sorts the labels in the URL alphabetically, ensuring that there is just one URL for each filter instead of possible multiple URLs. This should reduce the load on the server when search engine crawlers visit the Confluence site, because the crawlers no longer need to index multiple URLs.

The JIRA Issues macro now has improved caching. When trusted communication was first introduced, Confluence did not cache results for anonymous users or results retrieved using trusted communications. With Confluence 2.8.2, caching is implemented for both those cases. This fix should improve the performance of your JIRA site, because Confluence no longer needs to access the JIRA site as often.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.8 yet?

Take a look at the new features and other highlights in the Confluence 2.8 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.8.2 Upgrade Notes. We *str ongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.8.2 Upgrade Notes

Confluence 2.8.2 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**. See the documentation on backing up your Confluence site.

2. If your version of Confluence is earlier than 2.8.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.8 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.0 first, confirm

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the upgrade was successful, then upgrade again from version 2.7.0 to version 2.8.2. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Confluence 2.8.3 Release Notes

Confluence 2.8.3 is the **standard edition** version of Confluence 2.8.x. This version of Confluence is equivalent to Confluence version 2.8.2, but it does not include Oracle's Coherence technology. Due to licensing changes wi th Oracle over the Coherence clustering and distributed caching technology, Atlassian is no longer able to distribute this technology to customers without a Confluence clustered license.

Therefore, Atlassian has released 'standard editions' for each previous major version of Confluence back to 2.6, which includes Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3. Confluence 2.8.3 will be the only Confluence 2.8.x version available to customers with a non-clustered Confluence license.

For its caching functionality, Confluence 2.8.3 utilises Ehcache. This functionality was provided by the Coherence technology in previous Confluence 2.8.x versions.

For more information about the features, updates and fixes in Confluence 2.8.2, please refer to the Confluence 2.8.2 Release Notes.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.8.2 Upgrade Notes. However, if you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read the Confluence 3.0.1 Upgrade Notes for important information about transferring your caching layer customisations from Coherence to Ehcache.

We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Confluence 2.8 Beta Release Notes

28 March 2008

Confluence 2.8 will be launched in a few weeks' time. These release notes apply to Confluence 2.8 Beta, which is currently undergoing internal testing. These release notes show the highlights of the upcoming release, although we have not included all the enhancements and bug fixes. We'll publish the final and complete release notes with the release of Confluence 2.8.0.

If you are interested in trying out a developer's release, please take a look at the information and warnings in Co nfluence Development Releases.

What's Coming in Confluence 2.8

1 Page Ordering

- One of the most popular feature requests is now reality — Confluence allows manual page ordering.

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- You can choose the order in which wiki pages are displayed.
- Use a dynamic tree view to drag and drop your pages into the right position.
- Page order is reflected in all tree views for a space or a page family, including the PageTree macro and exports to PDF, HTML and XML.
- Read the documentation.

2 Dynamic Menus and Simplified Editing

- Drop-down menus replace tabs and links.
- Grouping of functions is more intuitive.
- Features are more visible than before — you may even come across things you didn't know Confluence had!
- Simplified screen design allows you to focus on editing the page content.
- There is more space for entering text.
- See an overview of the new menu structure and what's changed.

3 Collapsible Comments

- We've beautified the display of comments on pages and news items.
- You can collapse comments to a single line — just click the subject line of a single comment, or 'Collapse All'.
- It's easier to keep track of multi-level comment threads.
- When collapsed, a comment shows a single-line excerpt.
- The time stamp is relative for recent comments — for example, it might say 'less than a minute ago'.
- The new 'permanent link' icon makes it easier to link directly to a comment from another page.

4 Multiple Label Filter

- Combine more than one label in your label searches.
- Use '**+**' and '**-**' links to add or subtract labels from your search.
- Browse labels simply by typing in a URL, such as:

```
http://CONFLUENCE_HOSTNAME/label/ShipIt+ideas
```

- Read the documentation.

5 And Lots More

- Enhanced Dynamic Tasklist.
- An installation wizard for the Confluence distribution on Windows and Mac.
- Significant performance improvements.
- More administration, management and monitoring tools.
- Plenty of bug fixes to keep everyone happy.

Confluence 2.8 Release Notes

10 April 2008

The Atlassian Confluence team is delighted to present **Confluence 2.8**.

We have simplified the screen design to focus on content. There's a totally new menu structure for editing or adding content and many other actions. We've also grouped the menu functions so that they are easier to use and understand. This will help new users start using Confluence quickly. For our faithful customers, you may find existing features you didn't know Confluence had!

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The much voted for page-ordering feature allows you to define the order of your wiki pages yourself — just drag and drop your pages into the right position.

We've beautified the display of comments on pages and news items. With the multiple-label filter, you can combine more than one label in your label searches and surf labels directly via a sensible URL. Getting Confluence up and running is easier than ever with our new installer. An enhanced task list is bundled with Confluence, bringing faster response times and a simple yet powerful user interface.

There are some great performance enhancements and a lot for administrators and developers too.

- Thank you for all your issues and votes. Keep on logging, to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

Upgrading to Confluence 2.8?
• Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*** • If you are using any **third-party plugins**, please test them thoroughly before rolling 2.8 into production. • Please refer to the Confluence 2.8 Upgrade Notes for further essential information about upgrading.

Responding to your feedback:

14 new feature requests implemented

300+ votes satisfied

DOWNLOAD latest version

Highlights of this release:

- Dynamic menus and simplified screen design
- Page ordering
- Collapsible comments
- Multiple-label filter
- Confluence installer
- Task list
- Performance enhancements
- Administration, management and monitoring
- Highlights for developers
- Over 100 fixes and improvements
- Special thanks

Highlights of Confluence 2.8

1

Dynamic menus and simplified screen design

- Drop-down menus replace tabs and links.
- Grouping of functions is more intuitive.
- Features are more visible than before — you may even come across things you didn't know Confluence had!
- A cleaner screen design lets you focus on the page's content.
- It's simpler than ever to edit a page.
- There is more space for entering text.

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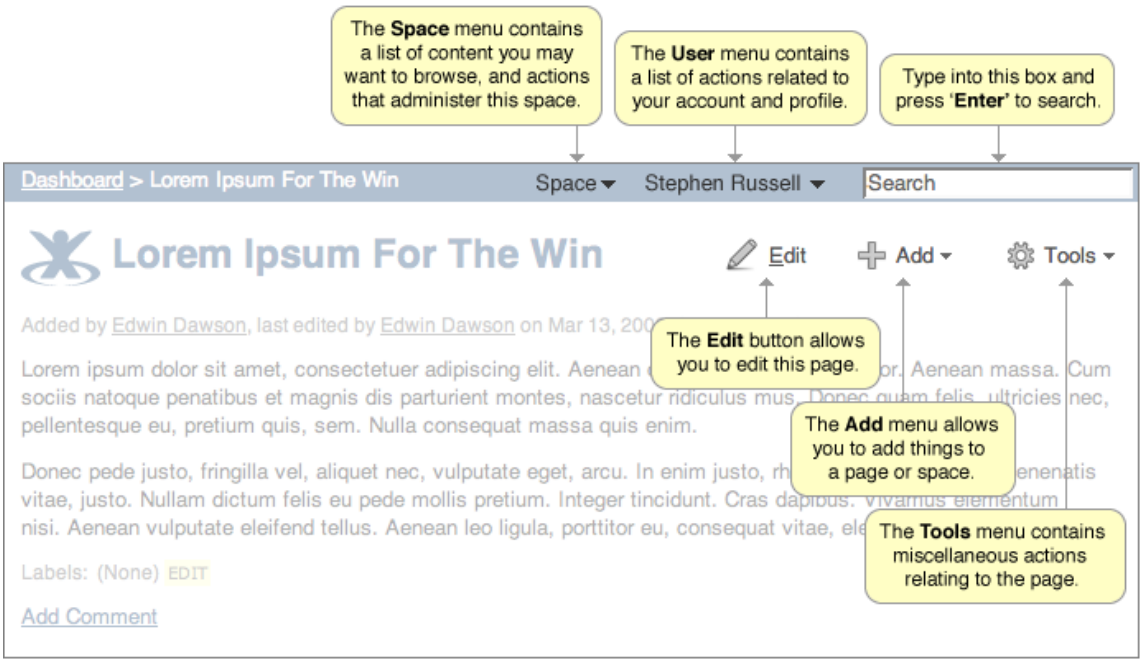
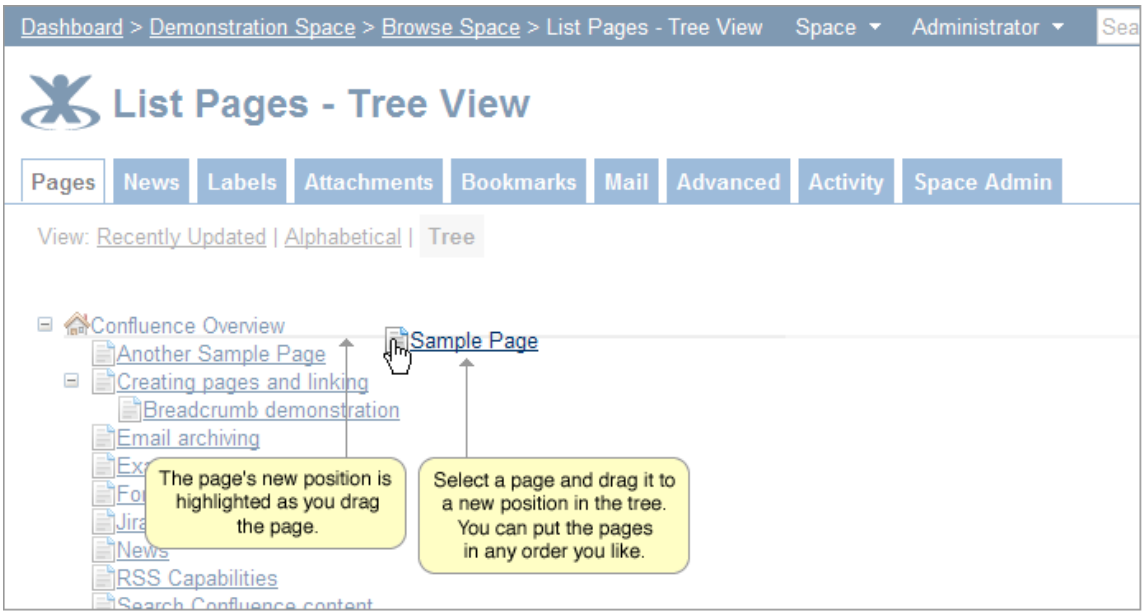
- See an overview of the new menu structure and what's changed.



2

Page ordering

- One of the most popular feature requests is now a reality — Confluence allows manual page ordering.
- You can choose the order in which wiki pages are displayed.
- Use a dynamic tree view to drag and drop your pages into the right position.
- Page order is reflected in all tree views for a space or a page family, including the PageTree macro and exports to PDF, HTML and XML.
- Take a look at the documentation to learn more.



3

Collapsible comments

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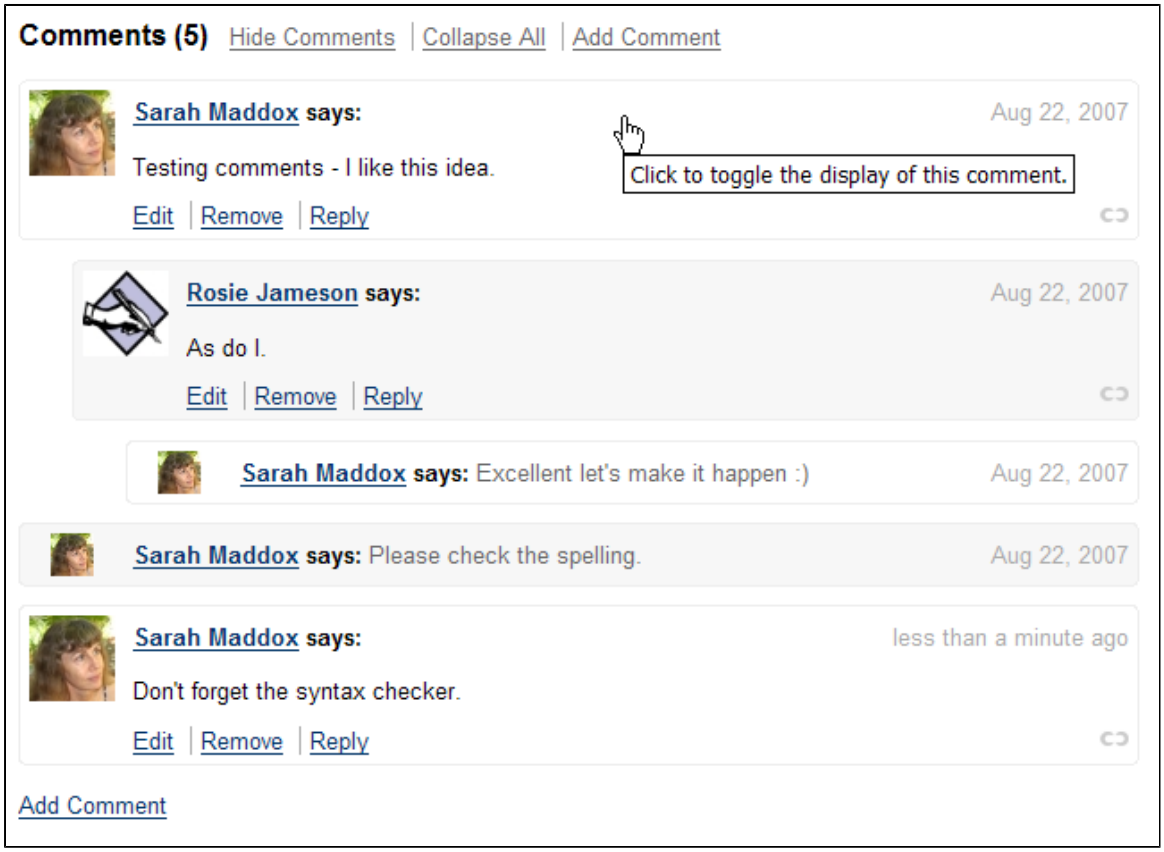
- We've beautified the display of comments on pages and news items.
- You can collapse comments to a single line.
- It's easier to keep track of multi-level comment threads.
- When collapsed, a comment shows a single-line excerpt.
- The time stamp is relative for recent comments — for example, it might say 'less than a minute ago'.
- The 'permanent link' icon is back, after a temporary absence in Confluence 2.6. Instead of lurking behind the date, it's now a link icon at the bottom right of each comment.



4

Multiple-label filter

- Combine more than one label in your label searches.
- Use the '**-**' link next to the label name to subtract a label from your multiple-label search.
- Browse labels simply by typing in a URL, such as:

```
http://CONFLUENCE_HOSTNAME/label/fedex+ideas
```

- Take a look at the documentation to learn more.

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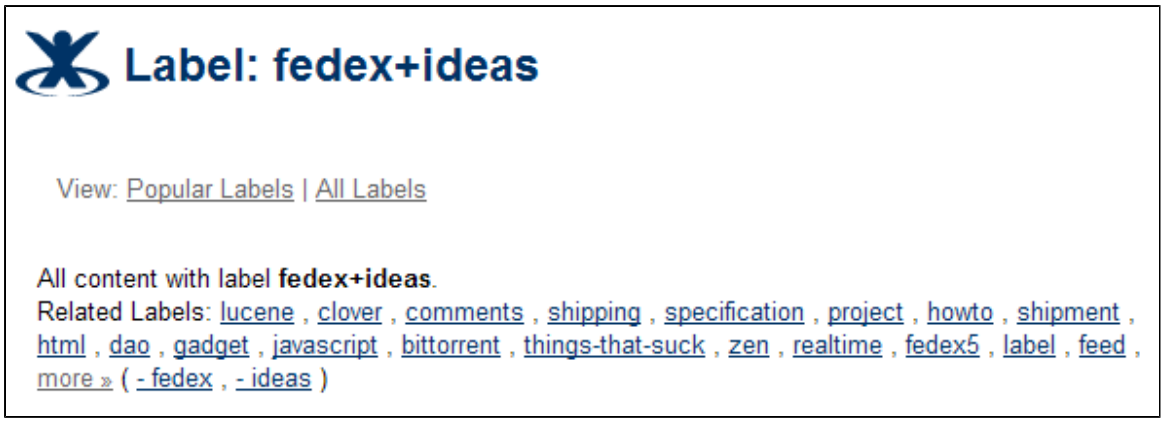
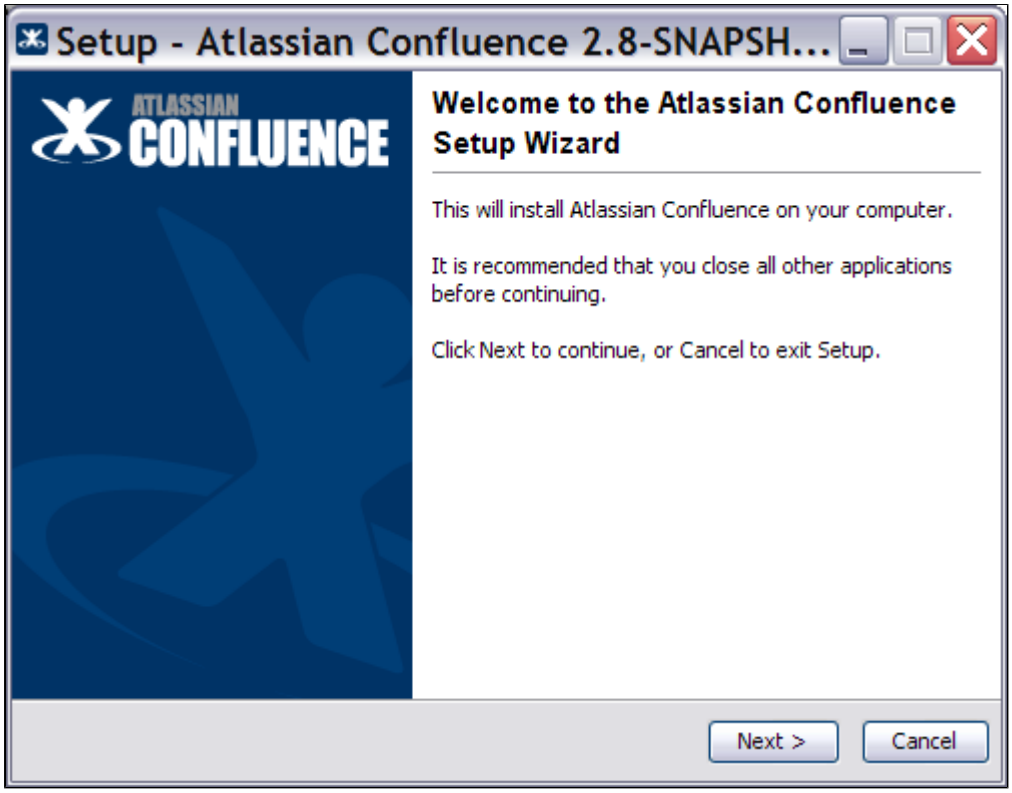


5

Confluence installer

- The installation wizard lets you install the Confluence distribution without fuss or bother.
- Your Java environment is automatically configured.
- Confluence starts up in your browser after installation and leads you straight into the Setup Wizard.
- You can choose to install Confluence as a Windows service.
- Confluence appears in your Windows Start Menu.
- Read the documentation.



6

Task list

- The enhanced task list plugin is now bundled with Confluence.
- Permissions in the task list match the permissions of the page containing it.
- New user and group pickers help you to choose the right person or group.
- The sophisticated visual design suits the Confluence look and feel — take a look at the borders, icons, radio buttons and the handy visible cue on drag-and-drop.

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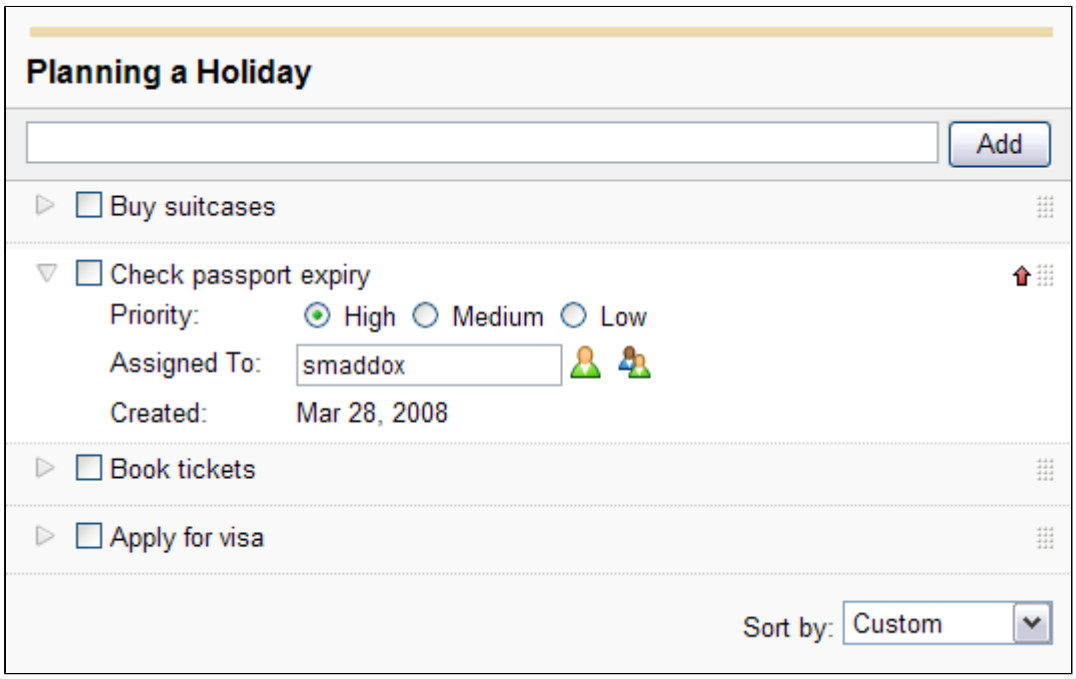
- The data is stored in the page, and you can edit it there too.
- Performance on list operations is vastly improved.
- Existing task lists are upgraded on first edit. Read more in the upgrade notes.
- Here's the guide to using the macro.



7

Performance enhancements

- You will notice significant performance improvements in this release.
- A new gzip compression filter speeds up the transfer of data from Confluence and uses far less memory than the earlier implementation.
- The PDF space export uses less server memory.
- And more for the technically-minded:
  - The commonly-accessed resources use permanent client-side caching.
  - We have optimised some operations that were performed on every request, decreasing the average time taken to load a page.
  - We have optimised the database access for labels and attachments.
  - Where users belong to many groups, the retrieval of groups from LDAP is faster.
  - Access to Confluence's data storage mechanism (Bandana) has been made more granular, so th we don't load the entire context when retrieving individual keys from large contexts.

8

Administration, management and monitoring

- Confluence now supplies statistics and other information via a Java Management Extensions (JMX) interface. A number of third-party consoles will allow you to view the information and monitor your Confluence instance. There's more information in the documentation.
- The Plugin Repository client shows you which plugins are officially supported.
- You can raise a support request via the Administration Console.
- Troubleshoot your LDAP user management directly from the Administration Console.
- A new field on the System Information page displays the current access latency to the Confluence database — useful for diagnosing database network problems.

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9

Highlights for developers

- Install custom path-mapping as part of your plugin, using the new Path Converter plugin modules — prettify your URLs.
- Include your JavaScript and CSS resources neatly, using the Web Resource plugin type.
- The Velocity template engine has been upgraded to version 1.5.
- We have begun a cleanup of the HTML and CSS for viewing and editing a page, moving towards semantic markup and web standards.
- We are moving towards standardisation on a single JavaScript library, based on jQuery. This is the supported JavaScript library for plugin developers. The benefits? No more conflicts between libraries. jQuery is fast. And there's less to learn!

10

Over 100 fixes and improvements

- The People Directory uses the hCard microformat for simple integration with a variety of microformat-enabled tools.
- And more.

Special thanks

We'd like to thank Shannon Krebs, David Peterson and David Chui in particular for their continuing contributions to the open-source Confluence plugin library.

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Issues resolved in Confluence 2.8

Below is the full list of issues resolved by Confluence 2.8. You can read the release notes here.

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Confluence 2.8 Screen and Menu Changes

Can't find a menu item in Confluence 2.8? That's understandable, because the user interface (layout of the screens and menus) in Confluence 2.8 has changed dramatically. This page contains a quick summary of the changes. Please read on for a quick and easy introduction.

Refer to Using the Confluence Screens for an overview of the new Confluence menu structure.

On this page:

- What's on this page?
- Confluence 2.8 User Interface in Detail
- New Menu Structure in Confluence 2.8

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- Changes to Menu Items in Confluence 2.8
  - RELATED TOPICS

> Some of the Confluence documentation will not immediately reflect the new user interface in Confluence 2.8. We are working to rectify the situation as quickly as possible. In the interim, please use this page as a guide.

What's on this page?

The image below shows a Confluence 2.8 screen, with numbers added to the image. The numbers relate to a table of menu commands below the image, showing the new menu structure. Finally, there is a comprehensive table of menu commands, their new locations and how to get there.

Confluence 2.8 User Interface in Detail

The following screenshot and numbered list show the new menu layout in Confluence 2.8.

Screenshot: Confluence 2.8 Annotated User Interface Changes

New Menu Structure in Confluence 2.8

The numbers in this list relate to the numbers added onto the image above.

1	'**Space Menu**' containing Pages, News, Labels, Attachments, Bookmarks, Mail, Advanced and Space Admin.
2	'**User Menu**' containing Personal Space, Preferences, History, Administration (Confluence Administrators only) and Log Out.
3	'**Edit Button**' which opens the current page for editing.

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4	'**Add Menu**' containing Page, News, Comment, Attachment, Add Bookmark. There may also be other items in this menu, depending upon the plugins you have installed on your Confluence site. For example, Add Diagram (Gliffy plugin) and Add Spreadsheet (EditGrid plugin).
5	'**Tools Menu**' containing Attachments, History, E-mail, Favourite, Watch, Info, View Wiki Markup, Export to PDF, Export to Word, Copy, Move and Remove.
6	'**Labels**'. This line shows tags attached to the current page.

Changes to Menu Items in Confluence 2.8

This table lists every change to the menu structure that has occurred in Confluence 2.8. Names for some commands have changed, so the old menu option names are listed, next to the new names, with instructions for finding them. (You can search the text on this page for the name of a menu item you used to use in an earlier version of Confluence – you'll find instructions next to it.)

Old items, now under Space Menu	New instructions
Browse Space — Pages	Click '**Space**', '**Pages**'
Browse Space — News	Click '**Space**', '**News**'
Browse Space — Labels	Click '**Space**', '**Labels**'
Browse Space — Attachments	Click '**Space**', '**Attachments**'
Browse Space — Bookmarks	Click '**Space**', '**Bookmarks**'
Browse Space — Mail	Click '**Space**', '**Mail**'
Browse Space — Advanced options	Click '**Space**', '**Advanced**'
Space Admin	Click '**Space**', '**Space Admin**'
Old items, now under Add Menu	**New instructions**
Add Page	Click '**Add**', '**Page**'
Add News	Click '**Add**', '**News**'
Add Comment	Click '**Add**', '**Comment**'
Attachments tab	Click '**Add**', '**Attachment**'
Bookmarks	Click '**Add**', '**Add Bookmark**'

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Add other items to the page, as provided by plugins such as Gliffy diagrams and spreadsheets	Click '**Add**' and then select the relevant option (available only if you have the relevant plugin installed)
Add Spreadsheet	Click '**Add**', '**Add Spreadsheet**'
Old items, now under Tools Menu	**New instructions**
Attachments tab	Click '**Tools**', '**Attachments**'
View Page History	Click '**Tools**', '**History**'
Email the page to someone	Click '**Tools**', '**E-mail**'
Favourite button	Click '**Tools**', '**Favourite**'
Watch button	Click '**Tools**', '**Watch**'
Info tab	Click '**Tools**', '**Info**'
View Wiki Markup	Click '**Tools**', '**View Wiki Markup**'
View a printable version of the current page	Click '**File**', '**Print Preview**' (in your browser menu)
Export to PDF	Click '**Tools**', '**Export to PDF**'
Export to Word	Click '**Tools**', '**Export to Word**'
Copy (page)	Click '**Tools**', '**Copy**'
Move (page)	Click '**Tools**', '**Move**'
Remove (page)	Click '**Tools**', '**Remove**'
Miscellaneous page element(s)	**New instructions**
Labels	(moved to the bottom of page content)

RELATED TOPICS

Using the Confluence Screens

Take me back to Confluence User's Guide

Confluence 2.8 Upgrade Notes

Below are some essential notes on upgrading to **Confluence 2.8**. For details of the new features and improvements in this release, please read the Confluence 2.8 Release Notes.

On this page:

- Upgrade Notes
  - Crowd Integration

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- Default Order of Pages Changed from Alphabetical to Natural
- Plugins
- Velocity Template Engine
- Dynamic Tasklist 2
- Customised Page Layouts
- JavaScript Libraries
- Java Versions

- Upgrade Procedure

Upgrade Notes

Crowd Integration

If you are using Atlassian Crowd as your Confluence user management and single sign-on solution, please upgrade to Crowd 1.3.2 or later. With Confluence 2.8 the atlassian-user interface has changed, and Crowd 1.3.2 provides the required update to Crowd's atlassian-user integration module.

Default Order of Pages Changed from Alphabetical to Natural

Confluence 2.8 introduces the ability to move pages into any order you choose.

As part of the above feature, we have changed the default page order in Confluence, from simple alphabetical ordering to a 'natural' ordering. The natural ordering handles numeric values correctly when doing string comparisons.

Impact:

- The new natural ordering is the same as the ordering already used by the PageTree plugin, which some customers use to create a left-hand navigation panel.
- The change to natural ordering should have little effect on most users because, under most situations, natural ordering and alphabetical ordering will produce the same results.
- For customers who have inserted chapter or page numbers to force the correct order, the new natural ordering will show the existing pages in the correct order.

If you do find that the order of your pages is adversely affected, you can use the new page-ordering function to move the pages.

Plugins

Please check the following if you have added any plugins to Confluence:

- If you are using any third-party plugins, please test them thoroughly before rolling 2.8 into production.
- The PageTree plugin has been updated. If you are using this plugin, please download the latest version to ensure compatibility with Confluence 2.8.

Velocity Template Engine

Confluence's Velocity template engine has been upgraded from 1.3 to 1.5. Please test carefully for compatibility problems with existing third-party themes and plugins. For developers, there's more information about Migrating to Velocity 1.5.

Dynamic Tasklist 2

The Dynamic Tasklist 2 plugin is now bundled with Confluence. The new `tasklist` macro replaces the older `tasklist` and `dynamictasklist` macros. What happens to existing tasklists?

- By default, the new macro will be enabled and the older macros disabled in your Plugin Repository.
- When someone views a page containing an older version of the task list, the display will show the new format but the page will not be updated.

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- When someone first adds a task or changes anything in the task list, the data will be converted to the new format.

Customised Page Layouts

The Confluence Upgrade Guide includes instructions on re-applying your customisations after the upgrade. We're repeating some of that information here, because it's particularly important due to the UI changes in this release.

If a space uses a customised page layout, the new Confluence 2.8 layout will not be applied. This means that you will not see the new menu structure within that space. For example, this will happen if you are using pagetree navigation to form a table of contents on the left.
Fix: Apply the Default Page Layout, then re-insert your custom code.

Steps in detail:

1. Go to the Space Admin screen and click 'Edit' to view your customised Page Layout.
2. Copy the customised code.
3. Cancel the edit.
4. Click 'Reset Default' to apply the new Confluence 2.8 default page layout.
5. On the Space Admin screen, click 'Create Custom' to create a custom page layout.
6. Reinsert your customised code and click 'Save'.

JavaScript Libraries

jQuery is the supported JavaScript library for plugin developers.

Advance notice — deprecated libraries: We have decided to standardise on jQuery as the JavaScript library for Confluence. This library will eventually replace all others. For this reason, use of the following JavaScript libraries in Confluence is **deprecated**:

- The Yahoo! User Interface Library (YUI)
- Prototype
- Scriptaculous

Because there is a lot of legacy plugin code using Prototype and Scriptaculous, these will continue to be available for at least one more major release of Confluence.

Java Versions

Confluence 2.8 supports Java 1.4, Java 5 and Java 6. We recommend Java 6 because of its increased performance and easier troubleshooting, due to enhanced memory dump and profiling capabilities.

Advance notice — Java 1.4 will be deprecated in a future release. Confluence 2.8 will be the last version that supports Java 1.4. Please refer to the Java 1.4 Support Timeline for more information.

Upgrade Procedure

> As always please test your upgrades in your **TEST environment** before rolling into **PRODUCTION**.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up** your Confluence installation directory and your Confluence home directory, as directed in the Upgrade Guide. If you are using an external database, perform a database backup.

2. If your version of Confluence is earlier than 2.7.x, read the release notes and upgrade guides for all releases between your version and the latest version.

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- If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
- If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.0 first, confirm the upgrade was successful, then upgrade again from version 2.7.0 to version 2.8. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

5. If you encounter a problem during the upgrade, please create a support ticket and one of our support engineers will assist you through the process.

RELATED TOPICS

Confluence 2.8 Release Notes

Confluence 2.9.1 Release Notes

8 September 2008

Confluence 2.9.1 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

This release also addresses an issue relating to contributor filtering with LDAP. In the previous version, the search function was not able to filter results by authors from an LDAP directory. This fix requires an upgrade action; see the Confluence 2.9.1 Upgrade Notes for more information.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.9 yet?

Take a look at the new features and other highlights in the Confluence 2.9 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.9.1 Upgrade Notes. We *str ongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.9.1 Upgrade Notes

Confluence 2.9.1 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

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If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 2.8.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.9 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Fix for Contributor Filtering LDAP Users

An issue was fixed in this release relating to search functionality and filtering by contributor. Authors from LDAP directories are now taken into account, however you will need to carry out the instructions to make sure all users are included in this feature.

Enabling Contributor Filtering for Search

Confluence 2.9 includes an enhancement to the search functionality which allows the filtering of search results by author or contributor. Unfortunately an existing bug in Confluence prevented this functionality from being used on sites that use LDAP for their user management.

Monitoring the Upgrade Task in Confluence 2.9.1

Confluence 2.9.1 fixes this defect and also includes an upgrade task that should ensure any existing content contributors are properly indexed and therefore available in the contributor filter auto-complete box.

Enabling this functionality is simply a case of installing Confluence 2.9.1 and watching your log file during start up for specific messages, such as the following.

```
Beginning PersonalInformation repair.
Found <n> usernames that need to be retrieved.
Finished Personal Information repair.
```

On a large external directory of users, it is possible that this task may take many minutes to run. However, the processing of this task will not delay the startup of Confluence.

Enabling Detailed Progress Reporting during Upgrade

If you wish to see more detailed progress reporting during the upgrade, you will need to carry out the following steps.

To enable detailed progress reporting,

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1. Enable '**Debug**' level logging for the logger called `com.atlassian.confluence.upgrade.PersonalInformationRepairTask`.
2. During startup of Confluence, you should also see additional progress reporting messages similar to the following:

```
Created 10 from <n> missing Personal Information objects.
Created 20 from <n> missing Personal Information objects.
Created 30 from <n> missing Personal Information objects.
```

Manually Instigating the Fix

Should you discover any problems during the repair task (as reported in the logs), then a Confluence Administrator can manually rerun the task by visiting the following page.

```
<confluence base URL>/admin/createMissingPersonalInfo.jsp
```

That page presents a single button that will re-run the repair task. In addition to the logging noted previously, the same messages will be returned to the administrator's browser.

Actions Taken when Running the Fix

There is no functional cost to running this fix. Should you accidentally run it too frequently, there is no functional implication. It is worth being aware of what is happening in the back-end so you can schedule a relevant time to perform it. While the fix is running, the following occurs:

- Two database queries are run to find the missing contributors, each involving an inner join against the same table.
- Each missing user is requested from the LDAP server by username.
- Each missing user will lead to a row insert in the database (these are batched).

Restoring Inherited Page Permissions After 2.9 Upgrade

Confluence instances that were upgraded to Confluence 2.9 are affected by a vulnerability. Child pages under a page protected by permissions are not protected by inherited permissions, as they should be. Please note that new installs of Confluence 2.9 which were not an upgrade from an old version are **not** affected.

Carry out the steps below to rectify the situation.

To Restore Inherited Page Permissions After Upgrading to Confluence 2.9,

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1. Log into Confluence as '**Administrator**'.
2. Access this specific page in Confluence:

   ```
   CONFLUENCE_HOME/admin/permissions/pagepermsadmin.action
   ```

   (replace 'CONFLUENCE_HOME' with the domain name of your own Confluence instance).
3. On that page, a single button is visible, entitled '**Rebuild Ancestor Table**'. Click that button. It will report its success.
4. Now, go to the '**Confluence Admin**' page. Here, click '**Cache Statistics**' from the left navigation bar. A long list appears.
5. Find '**Inherited Content Permissions**' in the list. Now, click the '**Flush**' button to the right of '**Inherited Content Permissions**'.
6. Inherited permissions will now be applied.

Read more about this vulnerability in the Security Advisory.

Confluence 2.9.2 Release Notes

14 October 2008

Confluence 2.9.2 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

You can now view the Wiki Markup code for previous versions of a page as well as the current version. Open a previous version from the page history, then select 'View Wiki Markup' from the 'Tools' menu. Previously, a bug caused Confluence to show the Wiki Markup only for the current version of the page.

Another bug caused an error to occur when you copied a page and tried to add an attachment before saving the page. This is now fixed, along with a number of other issues.

Don't have Confluence 2.9 yet?

Take a look at the new features and other highlights in the Confluence 2.9 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.9.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

Error rendering macro 'jiraissues' : JIRA project does not exist or you do not have permission to view it.

Confluence 2.9.2 Upgrade Notes

Confluence 2.9.2 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest

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version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.

2. If your version of Confluence is earlier than 2.9.0, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.9 upgrade notes and the 2.9.1 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

Confluence 2.9.3 Release Notes

Confluence 2.9.3 is the **standard edition** version of Confluence 2.9.x. This version of Confluence is equivalent to Confluence version 2.9.2, but it does not include Oracle's Coherence technology. Due to licensing changes wi th Oracle over the Coherence clustering and distributed caching technology, Atlassian is no longer able to distribute this technology to customers without a Confluence clustered license.

Therefore, Atlassian has released 'standard editions' for each previous major version of Confluence back to 2.6, which includes Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3. Confluence 2.9.3 will be the only Confluence 2.9.x version available to customers with a non-clustered Confluence license.

For its caching functionality, Confluence 2.9.3 utilises Ehcache. This functionality was provided by the Coherence technology in previous Confluence 2.9.x versions.

For more information about the features, updates and fixes in Confluence 2.9.2, please refer to the Confluence 2.9.2 Release Notes.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.9.2 Upgrade Notes. However, if you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read the Confluence 3.0.1 Upgrade Notes for important information about transferring your caching layer customisations from Coherence to Ehcache.

We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Confluence 2.9 Release Notes

7 August 2008

With great pleasure, Atlassian presents **Confluence 2.9**.

First up is the Search. The new screen design focuses the eye on your search term and results. To help you find information more quickly, Confluence now searches all content types by default and puts the most relevant results at the top of the list. Because a wiki is all about people, Confluence treats personal information as the most relevant. With author filtering, you can now find content written by a specific person.

The macros bundled with Confluence have been treated to a major overhaul. The Chart and Gallery macros offer sophisticated new displays and more interactivity. The revised Pagetree macro is now included in the Confluence download. Try using the Pagetree to add a navigation panel to your pages. We have added some popular new features and fixed a number of much-voted-for bugs in other macros too.

When you are editing a page, Confluence now automatically saves your work and displays the time of the last auto-save. If something goes wrong, you can quickly retrieve your work by selecting 'Drafts' from the user menu.

Other features include resetting page order to alphabetical and some much-needed help in the ongoing battle

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against spam.

Highlights of this Release:

- Streamlined Search
- Auto Save
- Charts
- Page Tree
- Gallery
- New Tutorial
- More in the Menus
- Alphabetical Page Ordering
- Better Spam Prevention
- Plugin Repository
- Engine Room and Developers' Community
- More than 140 Fixes and Improvements
- Special Thanks

Responding to your Feedback:
210 votes satisfied

DOWNLOAD latest version

- Thank you for all your issues and votes. Keep logging, to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

Upgrading from a previous version of Confluence
• **Confluence 2.9 requires Java 5 at a minimum**, and will no longer work with Java 1.4. Before upgrading to Confluence 2.9, please refer to the Confluence 2.9 Upgrade Notes for more details on this change. • Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*** • Please refer to the Confluence 2.9 Upgrade Notes for further essential information about **plugi ns** and other factors affecting your upgrade.

Highlights of Confluence 2.9

1

Streamlined Search

- The redesigned Search screen helps you to focus on the search term and results, by simplifying the filte box and other parts of the screen.
- By default, the search now includes all spaces and all content types: pages, news items, comments and so on.
- You can filter the search results by space, content type and date modified.
- If your Confluence site uses the standard out-of-the-box configuration for user management, you can als filter the search results by contributor.
- The search results are weighted to give personal information the highest relevance, followed by pages, news items and the other content types.
- When using the Search macro or the Search API, you can now also filter by contributor.
- Take a look at our documentation for more details on the search and the ranking of search results.

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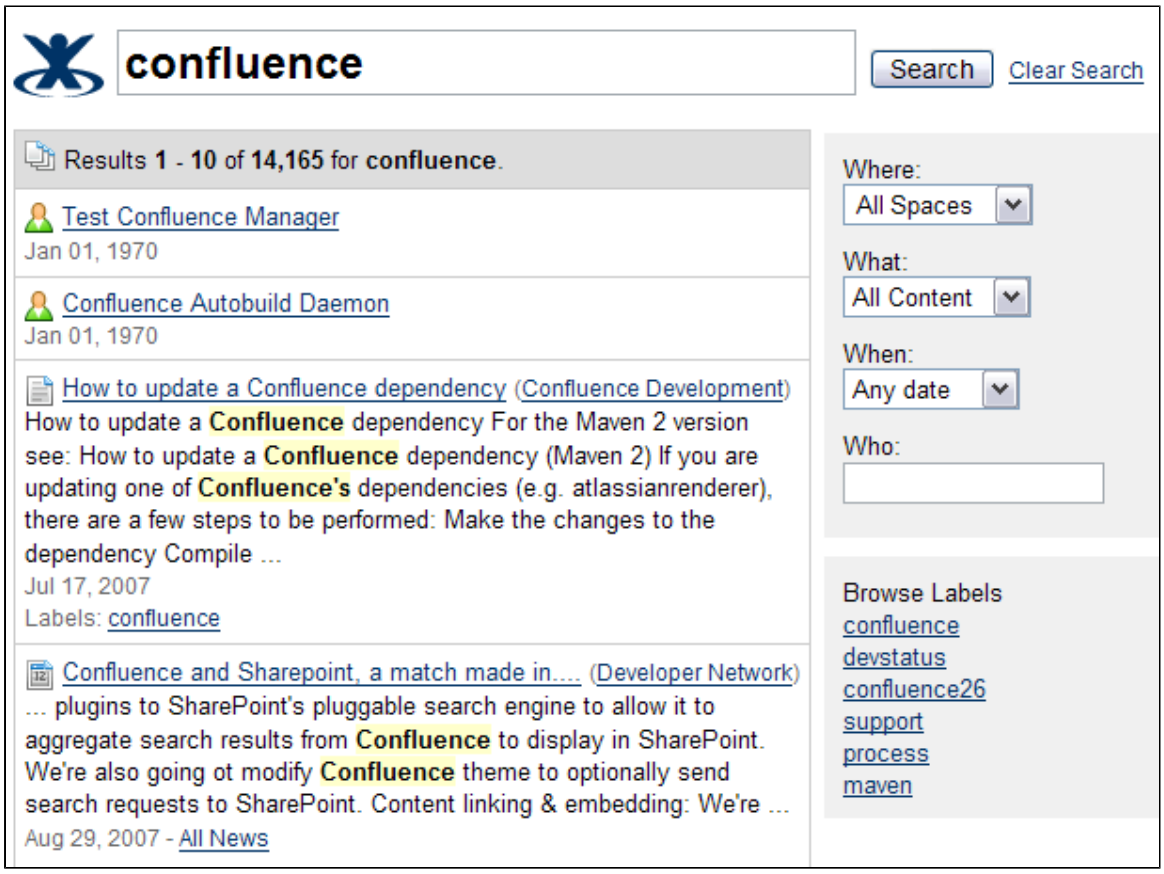
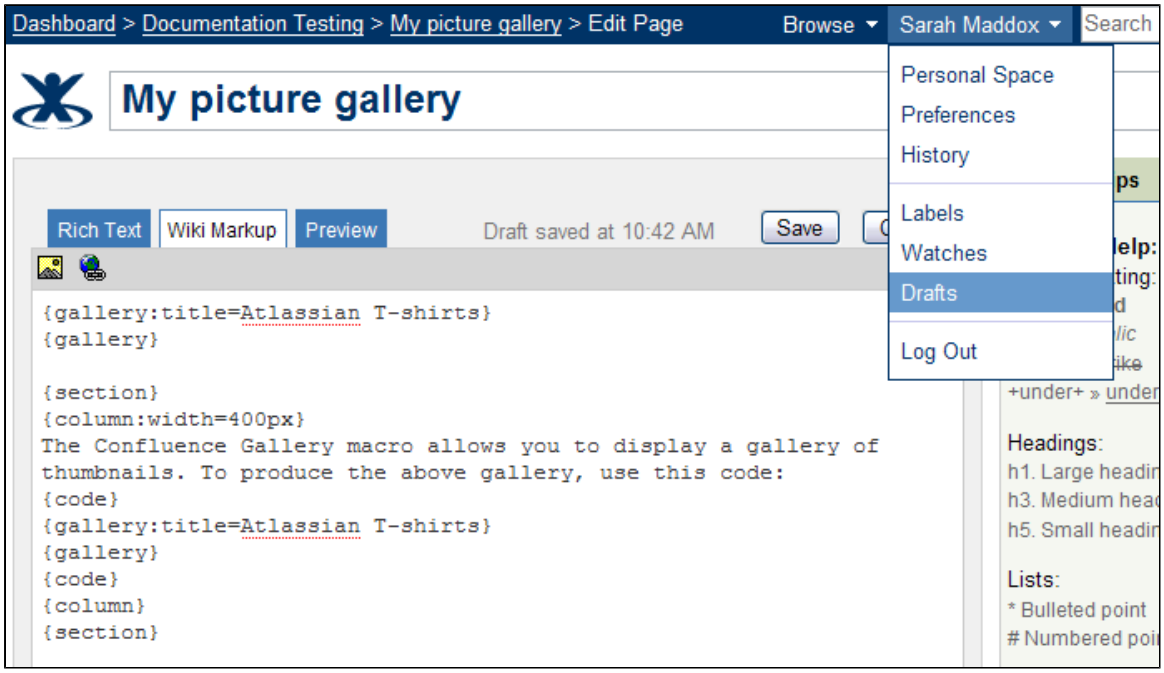


2

Auto Save

- Confluence automatically saves your work to a draft while you are adding or editing a page.
- Now with release 2.9, a message near the 'Save' button shows the time of the latest auto-save.
- If something goes wrong, retrieve the saved draft easily from the dropdown menu under your name.
- You can read more about drafts in the documentation.



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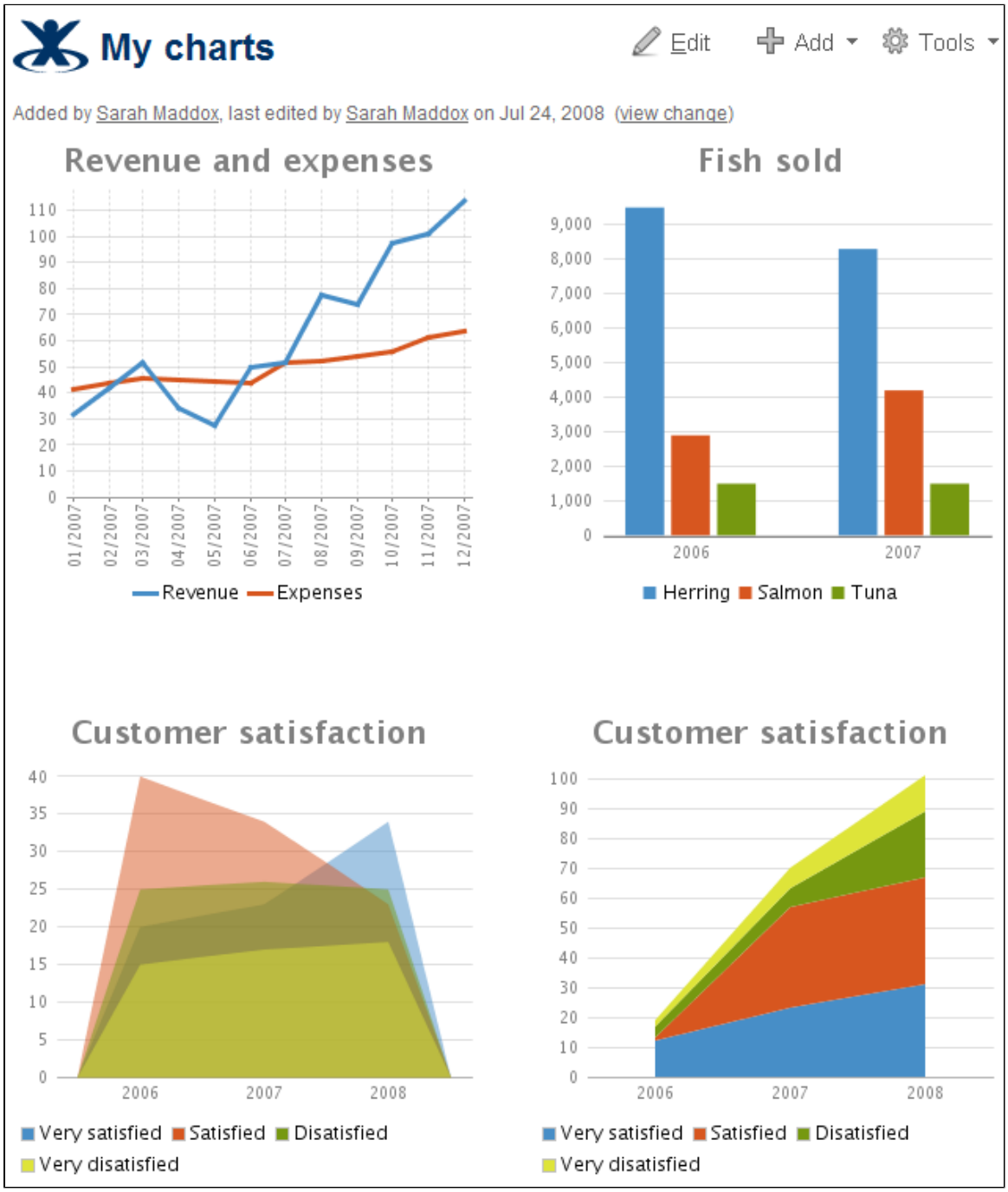
3

Charts

- The Chart macro presents a sophisticated new look.
- Below are some example charts displayed on a Confluence page.
- The documentation shows you how to add the macro to your page and choose different formats and types.



4

Page Tree

- The Pagetree macro is now bundled as part of your Confluence installation.
- It displays a dynamic, hierarchical list of pages which you can use as a table of contents or a navigation

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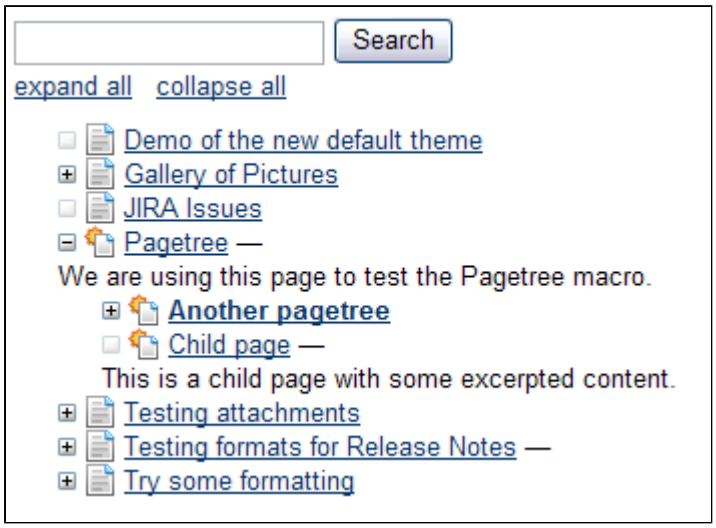
panel.

- You can choose to include a search box above the tree of pages or on its own.
- New links allow viewers to collapse or expand all branches in the tree at once.
- There are a number of options for specifying the root of the page tree. For example, you can show children of the current page, or children of the current page's parent, or all pages in the space.
- Take a look at the documentation to see the complete list of options.



5

Gallery

- Use the Gallery macro to display a set of pictures on a page.
- Now you can include or exclude individual pictures, or simply display all the images at once.
- Choose pictures from the current page or another Confluence page.
- Take a look at the documentation for help on these and other options.

- Viewers can click an image to zoom in and view the gallery as a slide show.

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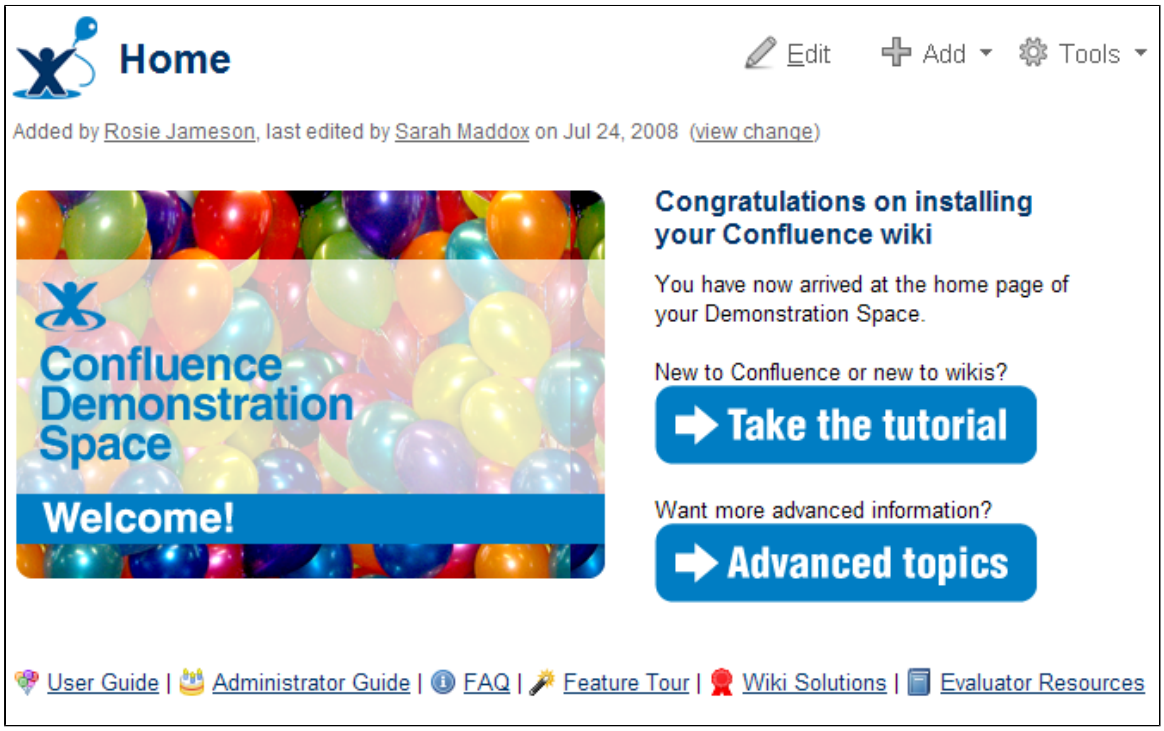
6

New Tutorial

- When you download Confluence and choose to include the sample content, you will receive a new Demonstration Space.
- There's a tutorial for those are new to Confluence or new to wikis.
- Other users will enjoy the advanced topics and links to more information.
- You can use the tutorial as a quick-start guide for new starters in your organisation.



7

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More in the Menus

- The Space menu which appeared in Confluence 2.8 has now been renamed to 'Browse'. Faithful Confluence users will recognise and welcome this old friend.
- The Browse menu now includes the People Directory, Space administration and Confluence administration for authorised users.
- You can now reach your personal labels, watches and drafts directly from the dropdown menu under yo name on any Confluence page.

8

Alphabetical Page Ordering

- By default Confluence orders your pages alphabetically, but you can drag and drop them into any order you like.
- Now Confluence 2.9 allows you to reset the page order to alphabetical, just by clicking the A icon next the parent page.
- The documentation tells you more.

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9

Better Spam Prevention

- A new link on the user profile screen allows administrators to jump directly to the user management screen — handy for dealing with those pesky spammers of the human variety.
- We have enhanced Confluence's Captcha functionality to strengthen the barrier against non-human spammers such as bots or web spiders.
- Captcha is now active on user profile pages as well as other pages.
- The image which Captcha displays is now even more difficult for non-humans to read. Take a look at the word 'brihter' in the screenshot below.
- You can read the instructions on configuring Captcha behaviour.

10

Plugin Repository

- The Plugin Repository shows more consistent information about the plugins on your Confluence site, including the system and bundled plugins which are shipped with Confluence.

11

Engine Room and Developers' Community

- Confluence's request throughput has been improved, thanks to better class- and resource-loading strategies.
- Startup time has also been reduced. This is particularly good for developers and anyone who needs to restart Confluence often.
- The Search API now allows you to filter search results by contributor.

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- As part of the ongoing work to make it easier for internal developers and plugin developers to work on Confluence, this release includes re-factorings of some web action classes.
- To improve Confluence's resistance to cross site scripting security vulnerabilities, we have added an experimental automatic HTML entity encoding feature. This is the first step to providing a more secure product by default.

12

More than 140 Fixes and Improvements

- Take a look at the complete list of issues resolved in Confluence 2.9.

Special Thanks

We'd like to say thank you to Zohar Melamed and Shannon Krebs, who wrote the original Pagetree and Pagetree Search plugins.

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Confluence 2.9 Upgrade Notes

Below are some essential notes on upgrading to **Confluence 2.9**. For details of the new features and improvements in this release, please read the Confluence 2.9 Release Notes.

On this page:

- Upgrade Notes
  - Plugins
  - Java Versions
  - Supported Databases and Application Servers
  - JavaScript Libraries
  - Confluence Themes
- Upgrade Procedure

Upgrade Notes

Plugins

Please check the following if you have added any plugins to Confluence:

- If you are using any third-party plugins, please test them thoroughly before rolling 2.9 into production.
- If you have installed the Gallery plugin onto your Confluence site, please remove it (or do not reinstall it after upgrading Confluence) in order to get the benefit of the new Gallery macro. The Gallery macro has

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been significantly improved in this release. It now incorporates features which were previously available only in the separate Gallery plugin.
- If you have installed the PageTree plugin or the Pagetree Search plugin onto your Confluence site, please remove them (or do not reinstall them after upgrading Confluence) in order to get the benefit of the new Pagetree macro. The Pagetree macro has been significantly improved in this release. It replaces the previous PageTree plugin, and incorporates the pagetree search option.
- If you are using the Blog Posts macro, be aware that invalid space keys will now be detected and cause the macro to fail. Previously they were ignored and blog posts from all spaces were returned.

Java Versions

Java 1.4 is not supported in Confluence 2.9 and later. Please refer to the Java 1.4 Support Timeline for more information.

Before upgrading to Confluence 2.9, you will need to ensure your environment is running at least Java 5. Confluence 2.9 supports Java 5 and Java 6. We recommend Java 6 because of its increased performance and easier troubleshooting, due to enhanced memory dump and profiling capabilities.

You can check your current Java version in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**System Information**' from the '**Administration**' section in the left-hand panel.
3. Refer to '**Java Version**'.
    - If the version is 1.5 or higher, you do not need to do anything.
    - If the version is 1.4, you need to upgrade your JDK before you can upgrade to Confluence 2.9.

If you are running the Confluence EAR-WAR edition against your own application server, you will need to check with your application server vendor about which JDK versions are supported.

Supported Databases and Application Servers

Additions to Application Server Support

We have added the following versions to the list of officially supported application servers:

- Resin 3.0 and 3.1
- Tomcat 6 (see known issue with authenticated datasources)

Platforms No Longer Supported

The following platforms were on the 'unsupported but working' list for Confluence 2.8. They are not on that list as of Confluence 2.9. They probably still work, but we have not tested them. Please upgrade soon.

- MySQL 4.0 — please upgrade to MySQL 5
- SQLServer 2000 — please upgrade to SQLServer 2005
- Websphere 6.0 — please upgrade to Websphere 6.1
- Weblogic 8.1 — please upgrade to Weblogic 9.2

Please refer to the list of supported application servers and databases on our Supported Platforms topic for the updated matrix.

Advance Notice — Changes to Supported Platforms in the Next Release

The next major release of Confluence after 2.9 will **not** support the following platforms/versions any more. We will still test those platforms infrequently, and Confluence will probably still work fine with them for a while, but they will be not officially supported.

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- MySQL 4.1 — please upgrade to MySQL 5
- Tomcat 5.0 — please upgrade to Tomcat 5.5 or 6
- Resin 2 — please upgrade to Resin 3
- JBoss 4.0.x — please upgrade to JBoss 4.2.x

JavaScript Libraries

jQuery is the supported JavaScript library for plugin developers.

Advance notice — deprecated libraries: We have decided to standardise on jQuery as the JavaScript library for Confluence. This library will eventually replace all others. For this reason, use of the following JavaScript libraries in Confluence is **deprecated**:

- Prototype
- Scriptaculous

Because there is a lot of legacy plugin code using Prototype and Scriptaculous, these will continue to be available for this release of Confluence.

The **Yahoo! User Interface Library** (YUI) has been removed from this release, following its deprecation in Confluence 2.8.

Confluence Themes

Advance notice — The Confluence Classic Theme will be deprecated in a future release. Confluence 2.9 will be the last version that supports the Confluence Classic Theme. This theme uses outdated typography and formatting, which was replaced by the new-look Default Theme in Confluence 2.6. At that time, we introduced the Classic Theme to minimise the impact on customers who relied on the older typography. After Confluence 2.9, the Classic Theme will no longer be supported.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence home directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.

2. If your version of Confluence is earlier than 2.8.x, read the release notes and upgrade guides for all releases between your version and the latest version. In particular:
   - Please read the 2.8 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.7.0 first, confirm the upgrade was successful, then upgrade again from version 2.7.0 to version 2.8.2. For more details, please refer to CONF-11767.

3. Download the latest version of Confluence.

4. Follow the instructions in the Upgrade Guide.

5. If you encounter a problem during the upgrade, please create a support ticket and one of our support engineers will assist you through the process.

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RELATED TOPICS

Confluence 2.9 Release Notes

Issues resolved in Confluence 2.9

Below is the full list of issues resolved by Confluence 2.9. You can read the release notes here.

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Confluence 2.10.1 Release Notes

7 January 2009

Confluence 2.10.1 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

A bug was identified in Confluence version 2.10.0 that made the label parameter of the Content by Label Macro case-sensitive. This resulted in link breakages where differences existed in case usage between {contentbylabel} label parameter values and the page labels they referenced. However, this issue has now been fixed.

Another issue was identified in Confluence version 2.10.0 that prevented specific Confluence components (for example, those of the Rich Text Editor) from loading correctly when running Confluence behind certain proxy server configurations. For example, this may have become apparent when running Confluence behind an Apache HTTP Server using the mod_proxy connection module. This issue has also been fixed in Confluence version 2.10.1, along with a number of other issues.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.10 yet?

Take a look at the new features and other highlights in the Confluence 2.10 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.10.1 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (23 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-14329	viewfile macro does not work in case of umlauts in attachment name		Resolved	Fixed
	CONF-14108	Recently Updated Macro Documentation		Resolved	Fixed

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		Needs update			
	CONF-14049	Clarify source code shipped with product		Closed	Fixed
	CONF-14033	Documentation on support for platforms not x86 is unclear		Resolved	Fixed
	CONF-14032	Office Connector plugin shows vendor as unknown in the Plugin Manager		Resolved	Fixed
	CONF-14026	Upgrade to Atlassian Plugins 2.1.3		Resolved	Fixed
	CONF-14015	500page.jsp always reports Confluence User as anonymous		Resolved	Fixed
	CONF-14014	Word import with Office Connector can overwrite existing content without permission		Resolved	Fixed
	CONF-13998	In SharedMode the SpaceGroupFilter will filter out all search results if the user is not an administrator		Resolved	Fixed
	CONF-13987	Confluence 2.10 Standalone Default SSL Implementation Not Compatible With Tomcat 6		Resolved	Fixed
	CONF-13969	Content By Label macro now uses case sensitive label names		Resolved	Fixed
	CONF-13942	Rich Text editor does not display when Confluence is running behind Apache		Resolved	Fixed
	CONF-13934	The "purchasing it" link at the		Resolved	Fixed

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		footer of a Confluence page (under an Evaluation Licence) is incorrect.			
	CONF-13930	confluence-2.10-std README file needs to correct the jdk version.		Resolved	Fixed
	CONF-13900	Plugin being disabled after being upgraded or re-enabled		Resolved	Fixed
	CONF-13892	Plugin state conflict when plugin installed at same time as plugin state is checked.		Resolved	Fixed
	CONF-13865	Admin users should be able to see content in all spaces when using QuickNav		Resolved	Fixed
	CONF-13846	Wildcard and range queries always converted to lower case		Resolved	Fixed
	CONF-13702	Session must not be invalidated on logout		Resolved	Fixed
	CONF-13524	Left navigation theme displays "news operations" instead of "page operations" when viewing the left nav main menu categories		Resolved	Fixed
	CONF-9693	Exporting a space that is associated to a SpaceGroup causes an error (lazy init exception)		Resolved	Fixed
	CONF-9033	change-history macro produces a		Resolved	Fixed

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		IndexOutOfBoundsException when previewed on create page/news			
	CONF-8643	Rationalise FAQ		Resolved	Fixed

Confluence 2.10.1 Upgrade Notes

Confluence 2.10.1 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.10, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.10 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.10.2 Release Notes

18 February 2009

Confluence 2.10.2 is a recommended upgrade which fixes a security flaw and other issues.

Please refer to the security advisory for details of the security vulnerability, risk assessment and mitigation strategies.

Rich Text Editor fixes

A bug was identified in Confluence version 2.10, which affected the Rich Text Editor in Internet Explorer browsers. This bug prevented new content that was entered into a single line break between existing chunks of text from being saved. For instance, if a user placed their cursor on a single blank line (or line break) between two existing sections of text, entered new text (consisting of any number of paragraphs) and saved it, the new text would not be saved. This issue has now been fixed.

Another issue was identified in the Rich Text Editor which made text appearing immediately under an image concatenate with the image's Wiki Markup when the page content was saved. This prevented the image from being displayed. While inserting an additional line break between the image and text provided a workaround, this issue has now been fixed and this workaround is no longer required.

Content by Label Macro fixes

A bug was identified in the Content by Label Macro that prevented its sort parameter from functioning correctly. However, this has now been fixed. Furthermore, the performance of the Content by Label Macro has been improved.

With the release of Confluence 2.10, the default behaviour of the Content by Label Macro's **space** parameter was modified to **@self**. Due to customer feedback and popular demand, however, we reverted this parameter's

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default behaviour back to **@all**.

Other fixes

A stability issue was identified in Confluence version 2.10 which has now been fixed. However, a minor side effect has been identified which can result in some superfluous non-breaking spaces not being removed from the end of lines, when either saving a page or switching from the Rich Text Editor to Wiki Markup modes.

A bug was identified in Confluence version 2.10 that prevented Confluence from playing SWF files with Flash Player 10 in Internet Explorer. This has now been fixed.

Some issues were identified with the Code Block Macro in Confluence 2.10, which resulted in the removal of white space within a code block when switching from Wiki Markup to Rich Text Editor modes. However, a fix was introduced to mitigate these issues.

An issue was identified when Viewing Pages Alphabetically, which prevented Confluence from listing pages by specific letters of the alphabet when 1,000 or more pages started with any one letter of the alphabet. This issue has now been fixed.

When writing content in Wiki Markup, URLs containing accented characters now render correctly into links. Additionally, Confluence's French and German product interface translations have been improved.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.10 yet?

Take a look at the new features and other highlights in the Confluence 2.10 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.10.2 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (47 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-14840	Update Java Policy Security page for 2.10.x		Resolved	Fixed
	CONF-14744	Users may have to rebuild indices after performing migration		Resolved	Fixed
	CONF-14451	Attachments on Comments will not be indexed correctly		Resolved	Fixed
	CONF-14449	Attachment Manager allows for storing data		Resolved	Fixed

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		against history versions of a page			
	CONF-14429	"java.lang.NullPointerException at java.util.regex.Matcher.getTextLength(Unknown Source)" when importing a .doc file		Resolved	Fixed
	CONF-14424	Append new line character to end of code macro to mitigate loss of spaces in code macro		Resolved	Fixed
	CONF-14333	Internal system information is shown on the GUI for list of restricted pages		Resolved	Fixed
	CONF-14311	Document new Web UI plugin location		Resolved	Fixed
	CONF-14275	HTTP Header Injection vulnerability: os_destination value not properly escaped when used as redirect location		Resolved	Fixed
	CONF-14255	Disallow adding a child page under a page it cannot view in default theme		Resolved	Fixed
	CONF-14152	stylesheet.page.description in Colour Screen help tips		Resolved	Fixed
	CONF-14138	Confluence installed as a service seems to be started but the server start actually fails		Resolved	Fixed
	CONF-14136	Typo in screenshot for		Resolved	Fixed

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		attachment migration documentation			
	CONF-14129	Exporting to Word in anti-XSS mode will include html tags		Resolved	Fixed
	CONF-14119	Typo in warning message when changing Attachment Storage Configuration		Resolved	Fixed
	CONF-14101	HTML export skips file attachements with space characters (blanks) in their name		Resolved	Fixed
	CONF-14094	Confluence Support Request Improvements		Resolved	Fixed
	CONF-14069	Remote API rename feature should not allow duplicate titles		Resolved	Fixed
	CONF-14048	Incorrect German Translation for "Sign Up"		Resolved	Fixed
	CONF-14047	Remove contextPath from drop-down.js		Resolved	Fixed
	CONF-14023	Content By Label macro now defaults to showing content from the current space only		Resolved	Fixed
	CONF-14020	Upgrade to latest atlassian-gzipfilter to fix remote APIs		Resolved	Fixed
	CONF-14018	Rich Text mode doesn't save changes between linebreaks in IE		Resolved	Fixed
	CONF-14006	Get 500 when trying to		Resolved	Fixed

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		communicate to confluence via trusted apps.			
	CONF-14002	HTML export: Attachments are missing filetypes/extensions		Resolved	Fixed
	CONF-13974	Confluence does not play SWF file in Internet Explorer when using Flash Player 10 (it works when using flash player 9)		Resolved	Fixed
	CONF-13965	CPU Spike: DefaultWysiwygConverter.convertXHtmlToWikiMarkup risks blowing the stack		Resolved	Fixed
	CONF-13937	Incorporate more German and French Translations		Resolved	Fixed
	CONF-13825	NullPointerException when thumbnail cannot be generated		Resolved	Fixed
	CONF-13824	Images and text concatenated by RTE save operation, also causing image markup to be escaped.		Resolved	Fixed
	CONF-13707	Inserting image of size bigger than attachment limit yields "Page Not Found" error		Resolved	Fixed
	CONF-13694	PATCH: Confluence sets incorrect content type for css files bundled in war		Resolved	Fixed
	CONF-13677	Cannot update the name of a space using storeSpace(Strin		Resolved	Fixed

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		g in0, RemoteSpace in1)			
	CONF-13588	Users should not have to click Refresh to update their license count after removing a user		Resolved	Fixed
	CONF-13435	mismatched tag. Expected:		Resolved	Fixed
	CONF-13119	Pressing the search button always appends previous search query to proposed new query.		Resolved	Fixed
	CONF-13028	Paging to the ninth result set of any pagination displays "one" twice in pagination choices		Resolved	Fixed
	CONF-12809	Anonymous Users can still see links to the people directory even when disabled		Resolved	Fixed
	CONF-12707	Accented characters (all non-ascii?) cause link rendering to fail		Resolved	Fixed
	CONF-12475	RSS feeds created by Space->Advanced ->Rss Feeds do not respect the base server url		Resolved	Fixed
	CONF-11795	Export With {toc} Causes NullPointerException		Resolved	Fixed
	CONF-10174	Pages created with restrictions show restrictions as created by Anonymous		Resolved	Fixed

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	CONF-9715	Confluence crash can result in empty confluence.cfg.xml file.		Resolved	Fixed
	CONF-9635	System Error when accessing via a TinyURL that ends with a dash		Resolved	Fixed
	CONF-9213	PageManager can create Duplicate Pages		Resolved	Fixed
	CONF-8865	Improve content-by-label macro performance		Resolved	Fixed
	CONF-5322	Add sorting options to the contentbylabel macro		Resolved	Fixed

Click here to open a report on http://jira.atlassian.com for Resolved or Closed issues in Confluence 2.10.2.

Confluence 2.10.2 Upgrade Notes

Confluence 2.10.2 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.10, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.10 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.10.3 Release Notes

15 April 2009

Confluence 2.10.3 is a recommended upgrade which fixes some security flaws and other issues.

Please refer to the security advisory for details of the security vulnerabilities, risk assessments and mitigation strategies.

General Fixes

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A bug was identified, whereby viewing or editing restrictions could not be assigned to a page, whose parent page contained an apostrophe in its title and also possessed existing page restrictions. This bug has now been fixed.

When a user is restricted from viewing a page, Confluence presents them with a more informative **Access Denied** error rather than a general **Page Not Found** error.

When the {gallery} macro is used on a page with no parameters or image attachments, it would render into an error in HTML or PDF exports. This issue has now been fixed.

An issue was identified whereby under certain circumstances, clicking on a page's or blog's thumbnail image to expand it would result in a Runtime Error in Internet Explorer versions 6 and 7. This issue has now been fixed.

Widget Connector Plugin

Several new features have been added to the Widget Connector Plugin packaged with Confluence 2.10.3, including support for new widget, video and micro-blogging sites. Other supported features include Google Calendar and the Wufoo HTML Form Builder. For more information on how to add these features to your Confluence page or blog, refer to Widget Connector Macro.

Episodic made changes to the format of IDs they designate for all new videos, allowing them to be alphanumeric rather than solely numeric. The Widget Connector plugin has been updated to support this new URL format.

Engine Room Fixes

An issue was identified in Confluence's PDF Export feature that could result in memory leaks. These in turn may have affected the performance and stability of Confluence instances. This issue has now been fixed.

A few other issues were identified which under certain or specific circumstances, could affect the stability of Confluence. However, these have now been fixed.

There's a complete list of fixes below. Click a specific issue to see details of the fix.

Don't have Confluence 2.10 yet?

Take a look at the new features and other highlights in the Confluence 2.10 Release Notes.

Download Latest Version

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.10.3 Upgrade Notes. We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Updates and Fixes in this Release

JIRA Issues (31 issues)					
Type	**Key**	**Summary**	**Priority**	**Status**	**Resolution**
	CONF-21022	Provide option to return unauthorized message rather than 404 when user does not have permissions for page		Resolved	Won't Fix

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	CONF-17439	Fix the 2.10 patch for link insertion point in IE RTE		Resolved	Fixed
	CONF-15541	Previewing a page does not display long content when Confluence is embedded in a frame		Resolved	Invalid
	CONF-14988	SAXParser memory leaks		Resolved	Fixed
	CONF-14922	com.sun.pdfview.font.Type1CFont.readCommand(Type1CFont.java:357) consumes 100% CPU, blocks all other pdf threads		Resolved	Fixed
	CONF-14849	Discarding a draft and refreshing the page results in an error		Resolved	Fixed
	CONF-14775	Add new filter and response wrapper to prevent header injection attacks		Resolved	Fixed
	CONF-14753	XSS vulnerability can be exploited with the Page Index macro		Resolved	Fixed
	CONF-14704	Impropper sanitisation of attachment filenames allows header injection		Resolved	Fixed
	CONF-14537	Can not alter the permissons on a page, if the parent page has permissions and the parent has an apostrophe in the page name. Similar to CONF-10717		Resolved	Fixed
	CONF-14510	Fix upgrade tasks that access the		Resolved	Fixed

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		database through a connection from the HibernateSession which is later garbage collected			
	CONF-14493	Password is being logged for 500 errors		Resolved	Fixed
	CONF-14386	Empty gallery macro throws error in HTML and PDF export		Resolved	Fixed
	CONF-14337	XSS in the Widget Connector		Resolved	Fixed
	CONF-14326	Site search query box and submit button too small with Left Nav theme and Clickr theme		Resolved	Fixed
	CONF-14310	Studio plugins: Using components not available to plugins		Resolved	Fixed
	CONF-14178	System error when adding users to a group if the group name contains a space		Resolved	Fixed
	CONF-14127	New evaluation expiry message		Resolved	Fixed
	CONF-14102	anti-XSS mode breaks RTE-by-default editing and view page source		Resolved	Fixed
	CONF-14092	AspectJ caused CAC crash 2008-12-31		Resolved	Fixed
	CONF-13785	Errors when exporting demonstration space after migration to 2.10-m8		Resolved	Fixed
	CONF-13771	HTML export		Resolved	Fixed

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		results in NPE from requireResource velocimacro when used by plugins			
	CONF-13494	SOAP calls break when trying to write {tasklist} macro in contents		Resolved	Fixed
	CONF-13331	Search box display issue when not using default theme in IE and FireFox		Resolved	Fixed
	CONF-13316	NullPointerException thrown if user cannot move attachments		Resolved	Fixed
	CONF-13063	Confluence Advanced Search Pane search text box is flattened vertically in 2.91 using Left Navigation Theme		Resolved	Fixed
	CONF-12835	Error in Java Script when adding an image thumbnail and clicking on it		Resolved	Fixed
	CONF-12366	Image width and height are to 32 by wysiwyg editor for missing image files.		Resolved	Fixed
	CONF-11552	height and width of embedded movies is changed to 32 by Rich Text Editor		Resolved	Fixed
	CONF-9239	"Page not found" (404) is displayed to users without view permissions, should be "Access denied"		Resolved	Fixed

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	CONF-8130	image link breaks if the target is renamed		Resolved	Fixed

Click here to open a report on http://jira.atlassian.com for Resolved or Closed issues in Confluence 2.10.3.

Confluence 2.10.3 Upgrade Notes

Confluence 2.10.3 is a recommended upgrade which fixes some security flaws as well as other bugs. You'll find details of the fixes in the release notes.

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your `confluence.home` directory and database**.
2. If your version of Confluence is earlier than 2.10, read the release notes and upgrade guides for **all releases** between your version and the latest version. In particular:
   - Please read the 2.10 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.

Confluence 2.10.4 Release Notes

Please skip this version and upgrade to Confluence 3.0 or later

Please be advised that there is a known bug in Confluence 2.10.4, whereby the `ehcache.x ml` file is completely missing and there is no 'Cache Statistics' link on the Administration console. If the link `http://.../admin/cachestatistics.action` is directly accessed, a blank page is returned with no cache statistics details. Please upgrade to the latest version of **Confluence 3.x**, as indicated in the release notes. If you cannot upgrade to Confluence 3.x, please contact our support team.

Confluence 2.10.4 is the **standard edition** version of Confluence 2.10.x. This version of Confluence is equivalent to Confluence version 2.10.3, but it does not include Oracle's Coherence technology. Due to licensing changes with Oracle over the Coherence clustering and distributed caching technology, Atlassian is no longer able to distribute this technology to customers without a Confluence clustered license.

Therefore, Atlassian has released 'standard editions' for each previous major version of Confluence back to 2.6, which includes Confluence versions 2.10.4, 2.9.3, 2.8.3, 2.7.4 and 2.6.3. Confluence 2.10.4 will be the only Confluence 2.10.x version available to customers with a non-clustered Confluence license.

For its caching functionality, Confluence 2.10.4 utilises Ehcache. This functionality was provided by the Coherence technology in previous Confluence 2.10.x versions.

For more information about the features, updates and fixes in Confluence 2.10.3, please refer to the Confluence 2.10.3 Release Notes.

Upgrading from a Previous Version of Confluence

Upgrading Confluence should be fairly straightforward. Please read the Confluence 2.10.3 Upgrade Notes.

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However, if you have customised the cache settings in your installation of Confluence (e.g. for performance reasons), then please read the Confluence 3.0.1 Upgrade Notes for important information about transferring your caching layer customisations from Coherence to Ehcache.

We *strongly recommend* that you back up your `confluence.home` directory and database before upgrading.

Confluence 2.10 Release Notes

> Confluence 2.10 fixes some security flaws. Please refer to the security advisory for details of the security vulnerabilities, risk assessment and mitigation strategies.

3 December 2008

With great pleasure, Atlassian presents **Confluence 2.10**.

Confluence 2.10 is a major release which presents a number of new features and enhancements. With Confluence 2.10 we introduce the new **Widget Connector**, an easy way to embed multi-media content from all over the web directly into your Confluence page. Add Youtube videos, Flickr slide shows and Google Gadgets just to name a few. Now that the improved **Office Connector** is bundled with Confluence 2.10, you can also display the contents of attached documents, spreadsheets, presentations, and PDFs directly on any page. Also, with the new Office Connector, you can now view the contents of attachments using the new 'View' feature from the attachments page, or from a search.

In Confluence 2.10, finding all your content in Confluence is a lot easier. With **Quick Navigation** just start typing in the search box and immediately see suggested results. With **OpenSearch** autodiscovery, you can add Confluence search to your Firefox or IE7 search box with just one click. And with **'Did You Mean'**, you no longer have to worry about mistyping search terms since Confluence now suggests corrections to misspelled words. Take a look at the **new search results page**, you'll find the right page, attachment or person far more easily.

You can better control your avatar with new **profile picture cropping** and spruce up your personal space with **c ustom stylesheets.** Page editing has become more reliable through an upgrade to our **rich text editor** which now supports Safari and has a new styles dropdown. JIRA users will be delighted to use our new **JIRA Issues Macro** with drag and drop column sorting, paging and support for custom fields.

Confluence administrators will benefit from improved user management, a broader range of supported wikis for the **Universal Wiki Converter** and some good performance improvements.

Please see our **overview video** to see a demonstration of the new features in Confluence 2.10.

Highlights of this Release:

- Introducing the Widget Connector
- Improved Office Connector Now Bundled
- Introducing Quick Navigation
- 'Did You Mean', OpenSearch and More
- Custom Stylesheets for Confluence Spaces
- Updated JIRA Issues Macro with Custom Fields and Dynamic Display
- Enhanced User and Group Management
- Upgraded Rich Text Editor
- Universal Wiki Converter now with SharePoint Import and More
- Improved Activity Macros
- Plugin Framework 2
- More than 250 Fixes and Improvements

Responding to your Feedback:

720+ votes satisfied
11 new feature requests implemented

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DOWNLOAD latest version

- Thank you for all your issues and votes. Keep logging, to help us keep improving!
- Below is a list of the highlights in this release.
- Attached is the full list of issues resolved in this release.

Upgrading from a previous version of Confluence
• Upgrading Confluence should be fairly straightforward. ***We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*** • Please refer to the Confluence 2.10 Upgrade Notes for further essential information about **plu gins** and other factors affecting your upgrade.

Highlights of Confluence 2.10

1

Introducing the Widget Connector

Now you can embed multi-media content from other web sites into a Confluence page. Bring your wiki page to life with Google Gadgets, videos, slide shows, Twitter messages and more. Simply type the word '{widget}' and give it the web address of the content you want to embed.

- Gadgets: Google Gadgets.
- Videos: YouTube, MySpace Video, Google Video, Episodic, Vimeo, Metacafe, blip.tv, Viddler.
- Photos and images: Flickr, Skitch.com.
- Micro-blogging: Twitter, FriendFeed.
- Documents and presentations: SlideShare, SlideRocket, Scribd, presentations on Google Docs.
- Our documentation shows you what to do.

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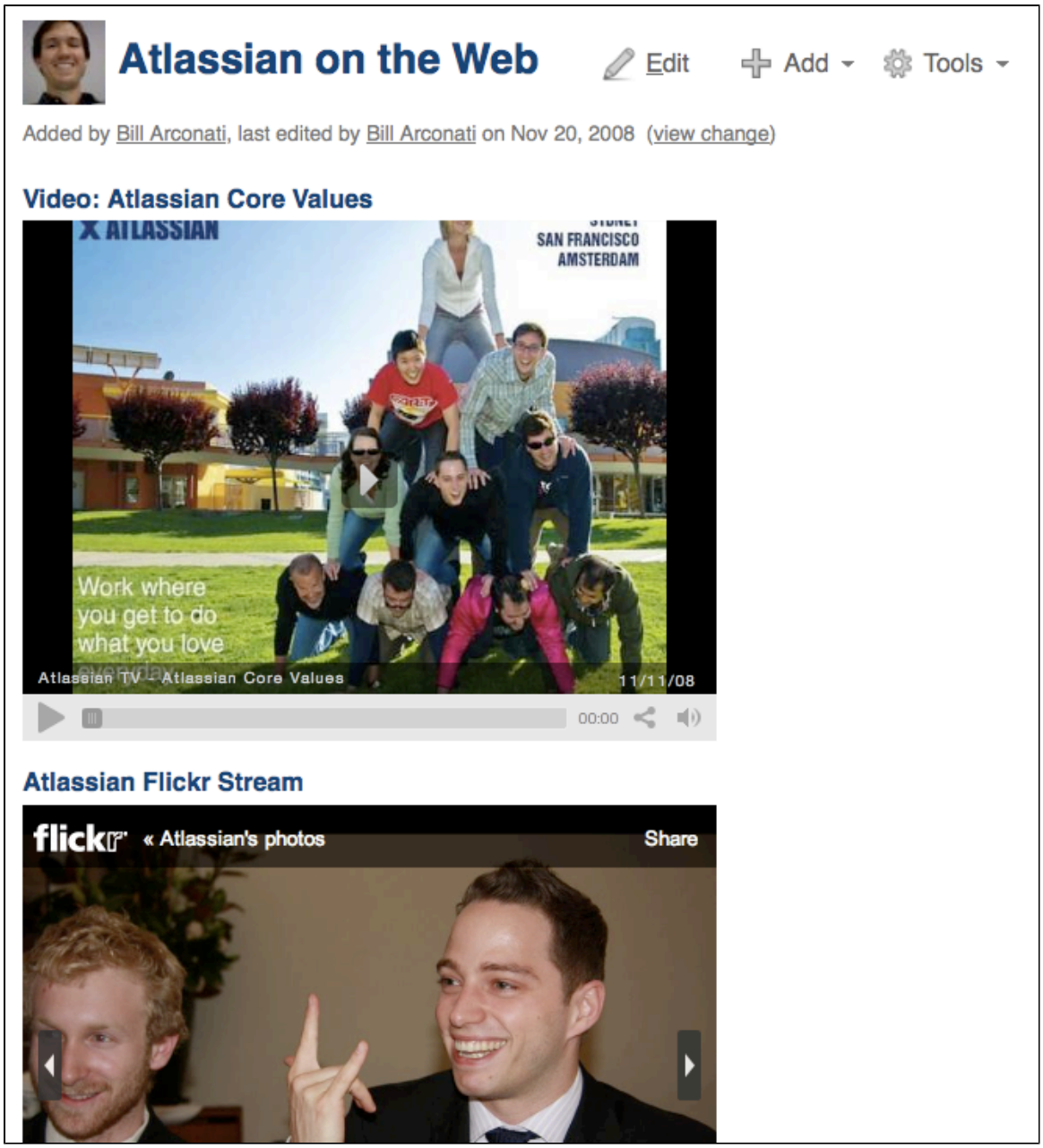

2

Improved Office Connector Now Bundled

The Office Connector is shipped as part of Confluence 2.10. There is no need to install it separately. Use the Office Connector to create and edit rich content for Confluence using Microsoft Office or OpenOffice.

- The new 'View' feature lets you view Office documents from the Search results, from the Attachments page and from a list of attachments displayed by the Attachments macro. You do not need to have Offic installed on your machine to view an Office document in Confluence.
- We have also fixed a number of bugs in the Office Connector. See the list of fixes.
- See all the features of the Office Connector in our documentation.

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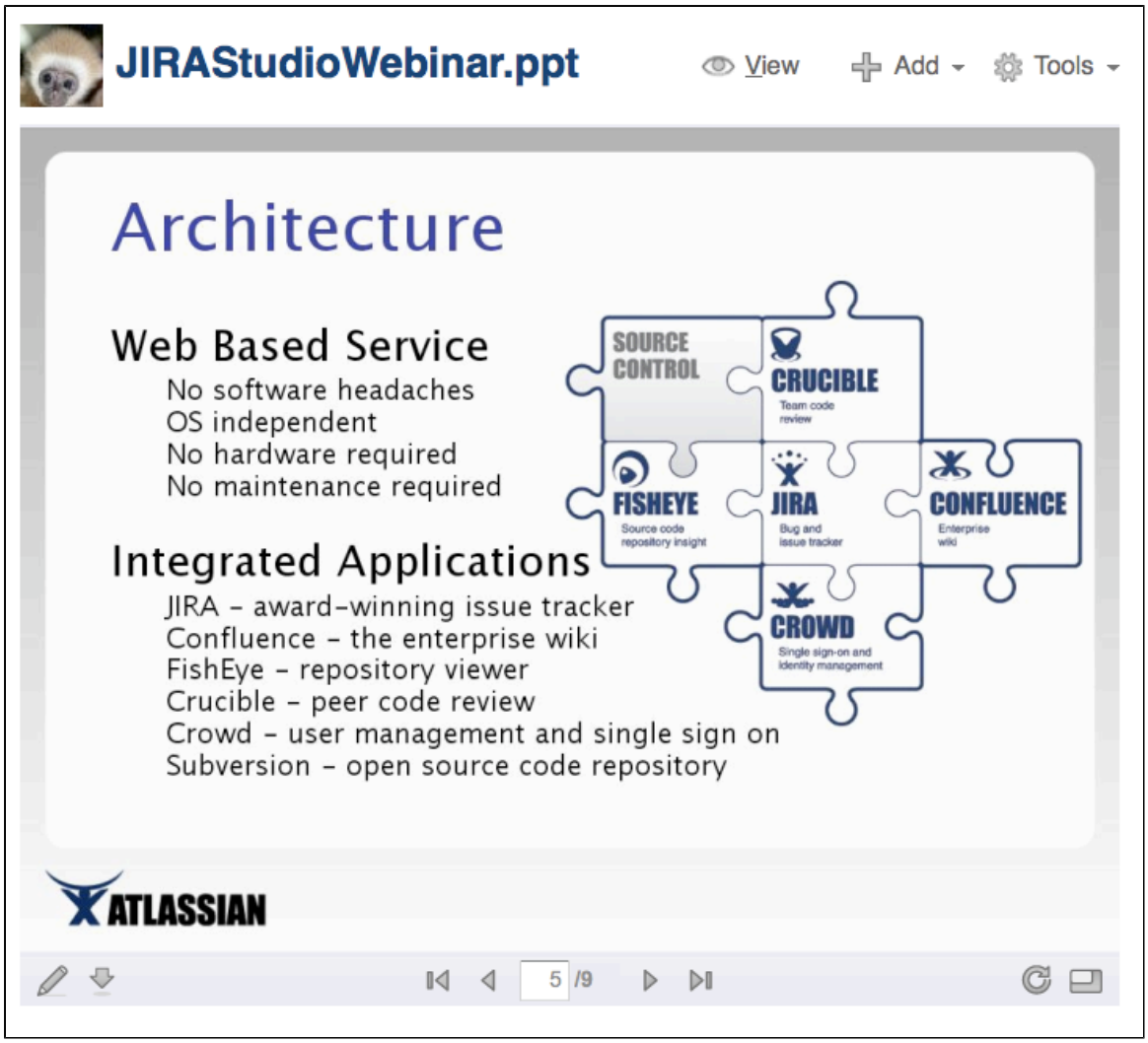

3

Introducing Quick Navigation

Confluence's search box now offers a quick navigation feature, the fastest way to find content in Confluence.

- Start typing your search term. Confluence matches titles as you type, showing a quickly-adjusting list of pages, news items, personal profiles, attachments and so on.
- The matching items are grouped by content type so that you can quickly find the type you want.
- When the matching item is a person's name, their profile picture appears next to their name in the list.
- Still not found what you are looking for? Click the 'Search' option at the bottom of the list to do a full search.

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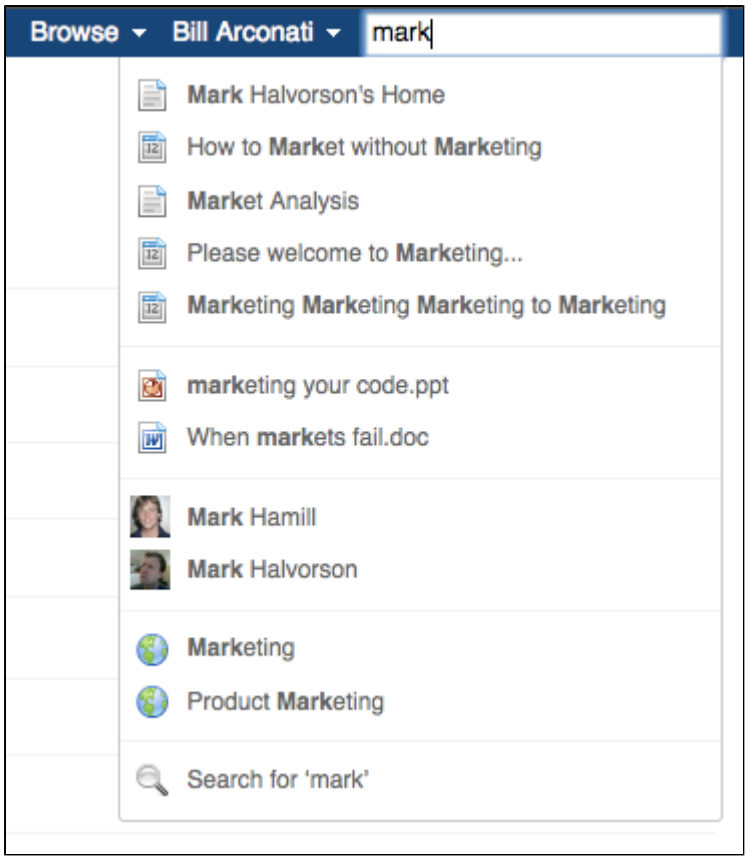

4

'Did You Mean', OpenSearch and More

Confluence 2.10 includes a number of improvements to the Search functionality.

- Find what you're looking for even if you mistype your search term. Confluence's new 'Did you mean' feature analyses your search term and suggests an alternative spelling to give you more relevant searcl results.
- You can now search Confluence from the convenience of your browser's search box, if you are using Firefox or IE7. Just add your Confluence site as a search provider, via the dropdown menu next to the browser's search box. This is because Confluence now supports the autodiscovery part of the OpenSea h standard.
- We have also improved the layout of the Search screen so that it is easier to read. The titles now stand out more and a longer extract is shown.
- If the matching item is a person, the profile picture and other profile information appear in the search results.
- If the matching item is an attached Office document, a new 'View' link allows you to view the document online.
- There is a search box at the bottom as well as the top of the screen, so you do not need to scroll up to enter a new search term.
- The 'Clear Filter' link replaces the old 'Clear Search', and now just clears the filter criteria instead of the entire search.
- When ranking the search results, Confluence now gives slightly higher priority to pages created recently
- Take a look at our documentation for full details of the new features.

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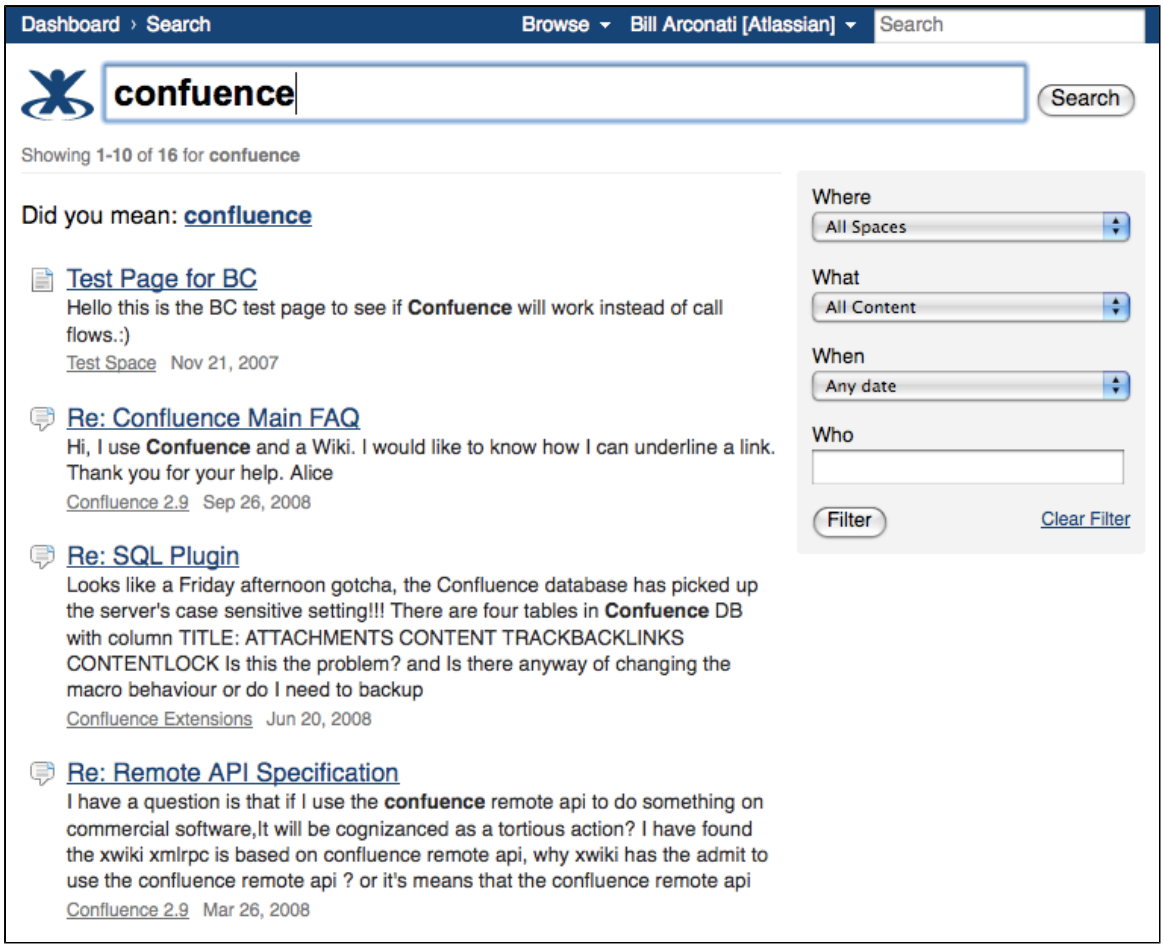

5

Custom Stylesheets for Confluence Spaces

Change the look of your Confluence space by specifying your own CSS styles. Cascading Style Sheets (CSS) are the standard way of styling web pages.

- For example, you might choose to change the background for the header at the top of each Confluence page. See our tutorial.
- Or you might change the look of the tabs in your Space Admin screens, as described in this example.
- To get started, take a look at our documentation.

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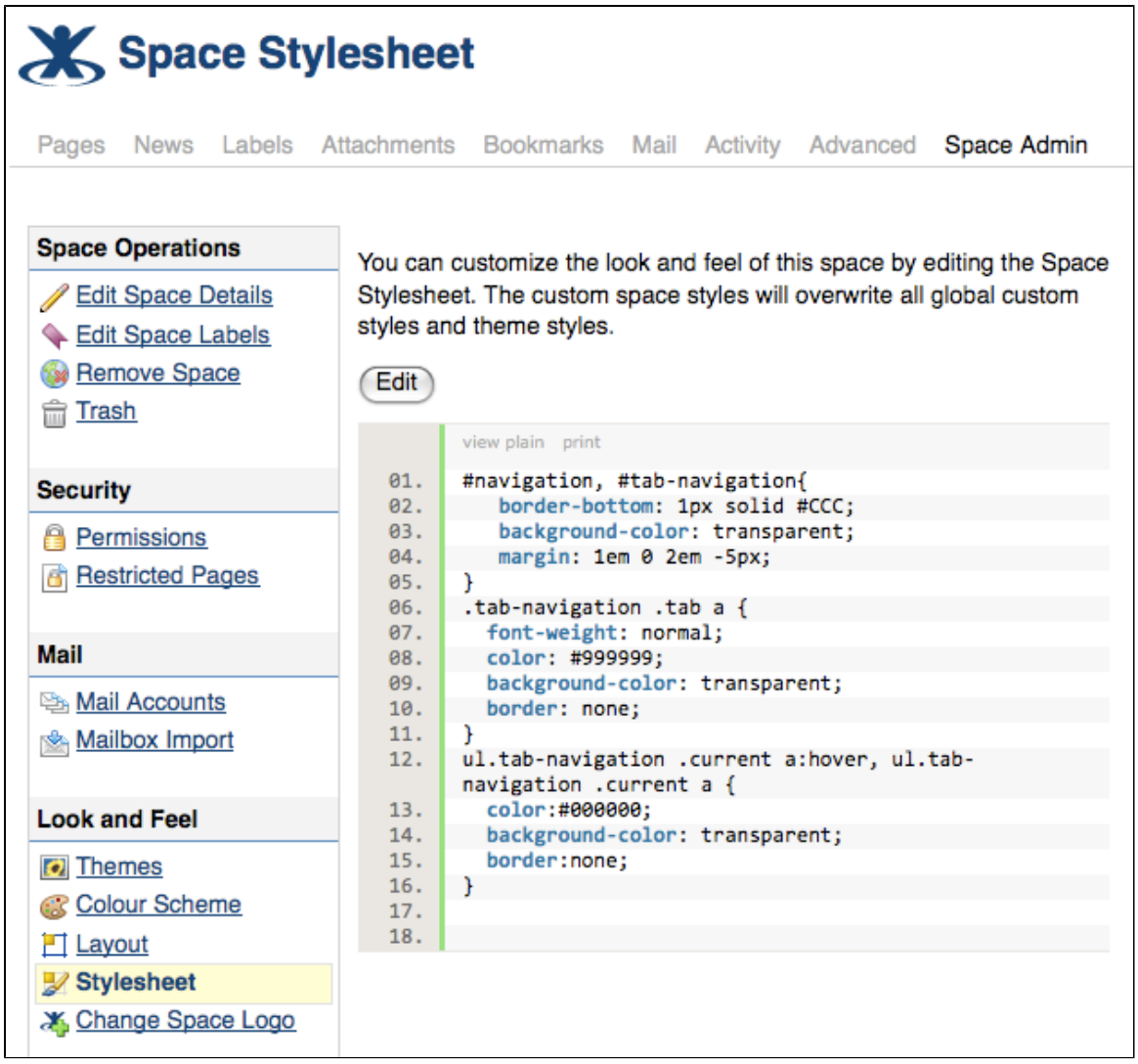

6

Updated JIRA Issues Macro with Custom Fields and Dynamic Display

The JIRA Issues macro now gives you more control both when viewing the output and when coding the macro.

- Specify any JIRA field as a column for display, including custom fields.
- Click the column headers to sort the output.
- Drag and drop the columns into a different order.
- Temporarily remove a column from the display.
- Click the triangle at top right of the issue table to collapse the table.
- Retrieve a page of issues at a time, rather than a huge list all at once.
- Take advantage of the improved performance of your JIRA site. The JIRA Issues macro now caches the results for anonymous users and for results retrieved using trusted communication. This should improve the performance of your JIRA site if you have set it up for trusted communication, because Confluence r longer needs to access the JIRA site as often.
- Our documentation tells you how to use the macro.

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Jira Issues

Key	Summary	Status
JRA-16054	HTML entities are not encoded as part of the XML backup, causing failure during restore	Needs Verification
JRA-16003	Base URL in Trusted Applications page accepts illegal characters	Open
JRA-15982	"Created Before" search does not match help text	Open
JRA-15980	Lotus Notes HTML and email handler	Open
JRA-15966	Public sign up is denied on some pages, if external user management is ON	Open
JRA-15959	MultiSelectCFType.getSingularObjectFromString returns incorrect object	Open
JRA-15950	Mantis importer duplicates some log messages	Open
JRA-15932	Unable to send warning e-mails about subscriptions during upgrade from 3.7.2 to 3.13.	Open
JRA-15931	Get velocity warning during upgrade of the attached data	Open
JRA-15925	Text emails include a condition not to display issue priority value. This should not be the case.	Open

Page 1 of 19 Displaying 1 to 10 of 184 items

7

Enhanced User and Group Management

Searching for users and adding users to groups is now much easier.

- You can add and remove users directly from the group management screen. This allows you to manage the group membership for a number of users at the same time.
- The new user search offers a simple and an advanced option. With the simple option, just type all or par of the person's name, username or email address. If you want to restrict your search, use the advanced option to specify the field you want searched. Or you can search for users in a specific group.
- A new user picker lets you select the people you need from the list of matching users. This makes thing much easier when adding members to a group, or when assigning page permissions and space permissions.

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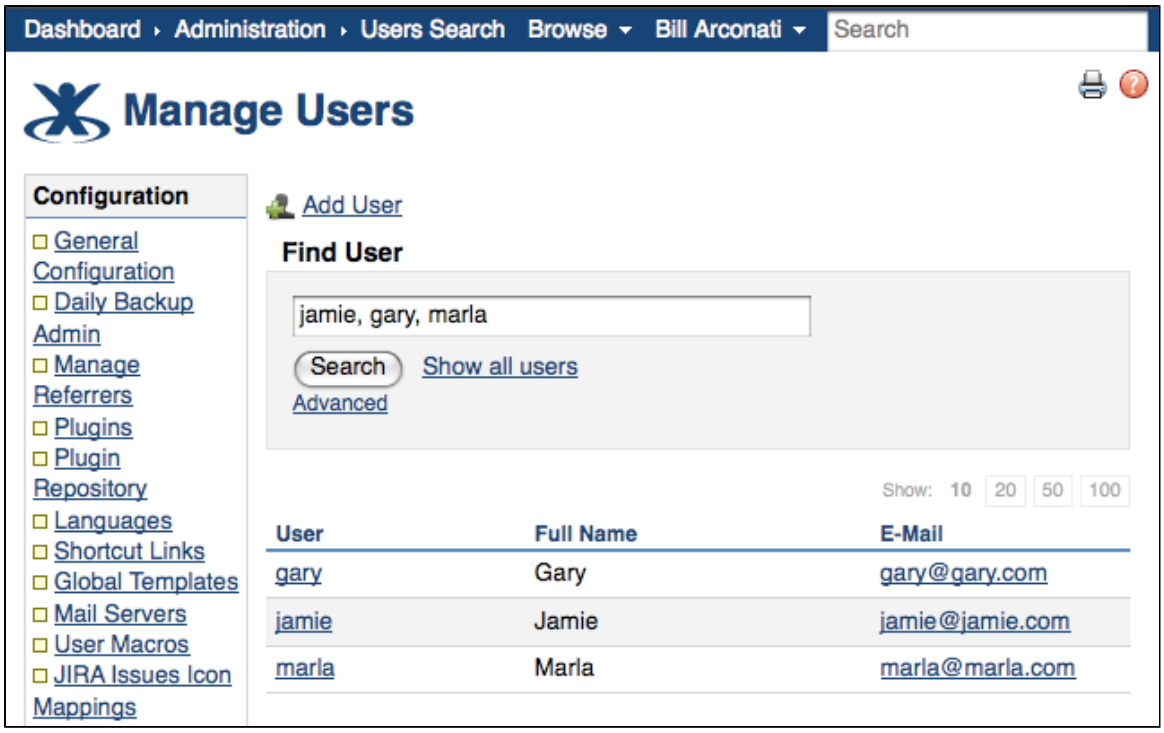

8

Upgraded Rich Text Editor

Confluence 2.10 brings many improvements to the Rich Text Editor and is a big step along the way to a great WYSIWYG experience.

- You can now use Safari to create and edit Confluence pages.
- The styles dropdown list now illustrates the format of each style, such as 'Heading 1', 'Heading 2' and sc on.
- Tables are easier to insert and edit.

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9

Universal Wiki Converter now with SharePoint Import and More

The Universal Wiki Converter (UWC) allows you to import content from other wikis into Confluence. Coinciding with the release of Confluence 2.10, there are some great improvements to this useful tool.

- You can now import pages from SharePoint wiki libraries, as well as other wikis, into Confluence.
- The UWC's enhanced user interface allows you to drag and drop wiki pages onto the UWC screen for conversion to Confluence.
- A new link on the Confluence Administration Console gives easy access the Universal Wiki Converter documentation and download pages.
- There is a new command-line interface to the UWC.
- The UWC also offers a new converter for Vqwiki, improvements to the Swiki converter, and more.

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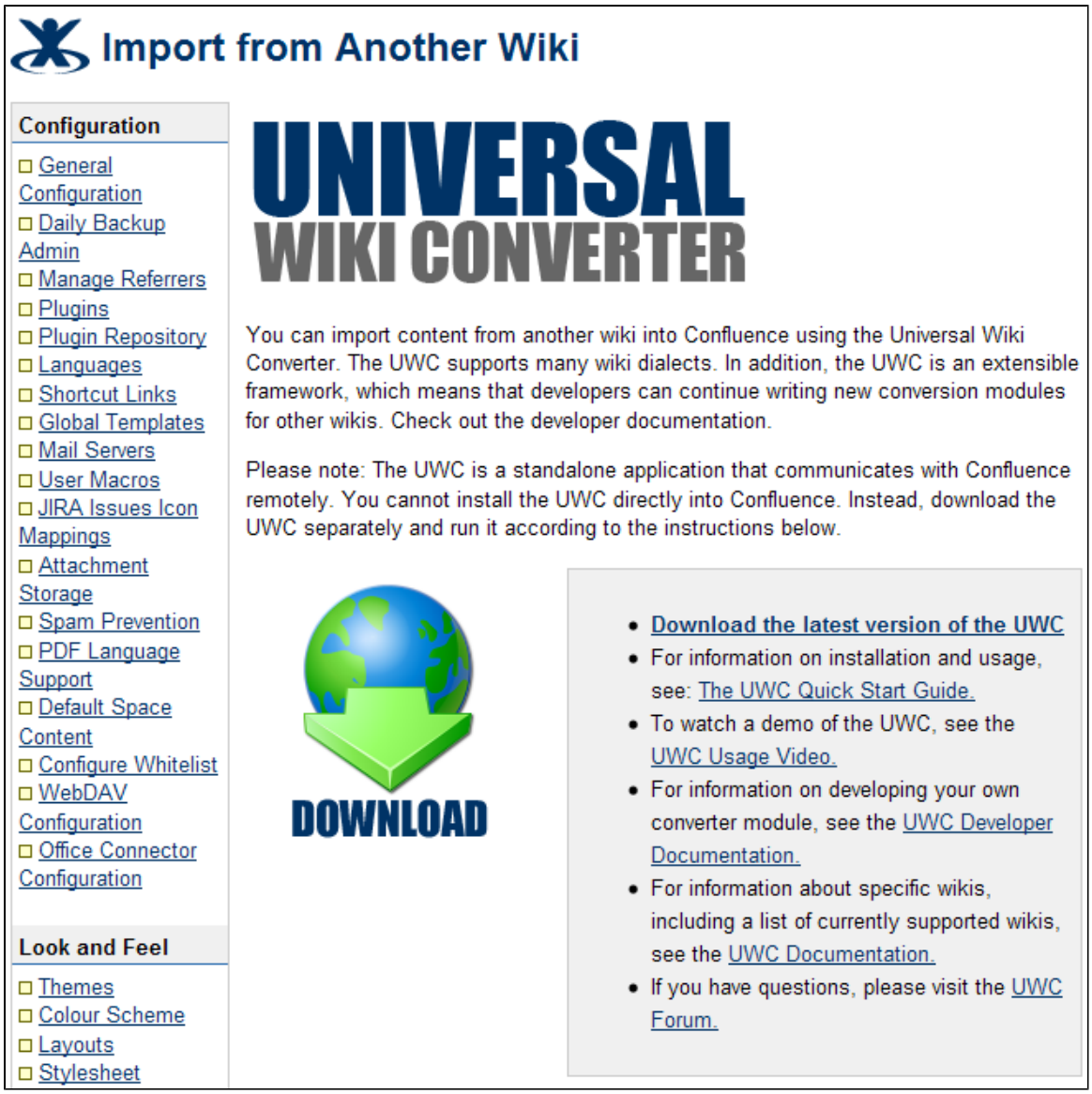

10

Improved Activity Macros

The Blog Posts macro, Recently Updated macro and Content by Label macro now support a common set of parameters, making it easier to code the macros and display the content you need.

- Filter content by author, label, space or content type.
- Use a minus sign (-) to exclude specific values. For example, using the 'author' parameter you can spec `author=-hpotter,hgranger,adumbledore`. You will get content which has been created/updated by either 'hgranger' or 'adumbledore' (or both) but 'hpotter' has not touched.
- Sort the resulting list of items by title, date created or date modified, in ascending or descending order.

For the HTML Include macro and the RSS macro, you can now specify a 'whitelist' of allowed URLs. This will improve the security of your Confluence site, because it can be dangerous to include content from untrusted external sites. Our documentation shows you how to specify the whitelist.

11

Plugin Framework 2

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Confluence 2.10 comes with Atlassian's new Plugin Framework 2.1, based on Spring Dynamic Modules using a embedded OSGi container. The new framework lays the groundwork for the following improvements:

- More robust Spring component plugins.
- The ability for plugins to depend on each other.
- Control over plugin load order.
- The ability for plugins to define their own extension points.
- More consistent plugin APIs between products.
- More consistent plugin behaviour across different versions of Confluence.

Take a look at our developer documentation. The new plugin framework is under development. Here are some uidelines on converting your existing plugins to the new framework. We'd be delighted to have your feedback v our JIRA project.

12

More than 250 Fixes and Improvements

- A new attachments icon 1 on the first line under the title of a page tells you that there are files attache to the page, as well as how many attachments.
- A new lock icon marks pages which have view or edit restrictions.
- The Demonstration Space included in the Confluence download now has more sample content. We hav adapted pages from our own development, human resources and sales teams, to give some ideas on how your organisation might use Confluence.
- The default home page for a space now includes a list of recently updated content, a search input box and a tree view of the pages in the space. The default home page is created when you add a space. Yo can edit the home page to include or remove any content as required.
- You can now crop and tailor your profile picture and delete any profile pictures that you no longer want.
- There is no longer any need to re-create the database indexes manually during the upgrade procedure. From Confluence 2.10, the upgrade process will automatically re-create the indexes.
- Trusted authentication and other Seraph-based authentication methods are now available for calls to the Confluence RPC methods. This makes it practical to write front-end AJAX functionality which uses the remote API to retrieve or modify Confluence data.
- Take a look at the complete list of issues resolved in Confluence 2.10.

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Sarah Maddox

Universal Wiki Converter
Laura Kolker

Confluence 2.10 Upgrade Notes

Below are some essential notes on upgrading to **Confluence 2.10**. For details of the new features and improvements in this release, please read the Confluence 2.10 Release Notes.

On this page:

- Upgrade Notes
  - Enabling the New Quick Navigation Feature on Customised Confluence Sites
  - Crowd and the User Search
  - RSS and HTML macro whitelists
  - Plugins
  - Java Versions
  - Platforms No Longer Supported
  - JavaScript Libraries
  - Confluence Themes
  - End of Life of SnipSnap Import
  - No Need to Re-Create Database Indexes Manually
- Upgrade Procedure

Upgrade Notes

Enabling the New Quick Navigation Feature on Customised Confluence Sites

If you have customised your Main Layout on either the space or the global level, or if you have a custom theme plugin, the new quick navigation feature will not work immediately for you.

To enable quick navigation, you need to add the following statement to your Main Layout anywhere before the `#standardHeader()` statement:

```
#requireResourcesForContext("main")
```

Crowd and the User Search

Confluence 2.10 includes a much-enhanced user search. (See the release notes.) If you are using Atlassian's Crowd for user management, you will need Crowd 1.5.1 or later to use the 'Simple' option in the user search. If your version of Crowd does not support the simple user search, you will see only the 'Advanced' search form. Please consider upgrading your Crowd version, to take advantage of the advanced user search.

RSS and HTML macro whitelists

To improve the security of a default installation of Confluence, macros which display HTML from external sources now use a whitelist of URLs configured by the Confluence administrator. This affects the RSS and HTML include macros.

See Configuring a URL Whitelist for Macros for instructions on how to configure a list of allowed URL patterns

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for the RSS and HTML macros in Confluence 2.10.

Plugins

If you are using any third-party plugins on your Confluence instance, please test them thoroughly before rolling 2.10 into production.

Java Versions

Java 1.4 is not supported in Confluence 2.9 and later. Please refer to the Java 1.4 Support Timeline for more information.

Before upgrading to Confluence 2.10, you will need to ensure your environment is running at least Java 5. Confluence 2.10 supports Java 5 and Java 6. We recommend Java 6 because of its increased performance and easier troubleshooting, due to enhanced memory dump and profiling capabilities.

You can check your current Java version in Confluence:

1. Choose **Browse** > **Confluence Admin**.
2. Select '**System Information**' from the '**Administration**' section in the left-hand panel.
3. Refer to '**Java Version**'.
    - If the version is 1.5 or higher, you do not need to do anything.
    - If the version is 1.4, you need to upgrade your JDK before you can upgrade to Confluence 2.10.

If you are running the Confluence EAR-WAR edition against your own application server, you will need to check with your application server vendor about which JDK versions are supported.

Platforms No Longer Supported

The following platforms were on the 'unsupported but working' list for Confluence 2.9. They are not on that list as of Confluence 2.10. We will still test those platforms infrequently, and Confluence will probably still work fine with them for a while, but they will not be officially supported.

- MySQL 4.1 — please upgrade to MySQL 5
- Tomcat 5.0 — please upgrade to Tomcat 5.5 or 6
- Resin 2 — please upgrade to Resin 3
- JBoss 4.0.x — please upgrade to JBoss 4.2.x

Please refer to the list of supported application servers and databases on our Supported Platforms topic for the updated matrix.

There is a workaround to enable MySQL 4.1.x.

JavaScript Libraries

jQuery is the supported JavaScript library for plugin developers.

Advance notice — deprecated libraries: We have decided to standardise on jQuery as the JavaScript library for Confluence. This library will eventually replace all others. For this reason, use of the following JavaScript libraries in Confluence is **deprecated**:

- Prototype
- Scriptaculous

Because there is a lot of legacy plugin code using Prototype and Scriptaculous, these will continue to be available for this release of Confluence.

The **Yahoo! User Interface Library** (YUI) is no longer supported, following its removal in Confluence 2.9.

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Confluence Themes

The Confluence Classic Theme is no longer supported, following its deprecation in Confluence 2.9. This theme uses outdated typography and formatting, which was replaced by the new-look Default Theme in Confluence 2.6. At that time, we introduced the Classic Theme to minimise the impact on customers who relied on the older typography.

When you upgrade to Confluence 2.10, an upgrade task runs to do the following:

- Any space with the Classic Theme configured will be migrated to use the Default Theme.
- If your Global Theme is set to use the Classic Theme, the Global Theme is also migrated to the Default Theme.
- The Classic Theme plugin is uninstalled. (The Classic Theme entry in the database is removed.)

End of Life of SnipSnap Import

Advance notice — EOL SnipSnap import: Confluence 2.10 is the last release which will include the SnipSnap Import option in the Confluence Administration Console. From the next release after Confluence 2.10, the SnipSnap import will no longer be available.

No Need to Re-Create Database Indexes Manually

In previous releases of Confluence, you needed to manually re-create the database indexes during the upgrade procedure. For this purpose, we provided a set of SQL statements as an attachment to the Upgrade Guide. From Confluence 2.10, the upgrade process will automatically re-create the indexes. Please refer to the Upgrade Guide.

Upgrade Procedure

> **Upgrade a test environment first**
>
> As always, please test your upgrades in your test environment before rolling into production.

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you back up your Confluence Home Directory and database. See the documentation on backing up your Confluence site. If you are using an external database, perform a database backup.
2. If your version of Confluence is earlier than 2.9.x, read the release notes and upgrade guidesfor all releases between your version and the latest version. In particular:
   - Please read the 2.9 upgrade notes.
   - If you are upgrading from 2.1 or earlier, please read the 2.2 release notes.
   - If you are upgrading from 2.2 or earlier, you will need to upgrade to Confluence 2.5.8 first, confirm the upgrade was successful, then upgrade again from version 2.5.8 to the latest. For more details, please refer to CONF-11767.
3. Download the latest version of Confluence.
4. Follow the instructions in the Upgrade Guide.
5. If you encounter a problem during the upgrade, please create a support ticket and one of our support engineers will assist you through the process.

RELATED TOPICS

Confluence 2.10 Release Notes

Issues resolved in Confluence 2.10

Below are the issues resolved in Confluence 2.10, ordered by number of votes. For the full details of the fixes, improvements and new features, please take a look at our issue tracker. You can also take a look at the Conflue

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nce 2.10 Release Notes.

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Above are the issues resolved in Confluence 2.10, ordered by number of votes. For the full list of fixes, improvements and new features, please take a look at our issue tracker.

Workaround For Enabling MySQL 4.1.x with Confluence 2.10

With the release of Confluence 2.10, MySQL 4.1.x is no longer supported and will not work by default. See the Supported Platforms topic for further details.

However, there is a workaround to enable MySQL 4.1.x with Confluence 2.10.

To enable MySQL 4.1.x with Confluence 2.10:

1. When launching Confluence from the command line, add the following parameter:

```
-Dmysql4Compatibility=true
```

2. This will enable MySQL 4.1.x to work with Confluence 2.10. Please note however, that use of this database will not be supported by Atlassian.

Release Notes 2.0

Atlassian Software is proud to present Confluence 2.0 (otherwise known as Yarra). Yarra is the result of five months of solid work by the Confluence team, and we're really glad to be able, finally, to share it with the world. Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days, can download Confluence from the Atlassian website: http://www.atlassian.com/software/confluence

Yarra is the fifth major update to Confluence. Among the improvements in Confluence 2.0 are an easy-to-use WYSIWYG editor for writing pages, labels for categorising them, and a powerful RSS builder for keeping track of what's new.

Confluence 2.0 is a free upgrade for any customer who purchased their Confluence license after November 16th, 2004. If the maintenance period of your license has expired, or is about to expire, why not contact our friendly sales staff and get it renewed? It's the only way to keep up with all the great new features we're adding.

A big thanks to everyone who reported bugs and offered suggestions over the last few months, especially everyone who helped by trying out our Confluence Development Releases. Also, congratulations to the Socceroos for getting Australia into the World Cup for the first time in 32 years. It *almost* makes up for losing the Ashes.

See also: Issues Resolved for 2.0

Contents

- Upgrading

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- Migration
- New Features
- Notable Bug Fixes
- Outstanding Bugs

Upgrading From a Previous Version of Confluence

Upgrading Confluence should be pretty easy. *We strongly recommend that you backup your confluence.home directory and database before upgrading!*

Upgrades from 1.4.2 and earlier

If you are upgrading from Confluence 1.4.2 or earlier, you may experience problems with some space-related functionality (see CONF-4765), such as adding a space as a favourite. To work around this, please restart the Confluence instance after the upgrade. This will be fixed in Confluence 2.0.2.

Important Migration Notes

Macro/Plugin Compatibility

Necessary changes were made to the Confluence rendering subsystem during the development of Confluence 2.0 that may render some third-party plugins (especially macros) inoperable. If you upgrade Confluence and find that macros or plugins are not operating correctly, try removing *all* files from `[confluence-home]/plugins` and restarting Confluence.

HSQL 1.8 Upgrade

If you are using the embedded HSQL database, it is possible that Confluence will not be able to automatically upgrade your data. If this happens, Confluence 2.0 will refuse to start, and you will be directed to the following Confluence page which contains instructions on how to upgrade the database manually: Upgrading From HSQL 1.7.1 to 1.8

SSO update

If you are using some third-party Seraph authenticator with Confluence, or have written your own, you should read CONF-4581 before upgrading. Confluence now uses the Seraph defined login.link.url property to define its login link urls, which may cause issues with authenticators that relied on Confluence's previous, incorrect behaviour.

Weblogic Performance

Confluence 2.0 may perform very badly under Weblogic. There is a workaround for this problem described in CONF-4634, and a full fix IS included in 2.0.1.

JDK 1.5

If you are running Confluence 2.0 on the JDK 1.5, you will need to download some additional dependencies as described in CONF-4643. A full fix is included in a 2.0.1.

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> **MySQL 5**
>
> If you are running Confluence 2.0 on the MySQL 5 database, you may encounter some problems. One fix is described here.

Upgrading from 1.4.4

After upgrading to 2.0, administrators will need to rebuild the site's search-index to ensure all the new search features are enabled. Do this from the *Content Indexing* section of the global administration menu.

Upgrading from 1.3.5 or Earlier

Users upgrading from an earlier version of Confluence should check the release-notes of the other major Confluence releases:

- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

New Features

The four major new features in Confluence 2.0 are:

- Rich Text Editing
- Labels for content
- New Dashboard Features for managing sites with large numbers of spaces.
- A dynamic RSS Builder

..but there's a lot more on top of that.

Rich Text Editing

> **Browser Compatibility**
>
> The Confluence Rich Text editor is currently only compatible with Internet Explorer 6 on Windows, plus Mozilla and Firefox across platforms. Javascript must be enabled in the browser for the editor to function. Support for Safari under Mac OS X is currently not available. To track Safari compatibility, please follow this JIRA issue: CONF-3864

It almost goes without saying that the most highly requested feature in Confluence has been the ability to create pages without having to learn wiki markup. We're glad we can finally offer a powerful "what you see is (pretty much) what you get" rich text editor built into Confluence, making it easier for anyone to contribute to the site.

The WYSIWYG editor is enabled when you install or upgrade to Confluence 2.0. Global Administrators can disable the editor if they want to stick with pure wiki markup, and can also choose which editor users should be presented with by default. (The setting is under "General Configuration" in the administrative console). Users can also choose which editor they prefer simply by clicking on the "Make this my default editor" link that appears on the edit screen.

For the "feature mad" amongst us, here are some neat things you can do with the WYSIWYG editor:

- Full screen view - really useful for editing large pages. Click in the menu bar.
- Quickly switch between WYSIWYG and Wiki markup without a page refresh

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- Change the size of your editing window to suit your browser. Your size preference is remembered across sessions. To change it, drag the handle in the bottom right hand corner of the editor.
- Undo and redo!

Labels

Another highly requested feature was the ability to categorise content within Confluence beyond the rigid heirarchy allowed by spaces and parent-child relationships between pages. To this end we have introduced labels: simple one-word 'tags' that can be added to any page or blog-post the user has permission to edit. Labels can be used to categorise content, bookmark it, flag it for attention, or anything else you can think of.

> **A Tag By Any Other Name**
>
> Picking a name for labels wasn't easy. Google's GMail service calls them labels, while other collaborative categorisation systems such as del.icio.us and Flickr call them tags. We decided that 'label' was a more natural description. For more information about our choice, see Labels vs Keywordson our new Developer Blog and for more on the overall philosophy behind labels and tags, check out the Folksonomy page on Wikipedia.

Labels can be added to any page from the edit screen, or through a dynamic interface right when you're viewing a page.

Once a page is labeled, then clicking on the label's name allows you to browse other pages with the same label, or view related labels that commonly occur on the same pages.
You can also view the space's most popular labels from the space browser, to get an idea of the most popular topics within the space.

Personal Labels
If you prepend `my:` to a label (for example, `my:todo` or `my:favourite`, then the label is a personal label - only visible to you. Personal labels allow you to tag content for your own purposes: for example to keep track of

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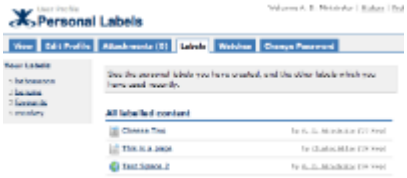
pages you feel need your attention, or that contain information you refer to frequently. You can browse your personal labels from your user profile. Any user can add their personal labels to any page, even when they don't have editing permission.



Favourites
Favourites are a special personal label: `my:favourite` or `my:favorite`. Whenever you see the icon, it means you can label this content as being your favourite, and whenever you see the icon, it means that the content is currently in your list of favourites. You can view your favourites from the Labels tab of your user profile, or keep track of them on your dashboard.
Label-Aware Macros
Many existing macros have been improved to allow you to filter content based on labels: including the {recent-pages}, {recently-updated} and {blog-posts} macros. We've also added macros that provide more information about labels and labelled content:

- {related-labels} gives a list of labels that might be related to a page
- {listlabels} lists all the labels in a space
- {contentbylabel} lists content that has a particular label
- {recently-used-labels} lists labels that have been recently added or applied
- {navmap} draws a nice-looking table of links to pages with a particular label

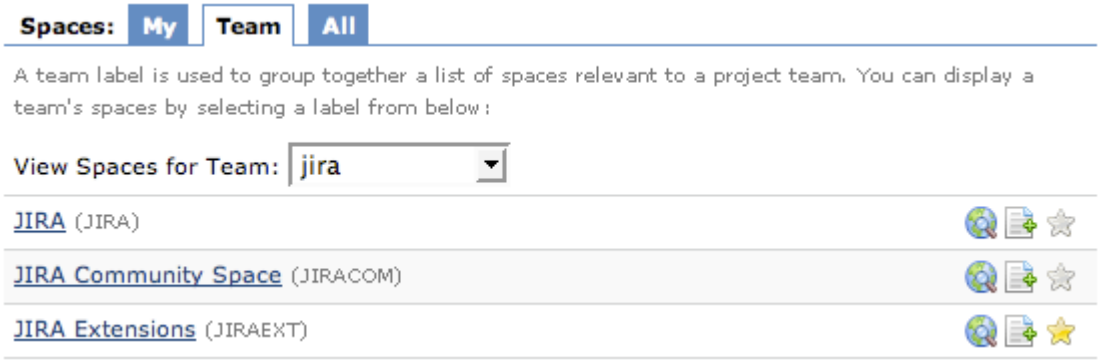
Dashboard Features

The Confluence dashboard has been improved to make it easier for you to keep track of only those spaces you are interested in: a big improvement for Confluence sites with large numbers of spaces. The list of spaces is now divided into four tabs (although all four may not be visible):

- **All** shows you all spaces
- **My** shows you all spaces you have marked as your favourites (you can mark a space as your favourite from the *All* tab by clicking on the icon)
- **Team** shows you all the available 'teams', and the spaces that have been assigned to them
- **New** shows you any space that has been added in the last week

The recently updated content list on the dashboard will reflect the spaces in your chosen tab. So if you're looking at the **My** tab, the dashboard will only be showing you the recent updates in your favourite spaces.

Teams



Teams are a simple, and very wiki-like way to group spaces together. Space administrators can add "team labels" to a space, which are then used to group those spaces under the team tab on the dashboard. So if your

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wiki has 100 spaces, but only five of them are of any interest to your sales team, just add a "sales" team label to those five spaces. That will group those spaces together on the dashboard under the 'team' tab, and your sales team need never look at the other 95 spaces.

RSS Builder

Confluence has always provided a brace of useful RSS feeds, but the problem is that for every feed we provided, users asked for half a dozen more. The obvious answer is to let users build RSS feeds based on their own chosen criteria. You can access the RSS builder from the Confluence dashboard

Once in the builder, you can choose

- Which spaces to include in the feed
- Which types of content should be tracked
- Which labels, if any, you are interested in
- How many items to include in the feed
- Whether you want a single RSS entry per page or one for each time the page is edited
- Whether you want an RSS 2.0 or Atom 0.3 feed
- Whether Confluence should require authentication to view the feed

Once you have decided what you want, Confluence will give you a URL to paste into your RSS reader. These URLs can be shared with other Confluence users, although they will only ever be allowed to see content that they have permission to view. If you have asked to authenticate, Confluence will require HTTP Basic Authentication, which is supported by most RSS readers.

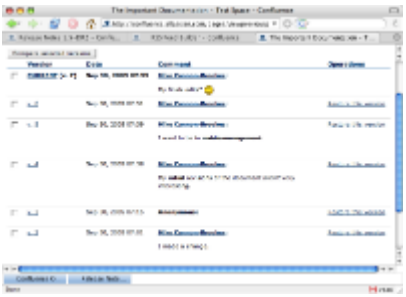
We've also taken the opportunity to improve the presentation of our RSS feeds - including a lot more information in each feed so you can follow your Confluence site entirely from your newsreader.

> The Atom Working Group has blessed the final Atom 1.0 standard, and are recommending that all applications remove support for Atom 0.3. However, as of the release of Confluence 2.0, there is no stable Atom 1.0 library from which we could generate feeds. In some future release of Confluence, Atom 0.3 support will be removed in favour of Atom 1.0.

Other New Features

Record "Change Comments" When Editing a Page

There is now a field on the edit screen for recording a "change comment" when you edit a page. These comments are stored in the page history, and can be used to keep a more complete history of *why* a page has been edited.



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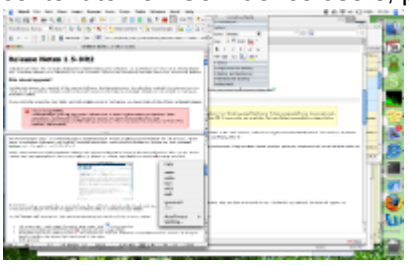
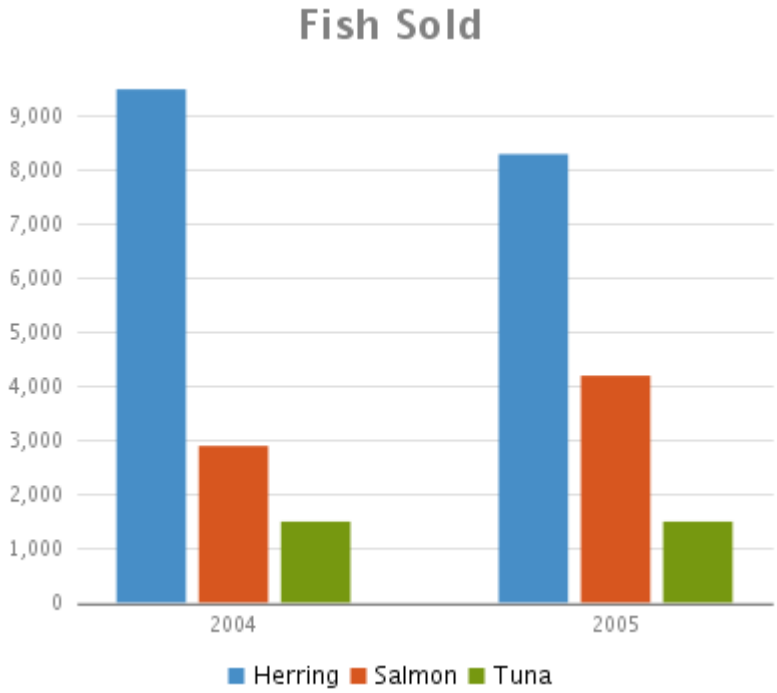
Embed Flash and Movies
You can now embed Flash content or movies (Quicktime or Windows Media) into a page as easily as you can an image: just attach the Flash or movie file to the page, then include it as you would include an image (!filename.mov!).
Export Pages as Word Documents
You can now export pages straight into Word from the Info tab. This is extremely useful for emailing around content to non-Confluence users, printing a document or just creating a backup in Word.



Copy Pages
Also on the Info tab is a "Copy" link that allows you to clone a page in a single click - including making copies of any attachments.
Improved Search Interface
Results returned from Confluence's search engine now have:

- Improved contextual results, showing the most important text around where your query was matched in the page
- Contextual results for any attachment: see where a search was matched even **inside** PDF, Word, PowerPoint or Excel documents!
- Search results for attachments give you more (and clearer) information about what the attachment is, and where it's from!search-result-fragments.png|align=center!
  Chart Plugin

The Chart Macro is now shipped with Confluence, allowing you to dynamically generate neat looking charts like this:



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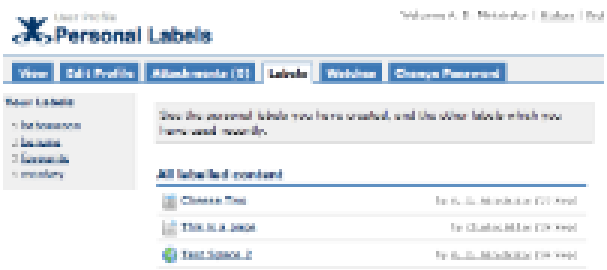
Wiki Source

```
{chart:title=Fish Sold|type=bar|width=400|height=350|legend=true}
|| Fish Type || 2004 || 2005 ||
|| Herring | 9,500 | 8,300 |
|| Salmon | 2,900 | 4,200 |
|| Tuna | 1,500 | 1,500 |
{chart}
```

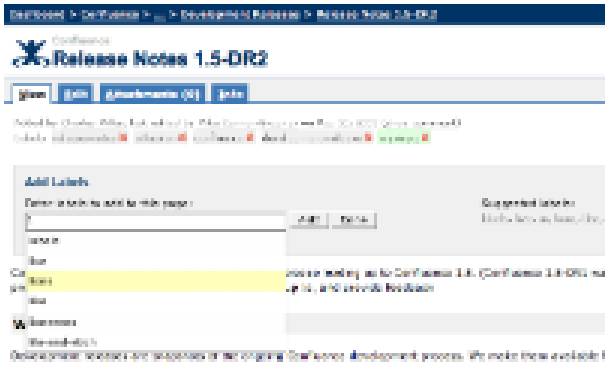
Improved Gallery Macro

The gallery macro has been spruced up, and now has a slideshow view:

Confluence 2.0 Screenshots



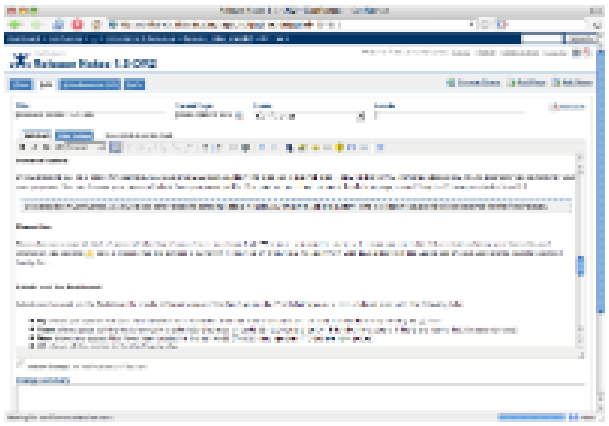
My personal labels! Only for me!



View page label interface showing autocomplete.

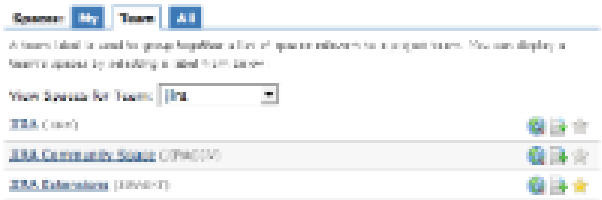
The r

Improved search showing fragments from attachments, file sizes and types.



Screenshot of the new 2.0 rich text editor

A ver



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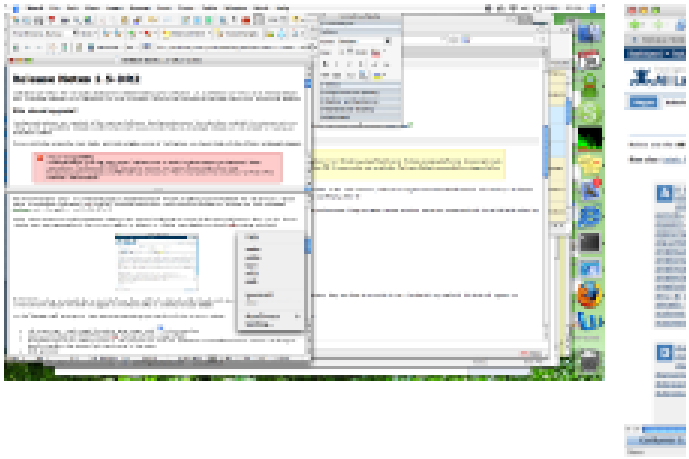

The new Dashboard space tabs, here showing the "jira" team tab and one favourite space.

Some release notes exported to Word (even on a Mac!) - great for printing too.

Alph

Popular labels for a given space.

Additions to the Remote API

Additions to the Confluence Remote API include:

- Comment manipulation
- Label manipulation
- Attachment uploading and editing
- Improved user- and permissions management

> Confluence now uses version 2.0 of the Apache XML-RPC library. Java XML-RPC clients using earlier versions of the Apache XML-RPC libraries (i.e. 1.3 or earlier) may experience problems with responses containing non-ASCII data.

Also...

- You can download all the attachments on a page in a single zip-file
- Import and restore now have progress indicators
- Backup and restore use significantly less memory
- The embedded database has been upgraded to HSQL 1.8, which should be significantly more reliable
- Collapsed breadcrumbs now expand with a single mouse click

Notable Bug Fixes

We resolved a *lot* of issues between Confluence 1.4.4 and Confluence 2.0. The best way to see what we've fixed is to ask JIRA, the world's best issue-tracker: Issues Resolved for 2.0

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Outstanding Bugs

Some bugs were introduced during the Confluence 2.0 development cycle that we could not fix in time for the final release. Of note are:

- Some pernicious Javascript errors when changing styles in the rich text editor under Internet Explorer
- The rich text editor may not perfectly handle complex pages with structural macros
- Attachments containing high-bit characters in their filenames may not be correctly retrieved by Confluence

Once again, if you find any bugs in Confluence, or have any feature suggestions, you can report them online in JIRA.

The Confluence 2.0 Team

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Oversight & ~~Mis management~~
Mike Cannon-Brookes
Scott Farquhar

Nerf Target-Practice
Nick Faiz

Well that's all folks - if you're still reading - thank you for getting this far!

> To keep up with all the latest developments in the next 2.1 release (codenamed: Bogan) - subscribe to our developer blog.

Issues Resolved for 2.0

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

Release Notes 2.0.1

Confluence 2.0.1 is a maintenance release that resolves some issues users may have encountered using Confluence 2.0. In particular, this includes issues relating to failures to upgrade and javascript problems.

2.0.1 is a free upgrade for all customers who purchased their Confluence license after November 28th, 2004.

Who should upgrade?

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Confluence 2.0.1 is a recommended upgrade for all users who have not yet upgraded to 2.x and for those users of 2.0 that are encountering issues fixed in this release.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.4.4 or earlier of Confluence, please check the release-notes of the other major Confluence releases:

- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.0.1

See also: Issues resolved for 2.0.1

- Javascript failing with a class not found. (CONF-4643)
- Confluence 2.0 hangs on weblogic. (CONF-4634)
- Disabling WYSIWYG editor causes AJAX error in Preview mode. (CONF-4745)
- Ancestors table hangs on to foreign key relationships if it can't be deleted. (CONF-4700)

Issues resolved for 2.0.1

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.0.2

Confluence 2.0.2 is a maintenance release that resolves a security issue, along with various issues users may have encountered using Confluence 2.0.1.

> A security flaw as described by the Confluence Security Advisory 2005-12-05 has been identified to exist in Confluence 1.4.x and 2.0.x. This has been fixed in 2.0.2. We recommend to all customers that they either upgrade to 2.0.2 or follow the instructions provided on the Confluence Security Advisory 2005-12-05 to patch there installation.

> The release of Firefox 1.5 resulted in new bugs and issues with the Rich Text editor. Therefore every version of Confluence up to 2.0.2 isn't very compatible with this browser in terms of Rich Text editing.
>
> Confluence 2.0.3 will feature an updated version of the editor which will solve most of the problems with Firefox 1.5 (CONF-4809).

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2.0.2 is a free upgrade for all customers who purchased their Confluence license after December 5th, 2004.

Who should upgrade?

Confluence 2.0.2 is a recommended upgrade for all users as it contains a security patch for the Confluence Security Advisory 2005-12-05. If you are unable to upgrade to 2.0.2, then please see Confluence Security Advisory 2005-12-05 for details on how to patch your installation.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.0, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.4.4 or earlier of Confluence, please check the release-notes of the other major Confluence releases:

- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3

Changes in 2.0.2

See also: Issues resolved for 2.0.2

- Search results page needs to XML encode the query string provided by the user (CONF-4825).
- Recently updated does not list any items (CONF-4770).
- CamelCase linking interferes with rendering of attachment link (CONF-3447).
- Umlaute in links are causing encoding problems with the Rich Text editor (CONF-4775).
- Disabled accounts still receive (blank) daily reports (CONF-4802).

Issues resolved for 2.0.2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.0.3

Confluence 2.0.3 is a maintenance release. It contains a upgrade of the WYSIWYG editor and numerous bug fixes.

2.0.3 is a free upgrade for all customers who purchased their Confluence license after December 12th, 2004.

Who should upgrade?

Confluence 2.0.3 is a recommended upgrade for all users who are having problems with the WYSIWYG editor. This release contains an upgrade to the WYSIWYG module that contains numerous bug fixes.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.0, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before*

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upgrading!

If you are upgrading from Confluence 1.4.4 or earlier of Confluence, please check the release-notes of the other major Confluence releases:

- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3

Changes in 2.0.3

See also: Issues resolved for 2.0.3

- Upgrade to TinyMCE 2.0.1 (CONF-4808)
- Backup restore progress monitor does not refresh during restore, making it look like the backup is hanging (CONF-4895)
- Information leak when accessing url directly (CONF-4794)
- Personal labels showing up on the {contentbylabel} macro (CONF-4894)

Issues resolved for 2.0.3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

Release Notes 2.1

Atlassian is happy to offer our customers an early Christmas present: Confluence 2.1 (otherwise known as Bogan). Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days, can download Confluence from the Atlassian website: http://www.atlassian.com/software/confluence

Bogan is the Sixth major update to Confluence, offering vastly improved LDAP integration through our new atlassian-user library, as well as introducing the much-requested autosave feature to protect you from losing your precious edits.

Upgrading from 2.0

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

> **Plugin Compatibility**
>
> Any plugin written for Confluence 2.0 and earlier that interfaces with the User system will need to be updated for Confluence 2.1. Plugin developers can find more information on the Atlassian developer blog

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LDAP Integration Configuration Changes

Customers who have already integrated Confluence with LDAP through the OSUser LDAP providers will need to make changes to their `osuser.xml` file before upgrading. You can find full details in step 3 of LDAP Authentication with OSUser.

OSUSer or Seraph Customisations

Customers who have performed their own customisations on OSUser or Seraph within Confluence **must** be sure to test their changes with Confluence 2.1 before upgrading any production system. While we have tried to maintain backwards compatibility, the integration of atlassian-user may adversely affect existing customisations.

Upgrading from 1.4 and earlier

Users upgrading directly from 1.4 or earlier should also read the 2.0 Release Notes for caveats regarding the 1.4 -> 2.0 upgrade.

Contents

1. New Features
2. Improvements
3. Notable Bug-fixes

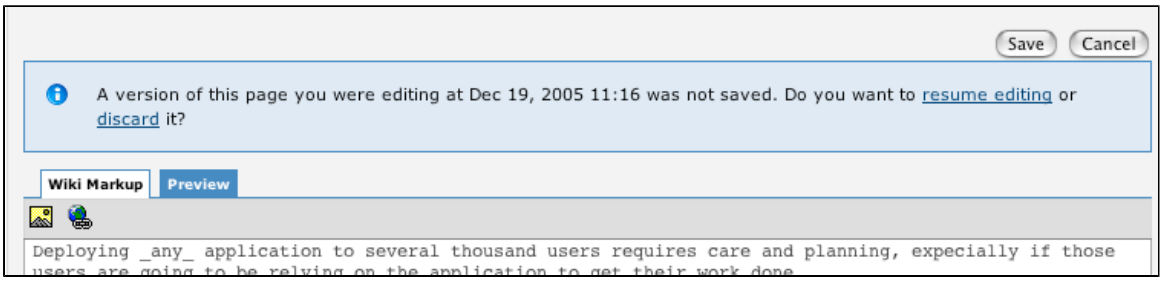
See also: Issues Resolved for 2.1

New Features

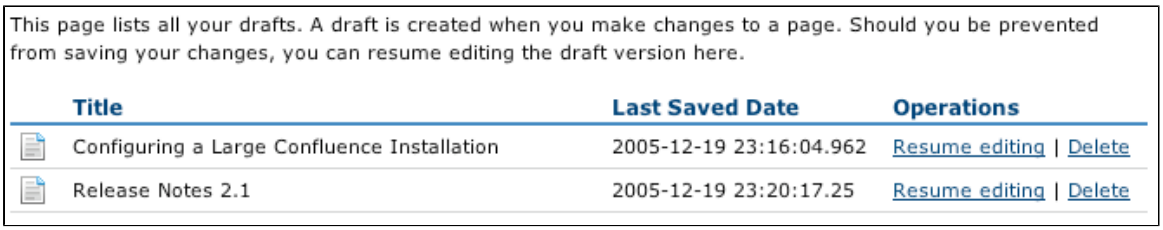
Autosave

If you've used wikis for long enough, you know the pain of losing a long, involved editing session to a browser crash, session timeout, or just not thinking and clicking on a link to another page. As of Confluence 2.1, this is no longer a problem: the most you'll lose is half a minute of your work.

Every thirty seconds (this interval is configurable by the global administrator), the browser will save your unfinished edit to the server. This autosave will hang around until you either hit the "Save" or "Cancel" button yourself, even if the server is restarted. So if you lose your changes, all you have to do is navigate back to the edit page, and will be given the chance to begin editing again where you left off.



You can view your outstanding autosaved documents from your profile under the "Drafts" tab.



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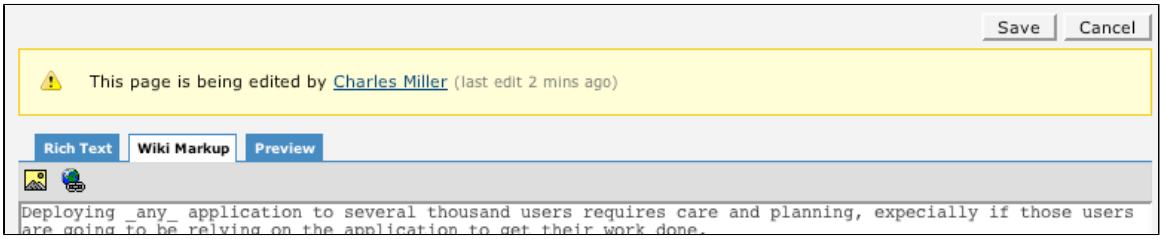
Concurrent Edit Warnings

A useful side-effect of autosave is that now Confluence has an accurate way of measuring who is editing which page. If two people start editing the same page at the same time, Confluence will display a warning message telling you who else is editing the page. You can then negotiate between yourselves who gets to save first.



Even better, Confluence will let you know how long it was since the other editor made any changes to the page, so if somebody has just left their browser open on the edit page for a couple of hours, you'll know you can sneak your changes in while they're asleep. 🙂

User Management

Confluence 2.1 sees the landing of our new `atlassian-user` user management library. Most Confluence customers will not see any significant change from this move, but for anyone looking to integrate Confluence with an external user-base (especially LDAP), atlassian-user is a big step forward.

Confluence can now integrate fully with an LDAP directory server, without the previously annoying practice of having to mirror the users and groups locally on Confluence: Confluence LDAP Documentation Index

Improvements

Performance

A lot of work was done improving the performance of the Confluence dashboard and edit pages, especially for customers who may have thousands of spaces and hundreds of thousands of pages in their Confluence installation. Both of these pages should now respond significantly faster.

Other

- You can now manually set the MIME type under which embedded objects should be served – CONF-4906
- The system info and error pages include more information about your database configuration – CONF-4957
- ~~Email attachments no longer show up on the recently updated list~~ (this seems to have regressed in the final release) – CONF-4684
- Added an icon mapping for sub-tasks in the jiraissues macro – CONF-4921
- Allow attached Windows Bitmap files to be displayed as embedded resources – CONF-4922

Notable Bug-fixes

Confluence 2.1 includes all bug-fixes that were made up to Confluence 2.0.3, and also includes fixes for the following issues:

- Preview now works correctly when rich text editor is disabled – CONF-4935
- Info tab no longer shows incoming links from pages in the trash – CONF-4815
- Trying to set a page as its own parent now presents a validation error instead of a system error – CONF-4941
- Confluence no longer removes every second character from the filenames of email attachments – CONF-4938
- JiraJdbcProfileProvider problems reliably accessing profile information from JIRA resolved – CONF-4933
- Unresolved images now replaced with placeholders in WYSIWYG editor – CONF-4929
- Removing the {excerpt} macro from a page now deletes the excerpt – CONF-4918

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Vidya Madabushi

Oversight & ~~Mis management~~
Mike Cannon-Brookes
Scott Farquhar

Issues Resolved for 2.1

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.1.1

Confluence 2.1.1 is a maintenance release that resolves some issues users may have encountered using Confluence 2.1, including issues related to user management, the editing UI and email notifications.

2.1.1 is a free upgrade for all customers who purchased their Confluence license after December 24th, 2004.

Who should upgrade?

Due to the severity of the issues that it resolves, Confluence 2.1.1 is a recommended upgrade for all Confluence customers.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.0.3 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

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Changes in 2.1.1

See also: Issues resolved for 2.1.1

- Users can not change their passwords CONF-5005
- Cursor jumps to the beginning of the rich text editor periodically CONF-4993
- Change comments not being displayed correctly CONF-4979
- Email notifications do not correctly report the user who made the change CONF-4973
- Pages can not be created or saved in some custom atlassian-user or OSUser configurations CONF-4978

Issues resolved for 2.1.1

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.1.2

Confluence 2.1.2 is a maintenance release that resolves some issues users may have encountered using Confluence 2.1.1 or earlier, including issues related to page editing, Javascript errors in Firefox and Safari and PDF exports.

2.1.2 is a free upgrade for all customers who purchased their Confluence license after January 12th, 2005.

Who should upgrade?

Confluence 2.1.2 fixes a number of bugs found in Confluence 2.1.1 and earlier. Customers are recommended to upgrade if they are experiencing any of the issues fixed in this release.

Upgrade Procedure

> If you are using MySQL, please apply the patch detailed in this bug report http://jira.atlassian.com/browse/CONF-5153. That is, please download 2.1.2, extract it, and copy the above mentioned patch into the unpacked 2.1.2 distribution *and then* go about your upgrade. We will be releasing a version with this patch bundled soon.

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.1 or 2.1.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.0.3 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.1.2

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See also: Issues resolved for 2.1.2

Improvements

- JiraPortlet macro now has an optional "baseurl" parameter for when Confluence accesses JIRA from a different URL to regular users – CONF-4897
- Children listed at the bottom of pages are now sorted alphabetically – CONF-4878
- Confluence warns space administrators when they permit anonymous access to a space, but global anonymous access is disabled – CONF-4898

Bugs Fixed

- NS_ERROR_NOT_AVAILABLE popup no longer appears when editing certain pages in Firefox – CONF-5038
- "Error converting parameters" popup no longer appears when editing certain pages in Safari – CONF-4976
- Edit page no longer returns NoSuchElementException error under some circumstances – CONF-5007
- "Last week" and "Last month" searches no longer fail when time period spans the new year – CONF-5056
- News items marked as favourites are now listed on the dashboard – CONF-4998
- Mail attachments no longer show up in recent changes on dashboard – CONF-4684
- PDF Export no longer fails with error parsing background-color attributes – CONF-5026
- Anonymous users do not cause a crash when exporting a space – CONF-5129
- Disabling a servlet plugin no longer causes a NullPointerException – CONF-5021
- Notification emails no longer prepend the site's context path twice to certain URLs – CONF-5024
- It is now possible to move a page between spaces and change its parent in the same operation – CONF-5103
- Dashboard favourite selection now works in Opera 8.5 – CONF-5012
- Username links no longer cause a NullPointerException in certain configurations – CONF-5028

Issues resolved for 2.1.2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.1.3

Confluence 2.1.3 is a maintenance release that resolves some issues users may have encountered using Confluence 2.1.2 or earlier, including issues related to Rich Text editing, LDAP user management, restoring to MySQL, and Unicode on MS SQL Server

2.1.3 is a free upgrade for all customers who purchased their Confluence license after January 23rd, 2005.

Who should upgrade?

Confluence 2.1.3 fixes a number of bugs found in Confluence 2.1.2 and earlier. Customers are recommended to upgrade if they are experiencing any of the issues fixed in this release.

Confluence is a **recommended upgrade** for all customers using Confluence's new atlassian-user LDAP user management with dynamic group mappings. For more information see USER-95

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Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.1 to 2.1.2, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.0.3 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.1.3

See also: Issues resolved for 2.1.3

Improvements

- You can now suppress camel-case linking with {nl:CamelCaseWord} – CONF-3700
- Confluence RSS macro is now compatible with Google News RSS – CONF-4892
- The {contentbylabel} macro supports a wider range of options – CONF-5137

Bugs Fixed

- Many fixes related to Rich Text editing, and switching between Rich Text and Wiki Markup editing.
- Further PDF export fixes – CONF-4930
- The upload option in the attachments macro works – CONF-5127
- Fixed a bug where Word exports would open in the wrong application – CONF-5163
- Handling of situation where site exceeds its licensed user limit and then removes users is improved – CONF-5208
- Restoring a site to MySQL now properly removes and re-creates database tables – CONF-5153
- Confluence now uses correct NVARCHAR type for multibyte text in MS SQL Server – CONF-5204

Issues resolved for 2.1.3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.1.4

Confluence 2.1.4 is a maintenance release that resolves some issues users may have encountered using Confluence 2.1.3 or earlier. Confluence 2.1.4 fixes more than 55 issues, including bugs related to space import/export, the WYSIWYG editor, page breadcrumbs, and many more

2.1.4 is a free upgrade for all customers who purchased their Confluence license after February 16th, 2005.

Who should upgrade?

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Confluence 2.1.4 fixes a number of bugs found in Confluence 2.1.3 and earlier. Customers are recommended to upgrade if they are experiencing any of the issues fixed in this release.

Confluence is a **recommended upgrade** for all customers using Confluence's new atlassian-user LDAP user management, as it fixes important issues related to user login validation.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from an earlier Confluence 2.1 release, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

> If you are running a **Sybase** or **Microsoft SQL Server** database, please replace confluence/WEB-INF/classes/com/atlassian/confluence/upgrade/UpgradeUtils.class with this version before upgrading.
>
> You should also install this if your upgrade fails with the message: **Session is currently disconnected**

If you are upgrading from Confluence 2.0.3 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.1.4

More than 55 issues were resolved between 2.1.3 and 2.1.4. For the complete list, see: Issues resolved for 2.1.4

Note about markup for embedded content

A bug was fixed in 2.1.4 that previously allowed spaces as attribute separators in embedded content wiki markup (CONF-5406). This means `!image.jpg|alt=Great pic!` now works correctly, but `!image.jpg|border=1 alt=test!` doesn't. The correct and documented way to write the latter continues to be `!image.jpg|border=1,alt=test!`.

Improvements

- {livesearch} macro results can now be limited to a particular space – CONF-3432
- A setting was added to General Configuration to control the maximum number of attachments that can be uploaded at once – CONF-5447
- A setting was added to General Configuration to enable or disable GZip content encoding – CONF-5257
- "Insert Link" and "Insert Image" now work correctly on Safari in OS X 10.4.4 and later – CONF-5435
- A draft is automatically saved when moving from 'Edit' to 'Preview' – CONF-5366
- A `getPermissionsForUser` method was added to the remote API to allow administrators to retrieve the permissions of particular users – CONF-5439

Notable Bugs Fixed

- Many fixes related to the maintenance of the ancestors table while moving or renaming pages, which may have resulted in the misplacing of page breadcrumbs or inherited page-level permissions – CONF-5104, CONF-5243, CONF-5244
- Many fixes related to Rich Text editing, including the handling of tables and whitespace – CONF-5299, CONF-5231, CONF-5492, CONF-5294, CONF-5324, CONF-5247, CONF-5362, CONF-5265
- Space import no longer overwrites part of global configuration – CONF-5370

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- Confluence no longer tries to create indexes with names bigger than DB2 can handle – CONF-5316
- "Insert Link" and "Insert Image" no longer erase contents of edit fied in Safari on OS X 10.4.4 and later – CONF-5329
- Links from the {labels} macro are now space-relative – CONF-5346
- emoticons no longer mistaken for embedded image markup – CONF-3369
- "Profile:" no longer mistaken as the start of a file: URL

Issues resolved for 2.1.4

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.1.5

Confluence 2.1.5 is a maintenance release that resolves some issues users may have encountered using Confluence 2.1.4 or earlier.
Confluence 2.1.5 fixes around 50 issues, including a number of fixes for LDAP support, the WYSIWYG editor, and other areas.
2.1.5 is a free upgrade for all customers who purchased their Confluence license after March 16th, 2005.

> Confluence 2.1.5 has a problem which disables the rich text editor link dialog. Please replace the file WEB-INF/classes/com/atlassian/confluence/user/actions/PagePickerAction.properties with this file: PagePickerAction.properties
>
> This is fixed in **2.1.5a**.
>
> **Known Issues in 2.1.5a**
>
> Anonymous users may get a Javascript error under some circumstances. See CONF-5765 fo r details and a patch.
>
> When using LDAP user management, changing passwords for local users won't work. See C ONF-5775 for details and a patch.

Who should upgrade?

Confluence 2.1.5 fixes a number of bugs found in Confluence 2.1.4 and earlier. Customers are recommended to upgrade if they are experiencing any of the issues fixed in this release.

Confluence is a **recommended upgrade** for all customers using Confluence's new atlassian-user LDAP user management, as it fixes important issues related to LDAP integration.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from an earlier Confluence 2.1 release, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.0.3 or earlier, please check the release-notes of the other major

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Confluence releases:

- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.1.5

More than 48 issues were resolved between 2.1.4 and 2.1.5. For the complete list, see: Issues resolved for 2.1.5

Improvements

- LDAP queries are cached to improve performance - CONF-5288
- Administrators can insert custom HTML on every Confluence page, see Administration, Custom HTML - CONF-5350
- Tables created in the rich text editor don't have non-breaking spaces added to each cell - CONF-5044
- News improvements - Info tab available including list of version, News can be exported as PDF - CONF-1989, CONF-5582, CONF-5594

Notable Bugs Fixed

- Anchor, user profile and attachment links now round-trip properly in the rich text editor - CONF-5678
- Paging of LDAP users works properly - CONF-5438
- Servlet plugins can be disabled - CONF-5598
- Forgotten username emails work again - CONF-5530
- User profiles fixes with LDAP - CONF-5225, CONF-5549

Issues resolved for 2.1.5

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2

Atlassian is proud to announce the release of Confluence 2.2, otherwise known as Shoalhaven Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days, can download Confluence from the Atlassian website: http://www.atlassian.com/software/confluence

Shoalhaven is the seventh major update to Confluence (in two years!). It introduces 'personal spaces', support for localisation/internationalisation, CAPTCHA spam protection, a multitude of new extension points for plugin developers, a simpler LDAP configuration syntax, and more.

Upgrading from 2.1

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

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MySQL Driver Support

For users using MySQL with Confluence 2.2 (or higher), please ensure that you are using the latest (3.1.12) MySQL Java Connector. Earlier versions of the MySQL connector have a bug which may prevent Confluence from upgrading successfully. (more information below)

LDAP Authentication

If you are currently using LDAP authentication **through OSUser** (that is, you adjusted your o `suser.xml` file), please *do not upgrade to 2.2*. This feature is currently unavailable and an issue has been filed for it here. This issue has been resolved in Confluence 2.2.1.

User Management Bug

You must apply the patch attached on this bug report to be able to create users in this version. This issue has been resolved in Confluence 2.2.1.

Index Rebuilding

Upgrading to 2.2 will trigger a rebuild of Confluence's search index. This will cause certain features such as search, the dashboard and RSS feeds to behave unpredictably for up to a few minutes after upgrading.

LDAP Integration Configuration Changes

The configuration file syntax for atlassian-user has changed. Customers who configured Confluence 2.1 to use AtlassianUser LDAP integration must follow the instructions on this page.

Anonymous Permission Changes

The way that anonymous permissions are applied to users who have logged in has changed. Administrators should understand how they have changed below before upgrading.

Plugin Loading Changes

Prior to Confluence 2.2, it was possible for an outdated plugin, or a plugin with unsatisfied dependencies, to break the entire plugin subsystem. Confluence 2.2 is much more careful about loading plugins, and isolating them if they break. This may, however, cause Confluence to refuse to load an entire plugin, simply because one of its contained plugin modules will not load.

Upgrading from 2.0 and earlier

Users upgrading directly from 2.0 or earlier should also read the 2.1 Release Notes for caveats regarding the 2.0 -> 2.1 upgrade.

Contents

1. New Features
2. Improvements
3. Notable Bug-fixes
4. Important note for MySQL users

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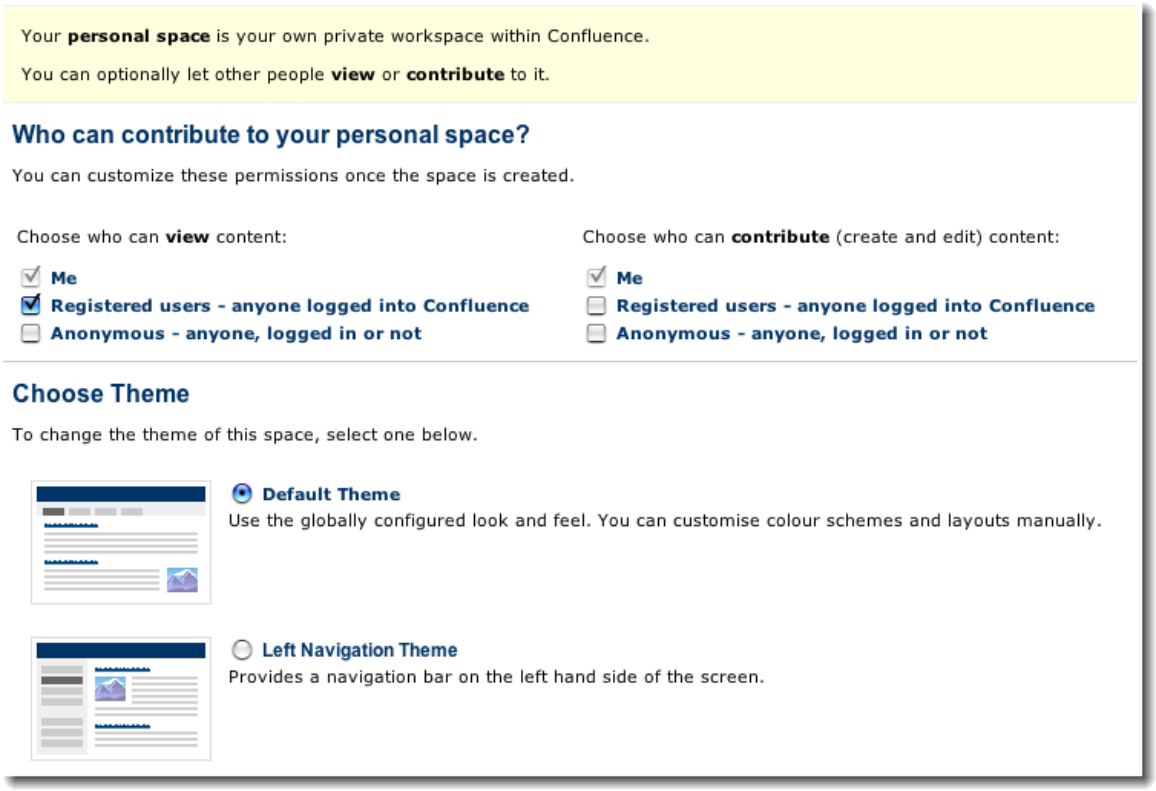
See also: Issues Resolved for 2.2

New Features

Personal Spaces

Two of the most frequent questions we get from Confluence customers have been: "How do I give my users their own wiki?" and "How do I give my users their own blog?" It seems everybody needs a little Personal Space.

Personal spaces belong to particular users, and rather than being listed on the dashboard, are available from the user's profile. (Future versions of Confluence will feature a 'people browser' to make it easier to discover the interesting personal spaces on your server). They can contain pages and news items like any other space, be searched and browsed. They can be kept private, or opened up so the whole world can view and edit them, just like global spaces.



Confluence's search and RSS builder interfaces have been updated to make it easy to choose whether you're interested in personal spaces or not.

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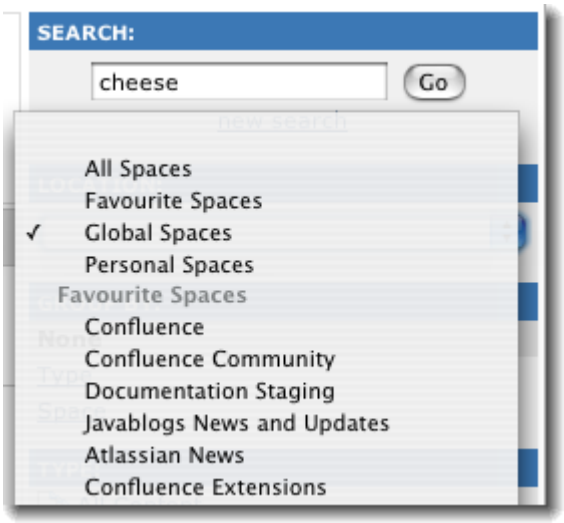

Oh, and if you create a personal space, don't forget to upload (or choose) your own profile picture, so people can see who you are.

Localisation/Internationalisation

Confluence now supports drop-in language packs to change the language of the user interface. The global administrator can select a default language for the entire site, while individual users can set their preferred language in their preferences.

No language packs are currently available, but we are currently working with our global partners so we can begin to provide translations. If you are interested in translating Confluence into another language, you can find instructions on building a language pack here: Language Module.

CAPTCHA Support

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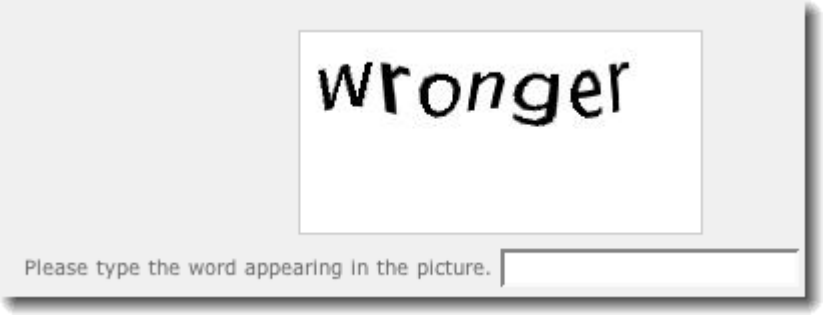

Many of the more public Confluence wikis have been suffering at the hands of spammers. CAPTCHA support adds the familiar 'type in this word' question to signup, edit and comment forms, to defeat automated spamming bots. You can turn on CAPTCHA from the global administrative console, and also choose which users will, or will not be subject to the spam check.

Plugin Improvements

Each version of Confluence is more customiseable than the last. One of the most exciting things to come from our recent plugin competition was learning just how creative our plugin developers are, and discovering more ways we can help them add features to Confluence.

- Job Module and Trigger Module allow you to schedule periodic tasks to run within Confluence
- Web UI Modules allow plugin developers to add new links, buttons and tabs to the Confluence interface, and make it easier for theme developers to stay up to date with changes to the Confluence UI.
- Code Formatting Module allow you to plug support for new languages into the {code} macro (or override the existing language support with something better).

We've also made a number of improvements to the plugin system, including:

- Making sure that a single 'rogue' plugin can't bring down the whole plugin subsystem.
- Enabling 'conditional get' for plugin resources, so browsers don't download them again and again.
- Fixing problems that may occur when a servlet or component plugin is reloaded or upgraded. (With many thanks to Dan Hardiker of Adaptavist.)

New atlassian-user Configuration Syntax

As promised, we have cleaned up the configuration file syntax for our atlassian-user user management library. This should make it much easier to configure Confluence to use external user repositories such as LDAP. You can find details of the new configuration file format here: Connecting to an LDAP Directory

Improvements

Permissions Changes

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In Confluence 2.1 and earlier, permissions that were assigned to Anonymous users were not automatically assigned to logged-in users, leading to the confusing situation where you could view a page when not logged in, but not view it when you *were* logged in.

In Confluence 2.2 and later, permissions that are assigned to the Anonymous user are also assigned to all logged in users. The sole exception to this rule is the global Use Confluence permission, which must still be explicitly granted to any user who wishes to log in. (This exception is necessary due to licensing restrictions).

Search

With help from Kelvin Tan, we've overhauled much of the underlying infrastructure of Confluence's search engine. Search in Confluence should now be more efficient, and some searches that were problematic before (such as wildcard* searches) now work as you would expect them to.

LDAP Performance

Confluence's performance against external LDAP user repositories should now be significantly faster.

Other

- The General Configuration screen is much better organised
- You can choose a space's initial permissions and theme when you create it
- The left-navigation theme has improved
- Themes may now be packaged with icons that will be displayed in the theme selector (see the screenshot of the "create personal space" screen above for an example)
- Confluence Standalone is now packaged with Tomcat 5.5
- Atom feeds are now generated to the Atom 1.0 standard
- The back-end storage of attachment files has been changed to resolve a number of problems that were caused when the underlying filesystem did not support the character-set of the attachment filename

Important note for MySQL users

For users using MySQL with Confluence 2.2 (or higher), please ensure that you are using the latest (3.1.12) MySQL Java Connector. Earlier versions of the MySQL connector have a bug which is triggered by improvements in Confluence 2.2. These earlier connector versions will result in an error being recorded in your logs on upgrade (and will result in unstable operation of Confluence)

```
ERROR [hibernate.tool.hbm2ddl.SchemaUpdate] execute could not complete schema
update
```

You can download the latest MySQL connector from the MySQL Java Connector 3.1 download page. Please be sure that you remove any older versions of the connector from your application server.

The Confluence 2.2 Team

Development and Support 😄
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Issues Resolved for 2.2

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2.1

Confluence 2.2.1 is a maintenance release that resolves some issues users may have encountered using Confluence 2.2, including issues related to LDAP user management, i18n, personal spaces and drafts.

2.2.1 is a free upgrade for all customers who purchased their Confluence license after May 18th, 2004.

Who should upgrade?

Confluence is a recommended upgrade for all customers using Confluence with external LDAP user management. All other customers should consult the list of issues resolved, and determine if this release is necessary for their own deployments.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

> **Draft Table Upgrade**
>
> Upgrading Confluence to 2.2.1 will cause all autosaved 'drafts' to be deleted from the database. Be sure everyone has saved their work before upgrading!

> **Confluence 2.2.1 and 2.2.1a**
>
> The current version available for download is 2.2.1a. 2.2.1 was originally released with an old version of the atlassian-plugins library, which caused the plugin fixes listed below not to be included in the release. Confluence 2.2.1a resolves that problem.

> **PageChildrenMacro IndexOutOfBoundsException error**
>
> Customers who downloaded 2.2.1 or 2.2.1a before the official announcement may encounter an error when using the {children} macro to view the children of other pages in the same space. There is a patch for this issue attached to CONF-6197

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4

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- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.1

For a complete list, see: Issues resolved for 2.2.1

External User Management

- Creating a new user will no longer cause a primary key violation on some Confluence installations. CONF-6092
- Fixed a regression where authentication against an external LDAP server via the old OSUser integration layer did not function. CONF-6052
- Fixed a possible ClassCastException on viewing a user's profile. CONF-6021

Plugins

Note: Due to a scheduling error, these fixes were not included in Confluence 2.2.1, but are in the supplementary 2.2.1a release.

- Component plugins are now correctly unregistered when they are removed. CONF-4041
- Plugins may now contain and reference dependent jar files. Thanks to Dan Hardiker of Adaptavist for the patch. PLUG-8
- Installing an older version of an already-installed plugin no longer causes an error. PLUG-12
- Removing an uploaded plugin no longer causes it to be deactivated the next time it is installed. PLUG-13

General Stability

- Confluence can now store drafts for spaces with long (>20 character) keys. CONF-6010
- Attachments stored in MySQL databases will no longer be silently truncated to 64KB. CONF-6120
- Global language setting is now saved correctly. CONF-6027
- Missing attachment data no longer causes PDF export to crash. CONF-6063
- Misleading "attachment missing" errors are no longer logged after a space import. CONF-6026

Improvements

- A Javascript alert warns users if they have left the CAPTCHA field blank. CONF-5984
- A link to the logged-in user's personal space is included on every page (from their full name). CONF-6056
- The {children} macro can now show the children of pages in another space. CONF-5986

Issues resolved for 2.2.1

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2.2

Confluence 2.2.2 is a maintenance release that resolves some issues users may have encountered using Confluence 2.2, including issues related to PDF generation, internationalisation, backup/restore and more.

2.2.2 is a free upgrade for all customers who purchased their Confluence license after May 31st, 2005.

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Who should upgrade?

Confluence 2.2.2 resolves CONF-6237, a bug related to the backup and restore of personal spaces. As such it is a recommended upgrade for customers wishing to restore or import data containing personal spaces. Other users should consult the list of resolved issues, and determine if the upgrade is necessary for their installation.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 or 2.2.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.2

Over 25 issues were resolved between Confluence 2.2.1 and 2.2.2. For a complete list, see: Issues resolved for 2.2.2

Backup/Restore

- An issue was resolved that could cause personal spaces to be imported incorrectly from backups. Existing backup files are still valid, the error was only during the re-importing process – CONF-6237

PDF Export

- PDF exports can now be generated for pages containing non-latin characters. To enable these exports you will need to provide Confluence with the correct font – CONF-1457
- PDF exports created in Confluence are now properly searchable, both in Confluence (CONF-1360) and in Adobe Acrobat (CONF-4529)

Other

- (UI) Fixed a Javascript error when saving a page with CAPTCHA disabled – CONF-6221
- (User management) Resolved an error when deleting a non-empty group – CONF-6082
- (i18n) Resolved issues with hard-coded English text in various places – CONF-6202
- (i18n) Resolved issues with internationalisation keys showing up in the permissions guide – CONF-6053

Issues resolved for 2.2.2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

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Release Notes 2.2.3

Confluence 2.2.3 is a maintenance release that resolves some issues users may have encountered using Confluence 2.2, including issues related to LDAP user management, installation, backup/restore and more. This release also includes a patch for a serious security issue regarding global permissions.

2.2.3 is a free upgrade for all customers who purchased their Confluence license after June 8th, 2005.

Who should upgrade?

Confluence 2.2.3 resolves a security bug related to unauthorised modification of global permissions. As such **this release is a recommended upgrade for all customers**.

For users of older versions of Confluence who do not wish to upgrade, a patch for this issue will be available shortly.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2, 2.2.1 or 2.2.2, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.3

As part of a new process for pushing out bug fix releases more quickly, this release follows just a week after the release of 2.2.2. Six issues were resolved between Confluence 2.2.2 and 2.2.3. For a complete list, see: Issues resolved for 2.2.3

Global Permissions

- A security problem was identified where unauthorised users could modify global permissions. For more information, including details on how to patch previous Confluence versions, please see the security advisory

Backup/Restore

- An issue was resolved where attachments were not imported from space exports. Existing backup files are still valid, the error was only during the re-importing process – CONF-6286

External user management

- Queries to LDAP repositories are now correctly escaped, so user and group names may contain commas – USER-106

Other

- (UI) Fixed parent link in preview of new page – CONF-6275
- (authentication) Fixed incorrect redirect from login when base URL contained an extra slash – CONF-6261
- (installation) Improved error handling during Confluence setup – CONF-6276

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Issues resolved for 2.2.3

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2.4

Confluence 2.2.4 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2.

2.2.4 is a free upgrade for all customers who purchased their Confluence license after June 22nd, 2005.

Who should upgrade?

Confluence 2.2.4 is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 - 2.2.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.4

We are currently trialling a process of more frequent bugfix releases, to make fixes available as soon as possible to those people who want them. 2.2.4 resolves six issues:

See also: Issues Resolved for 2.2.4

User Interface

- The "Space Admin" tab is no longer displayed to non-administrators. (Even though the tab was visible, non-administrators could still not access any of the administrative functions) CONF-6385
- Personal spaces are no longer listed in the space picker in the feed builder CONF-6830
- Attempts to create news items with invalid characters now fail with the correct error message CONF-6358

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Performance

- The velocity manager is no longer loaded twice, saving memory. CONF-6355
- The velocity cache now expires templates that have not been recently used, potentially saving memory. CONF-6339

Developer API

- Putting pages into, and removing them from the trash now trigger the correct events within Confluence CONF-6353

Issues Resolved for 2.2.4

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

Release Notes 2.2.5

Release notes are to follow ...

Issues Resolved

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

2.2.5 Security Patch

This patch fixes a minor security vulnerability regarding the administration of space mail accounts. It affects only Confluence 2.2.5.

To install this patch please download the three files attached to this page, stop Confluence and copy them to your `WEB-INF/classes/com/atlassian/confluence/mail/actions` directory, where they will replace the existing files. Then start Confluence.

Name	Size	Creation Date	Comment
5	4	Feb 17, 2006	AccountAction.class
6	4	Feb 17, 2006	AccountAction.class
1	8	Feb 12, 2006	AccountAction.class

Release Notes 2.2.6a

Confluence 2.2.6a is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2.

2.2.6a is a free upgrade for all customers who purchased their Confluence license after June 22nd, 2005.

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Who should upgrade?

Confluence 2.2.6a is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading. Customers running **Confluence 2.2.5 should upgrade**, as 2.2.6a fixes a security problem which could allow an unauthorised user to modify space mail box configuration. Only version 2.2.5 is affected by this vulnerability. Customers running 2.2.5 who don't wish to upgrade can follow these instructions to patch the vulnerability.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 - 2.2.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.6a

We are currently trialling a process of more frequent bugfix releases, to make fixes available as soon as possible to those people who want them. 2.2.6a resolves 20 issues.

A few of the issues are noted below, see Issues Resolved for 2.2.6a for a complete list.

User Interface

- The rich text editor allows underlining to be removed, and lists in tables are better behaved. CONF-6450, CONF-6508
- Users with capital letters in their names can watch pages and spaces. CONF-6489

LDAP

- LDAP users can be removed from local Confluence groups. CONF-6131
- The 'Change Password' link is no longer shown when LDAP is enabled. CONF-6360

Performance

- Indexing performance has been improved. CONF-6465

Issues Resolved for 2.2.6a

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

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Release Notes 2.2.7

Confluence 2.2.7 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2.

2.2.7 is a free upgrade for all customers who purchased their Confluence license after July 28th, 2005.

Who should upgrade?

Confluence 2.2.7 is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 - 2.2.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.7

We are currently trialling a process of more frequent bugfix releases, to make fixes available as soon as possible to those people who want them. 2.2.7 resolves 23 issues.

A few of the issues are noted below, see Issues Resolved for 2.2.7 for a complete list.

Task List Macro

- Tasks with the same name in different lists are now distinguished. CONF-5809

User Management

- The manage groups page can now display an unlimited number of groups. CONF-6458
- Users that belong to more than 100 groups are now always able to login. CONF-6292

PDF Export

- Exporting pages to PDF which include other pages will now have correct links and not lose images. CONF-1155

Internationalisation

- Tree view of page hierarchy will not be truncated when using multi-byte character sets. CONF-5872

Issues Resolved for 2.2.7

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JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2.8

Confluence 2.2.8 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2.

> Confluence 2.2.8 has slower indexing than previous versions. There is a fix for that regression here: CONF-6908

2.2.8 is a free upgrade for all customers who purchased their Confluence license after August 8th, 2005.

Who should upgrade?

Confluence 2.2.8 is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 - 2.2.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.8

We are currently trialling a process of more frequent bugfix releases, to make fixes available as soon as possible to those people who want them. 2.2.8 resolves 22 issues.

A few of the issues are noted below, see Issues Resolved for 2.2.8 for a complete list.

- Exporting a space as HTML now creates an index page which includes all the pages in the export. CONF-6670
- Timeouts can be set for HTTP requests made from Confluence to RSS feeds and JIRA instances. CONF-6697
- RSS Autodiscovery works in Safari. CONF-4607

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- When a group is deleted, space permissions for the group are now correctly removed. CONF-6733
- Change default background colour from grey to white. CONF-6733
- Non-breaking spaces are handled correctly when indexing. CONF-6685
- Rich text editor respects leading spaces in noformat macro. CONF-6527

Issues Resolved for 2.2.8

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.2.9

Confluence 2.2.9 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2. 2.2.9 resolves an indexing performance regression introduced in 2.2.8, and includes fixes for external user management, and MaxDB and Sybase compatibility.

2.2.8 is a free upgrade for all customers who purchased their Confluence license after September 9th, 2005.

Who should upgrade?

Confluence 2.2.9 is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading.

If you are running Confluence 2.2.8, but do not wish to upgrade to 2.2.9, we strongly recommend installing the patch attached to CONF-6908 instead to resolve an issue related to re-indexing performance.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 2.2 - 2.2.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0
- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.9

2.2.8 resolves approximately 25 issues. See Issues Resolved for 2.2.9 for a complete list. A few of the issues are noted below.

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External user management:

- LDAP users are no longer given the option to change their passwords in Confluence – CONF-6144
- External users belonging to more than 100 groups can log in successfully – CONF-6292
- External users can be removed from local groups – CONF-6832

Database Compatibility

- 'Review restricted pages' report now succeeds on MaxDB – CONF-6849
- Fixed Sybase error when removing a space – CONF-6715

Indexing

- A re-indexing performance regression introduced in 2.2.8 has been resolved – CONF-6908
- Advanced search queries for specific index fields now work as expected – CONF-6714
- Errors in text extractors no longer cause index queue flushing to fail – CONF-6857

Issues Resolved for 2.2.9

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.2.10

Confluence 2.2.10 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.2. 2.2.10 resolves an assortment of issues that were reported by customers.

2.2.10 is a free upgrade for all customers who purchased their Confluence license after November 30th, 2005.

Who should upgrade?

Confluence 2.2.10 is a minor bugfix release. Customers should consult the list of issues resolved in this release to determine if it is worth their while upgrading.

If you are running Confluence 2.2.8, but do not wish to upgrade to 2.2.10, we strongly recommend installing the patch attached to CONF-6908 to resolve an issue related to re-indexing performance.

Customers still running Confluence 2.2.2 or earlier are recommended to upgrade, as a significant security vulnerability was resolved in Confluence 2.2.3

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x version, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.1.5 or earlier, please check the release-notes of the other major Confluence releases:

- Release Notes 2.2
- Release Notes 2.1
- Release Notes 2.0

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- Release Notes 1.4
- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Changes in 2.2.10

2.2.10 resolves over 40 issues. All these issues are listed below:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.3

After much hard toil from the Confluence developers we are happy, nay ecstatic, to announce the availability of Confluence 2.3 (known affectionately as Snowy).Snowy is the eighth major update to Confluence. It supports clustered deployment as 'Confluence Massive', and introduces a people directory, activity statistics plugin, personal timezone preferences, and the ability to access Confluence via the Metaweblog and WebDAV APIs. Confluence 2.3 is a **free upgrade** for any customer who purchased Confluence after January 4th, 2006.

Upgrading from Confluence 2.2.x

Upgrading Confluence should be fairly straightforward: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Installation Notes

> **Known Issues and Patches**
>
> Please read the Release Notes 2.3 section of the release-notes before installing Confluence 2.3.
> These issues were resolved with a new maintenance release of Confluence 2.3.1

Contents

1. New Features
2. Improvements

See also: Issues Resolved for 2.3

New Features

Confluence Massive

Confluence is now a clusterable application. This means that it is possible to run multiple Confluence servers

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behind a load-balancer, to provide high availability, and to scale Confluence beyond the capacity of a single server.

Confluence Massive uses Tangosol Coherence to share data between nodes (and many other things besides).

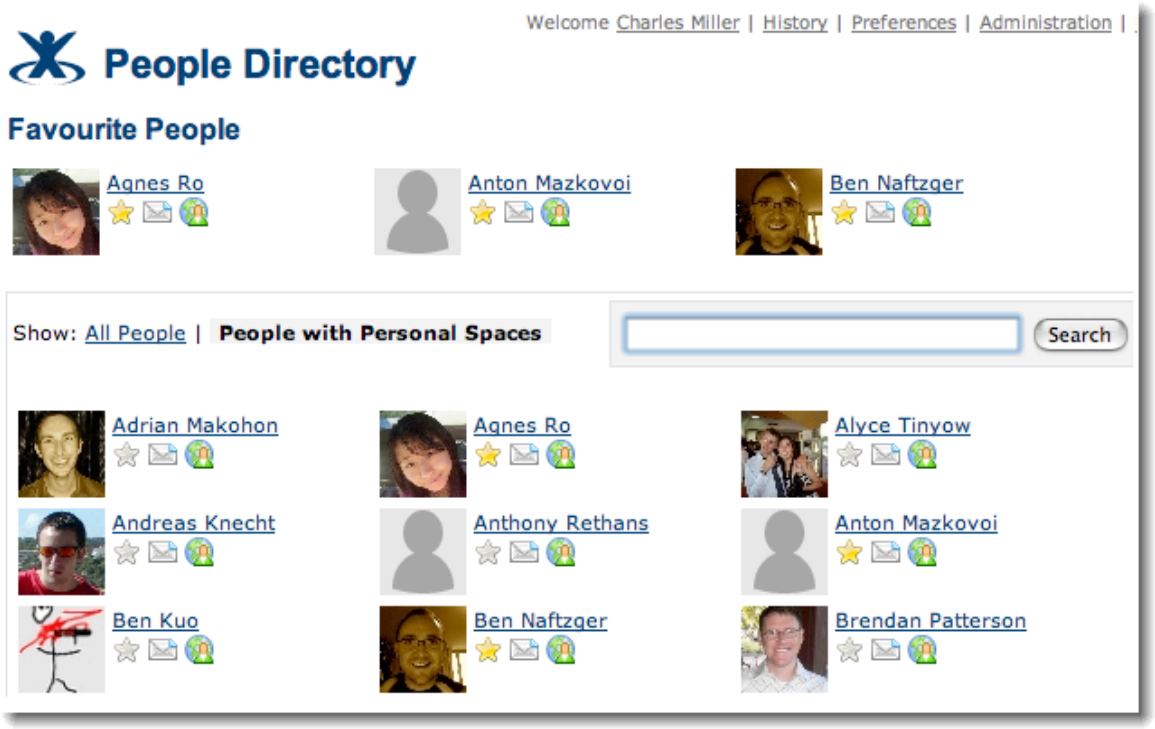
If you are thinking of running Confluence in a cluster, and need to know what is required and how it works, you can read Technical Overview of Clustering in Confluence.

You can find instructions for installing a Confluence cluster here: Confluence cluster installation.

> **Cluster Licensing**
>
> Confluence Massive clustering is only enabled if you have a clustered licence. For information on purchasing clustered Confluence licences, please check our pricing page, or contact our friendly sales team.

The People Directory

In version 2.2 (Shoalhaven), we added personal spaces to Confluence. Because of the potential for the proliferation of personal spaces we kept them off the Dashboard and search results by default, but this made it quite hard to find people in a Confluence site.



The People Directory, which you can find linked from the bottom of the Dashboard, gives you a way to browse through the other people who use a Confluence instance, their profiles and personal spaces.

If you find people whose personal spaces you want to follow, you can mark them as favourites from the people directory. This will add their personal spaces to your 'My' tab on the Dashboard, and will also make sure they're included when you search or make RSS feeds from your favourite spaces.

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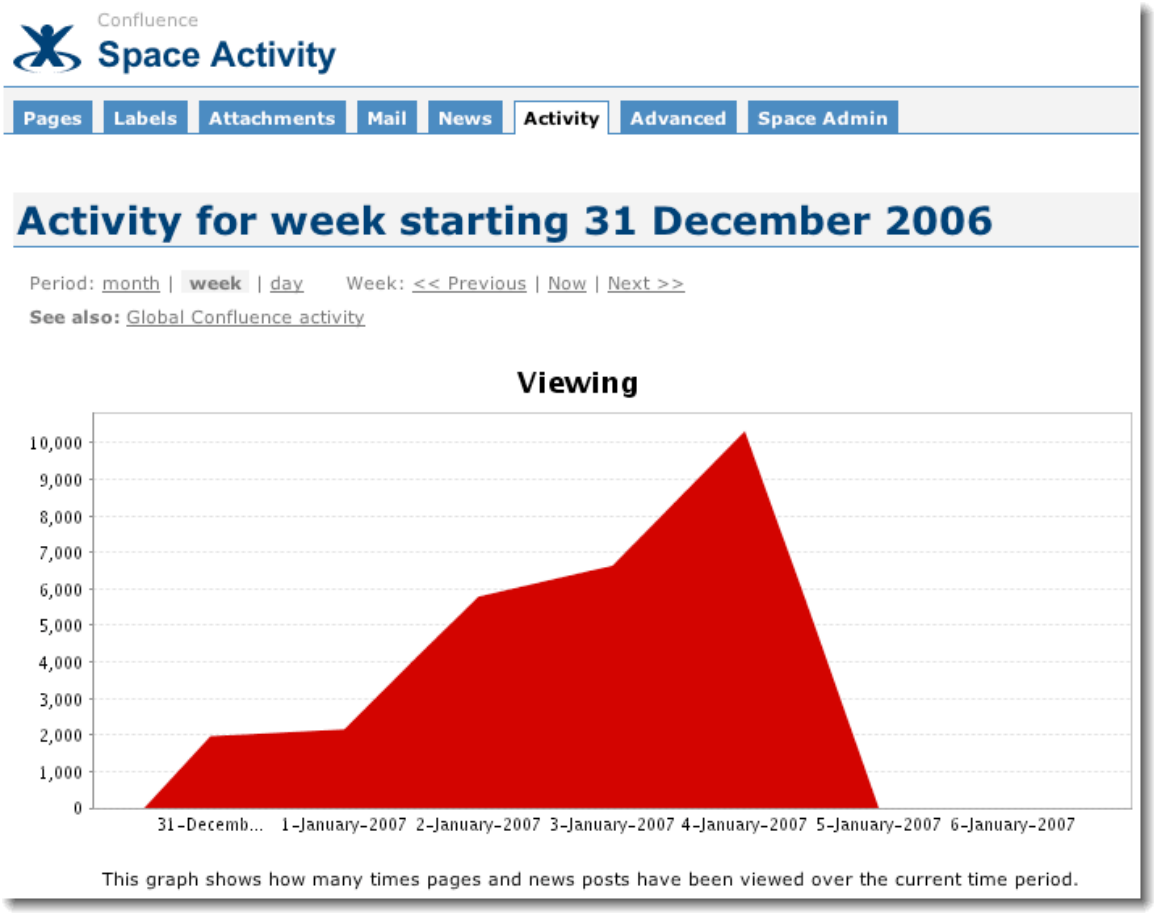
Activity Tracking

The activity plugin lets you know what's happening in Confluence: how many pages are being visited or edited in each space or across the whole site, which spaces or pages are the busiest, who are the most prolific editors.



You can view activity statistics for a space in Browse Space, or globally from the administration console.

The plugin also provides macros that allow you to embed usage data into a Confluence page: {usage}, {popular} and {topusers}.

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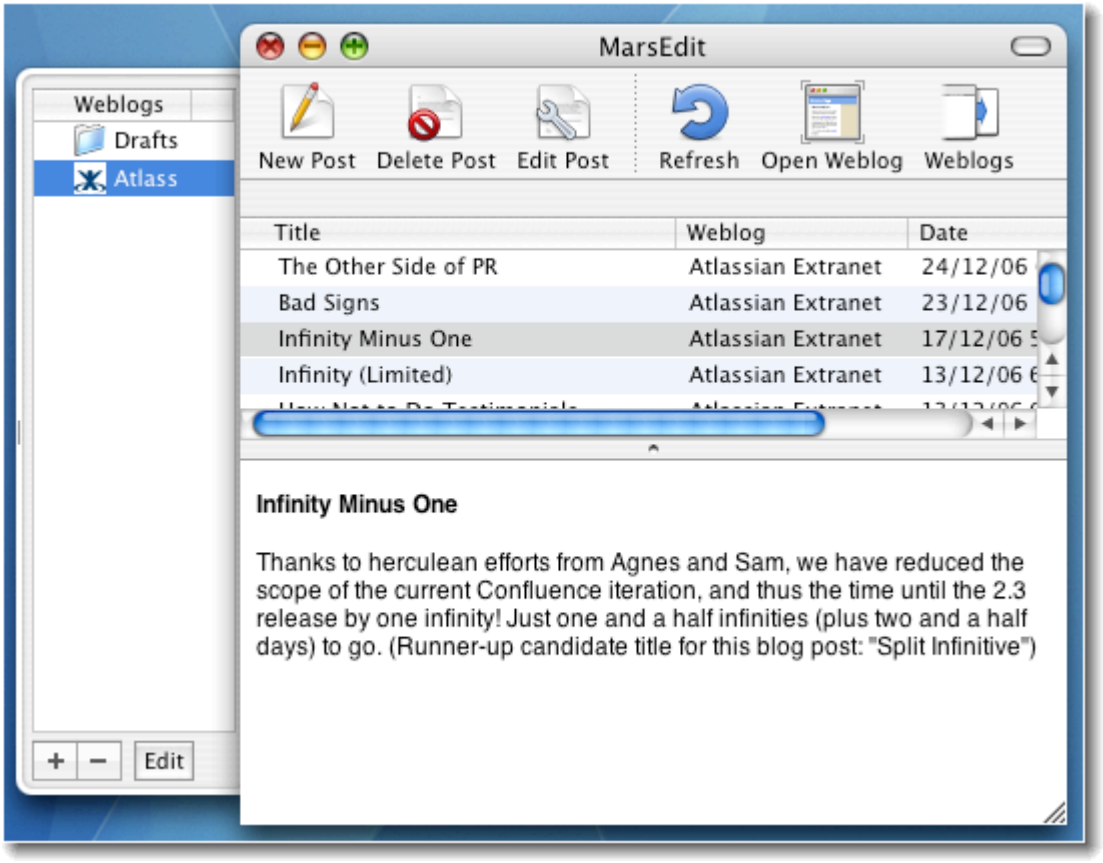
> Activity tracking does not work in a cluster, and will be disabled for clustered deployments. We're working on making the activity tracker clusterable in a future release. You can follow this issue in JIRA: CONF-7520

Blogger and MetaWeblog API Support

Confluence 2.3 bundles the Blogging RPC Plugin. This allows users to manage their News in Confluence using one of the many available blogger-compatible desktop clients.



You can read more about this plugin, including instructions for setting up various blogging clients for use with Confluence, on the plugin information page.

WebDAV Client Support

The Confluence WebDAV plugin allows users to mount Confluence as a shared drive, using the WebDAV protocol.

This provides a familiar interface for anyone who uses Confluence as a repository for files: you can browse your

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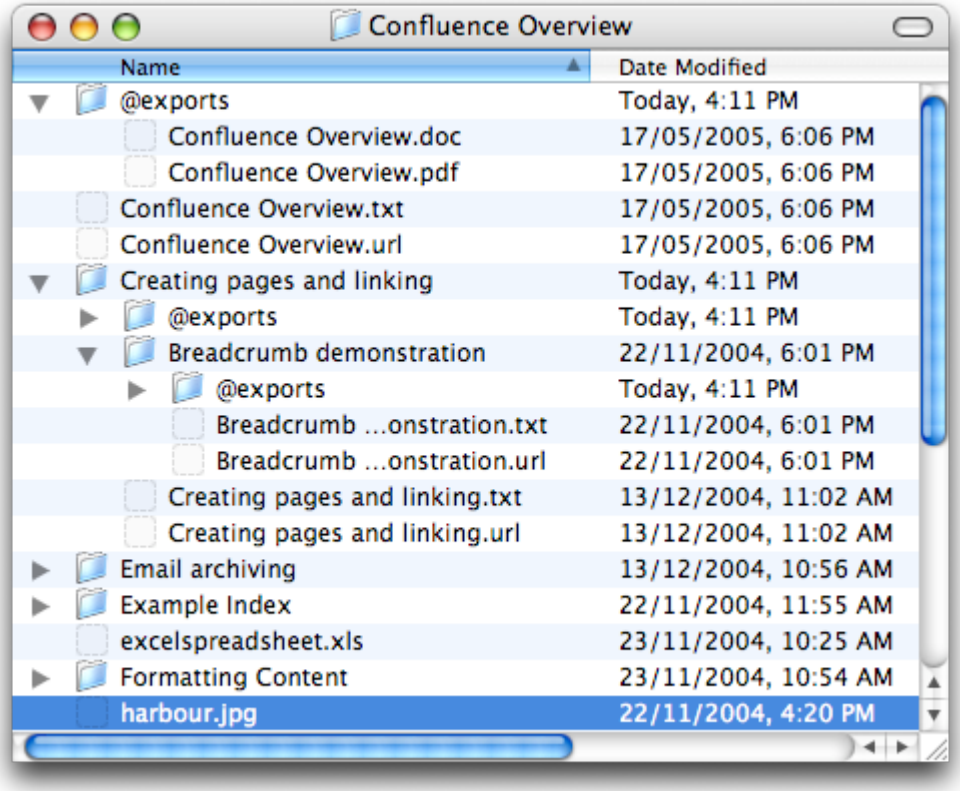
wiki straight from Windows Explorer or the Mac Finder; view Word or PDF versions of pages; upload attachments and edit attachments in place; create, edit and move pages.



For more information on the WebDAV plugin, check out: WebDAV Plugin

WebDAV is supported natively in Windows XP (as "Web Folders") and Mac OS X, although there are third-party clients that may provide different functionality or compatibility. We have a compatibility matrix if you're interested.

> **Experimental**
>
> WebDAV client support is currently experimental, and is disabled by default. You can turn it on from the Plugin management page in the global administration console.

Improvements

Plugins

- Adaptivist's fantastic Plugin Repository Client is bundled with Confluence.
- User Macro Module allow you to share user macros more easily.
- Lifecycle Module allow you to hook into Confluence startup and shutdown.
- Events are now produced when themes are applied, or colour-schemes modified.
- Confluence now ships with 'bundled' plugins that are installed when Confluence is installed, but are not hard-coded into the application (so they can be upgraded without upgrading Confluence).
- Plugin resources now set Last-Modified and ETag headers properly, so they can be conditionally retrieved by browsers.
- Confluence is now built entirely using Maven 2. More on this soon.

Other Changes

- Users can now choose to have dates and times displayed in their own timezone instead of the server's - CONF-1026.
- Most Confluence configuration data has been moved from the filesystem into the database.
- The Clickr Theme is bundled with Confluence.
- HTML exports are more reliable for sites with non-ASCII page titles - CONF-4862.

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- You can now get users from multiple LDAP repositories at the same time (or different search paths in the same LDAP repository) - CONF-6034.
- Shortcut links can now have the substitution string in the middle of the URL (CONF-3246), and have custom display text and titles (CONF-514).
- User macros are more flexible: you can configure how macro bodies are pre-rendered (CONF-2293), and you can also specify that a user macro generates wiki markup instead of HTML (CONF-3780).
- Pages with large numbers of attached images no longer eat up too many database connections - CONF-6393.
- When creating an RSS feed with the feed builder, you can choose whether to see full content, diffs, or both - CONF-6321.
- Searches now default to AND rather than OR for combining search terms - CONF-5874.
- The login page no longer prompts you to log in when you're already logged in. - CONF-6843.
- Support for the Nintendo Wii.
- Various improvements to performance that should result in a faster display of pages, and fewer problems for servers with large numbers of space permissions.
- Many static resources in Confluence are cached more effectively, so browsers have to retrieve CSS and Javascript files significantly less often - CONF-7212.

Known Issues and Patches

- Confluence 2.3 was originally accidentally shipped with three **testing-only language packs**. Since Sunday January 14th, the language packs have been removed from the distribution, but if you downloaded Confluence before that date they will be present. These language packs are machine translations, and are not intended for use on production systems (unless you're a native German speaker and really want a good laugh). If you downloaded an affected copy of Confluence and want to remove these packs, delete `de_DE-1.0.jar`, `ja_JP-1.0.jar` and `ru_RU-1.0.jar` from `confluence/WEB-INF/lib`.
- You need to apply this patch to enable **LDAP user integration** : CONF-7585
- If you have problems **restoring backups** please apply the patch included in this issue: CONF-7584
- Due to class name changes, if you're **upgrading from an existing system** running:
  1. MySQL - you need to edit `confluence.home/confluence.cfg.xml` and replace **`bucket.dialect.MySQLDialect`** with **`com.atlassian.hibernate.dialect.MySQLDialect`**. More information in this issue: CONF-7579
  2. DB2 - you need to edit `confluence.home/confluence.cfg.xml` and replace **`bucket.dialect.DB2Dialect`** with **`com.atlassian.hibernate.dialect.DB2Dialect`**. More information in this issue: CONF-7690
- Log file `atlassian-confluence.log` is not presently generated. Please see these instructions for enabling it.

The Confluence 2.3 Team

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Scott Farquhar

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> *And one was there, a stripling on a small and weedy beast,*
> *He was something like a racehorse undersized,*
> *With a touch of Timor pony — three parts thoroughbred at least —*
> *And such as are by mountain horsemen prized.*
> *He was hard and tough and wiry — just the sort that won't say die —*
> *There was courage in his quick impatient tread;*
> *And he bore the badge of gameness in his bright and fiery eye,*
> *And the proud and lofty carriage of his head.*
>
> - The Man from Snowy River, *A. B. 'Banjo' Paterson*

FileAppender log4j.properties

The 2.3 log4j.properties file doesn't specify a file for the FileAppender (because the necessary lines haven't been uncommented). Hence the log files normally generated via the file appender, `logs/atlassian-confluence.log`, is presently missing?

If you experience this situation and see errors in the logs such as:

```
log4j:WARN File option not set for appender [confluencelog].
log4j:WARN Are you using FileAppender instead of ConsoleAppender?
log4j:ERROR No output stream or file set for the appender named
[confluencelog].
```

- Please uncomment the following lines in the **`log4j.properties`** file located under `confluence/WEB-INF/classes` and restart Confluence
  (ie remove the #'s)

```
#log4j.appender.confluencelog.File=${catalina.home}/logs/atlassian-confl
uence.log
#log4j.appender.confluencelog.MaxFileSize=20480KB
#log4j.appender.confluencelog.MaxBackupIndex=5
```

Relevant resources

Confluence 2.3 Release Notes

Issues Resolved for 2.3

JIRA Issues				

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Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.3.1

Confluence 2.3.1 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.3.

2.3.1 is a free upgrade for all customers who purchased their Confluence license after January 23rd, 2006.

Who should upgrade?

Confluence 2.3.1 is a bugfix release which resolves some significant issues in Confluence 2.3. Customers running Confluence 2.3 should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.3 and wishing to upgrade should use this version also.

Significant issues for customers upgrading to Confluence 2.3

- **LDAP integration**: Confluence 2.3 shipped with a broken user migration script for customers wishing to integrate LDAP servers with their Confluence installation. 2.3.1 ships with a fixed version of this script which can also be obtained from CONF-7585
- **Upgrading with MySQL**: Customers using Confluence with MySQL may have had difficulty upgrading their instances to Confluence 2.3. This issue has been resolved in 2.3.1.

Significant issues for existing Confluence 2.3 users

- **Backup import**: Confluence 2.3 users wishing to import backups into their Confluence instance should upgrade to 2.3.1 or apply the patch listed against CONF-7584

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.3.1

2.3.1 resolves 20 issues. All these issues are listed below:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

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Release Notes 2.3.2

Confluence 2.3.2 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.3.1

> **Warning for LDAP users**
>
> Confluence 2.3.2 has a serious bug that prevents it from working with LDAP servers. Please use Confluence 2.3.3 instead.

2.3.2 is a free upgrade for all customers who purchased their Confluence license after February 12th, 2006.

Who should upgrade?

Confluence 2.3.2 is a bugfix release which resolves some significant issues in Confluence 2.3.1 Customers running Confluence 2.3.1 and 2.3 should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.3 and wishing to upgrade should use this version also.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.3.2

2.3.2 resolves 22 issues. All these issues are listed below:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.3.3

Confluence 2.3.3 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.3.2

2.3.3 is a free upgrade for all customers who purchased their Confluence license after February 14th, 2006.

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Who should upgrade?

Confluence 2.3.3 is a bugfix release which resolves some significant issues in Confluence 2.3.2 Customers running Confluence 2.3.2, 2.3.1 and 2.3 should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.3 and wishing to upgrade should use this version also.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.3.3

2.3.3 resolves 4 issues. All these issues are listed below:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.4

The Atlassian Confluence team is proud to present to you Confluence 2.4.2! What happened to 2.4 and 2.4.1? Let's just say we gave them a good workout.Confluence 2.4 is the ninth release of Confluence. It introduces much awaited support for editable comments, the ability to mail a page to groups of users and includes the usual slew of fixes since the last stable release.

Confluence 2.4 is the first in a series of frequent, small releases planned for the first half or 2007, that will help us get the functionality you want from Confluence, faster. For more information on our new release schedule, you might want to read this blog post.

Confluence 2.4.2 is a **free upgrade** for any customer who purchased Confluence after March 13th, 2006.

Upgrading from Confluence 2.2.x and 2.3.x

Upgrading Confluence should be fairly straightforward: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

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Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Contents

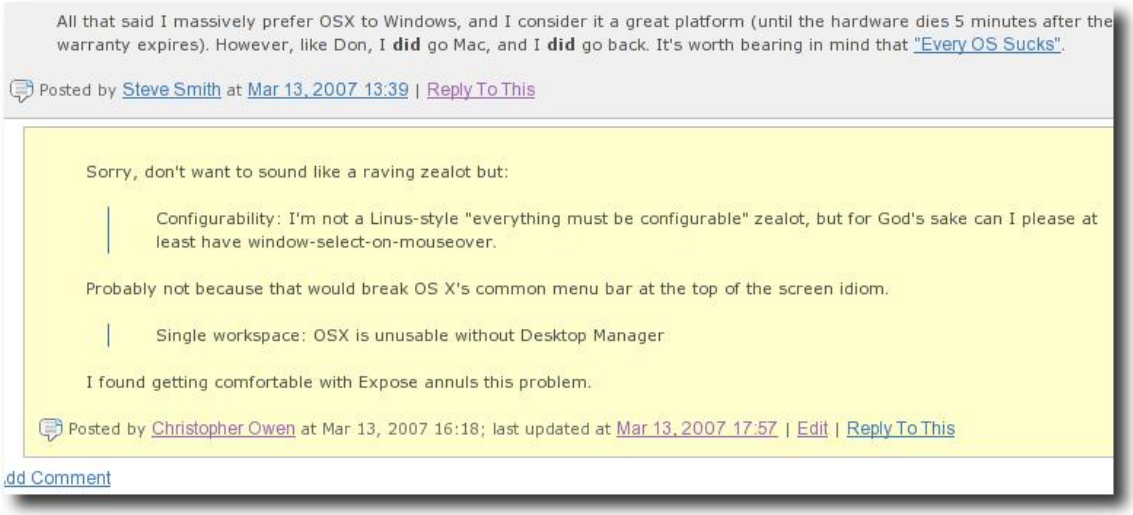
1. New Features
2. Improvements

See also: Issues Resolved for 2.4.2

New Features

Editable Comments

Say *so long!* to those annoying typos and ill-structured sentences as comments in Confluence are now editable. Comments may be edited by the original author or the administrator for the space in which the comment was posted.



Confluence has a ten minute grace period after the comment is posted in which updates will not be flagged in the user interface. This is in acknowledgment of the fact that most edits within this period are for correcting minor typos and formatting which will not impact the flow of conversation.

For more information, see the Confluence user guide: Editing a Comment

Page Mailing

Confluence 2.4 ships with the Mail Page plugin allowing users to conveniently send the contents of a Confluence page to other interested parties. You can easily specify who you want the page mailed to by using a combination of:

- Email addresses
- Confluence user names
- Confluence group names

For security reasons, the Mail Page plugin is disabled by default. If you want to use this feature, an administrator will have to enable it. There must also be a mail server configured in the Confluence instance for this operation to be available.

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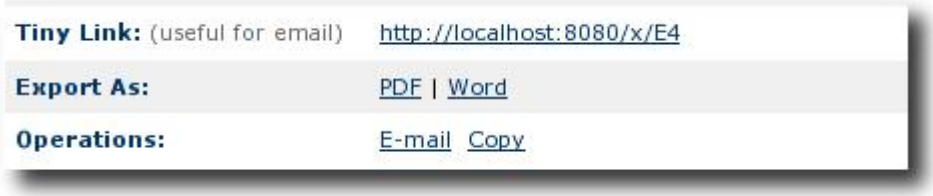
This operation is reached via a page's Info tab.



For more information, see the Confluence user guide: E-mailing a Page

Improvements

- The People Directory no longer shows inactive users (CONF-7771)
- Log messages now have more context such as the URL of the page being displayed and the name of the logged in user (CONF-7878)

The Confluence 2.4 Team

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David Loeng
Charles Miller
Christopher Owen
Agnes Ro
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Oversight & ~~Mis~~ management
Mike Cannon-Brookes
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Changes to the Page Permission API in Confluence 2.4

Confluence 2.4 contains changes to the Confluence API that will affect any plugins that modify Page Permissions (aka ContentPermissions). Some methods have been deprecated, some new methods have been created, and one method now behaves differently from before.

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Confluence 2.4 does not support having multiple view and edit permissions on a page. The Content Permission API allows such a state, but it should be avoided. For example, if a Page has multiple permissions set on it, these permissions will not be displayed properly via the user interface, and the pages may not be returned appropriately in a search.

Summary of Changes

Deprecated methods

```
ContentPermissionManager.getInheritedViewContentPermissions(Page)
ContentPermissionManager.getInheritedContentPermissions(ContentEntityObjec
t contentEntityObject)

ContentEntityObject.getPermissions()
ContentEntityObject.getContentPermission(String permissionType)
```

Changed methods

```
ContentPermissionManager.addContentPermission(ContentPermission
permission, ContentEntityObject content)
```

Added methods

```
ContentPermissionManager.setContentPermissions(List contentPermissions,
ContentEntityObject content, String type)
ContentPermissionManager.getInheritedContentPermissionSets(ContentEntityOb
ject contentEntityObject)

ContentEntityObject.getContentPermissionSet(String type)

ContentEntityObject.hasPermissions(String type)
ContentEntityObject.removeContentPermissionSet(ContentPermissionSet set)
```

Removed methods

```
ContentPermissionManager.saveContentPermission(ContentPermission
permission)
ContentPermissionManager.getContentUserPermission(ContentEntityObject
contentEntityObject)
ContentPermissionManager.onContentContextChanged(ContentEntityObject
contentEntityObject)

ContentEntityObject.setPermissions(List permissions)
ContentEntityObject.clearPermissions(ContentPermissionManager
permissionManager)
```

The change most likely to cause problems is:

```
ContentPermissionManager.addContentPermission(ContentPermission permission,
ContentEntityObject content)
```

This method now adds a ContentPermission to the ContentEntityObject as one would expect. Previously if a ContentPermission already existed on the ContentEntityObject, then any existing ContentPermission would be

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removed. That is, the method really behaved as one would expect "setContentPermission" to behave. As a result, any code that used addContentPermission in Confluence 2.3 or earlier, should now use setContentPermissions with a single entry list.

Example conversion of old addContentPermission usage

```
replace
ContentPermissionManager.addContentPermission(p, c)
with
ContentPermissionManager.setContentPermissions(java.util.Collections.singletonLis
t(p), c, p.getType())
```

Most methods that used to return a ContentPermission have been replaced with methods that return a ContentPermissionSet. In some places we have used deprecation to point to the new method and reimplemented the old method to extract the first ContentPermission from the ContentPermissionSet.

As usual, the methods on the ContentPermissionManager should be used rather than those on the ContentEntityObject. The only ContentEntityObject method that should be used is getContentPermissionSet. Even that method should be used only to display the existing Permissions. All writes to the ContentPermissionSets should be performed via the ContentPermissionManager.

The onContentContextChanged method of the ContentPermissionManager was previously used to notify a ContentPermissionManager that cached permissions on a ContentEntityObject may be invalid. This is now accomplished by publishing a ContentPermissionEvent. That event is published automatically when changing ContentPermissions via the ContentPermissionManager.

No changes have been made yet to the the XML RPC API. It does not currently allow modification of ContentPermissions.

Release Notes 2.4.1

The Atlassian Confluence team is proud to present to you Confluence 2.4.2! What happened to 2.4 and 2.4.1? Let's just say we gave them a good workout.Confluence 2.4 is the ninth release of Confluence. It introduces much awaited support for editable comments, the ability to mail a page to groups of users and includes the usual slew of fixes since the last stable release.

Confluence 2.4 is the first in a series of frequent, small releases planned for the first half or 2007, that will help us get the functionality you want from Confluence, faster. For more information on our new release schedule, you might want to read this blog post.

Confluence 2.4.2 is a **free upgrade** for any customer who purchased Confluence after March 13th, 2006.

Upgrading from Confluence 2.2.x and 2.3.x

Upgrading Confluence should be fairly straightforward: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1

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-> 2.2 upgrade.

Contents

1. New Features
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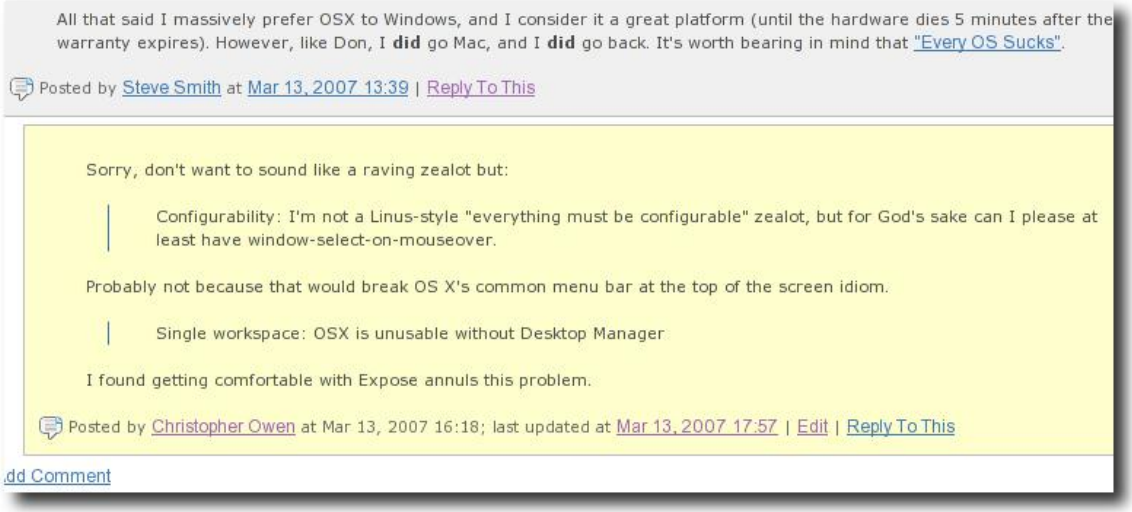

Confluence has a ten minute grace period after the comment is posted in which updates will not be flagged in the user interface. This is in acknowledgment of the fact that most edits within this period are for correcting minor typos and formatting which will not impact the flow of conversation.

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For security reasons, the Mail Page plugin is disabled by default. If you want to use this feature, an administrator will have to enable it. There must also be a mail server configured in the Confluence instance for this operation to be available.

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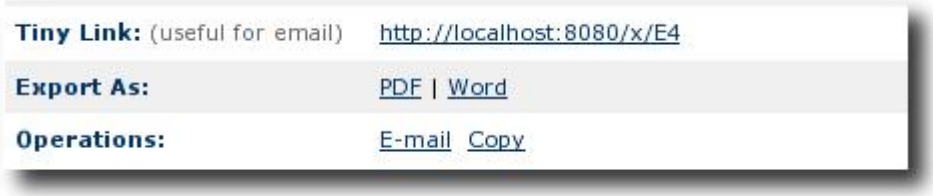
This operation is reached via a page's Info tab.



For more information, see the Confluence user guide: E-mailing a Page

Improvements

- The People Directory no longer shows inactive users (CONF-7771)
- Log messages now have more context such as the URL of the page being displayed and the name of the logged in user (CONF-7878)

The Confluence 2.4 Team

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Release Notes 2.4.2

The Atlassian Confluence team is proud to present to you Confluence 2.4.2! What happened to 2.4 and 2.4.1? Let's just say we gave them a good workout.

Confluence 2.4 is the ninth release of Confluence. It introduces much awaited support for editable comments, the ability to mail a page to groups of users and includes

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the usual slew of fixes since the last stable release.

Confluence 2.4 is the first in a series of frequent, small releases planned for the first half or 2007, that will help us get the functionality you want from Confluence, faster. For more information on our new release schedule, you might want to read this blog post.

Confluence 2.4.2 is a **free upgrade** for any customer who purchased Confluence after March 13th, 2006.

Upgrading from Confluence 2.2.x and 2.3.x

Upgrading Confluence should be fairly straightforward: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

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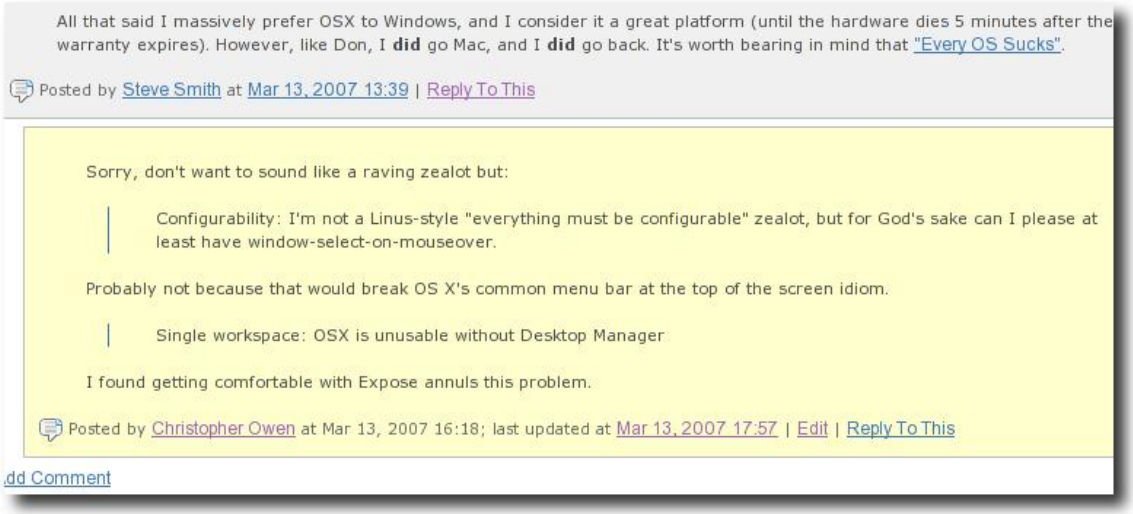

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of:

- Email addresses
- Confluence user names
- Confluence group names

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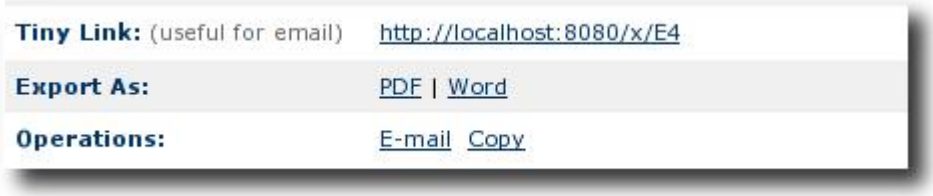
This operation is reached via a page's Info tab.



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Improvements

- The People Directory no longer shows inactive users (CONF-7771)
- Log messages now have more context such as the URL of the page being displayed and the name of the logged in user (CONF-7878)

The Confluence 2.4 Team

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Issues Resolved for 2.4.2

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.4.3

Confluence 2.4.3 is a maintenance release that resolves an assortment of issues users may have encountered using Confluence 2.4.2

2.4.3 is a free upgrade for all customers who purchased their Confluence license after March 22nd 2006.

Who should upgrade?

Confluence 2.4.3 is a recommended upgrade release which resolves some significant issues in Confluence 2.4.2. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.4 and wishing to upgrade should use this version also.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.4.3

2.4.3 resolves 15 issues. All these issues are listed below:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.4.4

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Confluence 2.4.4 is a recommended upgrade release that resolves issues users may have encountered using Confluence 2.4.3 or earlier.

2.4.4 is a free upgrade for all customers who purchased their Confluence license after March 30th 2006.

Who should upgrade?

Confluence 2.4.4 is a recommended upgrade release that resolves issues users may have encountered using Confluence 2.4.3 or earlier. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.4 and wishing to upgrade should upgrade directly to 2.4.4.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Source Release

Please note that the source release for 2.4.4 is currently unavailable. We have scheduled a fix for this which should be included in 2.4.5. Please see CONF-8007 for more details.

Changes in 2.4.4

2.4.4 resolves 17 issues. All these issues are listed below:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.4.5

Confluence 2.4.5 is a maintenance release that resolves issues users may have encountered using Confluence 2.4.4 or earlier.

2.4.5 is a free upgrade for all customers who purchased their Confluence license after April 12th 2006.

Who should upgrade?

Confluence 2.4.5 is a recommended upgrade release which resolves some significant issues in Confluence 2.4.4. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.4 and wishing to upgrade should upgrade directly to 2.4.5.

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Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or Confluence 2.3 version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.4.5

2.4.5 resolves these issues:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.5

The Atlassian Confluence team is proud to present Confluence 2.5. Confluence 2.5 is the tenth release of Confluence. It introduces more flexible page restrictions, and also includes a number of minor fixes.

Confluence 2.5 is a **free upgrade** for any customer who purchased Confluence after April 27th, 2006.

Upgrading from Confluence 2.2 and later

Upgrading Confluence should be fairly straightforward: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Introducing flexible page restrictions

Page restrictions give you the ability to choose who may read and/or edit any given page.

By popular request, page restrictions have been enhanced and can now be assigned to multiple people and/or groups:

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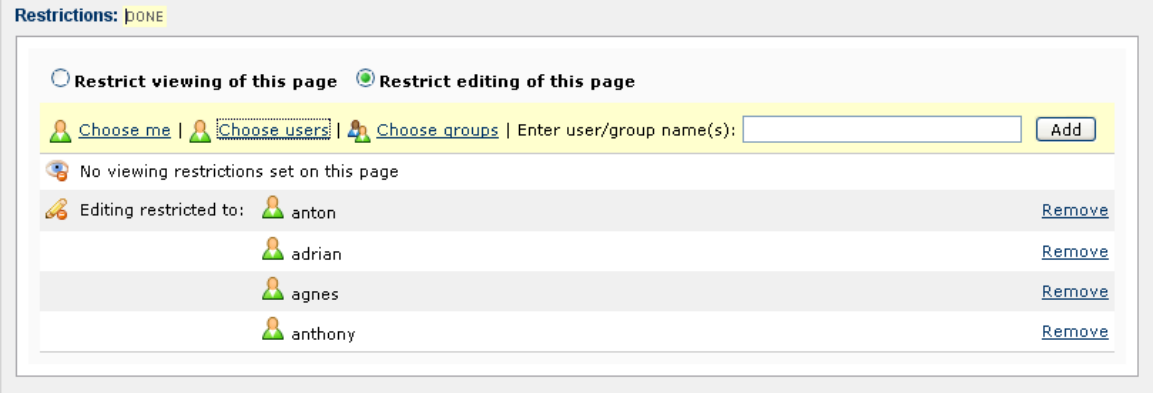

Other significant issues resolved

Dynamic task list JRE incompatibilities

Many customers have been prevented from upgrading the Java runtime hosting their Confluence instance due to CONF-4082, an issue which would prevent existing dynamic task lists from working with the new JRE. This issue has been resolved in Confluence 2.5 allowing dynamic task list users to upgrade and downgrade between Java versions without experiencing conversion exceptions.

`contentbylabel` macro supports AND condition

You may now use the `operator=AND` parameter with the `contentbylabel` macro to select pages that have all of the supplied labels. (CONF-4969)

The Confluence 2.5 Team

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Mike Cannon-Brookes
Scott Farquhar

Issues Resolved for 2.5

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.5.1

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Confluence 2.5.1 is a maintenance release that resolves issues users may have encountered using Confluence 2.5 or earlier.

2.5.1 is a free upgrade for all customers who purchased their Confluence license after May 7th 2006.

Who should upgrade?

Confluence 2.5.1 is a bugfix release which resolves some significant issues in Confluence 2.5. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.5 and wishing to upgrade should upgrade directly to 2.5.1.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or a later version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.5.1

2.5.1 resolves these issues:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.5.2

Confluence 2.5.2 is a maintenance release that resolves issues users may have encountered using Confluence 2.5 or earlier.

2.5.2 is a free upgrade for all customers who purchased their Confluence license after May 22nd 2006.

Who should upgrade?

Confluence 2.5.2 is a bugfix release which resolves some significant issues in Confluence 2.5. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.5 and wishing to upgrade should upgrade directly to 2.5.2.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or a later

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version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.5.2

2.5.2 resolves these issues:

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 2.5.3

Confluence 2.5.3 is a maintenance release that resolves issues users may have encountered using Confluence 2.5 or earlier.

2.5.3 is a free upgrade for all customers who purchased their Confluence license after May 30th 2006.

Who should upgrade?

Confluence 2.5.3 is a bugfix release which resolves some significant issues in Confluence 2.5. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

In particular, 2.5.3 fixes a problem which could cause indexing to fail when extracting text from unprintable encrypted PDF files.

Customers running releases older than 2.5 and wishing to upgrade should upgrade directly to 2.5.3.

Shared Mode Removed

This release removes the 'Shared Mode' setting from General Configuration. If you have shared mode enabled you should disable it before upgrading.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or a later version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

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Changes in 2.5.3

2.5.3 resolves these issues:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 2.5.4

Confluence 2.5.4 is a maintenance release that resolves issues users may have encountered using Confluence 2.5 or earlier.

2.5.4 is a free upgrade for all customers who purchased their Confluence license after June 13th 2006.

Who should upgrade?

Confluence 2.5.4 is a bugfix release which resolves some significant issues in Confluence 2.5. Customers running older versions of Confluence should review the list of resolved issues below, and upgrade if this release fixes any problems with their current Confluence installation.

Customers running releases older than 2.5 and wishing to upgrade should upgrade directly to 2.5.4.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from another Confluence 2.2.x or a later version, you can find instructions here.

We strongly recommend that you backup your `confluence.home` directory and database before upgrading!

Upgrading from Confluence 2.1 and earlier

Users upgrading directly from 2.1 or earlier should also read the 2.2 Release Notes for caveats regarding the 2.1 -> 2.2 upgrade.

Changes in 2.5.4

2.5.4 resolves these issues:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

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Release Notes 2.5.5

Confluence 2.5.5 is a recommended upgrade that resolves issues you may have encountered in Confluence 2.5.4 or earlier. Confluence 2.5.5 resolves two security bugs, related to space permissions and invalid characters in space names and keys.

As such **this release is a recommended upgrade for all customers**.

Confluence 2.5.5 is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after July 26th 2006.

Upgrading to Confluence 2.5.5

Upgrading Confluence should be fairly straightforward. You can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Changes in 2.5.5

Patch for security issues

Confluence 2.5.5 resolves two security bugs, related to:

- space permissions
- invalid characters in space names and keys.

For more information, please see the security advisory.

Server ID

Starting with release 2.5.5, Confluence will generate a server ID for you. Server ID has replaced License ID on the License Details page. You will find the server ID useful when contacting Atlassian support.

Server ID:

- is generated when you install Confluence for the first time
- exists for the life of the Confluence instance
- survives an upgrade
- is held in the database
- is not bound to a specific licence
- is the same for all servers in a cluster.

Translations for rich text editor now compatible with Confluence language pack plugins

Thank you to everyone who voted for this popular fix.

The rich text editor in Confluence shows text in tooltips, warnings and other messages. If you are using Confluence in a language other than English, you will want to translate these messages as well as the standard Confluence text.

With Confluence 2.5.5:

- The translations for the rich text editor can be part of a Confluence language pack plugin.
- If your language pack does not contain translations for the rich text editor, the text will show in English. (Before 2.5.5, it showed the 'key' value rather than English.)
- Partial translations of rich text editor messages are already included in the professional French and German language packs. Full translation is under construction.

This makes things much simpler!

You will find more information here:

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- Overview of language pack translations
- Technical overview of language pack plugins
- Specific information on translating the rich text editor

Other fixes in 2.5.5

2.5.5 resolves these issues:

Errors were reported by the JIRA trusted connection.

- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (19 issues)

Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due
	CONF-8992	Confluence system error exporting a page as PDF	Unassigned	Igor Mironov		Closed	Cannot Reproduce	Jul 24, 2007	Aug 06, 2007	
	CONF-8917	XSS vulnerability: space name and key not validated nor escaped	Unassigned	Samuel Le Berrigaud [Atlassian]		Resolved	Fixed	Jul 16, 2007	Sep 07, 2010	
	CONF-8916	Create patch to CONF-8877 for Confluence 2.5.4	Samuel Le Berrigaud [Atlassian]	Samuel Le Berrigaud [Atlassian]		Resolved	Fixed	Jul 16, 2007	Jul 27, 2007	
	CONF-8877	Security issue: user can copy page with only view permissions	Samuel Le Berrigaud [Atlassian]	Jon Nermut		Resolved	Fixed	Jul 10, 2007	Aug 24, 2008	
	CONF-8868	Userlister plugin causes NullPointerException	Unassigned	Tuomas Jormola		Resolved	Fixed	Jul 09, 2007	Jul 15, 2007	

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	CONF-8864	RSS feed doesn't filter personal labels	Charles Miller [old account, do not assign issues]	Charles Miller [old account, do not assign issues]		Resolved	Fixed	Jul 08, 2007	Jan 28, 2008	
	CONF-8860	Naming a page with a single dot locks page or space	Charles Miller [old account, do not assign issues]	François Nonnenmacher		Resolved	Fixed	Jul 06, 2007	Feb 27, 2008	
	CONF-8855	Page title length is not being validated, leading to errorpage for titles longer than 255 characters	Samuel Le Berrigaud [Atlassian]	Igor Minar		Resolved	Fixed	Jul 05, 2007	Aug 20, 2008	
	CONF-8851	"Next" link appears on the "Manage Groups" screen for duplicate groupnames	Charles Miller [old account, do not assign issues]	Gurleen Anand [Atlassian]		Resolved	Fixed	Jul 05, 2007	Jul 15, 2007	
	CONF-8846	Input for Labels is not properly validated	Christopher Owen [Atlassian]	Igor Minar		Resolved	Fixed	Jul 05, 2007	Jul 17, 2007	
	CONF-8830	Standalone tomcat server.x	Unassigned	Tom Davies [Atlassian]		Resolved	Fixed	Jul 03, 2007	Jul 05, 2007	

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		ml has enableLookups="true"								
	CONF-8789	Add Server ID implementation	Christopher Owen [Atlassian]	Christopher Owen [Atlassian]		Resolved	Fixed	Jun 28, 2007	Oct 08, 2007	
	CONF-8770	Email address exposure - email hidding option is ignored in user lookup	Don Willis [Atlassian]	Igor Minar		Resolved	Fixed	Jun 26, 2007	Jul 19, 2007	
	CONF-8703	contentbylabel operator=AND performs like an OR	Unassigned	Fennie Ng [Atlassian]		Resolved	Fixed	Jun 14, 2007	Dec 16, 2007	
	CONF-8657	Rich Text Editor broken with IE6 and French language pack	Unassigned	Don Willis [Atlassian]		Resolved	Fixed	Jun 06, 2007	Jul 29, 2007	
	CONF-8123	Using attachments syntax on space template results in NPE	Charles Miller [old account, do not assign issues]	Lothar Hegebart		Resolved	Fixed	Mar 22, 2007	Jul 17, 2007	
	CONF-8092	Rescan for new plugins in {1} - ConfluenceActionSupport_en_US.properties	Unassigned	Jim Clark		Resolved	Fixed	Mar 19, 2007	Jul 04, 2007	
	CONF-6	Simplify	Unassig	Don		Reso	Fixed	Sep 14,	May 12,	

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	987	Rich Text Editor localisation	ned	Willis [Atlassian]		lved		2006	2008	
	CONF-6167	Javascript errors when draft/heartbeat is interrupted can cause Internet Explorer to crash	Unassigned	Matt Ryall [Atlassian]		Resolved	Fixed	May 15, 2006	Aug 12, 2007	

Upgrade Guide 2.5.5

Who should upgrade?

Confluence 2.5.5 is a recommended upgrade that resolves issues you may have encountered in Confluence 2.5.4 or earlier. Confluence 2.5.5 resolves two security bugs, related to space permissions and invalid characters in space names and keys.

As such **this release is a recommended upgrade for all customers**.

Confluence 2.5.5 is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after July 26th 2006.

If you are running a release older than 2.5 and you want to upgrade, you should upgrade directly to 2.5.5. Refer to the upgrade procedure below.

Upgrade Procedure

Upgrading Confluence should be pretty easy. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.2.x or a later version, you can find instructions here.

If you are upgrading directly from 2.1 or earlier, you should also read the 2.2 Release Notes for warnings about the 2.1 -> 2.2 upgrade.

Release Notes 2.5.6

Confluence 2.5.6 is a recommended upgrade that resolves a number of security bugs and other issues you may have encountered in Confluence 2.5.5 or earlier.

As such **this release is a recommended upgrade for all customers**.

Confluence 2.5.6 can be downloaded from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa, and is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after August 8th 2006.

Upgrading to Confluence 2.5.6

Upgrading Confluence should be fairly straightforward. You can find instructions here. *We strongly recommend*

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that you backup your `confluence.home` directory and database before upgrading!

Changes in 2.5.6

- For details about the security fixes, please see the security advisory.
- CONF-8944 resolves a Crowd integration issue for Confluence 2.5.6 and later.
- The Crowd integration fix will be ported to previous Confluence versions in the near future - please see CONF-9122.

Here's a complete list of the bug fixes in Confluence 2.5.6:

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Upgrade Guide 2.5.6

Who should upgrade?

Confluence 2.5.6 is a recommended upgrade that resolves a number of security bugs and other issues you may have encountered in Confluence 2.5.5 or earlier.

As such **this release is a recommended upgrade for all customers**.

Confluence 2.5.6 can be downloaded from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa, and is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after August 8th 2006.

If you are running a release older than 2.5 and you want to upgrade, you should upgrade directly to 2.5.6. Refer to the upgrade procedure below.

Upgrade Procedure

Upgrading Confluence should be fairly straightforward. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.2.x or a later version, please see the Confluence Upgrade Instructions.

If you are upgrading directly from 2.1 or earlier, you should also read the 2.2 Release Notes for warnings about the 2.1 -> 2.2 upgrade.

Release Notes 2.5.7

Confluence 2.5.7 is a recommended upgrade that resolves two issues you may have encountered in Confluence 2.5.6:

- Indexing errors claiming 'too many open files', caused by duplicate libraries in the Confluence web application.
- Caching should be enabled by default for the LDAP configuration in `atlassian-user.xml`.

Confluence 2.5.7 can be downloaded from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa, and is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after 30 August 2006.

If you don't wish to upgrade to 2.5.7, but do want a fix for issue CONF-9251 ("Too many open files" error during index operations), you can manually remove the duplicate libraries shipped in the Confluence web application. Please follow the instructions on the JIRA issue.

Upgrading to Confluence 2.5.7

Upgrading Confluence should be fairly straightforward. You can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

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Changes in 2.5.7

Here's a complete list of the bug fixes in Confluence 2.5.7:

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Upgrade Guide 2.5.7

Who should upgrade?

Confluence 2.5.7 is a recommended upgrade that resolves two issues you may have encountered in Confluence 2.5.6:

- Indexing errors claiming 'too many open files', caused by duplicate libraries in the Confluence web application.
- Caching should be enabled by default for the LDAP configuration in `atlassian-user.xml`.

Confluence 2.5.7 can be downloaded from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa, and is a free upgrade for all customers who purchased their Confluence license or maintenance renewal after 30 August 2006.

If you are running a release older than 2.5 and you want to upgrade, you should upgrade directly to 2.5.7. Refer to the upgrade procedure below.

Upgrade Procedure

Upgrading Confluence should be fairly straightforward. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.2.x or a later version, please use the Confluence Upgrade Instructions.

If you are upgrading directly from 2.1 or earlier, you should also read the 2.2 Release Notes for warnings about the 2.1 -> 2.2 upgrade.

Release Notes 2.5.8

Confluence 2.5.8 is a **highly recommended** upgrade that resolves some issues in the user management framework and a memory leak in Confluence 2.5.x.

You can download Confluence 2.5.8 from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa. This upgrade is free for all customers with active Confluence software maintenance as at 3 October 2007.

This release has been made available after the Confluence 2.6 release date. This 2.5.8 version is for customers who want to fix the issues listed below, but do not want all the new functionality and theme changes in Confluence 2.6 yet.

Upgrading to Confluence 2.5.8

Upgrading Confluence should be fairly straightforward. You can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Changes in 2.5.8

Here's a complete list of the bug fixes in Confluence 2.5.8:

Error rendering macro 'jiraissues' : Unable to determine if

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sort should be enabled.

Upgrade Guide 2.5.8

Who should upgrade?

Confluence 2.5.8 is a **highly recommended** upgrade that resolves some issues in the user management framework and a memory leak in Confluence 2.5.x.

You can download Confluence 2.5.8 from http://www.atlassian.com/software/confluence/ConfluenceDownloadCenter.jspa. This upgrade is free for all customers with active Confluence software maintenance as at 3 October 2007.

If you are running a release older than 2.5 and you want to upgrade, you should upgrade directly to 2.5.8, referring to the upgrade procedure below.

Upgrade procedure

Upgrading Confluence should be fairly straightforward. *We strongly recommend that you back up your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 2.2.x or a later version, please use the Confluence Upgrade Instructions.

If you are upgrading directly from 2.1 or earlier, you should also read the 2.2 Release Notes for warnings about the 2.1 -> 2.2 upgrade.

Confluence 1.x.x Releases

- Release Notes 1.0
  - Release Notes 1.0rc5
    - Issues Resolved for 1.0rc5
  - Release Notes 1.0b1
  - Issues Resolved for 1.0b4
    - Release Notes 1.0b4
  - Issues Resolved for 1.0
  - Release Notes 1.0rc2
    - Issues Resolved for 1.0rc2
  - Release Notes 1.0rc6
    - Issues Resolved for 1.0rc6
  - Release Notes 1.0a3
  - Release Notes 1.0b2
    - Feature List
  - Release Notes 1.0rc1
    - Issues Resolved for 1.0rc1
  - Release Notes 1.0b3
    - Issues Resolved for 1.0b3
  - Release Notes 1.0a2
- Release Notes 1.0.1
  - Issues Resolved for 1.0.1
  - Release Notes_1.0.1
- Release Notes 1.0.3
  - Issues Resolved for 1.0.3
- Release Notes 1.1
  - Issues Resolved for 1.1
- Release Notes 1.1.1
  - Issues Resolved for 1.1.1
- Release Notes 1.1.2
- Release Notes 1.2
  - Issues Resolved for 1.2

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    - Permissions Changes in 1.2
- Release Notes 1.2.1
    - Issues Resolved for 1.2.1
- Release Notes 1.2.2
    - Issues Resolved for 1.2.2
- Release Notes 1.2.3
    - Issues Resolved for 1.2.3
- Release Notes 1.3
    - Confluence Presentation
    - Issues Resolved for 1.3
    - What's New in 1.3
- Release Notes 1.3.1
    - Issues Resolved for 1.3.1
- Release Notes 1.3.2
    - Issues Resolved for 1.3.2
- Release Notes 1.3.4
    - Issues Resolved for 1.3.4
- Release Notes 1.3.5
    - Issues Resolved for 1.3.5
- Release Notes 1.3.6
- Release Notes 1.4
    - Issues Resolved for 1.4
- Release Notes 1.4.1
    - Issues Resolved for 1.4.1
- Release Notes 1.4.2
    - Issues Resolved for 1.4.2
- Release Notes 1.4.3
    - Confluence SOAP Provider Migration
    - Issues Resolved for 1.4.3
- Release Notes 1.4.4
    - Issues Resolved for 1.4.4

Release Notes 1.0

Confluence 1.0

Ring the bells. Break out the champagne. Paint the town red. Dance naked in the streets. Or at least that's what we'll be up to tonight, because we're finally releasing Confluence 1.0!

Confluence 1.0 represents the hard work and dedication of quite a few people. Obviously there's the development team: Ara, Armond, Charles, Dave, Mike and Ross, but there's also the JIRA team and the rest of the guys at Altlassian who have offered support, advice, and loud music. A huge thanks also goes out to everyone involved in the beta-testing program. Your real-world use of Confluence gave us invaluable suggestions and bug-reports, and we apologise for the times we've messed up your databases on the way.

We're pretty proud of all the cool stuff we've managed to fit into Confluence already, and we're looking forward to making it even better in forthcoming versions (Remember, a license entitles you to a year of upgrades).

The only sad moment for the day is that for the 1.0 release, we had to lose emoticons. The regular expression responsible for turning 🙂 into a smiley-face was causing pages to take *ten seconds* to render. Commenting out the filter lowers the rendering time of even highly complex pages to a few hundred milliseconds. We promise, the smileys will return in a future version, faster and stronger than ever! Or if you don't mind the cost, you can re-enable them by uncommenting the emoticonFilter line in `wikiSubsystemContext.xml`

Users of late Release Candidate builds will notice a substantial improvement in performance as a result.

Contents

1. New Features

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2. Notable Bug-fixes since RC6
3. Outstanding Issues
4. Upgrading from RC6
5. Notable Features from Previous Releases

See also: Issues Resolved for 1.0

New Features

For once, we managed to resist the urge to add any new features this week, since we were busy cleaning everything up for today's release.

Notable Bug-fixes

- We have verified that you can now use Confluence's internal datasources with MySQL (for users of RC5 or earlier, see the upgrade section below for information on how to change to the production-ready datasources)
- Fixed the database transaction problems that were causing problems with user/group management, page renaming and commenting
- [~user] links no longer place the context path in the link twice
- Fixed a rendering regression that caused text to be spaced incorrectly within panels
- The 404 error page no longer causes a NullPointerException
- The recent comments RSS feed returns a valid RSS version number
- The 'diff' link now works in HTML edit notification emails when Confluence is installed in a non-root context.

Outstanding Issues

- The Emoticon filter is currently shipped disabled, because it was causing page-load times to go through the roof CONF-963
- You can not complete the Confluence setup process if you have external user-management enabled. Set up Confluence *before* setting up external user-management. CONF-950
- It is possible to make a "create page" link to a page with invalid characters in its title (which will thus fail to be created) CONF-810
- If you are using PostgreSQL, please make sure you use the JDBC3 version of the Postgres JDBC drivers. Some users have encountered problems with the JDBC2 drivers.
- Links to images that are page-attachments are broken in email notifications CONF-878
- There continue to be problems with high-bit characters in pages when Confluence is deployed on Resin CONF-569

Upgrading from RC6

We haven't made any changes to the database schema, so you should just be able to install the new version of Confluence, point it at your existing confluenceHome directory, and carry on as before. I would, however, recommend making a backup before you upgrade, just in case.

If you:

1. have not gone through the Confluence database setup steps since Confluence 1.0RC5
2. are running the embedded HSQL database, or are connecting to a database directly (not through an Application Server Datasource)

Then you will need to add a few connection pooling properties to confluence.cfg.xml file in your confluenceHome directory. Edit the file, and insert the following somewhere in the <Properties> section:

If you do not fall into the category described above, or if you find these lines are already in the file, you *do not* need to do this!

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```
<property name="hibernate.c3p0.max_statements"><![CDATA[0]]></property>
  <property name="hibernate.c3p0.min_size"><![CDATA[0]]></property>
  <property name="hibernate.c3p0.timeout"><![CDATA[30]]></property>
  <property name="hibernate.c3p0.max_size"><![CDATA[4]]></property>
```

This will enable c3p0 connection-pooling, which is far more reliable than the default pooling that we were using previously.

Notable Features from Previous Releases

Here's a quick retrospective of some of the cool things we have added to Confluence during the beta- and RC-releases. It is by no means comprehensive, but you can follow the links to the original release notes for an idea of just how busy we've been in recent months.

Confluence 1.0a2 (November 6, 2003)

- Shortcut links allow you to create special URL Shortcuts to point to existing web services: i.e. CONF-195
- Undefined and Orphaned Pages reports
- Revert page to previous version

Confluence 1.0a3 (December 5, 2003)

- Comments for pages
- Links in exported PDFs are internal links if the destination page has also been exported, external links otherwise
- Personal History popup keeps track of the pages you have visited
- Page Information screen lists all the incoming and outgoing links on a page
- Printable version of every page

Confluence 1.0b1 (December 19, 2003)

- Pages that have changed since your last login are highlighted in the 'recent changes' list
- Pages can be organised in parent-child hierarchies, allowing for clearer organisation of pages within a space
- Page renaming refactors links to the page, wherever they may appear in the site
- Search works across all content in the site, including comments, space descriptions and user information
- A new permission was added for creating comments
- {color} macro for coloured text
- Parameters allowed on image links

Confluence 1.0b3 (January 19, 2004)

- Beta2 was released a few days earlier, but we'd prefer not to talk about it.
- Searching works across PDF, HTML, XML and Word attachments
- The colour-scheme and page decorators can be configured across the site
- The site homepage is configurable
- Emoticons
- New macros: {include}, {include-html}, {rss}, {search}, {jiraissues}, {junitreport}
- User profiles can be longer than 255 characters
- Much better handling of anonymous contributions

Confluence 1.0b4 (January 26, 2004)

- FatCow, our acceptance-testing framework was introduced to the world
- Confluence now supports chronologically organised content: blog posts
- You can now move pages between spaces, and have their links updated accordingly
- en – and em — dashes are supported

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- You can link directly to attachments
- New macros: {blog-posts}, {anchor}, and an improved {rss} macro

Confluence 1.0rc1 (February 6, 2004)

- XML-RPC and SOAP APIs allow you to programmatically interact with Confluence
- Trackback allows Confluence to notify other sites of links, and be notified by them
- User notifications on page and space editing were overhauled
- Look and Feel configuration was enabled individually for each space
- Linking to space descriptions and user profile pages directly is now possible: Confluence User Community, Mike Cannon-Brookes
- History popup tracks more than just pages

Confluence 1.0rc2 (February 13, 2004)

- Improvements to the remote API
- RSS and HTML macros now use HTTP proxies if configured to

Confluence 1.0rc5 (February 20, 2004)

- RC3, RC4 and RC5 were released within days of each other, in a flurry of mad bug-fixing
- Page templates can now be filled in in-line
- If a page is moved or renamed and you go to the URL it used to inhabit, Confluence will try to direct you to its new location
- Exported PDFs now incorporate the site's stylesheet

Confluence 1.0rc6 (March 5, 2004)

- You can prevent people signing up, for private Confluence installations
- You can configure Confluence to mask user email addresses
- User management can now be shared with JIRA
- Page templates can now contain drop-down menus and text areas
- New macro: {html}

Release Notes 1.0rc5

Confluence 1.0rc5

It's time to release Confluence 1.0rc5 into the wild: it's the fourth Release Candidate since last Friday, and we're definitely getting close here. The last two release-candidates did not have their own release-notes, so these notes will also include things that were fixed for those versions.

Contents

1. New Features
2. New Macros
3. Improvements
4. Notable Bug-fixes
5. Outstanding Issues

See also: Issues Resolved for 1.0rc5

New Features

In keeping with our promise to not add any features during the Release Candidate process, we have been very restrained, and only added two new features 🙂

Template Preview

Page templates have been given an overhaul: when filling in your template variables, you are presented with a template of the rendered page, with input fields where the variables will be inserted. If you have the same variable used in several places, the form will take care of keeping them all in synch.

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Step 2: Fill in template variables

Choose values for the variables in this template. These values will be automatically inserted into the template for you in the correct locations.

New template (title)

By David Loeng (author)

February (month) 20th (day), 200 (year)

After a week of frantic bug-fixing, we have released Confluence 1.0 Release Candidate 2. Thanks everyone for reporting all the bugs they found in RC1. While we really hope you'll keep reporting anything you find that doesn't work, we're also hoping that there's a lot less to report now.

(from) - (to)
(from) - (to)
(from) - (to)

We have released RC2 because it's a lot more stable than RC1. We know a lot of you are already using Confluence in some kind of production capacity, and we don't want to keep you waiting for the important fixes that we put in this week.
Since we're in the middle of a feature freeze, there obviously aren't any new major features in this release, but there are a number of incremental improvements, and a lot of fixes.
Regards,

David Loeng (author)

Page Redirection

When you rename or move a page, the page's old URL will attempt to give users some clue as to where they should be looking: checking which pages have had this name in the past, or redirecting users to pages in another space with the same name.

In This Space

The page you were looking for may have been renamed to one of the following:

Ridiculous (Fish Space)
And yet another page to add to the confusion

Before (Fish Space)
Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Integer euismod tellus et sem. Aliquam ullamcorper hendrerit arcu. Sed lacus odio, mattis ut, sollicitudin at, tincidunt vitae, magna. Integer aliquam nibh sed libero....

In Other Spaces

The page you were looking for may have moved to another space:

Cows (Bouncy Space)
This is the page before it was renamed.

New Macros

- {weblogs} is a synonym for {blog-posts}

Improvements

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- The user signup screen has a more friendly UI
- Exported PDFs now incorporate the site's stylesheet, and thus look a lot better.
- Confluence now has a useful "404" error page that gives the user some suggestions of how to find what they were looking for.
- An Administrators page, linked from the footer of each page, lists those users in the "confluence-admin" group. (If you don't want your address to be made public on this page, create an administrative group with some other name)
- The error you receive when you exceed your licensed user limit is more informative, and no longer directs users to email Atlassian.
- The SnipSnap importer converts SnipSnap blog posts to Confluence blog posts.
- Several methods added to the XML-RPC and SOAP APIs for managing users and spaces. (See Conf Remote API Additions)
- The Daily Report email is more informative and more readable
- Page comments and Parent/child relationships are maintained during HTML and PDF exports
- news: and nntp: URL schemes are now recognised in bracketed links

Notable Bug-fixes

Since RC2

- Links between pages now work when you have a context path other than / (oops!)
- The daily report email is no longer sent every minute (oops!)
- You can no longer download attachments without being logged in (OOPS!)
- Search results no longer highlight words that were terms in previous searches

Since RC3

- Page redirects now work properly under Orion 2.0.2

Since RC4

- Removing a user no longer causes their notifications to hang around and crash things
- Removing a blog post works, too
- Many fixes to PDF rendering and exporting
- Many fixes to handling of Latin character set (See outstanding issues below)
- Invalid macros now give a more informative error than "no group 3"
- The 404 error page no longer requires you to log in to view it
- Macros that generate HTML (page include, HTML include, JIRA, RSS, FatCow) bypass the remainder of the page processing, and so should have far fewer formatting errors now.
- User browser filter remembers your search across pages

Plus, of course, innumerable fixed to annoying crashing bugs across all three releases.

Outstanding Issues

Latin Characters under Resin

We've tested creating pages with non-ASCII titles and content across several different browsers and several different operating systems, and they seem to be working reliably now... except on Resin. This will be quite noticeable since confluence.atlassian.com itself is running under Resin, but we have so far been unable to come up with a solution that works on this application server.

For users who need this functionality, we suggest running under Tomcat.

- On MySQL, the "orphaned pages" report may include the space's homepage CONF-766
- Combining block macros with lists is dangerous CONF-756
- Under some circumstances, paragraph tags will not be closed CONF-746

Issues Resolved for 1.0rc5

JIRA Issues

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Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.0b1

Confluence 1.0b1

Confluence 1.0b1 was released 19th December 2003.

That's right - we finally got it out the door! *cheers from around the room erupt as developers across in the Atlassian offices crack open a beer*.

New Features

- It's soooo much faster as we've implemented caching at multiple levels - trust me, it now *flies* in development. Here's hoping it flies for you too. (For those with a development bent, turn on profiling via the URL to see abeautiful profiling stack trace on stdout)
- The last login date is now tracked, pages and spaces changed since your last login are highlighted in green (as these are presumably pages you want to view), you can see a diff of the currently viewed page against the date you last logged in and there are various related reports of spaces/pages changed since your last login.
- Parent/child page hierarchies have been implemented. You can specify the parent for any pages and the ancestry is reflected in the breadcrumbs list. The full hierarchy is shown (including the current page's position) on the Page Information screen, and there is a related macro to show the children in various different types of trees (see the Notation Guide for details)
- Search has been completely overhauled - search now works across pages, comments and space descriptions and the results now display descriptions with highlighted search terms (this is really cool!)
- Page renaming and link refactoring now works across comments, space descriptions and pages - neat!
- The Notation Guide has been significantly improved with more useful examples, a list of the available macros and a tabbed interface. Also the edit/create pages now have a 'quick notation guide' to the most commonly used operations
- There is a new 'Create Comment' permission - so that you can make spaces which are publicly viewable/commentable, but not editable.
- The UI of the 'create link' and 'external link' links within a rendered page have been improved with subtle icons
- Page comments now have a sexy icon of their own, and can be shown/hidden at will. You can also permalink to any given comment and comments are fully indexed.
- Undefined and orphaned pages reports have been tightened significantly so that they now report truly undefined/orphaned pages
- You can create a list of URLs ignored from external referrers - this is useful where your server is known by multiple IP / domain name combinations, or you want to ignore all internal referrers (Admin / General configuration)
- {color} macro to colour blocks of text
- Logging in to Confluence now takes you to your intended destination, not the Dashboard
- There is an option to choose whether the default link for a space goes to the space homepage or the space summary (people internally and externally seem to be divided about which it should go to - so you can choose for yourselves)
- You can now edit and add SMTP servers through the web interface
- The administration interface has been completely overhauled and tightened
- Added a Mail Queue administration page
- Added a View System Information page

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- Added a pretty error page, and the ability to submit but reports (including exports) directly to us
- The permissions viewing and editing pages have been greatly simplified and improved across the application
- Confluence now has a licensing system, so you will need a license key to evaluate (these can be generated online as with JIRA).
- Image embedding can now include parameters (such as height, width, alignment etc) - see the Notation Guide for details.
- https:// links are now treated just like ftp:// and http:// external links
- Various rendering bugs have been fixed.
- Many other minor fixes, improvements and performance tweaks

Issues Resolved for 1.0b4

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.0b4

Confluence 1.0b4

To belatedly ring in the Year of the Code-Monkey, it's time for Confluence 1.0 beta 4. We've had some great feedback on the last few betas, thanks to everyone for submitting bugs, and contributing to Atlassian Answers a nd the discussion space.

Contents

1. FatCow
2. New Features
3. New Macros
4. Improvements
5. Notable Bug-fixes
6. Outstanding Issues

See also: Issues Resolved for 1.0b4

Atlassian FatCow

Along with 1.0b4, we're also releasing FatCow: Functional Acceptance Testing for the Confluence Wiki. Styled after Ward Cunningham's FIT and Bob Martin's Fitnesse, FatCow allows you to define web-based acceptance tests in wiki notation, and then run them from inside Confluence. Here's a tutorial showing how to write a quick FatCow test suite that makes sure Confluence shows up on Google. 🙂

FatCow is Open Source, and also serves as example code for anyone who wants to extend Confluence by writing their own macros (something that we'll be looking to make easier in future releases).

New Features

Blog Posts

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Each space can now host a "blog" of pages that are organised by date, rather than just by title. This is pretty useful if you want to attach some kind of updating news to a space. The "create blog post" button can be found on the right-hand toolbar.

Blogging support is pretty basic right now: you can create posts, and you can include the most recent posts in a page using the {blog-posts} macro. Rest assured, we'll be piling on the features in the next few releases.

Move Pages Between Spaces

A much requested feature, our newest refactoring lets you move pages cleanly from one space to another. We're using this already to maintain a private space where we stage documentation waiting to be transferred to the main documentation space.

Configurable Site Description

You can now change the text in the site description that appears on the user's dashboard: somewhere to put welcome messages or MOTDs. And, of course, it understands Confluence markup.

#includePage("Page") Velocimacro

For the decorator-editors, you can use this render the contents of a page anywhere inside a decorator. The page has to be in the space that the user is looking at, and if the page does not exist, nothing will be rendered.

New Macros

- {blog-posts} displays the most recent blog posts for a space.
- {rss} macro now has maxEntries and titleBar parameters.
- {anchor} macro allows you to create named anchors in a page (link to them with [SPACE:page#anchor])

Improvements

- You can now draw en – and em — dashes.
- mailto: links are now drawn as just the email address, like so user@example.com
- the {search} macro now excludes the page it was included in from the search results
- you can also link to attachments using #-anchors [SPACE:page#attachment.pdf]
- you are given the opportunity to pick a template when creating a page from a link, and any entered page title survives picking a page template

Notable Bug-fixes

- Spurious error message about editing a stale version of a page have been squashed.
- No longer crashes when you add a user to certain groups.
- Some database queries have been rewritten to work around the fact that MySQL doesn't understand sub-selects.
- Diffs more reliably highlight changed words
- Several minor rendering problems to do with deeply nested lists have been fixed.
- and many more...

Outstanding Issues

- You should restart Confluence immediately after finishing the initial setup steps, to avoid data loss CONF-493
- New-lines may not be drawn if the next line starts with whitespace CONF-475
- Emoticons are rendered inside {noformat} blocks CONF-502

Issues Resolved for 1.0

JIRA Issues				

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Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.0rc2

Confluence 1.0rc2

After a week of frantic bug-fixing, we have released Confluence 1.0 Release Candidate 2. Thanks everyone for reporting all the bugs they found in RC1. While we really hope you'll keep reporting anything you find that doesn't work, we're also hoping that there's a lot less to report now.

We have released RC2 because it's a *lot* more stable than RC1. We know a lot of you are already using Confluence in some kind of production capacity, and we don't want to keep you waiting for the important fixes that we put in this week.

Since we're in the middle of a feature freeze, there obviously aren't any new major features in this release, but there are a number of incremental improvements, and a *lot* of fixes.

But first, a...

WARNING

If you are upgrading from Confluence 1.0rc1, **do not** perform a backup of your data from within Confluence. There was a serious bug with RC1 that caused user permissions to be corrupted during data exports.

There have been no database changes between RC1 and RC2, so you should simply be able to run RC2 against your existing data without performing a backup/restore.

If you wish to back your data up safely before the upgrade, you will need to do so manually: shut down Confluence, make a copy of your Confluence home directory (as defined in `confluence-init.properties`, and if you are storing your data in something other than HSQL, use your database's native backup procedure.

h4. Contents

1. Improvements
2. Other Bug Fixes
3. Other Outstanding Issues

See also: Issues Resolved for 1.0rc2

Improvements

* Remote XML-RPC and SOAP APIs now have a {{getPermissions()}} method
* \{noformat\} macro accepts a title parameter
* Page view and create links are no longer displayed if the user does not have permission to view or create the destination page.
* When you create a page from viewing a previous page, you are given another chance to make that page the new page's parent.
* RSS and HTML include macros use HTML proxies if they are defined using the standard Java {{http.proxyHost}} and {{http.proxyPort}} system properties.
* Default session timeout is now 60 minutes

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* Improvements to user browser and user profile page UI
* Shortcut link definitions are now backed up and restored

Notable Bug-fixes

Stability

We've done a lot of work tracking down the source of any exception and page error that has been reported to us, and fixing their causes. We've also made one or two improvements to the error reporting page, but we're hoping you won't see it nearly as often (if at all) any more.

Page Templates

The creation, editing and deletion of page templates should now be a lot more reliable and provide a smoother user experience.

Also

* You no longer have to restart Confluence after its initial setup http://jira.atlassian.com/browse/CONF-493.
* Performing a full data export no longer corrupts users' group membership data: http://jira.atlassian.com/browse/CONF-645.
* You can now link to profiles of users with an @ symbol in their usernames: http://jira.atlassian.com/browse/CONF-639.
* Trying to create a page with illegal characters in its name no longer loses your page content on some browsers: http://jira.atlassian.com/browse/CONF-713.
* Trackback pings are now sent for URLs that are not surrounded by square brackets: http://jira.atlassian.com/browse/CONF-708.
* And, of course, many more.

Outstanding Issues

The two major areas we still need to work on are the PDF export and the use of non-ASCII characters in pages (especially page titles). Handling of both are much better than they were a week ago, but there's still some work to do before they're completely reliable.

Issues Resolved for 1.0rc2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.0rc6

Confluence 1.0rc6

Confluence 1.0rc6 fixes more bugs. Lots of them. There aren't many new and interesting features to report, although we have implemented the much-requested ability to mask email addresses and prevent public signup. Mostly, we've been toiling away fixing the lots of little problems that are getting in the way of us calling Confluence truly worthy of the 1.0 label.

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Contents

1. New Features
2. New Macros
3. Improvements
4. Notable Bug-fixes
5. Outstanding Issues

See also: Issues Resolved for 1.0rc6

New Features

Private Confluence Configuration

In private mode, the only way to add users to Confluence is through the administrative interface: users can not sign up on their own. This way, you can prevent random passers-by from signing on to your Confluence installation. The site administrator can configure this in the general administration settings.

Email Address Privacy

Another much-requested feature, the site administrator has three options for email-address privacy:

- Public: just like pre-rc6, users email addresses are displayed publicly.
- Masked: email addresses are still displayed publicly, but masked in such a way to make it harder for spam-bots to harvest them.
- Private: only site administrators can see users' email addresses.

Administrators should be aware that even in private mode, anyone in the `confluence-admin` group will still be listed (with their email address) on the administrators page, although their addresses will be masked.

Share User Management with JIRA

For sites with both a Confluence and a JIRA installation, Confluence can be set up to delegate its user-management to JIRA.

Template Field Types

Templates now support drop-down menus and text-input areas.

`@variablename|textarea(5,10)@` will give you a 5 x 10 text-area called 'variablename'. `@variablename|list(one,two,three,four)@` will give you a drop-down list called 'variablename', with options one, two, three and four.

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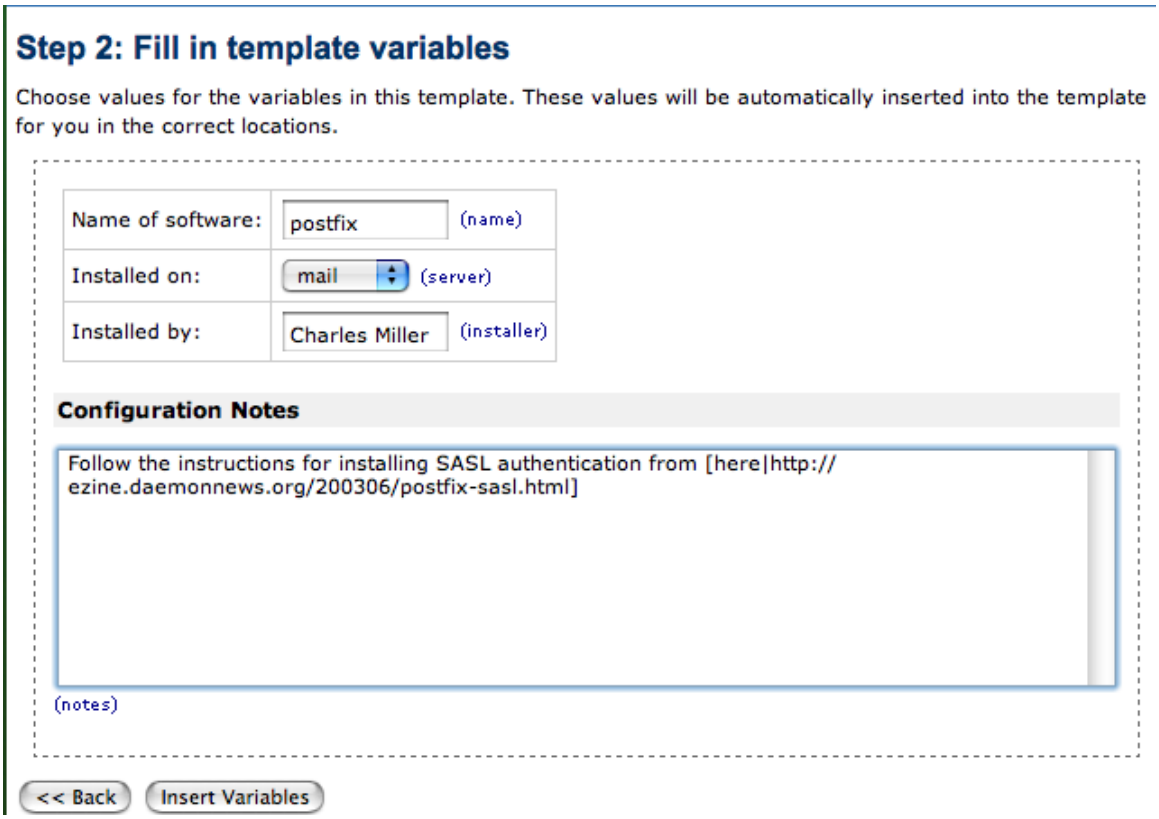

New Macros

- The {html} will allow you to insert arbitrary HTML code into a page. This macro is turned off by default, as it is a security-risk on public systems. We only recommend you enable it on private or intranet-based Confluence installations where you trust your users not to write malicious HTML code. Here's a trivial example of its use:

```
\{html\}
<p>This HTML is <b>inserted</b> into the page</p>
\{html\}
```

- The {junitreport} macro has an option: "reportdetails=failuresonly" that will cause it to only show details of tests that have failed. For example: {junitreport:directory=file:///var/tests|reportdetail=failuresonly}

Improvements

- Users are now taken to their preferred homepage rather than the dashboard after logging in
- Text-fields in a template are disabled during preview and viewing
- Orphaned and Undefined page reports are now paginated
- Macros such as {code} or {noformat} are now made part of a list if they are placed adjacent to them

Notable Bug-fixes

- User->Group relationships should no longer disappear during manual or scheduled backups
- Search results no longer allow people to see content they might not be allowed to see
- Comments should no longer appear out of order on a page
- Moving a page between spaces no longer breaks #anchor links
- Many rendering fixes, some subtle, some not so
- Many stability fixes, especially regarding import and export

Outstanding Issues

Random MySQL Disconnections

If you are running Confluence against MySQL using Confluence's built-in datasource, the connection with the

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database server may be lost after long periods of inactivity. We are pretty sure we have a fix for this, but since the bug takes several hours to manifest, we were not able to test the fix before the release of rc6.

The good news is that if we are right, it will only require a quick edit of your configuration file to implement the fix. Further announcements will be made both on confluence.atlassian.com, and the confluence-user mailing-list.

In the meantime, the workaround is to not use Confluence's built-in datasource, but to configure Confluence to use your application-server's JNDI datasources instead. Instructions for doing this with Tomcat can be found here, and if you need more help, don't hesitate to contact us at confluence-support@atlassian.com.

Latin Characters under Resin

We've tested creating pages with non-ASCII titles and content across several different browsers and several different operating systems, and they seem to be working reliably now... except on Resin. This will be quite noticeable since confluence.atlassian.com itself is running under Resin, but we have so far been unable to come up with a solution that works on this application server.

For users who need this functionality, we suggest running under Tomcat.

Also..

- On MySQL, the "orphaned pages" report may include the space's homepage CONF-766
- You can create a link to a page with an illegal title: prompting the user to create a page that can not exist CONF-810
- Trackbacks are not sent for shortcut links CONF-888

Issues Resolved for 1.0rc6

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.0a3

Confluence 1.0a3

Confluence 1.0a3 was released December 5 2003

New Features

- Completely rearchitected around the spring framework
- Page comments (CONF-235) - users can now attach comments to a page.
- Email notification for new comments.
- Supports non-ASCII characters in page names (CONF-297)
- Improved handling of internal and external links in exported PDFs
- Editing popup to help with inserting links (internal and external) into pages (CONF-129)
- Personal history (CONF-196) - a popup window containing your recently visited pages.
- Page information screen (CONF-270) lists all the incoming and outgoing links for a page, and all attachments
- User profile UI has been enhanced (CONF-172)
- Dashboard and Space summary pages have had a big UI overhaul)
- Brief help on Wiki notation now available on create and edit pages. (CONF-295)

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- Improved available help on various pages.
- Enhanced mail-server administration.
- All pages have a printable version accessible from the icon at the top-right of the page (CONF-338)
- HTML and text email notifications have been greatly improved and are now much more useful. Links in HTML emails work seamlessly with online Confluence version.
- Many other minor fixes, improvements and performance tweaks

Release Notes 1.0b2

I see dead pages!

Confluence 1.0b2 was released on Friday January 16, 2004 with a major bug in its search indexing that caused it to index pages that no longer existed. It was replaced by 1.0b3 the next Monday.

See also: Release Notes 1.0b3 and Issues Resolved for 1.0b3

Feature List

The features listed on this page refer to Confluence version 1.0 beta1.

Content Management

- Content is organised into discrete spaces in which users can create and edit pages.
- Easy-to-learn, easy-to-read but powerful notation for designing pages and linking between them, based on the popular textile markup.
- Arbitrary files can be attached to pages.
- Comments can be left on pages.
- Page templating allows rapid creation of boiler-plate pages.
- Pages can be organised into hierarchies.

Update Tracking

- Each page has a full change history, accessible as coloured diffs highlighting each change made.
- Simple Reports which pages have been updated since you last logged in.
- Email subscription informs you of pages that have been added or updated, or comments left.
- RSS feeds available for new and updated pages across the site, or in individual spaces.

Searching

- Full-text searching of all content, including pages, comments and space descriptions

Site Management

- Smart page-renaming updates links across the entire site, even in comments or space descriptions.
- Pages or spaces can be imported from plain text files, or exported to PDF or HTML.
- Simple backup and restore to XML files.
- Automatic daily backup feature.
- Reports of "orphaned" pages that exist but are not linked to, and of links that point to pages that do not yet exist.

User Management and Security

- Flexible security, from a public site, to a personal space.
- User- and group-based permissions.
- Separate viewing, commenting, editing and administration permissions for each space.

Deployment and Compatibility

- Available on a wide variety of platforms, either as a stand-alone server, or as a web-archive deployable into a compatible Java application server.
- Compatible with a large number of databases

Support

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- Confluence is under full-time development, with licensees entitled to a year of free updates.
- Atlassian's Legendary Service.

Release Notes 1.0rc1

Confluence 1.0rc1

It's Friday again, and that means it's time for us to release Murray; Confluence 1.0 Release Candidate 1.

RC1 marks the start of the feature-freeze as we plunge headfirst towards a stable 1.0 release. From now until 1.0-final we will be concentrating on fixing up the remaining bugs and polishing the interface. We are hoping that we won't need to send out a second release candidate, but we can't really make any promises until we've had a chance to go through the inevitable deluge of new issues that will follow this release.

Of course, this means that there are features you want to see in Confluence that won't make it into 1.0-final. [Keep those ideas and suggestions coming|DISC:]. Confluence isn't going to stop at 1.0 -- we just had to draw a line _somewhere_ or we'd end up perpetually in beta. We have no plans to slow down development after the first major release. Your Confluence licence includes a year of upgrades, and if you think Confluence is way cool now, it's just going to get better.

As always, before upgrading an existing Confluence installation, be sure to back up your data.

As you can see below, we've been busy the last two weeks. A hard-earned thirst needs a good cold beer.

Contents

1. New Features
2. New Macros
3. Improvements
4. Notable Bug Fixes
5. Outstanding Issues
6. Database Changes from Beta

See also: Issues Resolved for 1.0rc1

New Features

Remote API

!http://blogs.atlassian.com/rebelutionary/images/screenshots/conf-cocoa-client-shot-thumb.gif|align=right!

Confluence can now be browsed and edited remotely via SOAP or XML-RPC. [There are more details of the XML-RPC API here|http://developer.atlassian.com/display/CONFDEV/Confluence XML-RPC and SOAP APIs], while the SOAP WSDL can be downloaded from {{$your_confluence_root$/rpc/soap/confluenceservice-v1.wsdl}}. Throwing together a GUI client for Confluence is now [pretty|http://blogs.atlassian.com/rebelutionary/archives/000385.html] [easy|http://fishbowl.pastiche.org/2004/02/05/a_confluence_gui_client_in_200_lines_of_code], so feel free to embed Confluence support into your favourite editor, web browser or IDE.

Blogging Enhancements

The sketchy blogging support from Beta4 has been upgraded and overhauled. Enhancements include:

- The look and feel of blog pages has been greatly improved.
- A "recent blog posts" list available from the Space Summary page.
- Daily and monthly views for blog posts.
- Blog posts can now be edited and deleted.
- You can now link to blog posts using the internal link syntax. Blog posts are addressed by their posting-date and title, like so: SPACEKEY:/2004/01/03/Blog Post Title\.

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- You can link to the daily views, too: [SPACEKEY:/2004/01/03/\.
- RSS feeds are available for new blog posts, both globally (from the dashboard), and for each space (from the space summary page).

Also, anonymous users are no longer allowed to post blog entries. We couldn't really think of a use-case where anonymous blog-posts would be wanted, but if you can, let us know!

Configurable User Notification

With any knowledge-sharing application, it's important to keep informed as to what has changed. One way to do this is by subscribing to any of the RSS feeds offered by Confluence. Another is to have Confluence email you directly whenever there has been a change. Up 'til now, users have had to make do with the ad-hoc regular-expression based notifications that were put in for developers. WIth RC1, we now have a more fine-grained and user-friendly way to choose how you find out about changes to the site.

Each day, Confluence can email you a summary of any changes that have been made to the site in the past 24 hours. You can activate this feature in your user preferences.
You can subscribe to "watch" a page from the option in the right-hand operations menu. Whenever the page is modified, commented on, or a new attachment is added, you will receive an email. When you no longer want to watch the page, you can click the icon again to unsubscribe.
You can subscribe to watch an entire space from the option on the space summary page. This subscribes you to all pages in that space, and also notifies you when new pages are created.

Each user can now also choose whether or not they will be notified of changes they make themselves.

Trackbacks

While Confluence has always tracked links between pages within the Confluence site, it now has a way to track links to and from external sites: the Trackback API. In this way, a Confluence page can be informed when another site has mentioned it, and inform other sites that it has linked to them.

We have implemented the [Trackback|http://www.movabletype.org/docs/mttrackback.html] and [Trackback auto-discovery|http://www.movabletype.org/docs/mttrackback.html#autodiscovery%20of%20trackback%20ping%20urls] APIs across pages and blog-posts. Trackback is a widely implemented API that allows web pages to notify each other of links. You can enable (or disable) trackbacks from the Confluence general administration page.

When Trackbacks are enabled, each Page and Blog Post within Confluence is set up to receive trackback pings, and contains the auto-discovery code to allow clients to automatically find out how to send those pings. Trackbacks that are received are listed in the right-hand sidebar of the page.

Also when Trackbacks are enabled, Confluence will perform auto-discovery on each outgoing link from a page to see if the destination is equipped to receive trackbacks, and send its own trackback ping.

Look forward to future versions of Confluence making _very_ interesting use of this feature. :)

Per-Space Look and Feel

The template-- and colour-scheme editing features that were available on a global basis in previous versions of Confluence can now be configured separately for each space, allowing you to apply a different look and feel to the various spaces within your Confluence site.

New Macros

- Panel Macro allows you to draw a shaded box containing some content.

Improvements

- Import and Export should now be much faster, and use significantly less memory.

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- The user browser now has a search function, to make it possible to manage large numbers of users effectively.
- Incoming links are no longer displayed on a page if the user is unable to view the page being linked from.
- The \{anchor\}, \{blog-posts\}, \{index\} and \{quote\} macros are now documented properly.
- You can escape smileys by putting a backslash before their last character, to cause them not to be rendered as images :\).
- You can now link to peoples' user profile pages with \[~username\] (e.g. [~cmiller]).
- You can now link to space homepages with \[SPACEKEY:\] (e.g. [TEST:]).
- mailto: links have a nifty icon: mailto:user@example.com.
- The History popup now tracks your visits to blog posts, space summaries and user profile pages.
- Recent changes listings on the dashboard, user profile and space summary pages now includes changes to all content, not just pages.
- New Emoticons! (well, icons really)

| (y\) | (n\) | (i\) | (/\) | (x\) | (!\) |
| (y) | (n) | (i) | (/) | (x) | (!) |

Notable Bug-fixes

- Added HTML headers to detect and prevent RSS, HTML-Include and FatCow macros from being made to loop in on themselves. [CONF-525@JIRA]
- The \{anchor\} macro, and \[DOCPRIV:null] links now work as advertised. [CONF-616@JIRA], [CONF-605@JIRA]
- Fixed a divide-by-zero error in page diffs. [CONF-584@JIRA]
- Included {{javax.transaction}} libraries with release, to allow the WAR to run under Tomcat 5 [CONF-613@JIRA].
- And many more rendering and stability fixes...

Outstanding Issues

- Still some problems with character encoding in page titles. [CONF-569@JIRA]
- HTML include macro interacts badly with other Radeox filters. [CONF-549@JIRA]

Database Changes from Beta4

New Tables

TRACKBACK and NOTIFICATION tables were introduced. These tables should be generated automatically when you first start RC1.

New column in the EXTRNLINKS table

- alter table EXTRNLINKS add column CONTENTTYPE varchar(255);
- Constraint Change on LINKS Table*

The "not null" constraint was removed from the DESTPAGETITLE column of the LINKS table. Consult your database documentation on how to alter your database for this change. For example:

- _MySQL 3.23:_ alter table LINKS modify DESTPAGETITLE VARCHAR(255);
- _PostgreSQL 7.3.2_ alter table LINKS alter DESTPAGETITLE drop not null;

Issues Resolved for 1.0rc1

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

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Release Notes 1.0b3

Confluence 1.0b3

1.0b3 was released on January 19th, 2004. It replaces the short-lived 1.0b2 release, after 1.0b2 managed to escape into the wild with a bug in the search index that made it see pages that weren't there any more. Since 1.0b2 only existed for one weekend, the release-notes for both versions have been folded into a single document.

This is a massive release. Over 90 issues (new features, improvements and bug-fixes) were resolved between beta-1 and beta-3, with even more improvements made below the issue-tracking radar.

Contents

1. New Features
2. New Macros
3. Improvements
4. Notable Bug-fixes
5. Outstanding Issues

See also: Issues Resolved for 1.0b3

New Features

Search Attachments

Attachments are now indexed for searching just like any other content in the Confluence space. Alongside text, HTML and XML attachments, Confluence will also index Word, RTF and PDF documents.

Configurable Look and Feel

The site administrators can now customise the colour-scheme of the Confluence installation. More advanced configuration can be done by [editing the site's templates|Custom Decorator Templates] through a web interface, changing the appearance of the whole site.

Site Homepage

The site administrator can now set the site homepage for users who have not logged in: choosing from either the dashboard (the default behaviour in beta1 and before), or any of the Space homepages within the site.

Users who have logged in can choose their own site homepage in their user profile.

RSS Feed for New Comments

You can subscribe to all new comments added to a space using an RSS newsreader. (The link to the RSS feed can be found on the Space Summary page)

Emoticons

New Macros

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- Include Page Macro include the contents of one Confluence page within another.
- HTML Include Macro include the contents of an HTML document within a Confluence page (turned off by default. See Enabling the html-include Macro for more information).
- RSS Feed Macro include an external RSS feed
- Search Results Macro include the results of a Confluence search
- JIRA Issues Macro integrate Jira issue reports with your Confluence site
- JUnit Report Macro include JUnit test result data

Improvements

- Users' login names and full names are indexed for searching.
- Users' profiles may now be longer than 255 characters, and are also indexed for searching.
- Usernames are no longer case-sensitive.
- Anonymous contributions are clearly labeled.
- Users are warned if they are editing or commenting without having logged in.
- Notification emails now link to the appropriate "diff" page, so you can quickly see what has changed.
- Page diffs now highlight precisely what changed within each line: very useful when just one or two words change in a long paragraph.
- Lists of child pages and links are sorted alphabetically.
- Long lists of pages or search results are paginated.
- Shortcut links can be given different link text in the same way as other links.
- Incoming links and "hot referrers" are listed in the sidebar of the page view.
- Child pages are listed below the page contents in the page view.

Notable Bug-fixes

- You no longer get the old page (or don't see the comment) immediately after editing or commenting on a page http://jira.atlassian.com/browse/CONF-453.
- Persistent login cookies no longer conflict with a JIRA installation on the same server http://jira.atlassian.com/browse/CONF-440.
- Persistent login cookies no longer fail for users with certain characters in their username http://jira.atlassian.com/browse/CONF-387.
- Notification emails no longer send out garbage for anonymous changes. http://jira.atlassian.com/browse/CONF-421.
- Users who are not logged in no longer see strange table titles http://jira.atlassian.com/browse/CONF-422.
- And many more.

Outstanding Issues

- You should restart Confluence immediately after finishing the initial setup steps, to avoid data loss http://jira.atlassian.com/browse/CONF-493.
- New-lines may not be drawn if the next line starts with whitespace: http://jira.atlassian.com/browse/CONF-475.
- Emoticons are rendered inside \{noformat\} blocks: http://jira.atlassian.com/browse/CONF-502.
- If you put a \{children\} macro after an \{include\} macro, it will list the children of the included page: http://jira.atlassian.com/browse/CONF-504.

Issues Resolved for 1.0b3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

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Issues resolved for 1.0b2

1.0b3 was a quick bug-fix release for 1.0b2, so here are the issues resolved in 1.0b2:

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.0a2

Confluence 1.0a2

Confluence 1.0a2 was released November 6, 2003.

New Features

- Shortcut links (CONF-195 & CONF-247) - shortcut links enable you to easily make links to any 'web service' from within the syntax of a Confluence page. Simply specify your shortcut and the URL to link to (eg `"google", "http://www.google.com/search?q=$1"`) to add your own links. You could use this to link directly to JIRA installations, Google, intranets, searches or anything that has a 'URI' based interface.
- Revert page to a previous version (CONF-32) - revert to a previous version of any given page from the list of previous versions.
- Forgot password function (CONF-88) - retrieve your password if you happen to have forgotten it
- Report: undefined pages (CONF-197) - list of all pages which are linked to from other pages, but not defined.
- Report: orphaned pages (CONF-198) - shows all the pages which are never linked to (ie have content but no way to get to them).
- Interstitial help page after creating a space (CONF-251)
- 'Notify me', and HTML/text email preferences, with HTML email content
- Links to non-exported pages are now maintained in exported PDFs (the links point back to the online Confluence installation)
- Custom Radeox macros can now be used within Confluence - this enables you to write your own macros to produce custom content
- XML import/export of a single space (CONF-199) - useful for porting spaces between installations
- XML import/export of a single page (CONF-200) - useful for creating pages automatically, or sync'ing pages between installations.
- Many other minor fixes, improvements and performance tweaks

Release Notes 1.0.1

Confluence 1.0.1

Over the course of the last month of supporting Confluence 1.0, there are a number of patches that we have been distributing to fix specific problems our users have encountered. Confluence 1.0.1 is a maintenance release into which all these patches have been integrated.

Who Should Upgrade?

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All the issues that were resolved for this release are listed below. We have not snuck in any other changes: what you see here in the release notes is precisely what you will get. If you find something on the list that directly affects you, or that you feel justifies the effort of an upgrade, then do so. Otherwise, feel free to stick with 1.0.

Upgrade Procedure

If You Have Customised `osuser.xml`

If you have customised Confluence's user-management, for example to integrate it with LDAP or JIRA, you will have to integrate your changes to account for the caching OSUser providers we introduced in Confluence 1.0.1. See this document for more details: Confluence Caching OSUser Provider. Updated instructions for integrating with JIRA user management are here: Delegate user management to use JIRA logins

Otherwise

To avoid the possibility of data-loss, you should back up your ConfluenceHome directory and your database before upgrading, and perform a full backup from within the application.

Changes in 1.0.1

See also Issues Resolved for 1.0.1

Direct Attachment Links

In response to a loud demand from users, links to attachments using the [^attachment.jpg] syntax will download the attachment file directly, instead of linking to an anchor in the destination page.

Sybase ASE Support

Confluence 1.0.1 resolves the following problems that were causing Confluence not to work with Sybase ASE 12.5.1:

- ORDER-BY mappings failing on Sybase (CONF-1021)
- Can't add users under Sybase (CONF-1022)
- Weird datatype error under Sybase (CONF-1024)
- Sybase doesn't like complicated distinct selects (404 page fails) (CONF-1025)
- Backup import fails under Sybase (CONF-1063)

These bug-fixes may also improve Confluence's compatibility with other untested databases. They will not, however, have any effect on Confluence's operation against PostgreSQL, MySQL or HSQL.

Microsoft SQL Server Dialect in Setup Page

The Microsoft SQL Server database dialect was missing from the database setup page. It has now been added to the list. Confluence has not yet been tested on Microsoft SQL Server, and the usefulness of this option is not yet guaranteed. However, since the Sybase issues above are now resolved and SQL Server belongs to the same family as Sybase, it would be well worth a try.

JIRA User Provider Caching

Users who were linking their user management to JIRA's using the supplied provider were experiencing significant performance problems as a result. 1.0.1 introduces caching to the user provider, which should speed up these installations significantly.

Global Reports Visibility

Under Confluence 1.0, the global "undefined pages" and "orphaned pages" reports did not properly filter out pages that the user could not see. The user could not see the content of any page they did not have access to, but they could learn of the existence of (and names of) pages and spaces they were not permitted to see. This bug is fixed in 1.0.1

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Locale-Independent Dates in Backup/Restore

In Confluence 1.0, dates were written into backup files using a localised representation of the month. As such, if you exported Confluence data from a server in one locale it might not import successfully into a server with a different Locale setting. Confluence 1.0.1 still recognises the 1.0 export format, but its own exports will write out dates in a locale-independent format.

As noted above, this means that data exported from Confluence 1.0.1 *can not* be imported successfully into Confluence 1.0.

Fix Browser Crash on Viewing Some Templates

Previously, if you created a template containing no variables, then anyone attempting to preview or use that template would have their browser hang in an infinite Javascript loop. Confluence 1.0.1 fixes this bug.

Typo Fixed on User Group Editing Page

A single-character change from "privilage" to "privilege".

Issues Resolved for 1.0.1

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes_1.0.1

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Over the course of the last month of supporting Confluence 1.0, there are a number of patches that we have been distributing to fix specific problems our users have encountered. Confluence 1.0.1 is a maintenance release into which all these patches have been integrated.

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Typo Fixed on User Group Editing Page

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A single-character change from "privilage" to "privilege".

Release Notes 1.0.3

Confluence 1.0.3

Confluence 1.0.3 is another maintenance release, hopefully the last maintenance release we will need on the 1.0 branch before moving full steam ahead towards version 1.1. It fixes some bugs regarding the remote SOAP/XML-RPC API, the display of the 404 error page under Postgresql, and the display of the site's stylesheet under certain versions of Internet Explorer.

The Confluence development team are now working hard on 1.1, which will contain significant improvements and new features. Remember, a Confluence license entitles you to a year of upgrades, so if you buy 1.0.3 today, you'll be able to upgrade to 1.1 for no extra charge when the time comes.

See also: Issues Resolved for 1.0.3

Who should upgrade?

Confluence users should be running at least Confluence 1.0.2. Versions prior to 1.0.2 contain a bug that will cause their licenses to expire a month after the build date listed in the page footer, regardless of the true expiry date of the license. Versions 1.0.2 and later do not contain this bug. (Note: In the absence of this bug, only trial licenses ever expire. Purchased licenses for Confluence *do not expire.*)

All the issues that were resolved for this release are listed below. We have not snuck in any other changes: what you see here in the release notes is precisely what you will get. If you find something on the list that directly affects you, or that you feel justifies the effort of an upgrade, then do so. Otherwise, feel free to stick with 1.0.2

Upgrade Procedure

Confluence 1.0.3 contains no database or configuration file changes, so you should just be able to unpack it on top of your existing Confluence installation:

1. Shut down the Confluence server
2. Back up `confluence/WEB-INF/classes/confluence-init.properties`, and if you have customised it, `confluence/WEB-INF/classes/osuser.xml`
3. Unpack Confluence 1.0.3 in the same location as your existing Confluence installation
4. Restore the two files you backed up in step 1 to the 1.0.3 installation.
5. Start Confluence

To avoid the possibility of data-loss, you should back up your ConfluenceHome directory and your database before upgrading, and perform a full backup from within the application.

Changes in 1.0.3

Global RSS Feed Fixes

The global RSS feeds found on the Dashboard page were not being generated correctly: an extra ')' was being added to the end of links. This has been fixed in 1.0.3

Page Not Found Fix for Postgresql

Users running Confluence against a Postgresql database were encountering a system error whenever someone attempted to visit a page that did not exist. This has been fixed.

Remote API Fixes

Several outstanding issues with the remote API that were holding back the TimTam client have been fixed. In addition a `getVersion` method has been added to allow client authors to determine which version of Confluence a server is running, and adjust their features to match. The full description of Confluence's remote

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API is here: Confluence XML-RPC and SOAP APIs

- The WSDL file now respects the server's configured base URL, so SOAP can be used on servers that are behind a proxy.
- `getPermissions` now recognises when a user is in the `confluence-administrators` super-user group.
- `storePage` handles re-parenting a page correctly
- `storePage` will now allow a page to be renamed (all links to the page are automatically redirected)

Other Fixes

- You can now comment on a blog post when the title contains non-US-ASCII characters
- The bug that was causing some versions of Internet Explorer 6 to not display the site's stylesheet has been fixed

Issues Resolved for 1.0.3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.1

Nymboida, Nym to his friends, is Confluence 1.1. He wants to be your friend.

Confluence 1.1 is the first major update to Confluence. It's faster, more reliable, and packed with new features. Thanks to our policy of a year's free upgrades, any current Confluence customer will be able to upgrade to 1.1 at no cost.

Current customers, or new users who wish to try out Confluence for 30 days can download either the standalone or WAR distributions from the Atlassian website: http://www.atlassian.com/software/confluence

Upgrading from 1.0.3a

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

- Users who have enabled external user-management by customising their `osuser.xml` file will need to read this document also.
- Users who have used MySQL or Postgresql with Confluence 1.0 should read this document which explains how to get rid of any extraneous triggers or indexes that might have been created.

Contents

1. New Features
2. New Macros
3. Improvements
4. Notable Bug-fixes
5. Outstanding Issues

See also: Issues Resolved for 1.1

New Features

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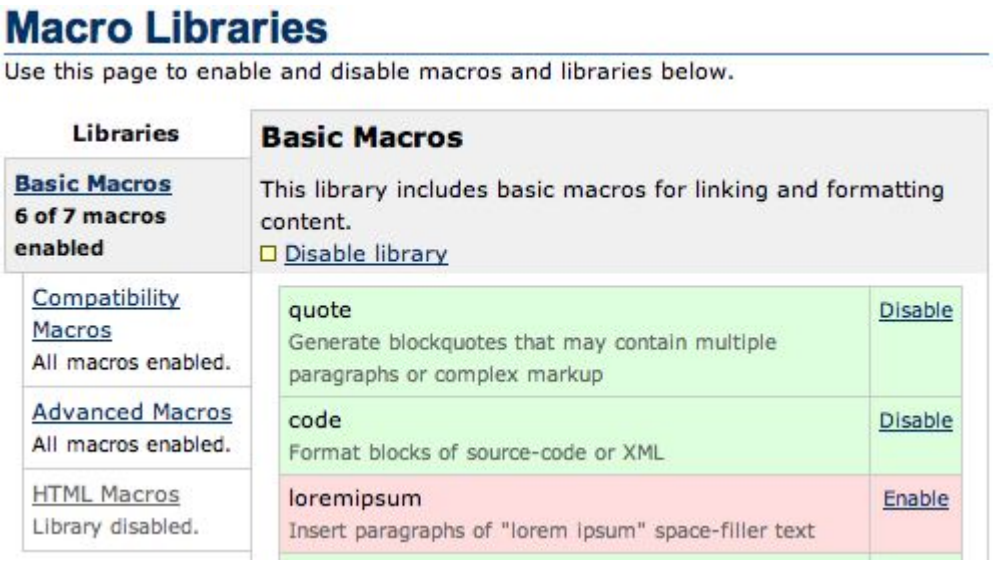
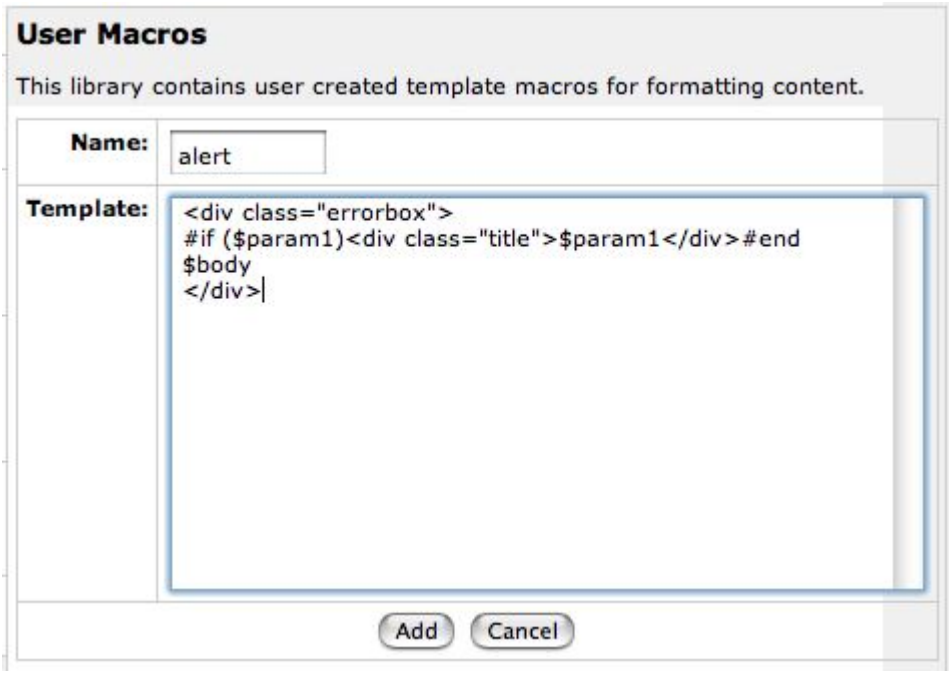
Macro Management

The biggest Nymboida new feature from an end user point of view is going to be the rewritten macro support.

Management - You can now enable and disable macros from this convenient (and very attractive) console. Macros are now grouped into libraries to make the management and creation of related macros simpler. Libraries can be installed, activated or deactivated as a single entity.



User Macros - We've also had a lot of requests from users for simple formatting macros: people who wanted their code snippets or notes to be formated in a certain way. Confluence 1.1 contains a simple way for administrators to create new macros from within the application without a restart: defining a template that the macro will apply to its arguments or content. User macros are very handy for providing consistent formatting and layouts across your pages.



Custom Macros - Installation of new macro libraries is a breeze: simply drop the library `.jar` file inside the web application, restart Confluence, and your new macros will appear in the management console. Confluence 1.1 also includes a custom macro toolkit (with Task List example shown below) to help users build their own complex macros easily using Java.

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Tasks: Shopping List	
Buy apples	(a)
Buy bananas	
Purchase shopping bag	(a)
Collect laundry	(a)
Deposit money	

More information:

- Guide to Confluence Macros - a guide to the Macro Management console
- Writing User Macros - how to write User Macros
- Custom Java Macros - obsolete - a guide (and worked example) for writing and distributing your own Java macros for Confluence

Attachments: versioning, comments and WebDAV support

Versioning - The number one feature request for Confluence 1.0 was versioned attachments. You ask, we deliver! Confluence can now have multiple versions of the same file attached to a page. It will keep a history of different versions of attachments, expandable dynamically.

Comments - Each attachment can now be accompanied with a comment describing why it is there, what it's about or the reason for it being attached. This is useful for tracking the differences between attachment versions, as well as for informing users as to why they should be interested in a particular file.

WebDAV - You can configure Confluence to store attachments in an external WebDAV server. This allows companies with an existing WebDAV infrastructure to give users alternative ways of accessing attachments and attaching files to Confluence pages.

Improvements to Page and Space Exports

- Exporting pages and spaces to PDF should be a great deal more reliable now. Whereas in Confluence 1.0, the export was likely to fail if the pages contained questionable markup, we now dynamically clean up each page before we export it.
- You can choose whether or not page comments are exported. Often you want to exclude comments if you want to send out a PDF of a page or publish a space as a website.
- The templates used to publish pages and spaces to HTML can be customised on a global and per-space basis. This makes it easy to publish a static website from the contents of a Confluence space: customise your templates, choose which pages to export, and voila.

Customise Display of Blog Posts

The templates used to display blog posts (both individually and in lists) can be edited either globally, or on a per-space basis, in the same way as the site's main decorators are editable. Also, the interface for editing templates has improved and will continue to do so in future releases.

Page Locking

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If you want to prevent another user from editing, deleting or renaming a page, you can now lock it. You may want to do this because certain pages in an otherwise public space (for example, front pages, disclaimers or copyright notices) must remain un-edited, or just because you're working on the page and don't want anyone else to interfere just yet.

Locking a page restricts editing to a single user (yourself), or members of a particular group. Anyone with the space administrative permission can override or delete a lock.

Oracle and Weblogic Support

We have made a concerted attack on the various issues that were making Confluence unreliable on Oracle and Weblogic, and we're pleased to report that both have been running just fine in testing. Most importantly, the bug that was preventing pages being saved to Oracle when they were over 4Kb in length has been fixed.

For details of what precisely was fixed, see:

- The Weblogic support super-issue in JIRA
- The Oracle support super-issue in JIRA

Search Powerpoint and Excel Attachments

Confluence already searches across attached Word, PDF and RTF documents, XML, HTML and any plain text file. This search support has now been expanded in Nymboida to include searching and indexing of all text within Microsoft Powerpoint presentations and Excel spreadsheets.

In addition, the new attachment comments are also searchable.

TinyURL

Every page has a unique, short URL displayed at the top of its Page Information page. This makes it easier to send colleague's the URLs for pages with long titles via email, instant message or IRC.

New and Improved Macros

New

- {excerpt} allows you to mark a portion of the page as its "excerpt". This has no effect on the page itself, but other macros (such as {blog-posts} and {children}) can use the excerpt as a short summary of the content of the page.
- {excerpt-include} includes one page's excerpt in another page.

Improved

- {code} macro supports coloured highlighting for several more languages: JavaScript, ActionScript, XML and SQL.
- {code} macro can have its title and border customised in the same way as the {panel} macro
- {blog-posts} takes an optional `time` parameter to indicate how far back it should look for blog posts. For example, {blog-posts:time=7d} will show all blog-posts within the last seven days
- {blog-posts} takes an optional `content` parameter to change the way the blog-posts are displayed. `content=excerpts` displays excerpts instead of the full content of the blog entry (using the {excerpt} macro if available, otherwise extracting the first few hundred characters of the post). `content=titles` displays the entries as a list of titles.
- {children} takes an optional `excerpts=true` parameter: if any of the children have an excerpt available, the first line will be displayed in the list.

Improvements

Improvements to the Markup Engine

Many improvements have been made to the Confluence markup parser, fixing niggling inconsistencies, and allowing many more combinations of effects. If you want to produce something like the following, you can:

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Name	Value

Some code	`public static void main(String[] args)`
	`{`
	`  System.out.println("Hello World");`
	`}`

A list	• Item 1 • Item 2 • Item 3 • Item 4
A panel	**I like cheese** • Brie • Camembert • Gruyere • Cheddar

You can also center an image using !image.gif|align=center!

Improvements to Linking

- You can specify a link title (which appears in the mouse-over tooltip) by adding another section to the link: [Link Body Text|Page Name|Link Title]
- [//foo/bar/baz.html] will create a relative URL link to `/foo/bar/baz.html` on the same server as Confluence is running
- `file:` URL links work
- UNC-style links: [\\SERVER\share\directory\file.doc] will create a `file://` link to the file on an external share

Note: Some web browsers (specifically Mozilla) consider `file:` URLs to be a security hazard, and do not follow them.

And a whole lot more...

Here's the quick fire version of some of the other improvements we've made in this release:

- You can resize the recent changes lists on the dashboard and space summary pages. This change is persisted in your user preferences.
- UI state (whether comments or attachments are open, size of recent changes lists) persists between sessions for registered users.
- The maximum attachment size can be configured from the General Configuration administration page.
- Going to http://yoursite.example.com/display now brings up a list of spaces instead of an error page.
- The display of the space summary page is significantly faster.
- Newly created users don't show up on the dashboard recent changes list unless they edit their profiles.
- The word "Confluence" has been moved to the end of page titles instead of the beginning, making them easier to distinguish in tabs and bookmarks.
- There are more ways to navigate to the "recent blog posts" page for a space.
- Removing a user is significantly faster.
- Headings in pages are automatically turned into anchors with the same name.
- Creating a space now creates an index page as well as a home-page.

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Notable Bug-fixes

It's hard to know where to start. We've fixed a lot of bugs across the whole application. If you want to know what's been fixed, you're probably best off looking for yourself.

Two areas, however, have been improved enough to deserve special mention.

- **PDF Export** - as mentioned above, we've made the PDF export much, much more reliable than it once was. Where before a page or space may have confused the PDF converter into not working, it should now be able to handle any markup you throw up at it.
- **International characters** - Many issues related to the use of non-ASCII characters in page titles, links, page contents and RSS feeds have been resolved since Confluence 1.0. Our users in non-English-speaking countries should find Confluence a much more pleasant and seamless experience now than they may have before.

Issues Resolved for 1.1

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.1.1

Confluence 1.1.1 is a maintenance release that fixes some bugs regarding attachments, page links and notifications. Remember, a Confluence license entitles you to a year of upgrades, and this upgrade along with future updates will be free of charge.

Who should upgrade?

This release mainly fixes the bugs discovered in our recent 1.1 release. The major issues resolved are listed below, or you can see the full list here. As some of the issues resolved have a significant impact on the user experience of Confluence, we recommend that anyone currently running 1.1 upgrade to 1.1.1.

Upgrade Procedure

1. Shut down the Confluence server
2. Back up `confluence/WEB-INF/classes/confluence-init.properties`, and if you have customised it, `confluence/WEB-INF/classes/osuser.xml`
3. Unpack Confluence 1.1.1 in the same location as your existing Confluence installation
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To avoid the possibility of data-loss, you should back up your ConfluenceHome directory and your database before upgrading, and perform a full backup from within the application.

Changes in 1.1.1

Attachment fixes

- Attachment versioning introduced a new table in Confluence that had a column whose name conflicted with some databases like Sybase
- Links to older version of attachments could not be accessed if the webapp was deployed with a context

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path
- Attaching files that contained '+' and '&' symbols caused certain pages in Confluence to break

These have been fixed in 1.1.1.

Notification fixes

Users opting to receive html formatted email received emails with the correct subject but no content. In addition, the "View Changes" link in the daily change email was broken. These are now fixed.

Email Server fixes

An upgrade to an email component used in Confluence in 1.1, caused an error to be displayed when users attempted to modify their email server settings. An upgrade has been added in 1.1.1 that will fix this problem to save users from having to perform the fix manually.

Export to PDF fix

Spaces labelled with names containing an '&' symbol could not be exported to PDF. This has been fixed.

Wiki Notation fix

The notation for a horizontal ruler was changed to five dashes (up from 4) in 1.1. This stopped the ruler from showing. This has been changed back in 1.1.1.

Issues Resolved for 1.1.1

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Release Notes 1.1.2

This fixes an upgrade problem in 1.1.1 where users attemtping to upgrade from 1.0.x directly to 1.1.1 encountered an "Upgrade Failed" error. Therefore, if you are still using a version older than 1.1, and am planning to upgrade, please upgrade to 1.1.2 to avoid this problem.

If you have already upgraded to 1.1.1 from 1.0.3a and cannot start Confluence due to the upgrade error, simply download 1.1.2 and upgrade to it. This should fix the problem.

If you have already upgraded successfully to 1.1.1 from 1.1 then you may safely ignore this upgrade.

Useful tips when upgrading from 1.0.3a

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

- Users who have enabled external user-management by customising their `osuser.xml` file will need to read this document also.
- Users who have used MySQL or Postgresql with Confluence 1.0 should read this document which explains how to get rid of any extraneous triggers or indexes that might have been created.

Release Notes 1.2

Atlassian is proud to present Confluence 1.2, otherwise known as Swan, to the world. Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days can download either the standalone or WAR distributions from the Atlassian website: http://www.atlassian.com/software/confluence

Swan is the second major update to Confluence, and once again all existing customers can upgrade for free, thanks to the provision for one year of free upgrades in your license. You will find that Swan contains significant new features in the areas of user management, search and space browsing, as well as the usual raft of

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enhancements, bug fixes and things we just couldn't resist throwing in at the last minute.

In all, 109 issues were resolved between 1.1.2 and 1.2. You can see the full list here: Issues Resolved for 1.2

Looking towards the future, we are going to attempt to increase the frequency of releases. While having one release every three months makes for impressively long release notes, it also means that customers are often left waiting longer than might be necessary for important enhancements or bug-fixes.

Upgrading from 1.1.2

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

You will need to reindex your site after upgrading to enable some of the new site search features. You can do this from the "Rebuild Search Index" link on the Administration Console.

Site administrators upgrading from 1.1.2 or earlier should take particular note of the changes to global and space permissions. Confluence should automatically upgrade old permissions to the new scheme when upgrading from or importing data from earlier versions, but it is a good idea to check that your spaces are still secure and accessible after the upgrade, just in case.

Upgrading from 1.0.3a

Users upgrading directly from 1.0.3a should also read the Nymboida Release Notes for caveats regarding the 1.0 -> 1.1 upgrade.

Contents

1. New Features
2. Improvements
3. Notable Bug-fixes

See also: Issues Resolved for 1.1

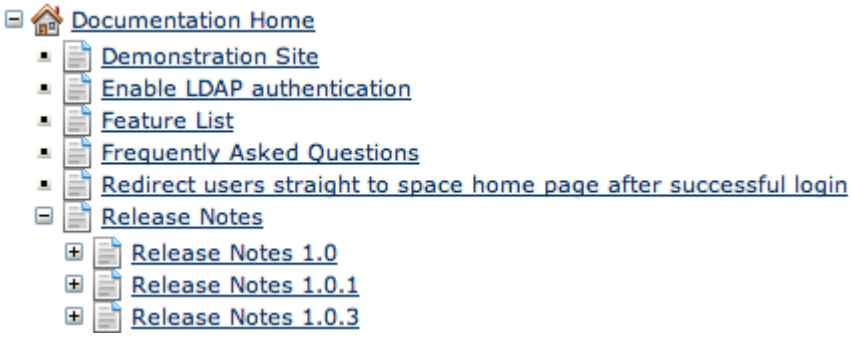
New Features

Page List Views

The old "list pages" screen has been enhanced, almost to the point of being unrecogniseable. In its place, we now offer three ways to browse the contents of a space.

The **Alphabetical View** looks like the "list pages" screen from 1.1 and earlier, but it has been enhanced to allow you to find pages quickly by the first letter of their title.

The **Directory View** presents the contents of a space as a tree, allowing you to drill down the hierarchy of parent and child pages (You will need Javascript turned on to use this view).



The **Search View** presents Swan's enhanced search interface, already focused on the space you are looking at.

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Image Thumbnails and Thumbnail Galleries

You can now display a thumbnail of any image attached to a page. Clicking on the thumbnail will pop up a window containing the full-sized image. For example, the nice picture of the waterfall from my holiday in California was generated by the following wiki-markup.

```
!waterfall.jpg|align=right thumbnail!
```

In addition, the {gallery} macro will create a thumbnail gallery of *all* the images that are attached to the page the macro is included in. You can see an example of this macro in action here: Thumbnail and Gallery Example.

The maximum sizes for thumbnails are configured in the General Configuration section of the Administrative Console.

Threaded Comments

Bowing to public demand, we have added the ability to arrange comments by thread: users may respond to a particular comment, and the comments will be arranged in accordance with who responded to what.

The default is still for comments to be presented as a flat list, but you can enable comment-threading in the General Configuration section of the Administrative Console.

Improvements

Enhanced Search

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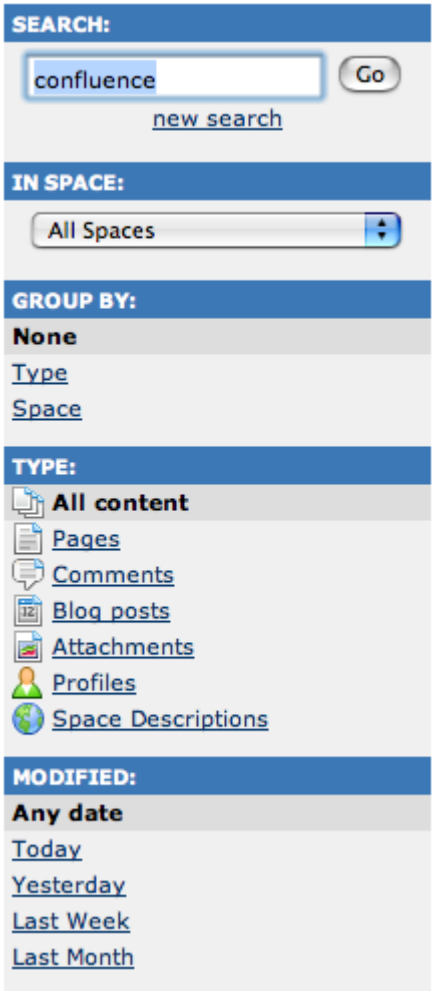

The site-search functionality of Confluence has been enhanced, both subtly behind the scenes, and quite obviously in front of them.

Behind the scenes, we now index more information such as attachment comments and filenames. We have improved the indexing of Powerpoint presentations so that more text is extracted from the Powerpoint file. We have also tweaked the ranking algorithms behind the search so that you are more likely to find the page (space, comment, blog post, attachment, user...) you are looking for.

More obviously, we have given the user a lot more control over searching with an intuitive user interface that allows you to limit searches by space, type of content, or date last modified, and to group search results by type and space.

The {search} macro has also been updated to take advantage of the new search features (the options are described more fully in the notation guide linked from Confluence's edit page):

```
{search:query=Confluence|maxLimit=5|spacekey=DISC|type=page}
```

New Permissions Interface

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Two of the biggest issues users have been having with permissions in Confluence were:

- The interface for setting permissions was confusing.
- It was hard to keep sites that allowed anonymous access below the workgroup license 25-user limit, especially if they used external user management.

Both of these issues have been fixed in Swan, but it has involved a slight change in the way permissions are checked. This should not be a problem for new Confluence users: the new system is easier to use than the old,. However, if you are upgrading from 1.1.2 or earlier, you should read this document to see what's different.

And a whole lot more...

Here's the quick fire version of some of the other improvements we've made in this release:

- The "double-click to edit" feature has been removed.
- Blog views now come with a monthly calendar showing nearby posts
- Macro libraries can now include images, or any other content the macro needs to serve over the web: look out for new example code in the macro documentation soon.
- Users can set their profile page to be their site homepage
- You can delete all referrer links that match your exclusion list (in General Configuration), to rid the site of referrer spam
- The site's administrative, search and editing pages are served with robots exclusion meta tags so that only the site's main content will be indexed by well-behaved search engines
- Restoring backups should be significantly faster for installations with many users
- Administrators can choose to restore backups from the filesystem instead of uploading them (important if your backup is quite large)
- Confluence now serves files with a proper Content-Length header, so browsers can display the download accurately
- CSS stylesheets are hidden in emails so they don't mess up Lotus Notes
- Export and backup filenames use a neater yyyymmdd date format

Notable Bug-fixes

- Exports created on Windows can now be imported on Unix-like operating systems without having to fix the path separators
- Hyphens in page headings or anchors will no longer render strangely
- Restoring a backup during setup now properly generates the search indexes
- Page "short links" now respect the configured site URL, regardless of which URL the user is accessing the site from
- Strange Powerpoint files no longer choke the indexer
- Users with Admin privileges can now see the link to the Administration Console without being in the 'confluence-administrators' superuser group
- Space administrators can modify space templates without having global administrator privileges.
- User macros are now lower-cased by default
- It is now possible to change the case of a page title by renaming the page

Issues Resolved for 1.2

JIRA Issues				

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Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Permissions Changes in 1.2

For Swan, changes were made to the way Confluence manages and checks permissions. This document is a guide for anyone migrating from Confluence 1.1.2 or earlier describing why the changes were made, and what this means to existing Confluence installations.

Why Change?

There were two goals behind changing permissions in Confluence:

1. Fix a significant problem whereby users with external user management enabled could not also enable Confluence anonymous access without blowing out their 25-user workgroup license.
2. Make the user interface for assigning and viewing permissions easier to use and understand.

What Changed?

"Anyone" User Removed

In Confluence 1.1.3, there was an "Anyone" user, who represented anyone using the system, whether logged in or not.

This user was the source of the licensing problem, and no longer exists in Confluence 1.2

Anonymous Permissions Added

Confluence 1.2 has explicit permissions for anonymous users. These permissions are only granted to users who are not logged in.

There is nothing stopping an administrator granting some permission to anonymous users, but not granting it to logged-in users. This results in the slightly bizarre possibility that a user might be able to do more before logging in than they can after. Luckily, this is a pretty easy situation for administrators to avoid.

Enabling anonymous access has no effect on Confluence's user count for licensing purposes.

Guard Permissions Added

The roles of the "Use Confluence" and "View Space" permissions have been expanded so that now they are *required* permissions before a user or group can be granted any more rights.

Before a user has access to *anything* in the Confluence server, they must first have "Use Confluence" permission, and likewise before a user has access of any kind to a space, they must first have the "View Space" permission.

For licensing purposes, your number of users is equivalent to the number of non-anonymous users with the "Use Confluence" guard permission.

Migrating from 1.1 to 1.2

Migrating Automatically

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When you upgrade from Confluence 1.1, or when you restore a backup created in 1.1 into Confluence 1.2, an upgrade task will run to automatically migrate your permissions to the new scheme, while keeping them consistent with your 1.1 security settings. The task will make the following changes:

- All "Anyone" permissions will be converted into two separate permissions: one for Anonymous access, and one for the `confluence-users` group. (If the `confluence-users` group does not exist, this step will be skipped)
- Any user or group with some global or space permission will also be granted the equivalent guard permission.

After starting up with the new version of Confluence, we suggest that you check that the permissions have migrated successfully. While we have tested the migration code, maintaining your site's security is important enough to warrant a double-check, just in case.

Migrating Manually

If the automatic migration does not complete successfully, which would most likely happen if you have removed the "confluence-users" group, you will need to perform the above steps manually, through the user administration interface.

Release Notes 1.2.1

Confluence 1.2.1 is a maintenance release that fixes some bugs that users may have encountered using Confluence 1.2. It incorporates improvements to performance for large Confluence installations, and fixes bugs related to the remote API, over-use of disk space, and a few annoying errors users were experiencing when setting up a new Confluence instance.

1.2.1 is a free upgrade for all existing Confluence customers.

Who should upgrade?

The issues resolved below are all either fixes to problems that have effected small numbers of users, or improve areas of Confluence that may not be used in your installation. As such, we recommend you read through the release notes and decide whether this upgrade is necessary.

If 1.2 is working fine, and none of the issues below are bothering you, there is no need to upgrade.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Changes in 1.2.1

See also: Issues Resolved for 1.2.1

Remote API Fixes

- getBlogEntries() will no longer erroneously return SQL Timestamps instead of date objects — CONF-1756)
- getPage() will now successfully retrieve a previous page version — CONF-1721
- renderContent() can now successfully render a page containing the {blog-posts} macro — CONF-1717

Setup Fixes

- Some users were encountering the following error during setup: "Unable to store Trigger with name: 'backupTrigger' and group: 'DEFAULT', because one already exists with this identification." This should

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no longer occur — CONF-1760
- Some users were encountering a NullPointerException in org.apache.lucene.store.FSDirectory.create() during setup when connecting to an external datasource. This should no longer occur — CONF-1767

Performance and Efficiency Fixes

- Installations with large search indexes will no longer experience a performance degredation when saving content — CONF-1759
- Backups will no longer leave a redundant exploded copy of the files being backed up in the temp directory — CONF-1752
- Deleting a space was not deleting its attachments from the confluence home directory. This is now fixed — CONF-1765
- Thumbnails are now stored in their own directory, so they won't be included unnecessarily in backups — CONF-1785

Other Issues Resolved

- Confluence now generates significantly higher-quality image thumbnails (Thanks to Mike Aizatsky for the tip) — CONF-1725

Note
Unless you are running JDK 5.0 (which we do not recommend as it is still in pre-release), this improvement will only be visible if you are running Confluence on Mac OS X

- URLs longer than 255 characters will no longer cause an exception when saving a page — CONF-1743
- Pages with titles containing quotes no longer break PDF exports — CONF-1719
- Internet Explorer 6 SP2 will no longer corrupt zip-files downloaded from Confluence — CONF-1669

Issues Resolved for 1.2.1

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.2.2

Confluence 1.2.2 is a maintenance release that fixes some bugs that users may have encountered using Confluence 1.2 and 1.2.1. It fixes problems with attachment downloading, text file imports and text-only emails.

1.2.2 is a free upgrade for all existing Confluence customers.

Who should upgrade?

Confluence 1.2.2 includes a fix for CONF-1810. This bug will cause serious problems for anyone who attaches multiple versions of the same file to a Confluence page, corrupting subsequent downloads.

As such, Confluence 1.2.2 is a *recommended upgrade* for anyone running 1.2 or 1.2.1.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or 1.2.1, you can find ins

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tructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Changes in 1.2.2

See also: Issues Resolved for 1.2.2

- The correct file size will now be stored for multiple versions of the same attachment, fixing a serious download corruption bug – CONF-1810
- Long {excerpt} blocks no longer overrun their database field – CONF-1705
- The {code} macro will no longer garble XML – CONF-1829
- Page diffs now escape HTML tags correctly – CONF-1830
- Fixed Postgresql error when you try to import text files that contain the nul (\0) character – CONF-1739
- "New Blog Post" icon in Page Operations URL now goes to the correct URL – CONF-1848
- "Next" link at the bottom of the alphabetical page listing now works – CONF-1797
- Text-formatted Confluence daily emails are now sent as text – CONF-1724
- The search input box on the "404 Not Found" page has been fixed – CONF-1800

Issues Resolved for 1.2.2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.2.3

Confluence 1.2.3 is a maintenance release that fixes some bugs that users may have encountered using the 1.2 series of Confluence. It fixes problems with Oracle support on Weblogic, thumbnail display, errors moving pages between spaces.

1.2.2 is a free upgrade for all existing Confluence customers.

Who should upgrade?

The issues resolved below are all either fixes to problems that have effected small numbers of users, or improve areas of Confluence that may not be used in your installation. As such, we recommend you read through the release notes and decide whether this upgrade is necessary.

Of particular note should be CONF-1911 which might effect customers trying to use Confluence with Oracle under Weblogic, and CONF-1914, a security issue where users may determine the names of attachments that they can not access.

If Confluence 1.2.2 is working fine for you, feel free to stick with it.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find in structions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

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If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Changes in 1.2.3

See also: Issues Resolved for 1.2.3

- Oracle LOB handler now works correctly under Weblogic – CONF-1911
- Attachments are no longer listed in search results if the user is not permitted to download them – CONF-1914
- Tomcat no longer hijacks Confluence's logging – CONF-1934
- Incoming page links no longer listed multiple times – CONF-1928
- Comments in daily update report are now linked properly – CONF-1904
- Thumbnails and the gallery macro no longer draw images with width and height of 0 – CONF-1861
- Fixed a system error moving pages between spaces when they are linked to from a comment – CONF-1851
- Fixed a system error when removing an attachment – CONF-1861

Issues Resolved for 1.2.3

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.3

Atlassian Software is proud to present Confluence 1.3 (otherwise known as Murrumbidgee). Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days can download either the standalone or WAR distributions from the Atlassian website: http://www.atlassian.com/software/confluence

Murrumbidgee is the third major update to Confluence (in less than nine months!), and once again we've raised the bar of what you should expect from a professional wiki. Confluence 1.3 looks better, performs better, installs more easily and does far more than it ever has before.

A big thanks to everyone who reported bugs, and offered suggestions over the last few months, especially everyone who helped by trying out our Confluence Development Releases.

Upgrading from 1.2.3

Upgrading Confluence should be pretty easy. *We strongly recommend that you backup your confluence.home directory and database before upgrading!*

You will need to reindex your site after upgrading to enable some of the new site search features. You can do this from the "Rebuild Search Index" link on the Administration Console.

Also, we've added a bunch of space-level permissions since 1.2. While our upgrade process should make sure everyone has the same permissions after the upgrade as they did before, it's a good idea to check to make sure nothing has been missed.

Upgrading from 1.1.2 or Earlier

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Users upgrading from an earlier version of Confluence should check the release-notes of the other major Confluence releases:

- Release Notes 1.2
- Release Notes 1.1

Contents

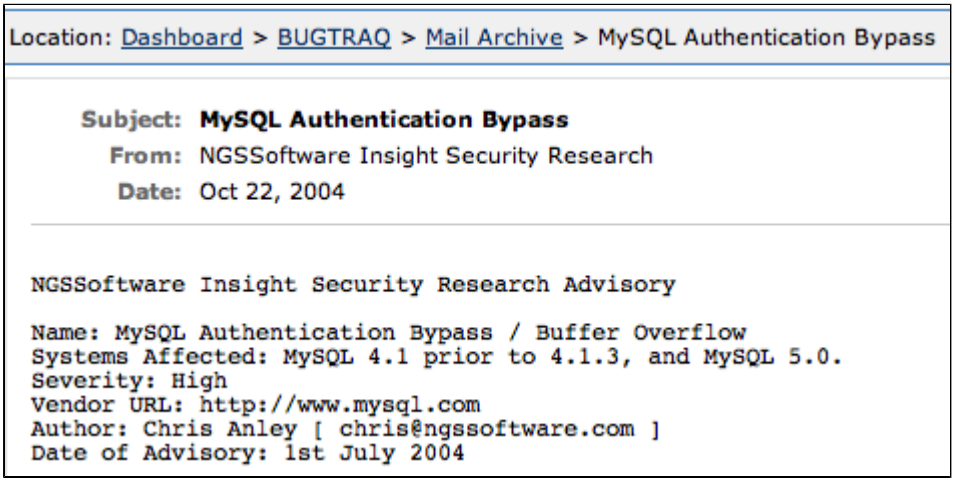
- New Features
- New Macros
- Improvements
- Notable Bug-fixes

See also: Issues Resolved for 1.3

New Features

Many of the features added to Confluence 1.3 are of interest only to site administrators. To get an idea of what's changed from the perspective of a user, you should read What's New in 1.3

Mail Archiving



Confluence is a collaboration tool. When communication happens through Confluence, it gets archived, indexed and interlinked so the whole team can benefit from the information. But what happens to communication that happens via email? At best it gets hidden away in the corner of one team member's inbox, at worst it just falls into nowhere.

Now, you can put that mail into Confluence as well.

Each Confluence space has a mail archive. You can import mail directly by uploading an mbox file, or you can have Confluence regularly poll a POP mailbox for new mail. Once mail is imported into Confluence it can be browsed chronologically or by thread, and searched using Confluence's powerful full-text search functionality.

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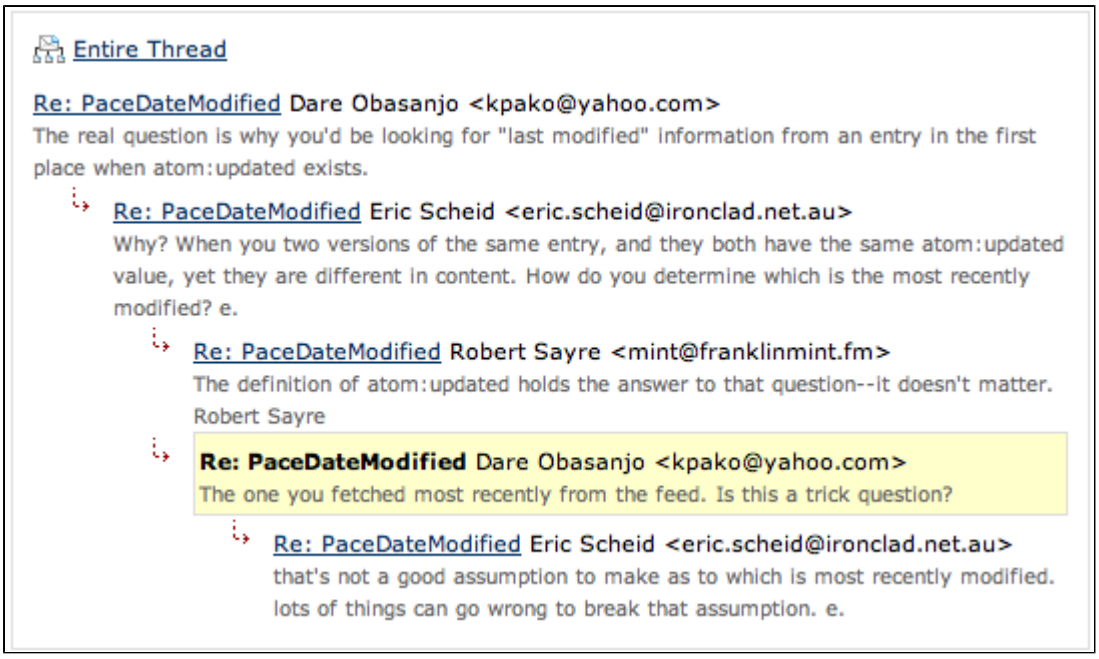
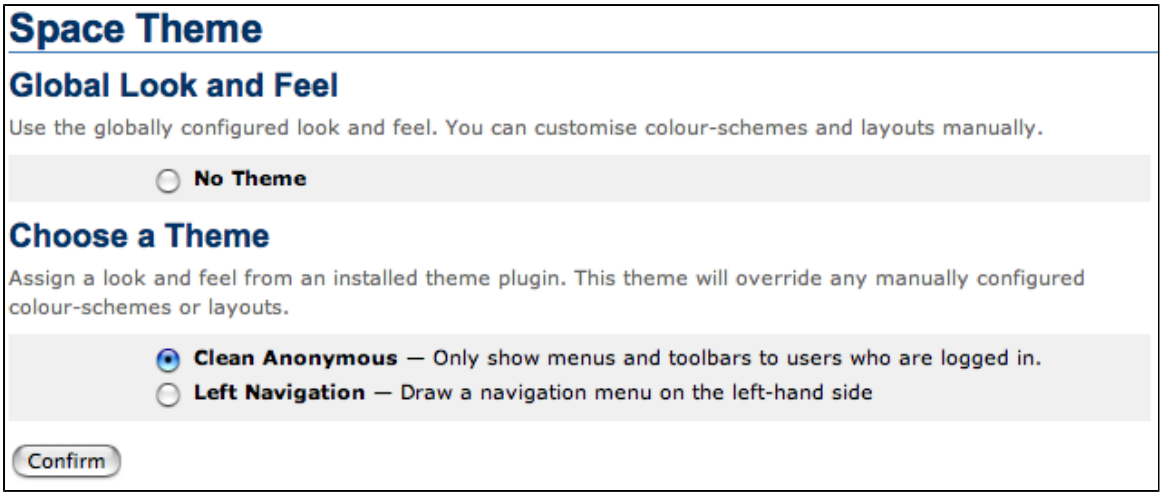


The threading and searching functionalities within Confluence are more powerful, and more useable than most dedicated mail archives that you will find online! For more information about Confluence's mail support, read the Mail Archiving FAQ.

Themes



It is now possible to package a particular Confluence look and feel into a theme. Themes can be dropped into a Confluence installation, after which they will be available for global or space administrators to customise the look and feel of the site.

Themes are built using the new plugin architecture that has been built into Confluence: for more details on how to create your own theme, see Theme Module.

The Trash Can

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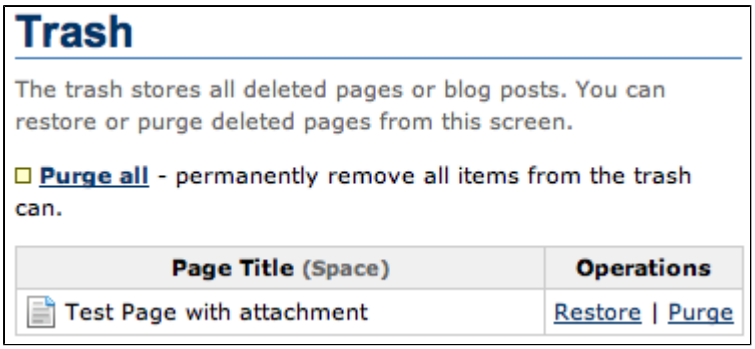

One of the most popular feature-requests, it is now possible to undelete pages, mail and blog-posts. When content is deleted from a space it is moved to that space's trash can. Space administrators can restore deleted pages, or consign them to oblivion.

More Granular Space Permissions

Another of our most popular feature-requests, we've divided up the space permissions so administrators have more control over what users can and can not do.

New Emoticons

Emoticon	Name	Syntax
	add	(+)
	forbidden	(-)
	help	(?)
	idea on	(on)
	idea off	(off)
	star	(*)
	red star	(*r)
	green star	(*g)
	blue star	(*b)
	yellow star	(*y)

Because you can never have enough neat-looking graphics.

Macros

- {note}, {information}, {warning} and {tip} macros let you add coloured notes to your page.
- The {section} and {column} macros give you an alternative to wiki-markup tables
- The {jiraportlet} macro allows you to embed a JIRA 3 portlet into a Confluence page
- The {excerpt} macro has an optional `hidden=true` parameter to hide the contents of the excerpt within the page
- The {excerpt-include} macro has an optional `nopanel=true` paramater to display the excerpt without

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any decoration
- The {jiraissues} macro has an optional `count=true` parameter to display only the number of issues found, not the details of those issues. It also has an oprtional `cache=off` parameter to ensure that a list of Jira issues will refresh on each request.
- The {blog-posts} macro consistently displays blog-posts in reverse chronological order
- The {search} macro can be limited to particular types of content
- The notation guide has been reorganised to be more friendly to users who don't know what a macro is

Improvements

Referrer Management

For public sites, referrer management has been vastly improved in Confluence 1.3, with a new management screen, the ability to block unwanted referrers right from where they are displayed, and the ability to turn off referrer tracking with a single click.

Setup Wizard

The Confluence setup wizard has been rewritten from the ground up. We've made it task-oriented, and stripped it back to just the stuff you need to get Confluence running. The result is a much smoother, much faster installation.

User Interface

We've made a lot of improvements to Confluence's user interface. You'll notice some improvements on the Dashboard, making it easier to see exactly what's changed recently. You'll notice some *huge* changes to the space summary/space administration section of the site.

Backups

- You can now **exclude attached files from your backups**. Of course, this means you have to back up your attachment directory separately, but if you already have a good backup regime for your filesystem (and can thus restore attachments separately), it means your Confluence data backups will take a lot less space
- We now **include important system configuration in your backups**, so that when you restore a site from backup, it will work the same way as it did when you backed it up.

Indexing

We have improved the way we index content within Confluence, which means your searches are even more likely to find the right result.

If the primary language of your Confluence site is not English, you should change the "Indexing Language" preference in Confluence's General Configuration.

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Site Performance

We've identified a number of places that were slowing down the performance of Confluence sites, from the dashboard to the spaces list page, to the search indexer, to the storing of referrers. Confluence should now perform faster than ever.

Also...

- Pages in an export are now in alphabetical, not creation order.
- The remote API can be accessed by anonymous users (this must be turned on in General Configuration)
- When previewing a page, you can continue editing without having to go back to the edit page
- You can link to anything in Confluence if you know its ID in the database (currently this is how you must link directly to mail) using the following link format: [$1234]
- You can link to anything relative to the root of the Confluence installation (useful for pointing to parts of the site that can't otherwise be linked) using three leading slashes: [///pages/editpage.action?pageId=1234]
- A whole lot more that we've forgotten...

Notable Bug Fixes

We resolved a *lot* of issues between Confluence 1.2.3 and Confluence 1.3. The best way to see what we've fixed is to ask JIRA, the world's best issue-tracker: Issues Resolved for 1.3

Confluence Presentation

> **This presentation was relevant to Confluence 1.3, so it was rather outdated.**
>
> We have removed it from this documentation space. You can find a copy of it here.

Issues Resolved for 1.3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

What's New in 1.3

Many of the changes between Confluence 1.2 and 1.3 are really of interest only to Confluence administrators. Here we detail the changes that will be important to all Confluence users.

The Trash

Previously, when you deleted a page or blog post, it was unrecoverable. In 1.3, deleting a page moves it to the Trash. Space administrators can retrieve pages from the trash, or purge them forever. If a page has been deleted (or you have deleted a page by mistake), contact a space administrator to get it back.

Note Macros

There are new macros for inserting coloured notes into a page:

{note}:

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This is a note

A note tells you about something that may be important to you.

{tip}:

This is a tip

A tip tells you something you might not have thought of yourself.

{info}:

This is informative

Info was an excuse to have a blue note.

{warning}:

Beware!

Warnings can be dangerous if overused, because people start ignoring them.

For more information, check out the notation guide.

Mail Archiving

Confluence now includes the capability to store email. This allows you to store mailing-list archives, or records of conversations amongst your team inside Confluence. Mail archiving must be set up by a space administrator.

Searched for **excerpt AND macro** in **Confluence Documentation** excluding **Mail**.
Also found **15 matches** in **Mail**. Include these matches.

All mail is indexed, but by default we exclude it from search results because the volume of email can often overwhelm the content of the Confluence site. When you do a search, you might see a reminder that there could be an answer to your question in the email archives.

To link to an email from a Confluence page, you must find the numeric ID of that mail from the end of its URL, and put that in your link like so: [$12572], which Confluence will draw like this: 12572

Improved JIRA Macros

The {jiraissues} macro has two new optional parameters:

- `count=true` makes the macro only return the number of issues matched by your filter, not the whole list of issues
- `cache=off` makes the macro retrieve the filter results from JIRA every time the page is loaded, ensuring the results are accurate. (Be careful if the filter returns a lot of results, though, you don't want to overload your servers)

There is a new {jiraportlet} macro that allows you to retrieve any portlet from a server running JIRA 3, and display it in a Confluence page, like so:

Unknown macro: 'jiraportlet'

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For more information, check the notation guide

Easy Column Layout

You can use the {section} and {column} macros to organise your page into columns. This is especially useful when you combine it with the {jiraportlet} macro: you can arrange a Confluence page just like a JIRA dashboard!

Here's a simple two-column layout:

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aliquam fermentum vestibulum est. Cras rhoncus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Sed quis tortor. Donec non ipsum. Mauris condimentum, odio nec porta tristique, ante neque malesuada massa, in dignissim eros velit at tellus. Donec et risus in ligula eleifend consectetuer. Donec volutpat eleifend augue. Integer gravida sodales leo. Nunc vehicula neque ac erat. Vivamus non nisl. Fusce ac magna. Suspendisse euismod libero eget mauris.

> Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aliquam fermentum vestibulum est. Cras rhoncus. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Sed quis tortor. Donec non ipsum. Mauris condimentum, odio nec porta tristique, ante neque malesuada massa, in dignissim eros velit at tellus. Donec et risus in ligula eleifend consectetuer. Donec volutpat eleifend augue. Integer gravid sodales leo. Nunc vehicula neque ac erat. Vivamus non nisl. Fusce ac magna. Suspendisse euismod libero eg mauris.

For more information, check the notation guide

Other Things

- Take a look at how the space summary page has been reorganised
- If you hit alt-E on any wiki page or blog post (ctrl-E if you're using a Mac), you'll be taken to the edit page.
- If you start a link with three slashes, you can link to something relative to the root of the Confluence installation. This is useful for creating links to pages that are part of Confluence, such as the dashboard ([///]), or the space list ([///spaces/listspaces.action]).
- The {excerpt} macro can take a `hidden=true` parameter to hide the contents of the excerpt within the page
- The {excerpt-include} macro can take a `nopanel=true` parameter to display the excerpt without any decoration or tables

Release Notes 1.3.1

Confluence 1.3.1 is a maintenance release that fixes some bugs that users may have encountered using Confluence 1.3.

1.3.1 is a free upgrade for all existing Confluence customers.

Who should upgrade?

Confluence 1.3.1 fixes a number of bugs that were found in Confluence 1.3. However, none of the bugs that were fixed were considered critical or likely to cause data-loss. Administrators should only upgrade Confluence if they are affected by (or feel they would be affected by) one of the issues resolved by this release.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

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Changes in 1.3.1

See also: Issues Resolved for 1.3.1

- Preferences for hiding or masking email addresses are no longer ignored on some screens – CONF-2352
- The plugin manager will no longer fail with an error when trying to return a plugin to its default state after activating or deactivating it – CONF-2396
- Disabling hot referrers in the referrer manager screen now works as expected – CONF-2397
- The save option has been restored to the comment preview screen – CONF-2321
- Deleting a blog post or a page no longer leaves possible orphaned comments in recent changes lists – CONF-2323
- Also, some edge cases in the setup wizard were fixed, the demonstration content was tidied up, and a few minor UI issues were resolved.

Issues Resolved for 1.3.1

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

Release Notes 1.3.2

Confluence 1.3.2 is a maintenance release which includes 30 bug fixes and improvements that users may have requested using Confluence 1.3.

1.3.2 is a free upgrade for all existing Confluence customers.

Who should upgrade?

We recommend that all 1.3.x users upgrade to Confluence 1.3.2 . It includes, among other things, the fix of a memory leak which had been occuring in our error monitoring (see below or CONF-2540); if you have been encountering performance issues within Confluence, this could be of benefit.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or 1.3.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

Changes in 1.3.2

See also: Issues Resolved for 1.3.2

We've closed 30 issues, so we will not name them all. Among the most promiment in the list are:

- A memory leak in our collection of logging events as a threadlocal, see CONF-2540.
- Consistent UI handling for editing and previewing blogs and comments, see CONF-2479 and CONF-2470
- Improved IO handling when building exports, see CONF-2510
- Better cleaning up attachments when pages are removed, see CONF-2567

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etc ...

Issues Resolved for 1.3.2

JIRA Issues				
Type	Key	Summary	Status	Resolution
		Authenticate to retrieve your issues		

Release Notes 1.3.4

Confluence 1.3.4 is a maintenance release which includes a few important bug fixes for anyone running Confluence. These release-notes include information about the (briefly available) 1.3.3 version of Confluence, which 1.3.4 has superseded.

1.3.4 is a free upgrade for all existing Confluence customers.

Who should upgrade?

We recommend that all 1.3.x users upgrade to Confluence 1.3.4. For customers running 1.3.2 and earlier, it includes a fix to the security issue described in Confluence Security Advisory 2005-02-09, and it thus an important upgrade for anyone who is still running an un-patched system.

For customers running 1.3.3, the upgrade is also recommended as this version fixes CONF-2740, a regression in 1.3.3 which could cause referrer and trackback data to disappear.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or 1.3.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

Changes in 1.3.4

See also: Issues Resolved for 1.3.4

Since only five bug-fixes were made for this release, here is a quick run-down.

- The patch for the security issue described in Confluence Security Advisory 2005-02-09 has been applied to 1.3.4
- A regression in 1.3.3 that caused trackback and referrer data to be lost has been fixed – CONF-2731
- An intermittent ClassCastException when viewing blog-posts has been fixed – CONF-1671
- The image cache for Apache FOP is now cleared between exports, preventing a case where the wrong version of an attachment may end up in a PDF export – CONF-2647
- A spurious "Connection already closed" log message in the JIRA user management bridge no longer occurs CONF-2656

Issues Resolved for 1.3.4

Issues resolved for 1.3.3

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JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Issues resolved for 1.3.4

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.3.5

Confluence 1.3.5 is a maintenance release which fixes a number of bugs found in earlier 1.3.x Confluence releases. Some areas improved in this release are space export/import, search and LDAP user management. 1.3.5 is also the first Confluence version to be successfully tested against Resin 3.0: see below for the special steps you need to take to get it running.

1.3.5 is a free upgrade for all existing Confluence customers.

Who should upgrade?

We recommend that all 1.3.x users upgrade to Confluence 1.3.5. For customers running 1.3.2 and earlier, it includes a fix to the security issue described in Confluence Security Advisory 2005-02-09, and it thus an important upgrade for anyone who is still running an un-patched system.

For customers running 1.3.4, the upgrade is also recommended as this version fixes CONF-2750, a regression in 1.3.4 that made it impossible to page through search results.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 – 1.3.4, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

Changes in 1.3.5

Resin 3.0 Compatibility

Confluence 1.3.5 is the first Confluence version to be successfully tested against Resin 3.0.12. Customers wishing to run Confluence under Resin 3 should read the special instructions at Known Issues for Resin 3.x

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Issues Resolved

- Paging through search results no longer results in an error. CONF-2750
- Space export and import now performs much more reliably. CONF-2678
- Setup wizard no longer complains about an incomplete setup if you restore a backup from disk. CONF-2637
- Special characters in search no longer cause parser to explode. CONF-2527, CONF-2532, CONF-2728, CONF-2735...
- Attachment filenames containing spaces are no longer truncated when downloading using Firefox. CONF-2739
- For the full list of fixes, see Issues Resolved for 1.3.5

Issues Resolved for 1.3.5

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.3.6

Confluence 1.3.6 is a special maintenance release for customers who are using Confluence with an Oracle database. It contains a number of fixes, originally developed for Confluence 1.4, to Confluence's behaviour against Oracle databases.

1.3.6 is available as a free upgrade for all existing Confluence customers from the archive download page.

Who should upgrade?

We recommend that customers skip Confluence 1.3.6 and upgrade to Confluence 1.4. Confluence 1.4 includes a great many new features and bug-fixes that are not included in 1.3.6. We do, however, recognise that 1.4 is a significant upgrade and some customers wish to continue with Confluence 1.3 for the time being.

Confluence 1.3.6 is recommended only for Confluence customers who:

- are not yet ready to upgrade to Confluence 1.4, and
- are running Confluence with an Oracle database

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 – 1.3.4, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

Changes in 1.3.6

Confluence 1.3.6 addresses a number of situations in which Confluence could lock up, consume additional resources, or fail to perform backup or restore operations against an Oracle database.

Release Notes 1.4

Atlassian Software is proud to present Confluence 1.4 (otherwise known as Hunter). Existing customers who wish to upgrade, or new users who wish to try out Confluence for 30 days can download either the standalone or

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WAR distributions from the Atlassian website: http://www.atlassian.com/software/confluence

Hunter is the fourth major update to Confluence, and the biggest yet in terms of new features and improvements both visible to the user or hidden "under the hood". Between 1.3.5 and 1.4, we resolved a massive 480 issues.

A big thanks to everyone who reported bugs, and offered suggestions over the last few months, especially everyone who helped by trying out our Confluence Development Releases.

See also: Issues Resolved for 1.4

Contents

- Upgrading
- Migration
- New Features
- Notable Bug Fixes
- Outstanding Bugs

Upgrading From a Previous Version of Confluence

Upgrading Confluence should be pretty easy: you can find instructions here. *We strongly recommend that you backup your confluence.home directory and database before upgrading!*

Upgrading from 1.3.5

Because of the significant UI changes between 1.3 and 1.4 (see below), we highly recommend disabling any themes or UI customisations before upgrading Confluence.

After upgrading to 1.4, administrators will need to rebuild the site's search-index to ensure all the new search features are enabled. Do this from the *Content Indexing* section of the global administration menu.

> **Upgrade Migration**
>
> The database migration tasks that must be run to upgrade Confluence from 1.3 to 1.4 may take several minutes to run. During this time, Confluence will be unavailable.

> **Confluence License Expiration**
>
> A commercial Confluence license entitles you to a year of free upgrades. As such, Confluence 1.4 is the first release of Confluence to which some customers may not be able to upgrade.
>
> **If you were issued your Confluence license before May 24th 2004, you will *not* be able to upgrade to Confluence 1.4**. Confluence 1.4 will refuse to run with any license issued before this date, and you will be required to downgrade to a previous Confluence version.

Upgrading from 1.2.3 or Earlier

Users upgrading from an earlier version of Confluence should check the release-notes of the other major Confluence releases:

- Release Notes 1.3
- Release Notes 1.2
- Release Notes 1.1

Migration

The best place to find out about the new features available in Confluence 1.4 is by checking out our What's New in Confluence 1.4 pages. However, there are a few features of specific interest to Confluence administrators that

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will be mentioned here:

v2Renderer

The engine by which Confluence converts wiki-text to HTML has been rewritten from scratch for Confluence 1.4. This was necessary, as the complexity of Confluence's markup was overwhelming the capabilities of the previous engine and leading to an increasing number of bugs, some of which had the potential to bring down the entire server.

v2Renderer is in every way more powerful (and better, more predictable) than the previous engine, and has undergone a lot of testing to make sure that it renders wiki pages the same way as its predecessor. However, pages that made use of bugs or undocumented features in the original engine may no longer render the same in 1.4 as they did in 1.3. If you come across something that is a bug or a missing feature in the new renderer, please file an issue in JIRA.

One side-effect of the new renderer is that custom Java macros written for Confluence 1.3 and earlier may not be compatible with Confluence 1.4 (although most should continue to function). For more information, macro authors should read this document

New User Interface

In response to a *lot* of feedback from customers and users of Confluence, the User Interface has undergone a major overhaul between Confluence 1.3 and 1.4. While the changes are mostly self-explanatory, and we believe the new interface is significantly easier for *everyone* to use and understand than its predecessor, it may be a good idea to make the following resource available to your users as part of the transition: 1.4 Interface - Where Did Everything Go?

Because of the substantial changes to the interface, themes and UI customisations made for Confluence 1.3 and earlier are not compatible with Confluence 1.4, and should be disabled before you upgrade.

Blogs have become News

Also in response to a lot of feedback, blogs in Confluence have now been renamed to *news*. We feel this makes it a lot easier to explain them to new and non-technical Confluence users. None of the functionality of blogs has been changed, just the name. 🙂

New Features

Confluence 1.4 has a lot of cool new stuff. Over the next week we'll be releasing a new section of the Confluence website that will examine the new features in detail. Stay tuned.

Notable Bug Fixes

We resolved a *lot* of issues between Confluence 1.3.5 and Confluence 1.4. The best way to see what we've fixed is to ask JIRA, the world's best issue-tracker: Issues Resolved for 1.4

Outstanding Bugs

Some bugs were introduced during the Confluence 1.4 development cycle that we could not fix in time for the final release. Of note are:

- Index rebuilding may fail on multi-processor systems (for a workaround, see CONF-3168)
- You can not install an XWork plugin by uploading through the web interface, it must be copied into `WEB-INF/lib` (CONF-3184)
- Uploading a malformed plugin through the web interface may make other plugins cease to function (CONF-3183)
- Under certain circumstances, the mbox mail import may fail against Oracle databases (CONF-3284)
- The Insert Image and Insert Link popups jump the cursor to the top of the text input area on browsers other than Internet Explorer (CONF-3232)

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Once again, if you find any bugs in Confluence, or have any feature suggestions, you can report them online in JIRA.

Issues Resolved for 1.4

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Release Notes 1.4.1

Confluence 1.4.1 is a maintenance release that resolves some issues users may have encountered using Confluence 1.4. Issues include an occasional failure to display Confluence pages, Oracle and MySQL database issues, and a slow memory-leak.

1.4.1 is a free upgrade for all customers who purchased their Confluence license after June 2nd, 2004.

Who should upgrade?

Confluence 1.4.1 is a recommended upgrade for all users of Confluence 1.4, as it addresses a memory-leak which, while slow, would progressively degrade Confluence's performance and ultimately cause the server to exhaust available memory.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.6 or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Changes in 1.4.1

See also: Issues Resolved for 1.4.1

- A slow memory leak has been fixed. (CONF-3347)
- An issue where Confluence pages would intermittently only display their header when loading has been resolved. (CONF-3295)
- Confluence will now deploy reliably on MySQL 4.1 with UTF-8 encoding. (CONF-3306)
- Several issues regarding Confluence's use of the Oracle database have been resolved.
- A recurring bug preventing PNG images from being exported to PDF on some application servers has been fixed. (CONF-731)
- Inconsistencies with custom colour-schemes have been resolved (CONF-3314)

Issues Resolved for 1.4.1

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

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Release Notes 1.4.2

Confluence 1.4.2 is a maintenance release that resolves some issues users may have encountered using previous Confluence 1.4 releases. 1.4.2 introduces Websphere and DB2 compatibility, and fixes issues related to content indexing and the mail queue.

1.4.2 is a free upgrade for all customers who purchased their Confluence license after June 30th, 2004.

Who should upgrade?

Confluence 1.4.2 is a bugfix release. Customers should consult the list of issues resolved for this release to decide whether it is worth their while upgrading. Since this release includes a number of important performance and reliability fixes for content indexing, anyone who relies on Confluence's search functionality should consider upgrading.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 or 1.4.1, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.6 or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Database Connection Pool Changes

Dependent on the size of your Confluence installation, the new re-indexing task may use up to 10 database connections simultaneously. As such, you may need to increase the size of your database connection pool in order to allow Confluence to continue to operate during and after rebuilding the search index.

If Confluence has been set up to use direct JDBC connections, then you will find the setting for Confluence's connection pool size in `confluence.cfg.xml` in your confluence home directory. Confluence should update this value automatically when you upgrade, so after starting up Confluence 1.4.2 for the first time, you should check to make sure it has been updated to 15 connections, as seen below:

```
<property name="hibernate.c3p0.max_size">15</property>
```

If Confluence has been configured to use a datasource supplied by the application server, you should ensure the application server is configured to supply Confluence with sufficient connections to run.

Changes in 1.4.2

See also: Issues Resolved for 1.4.2

- Confluence has now been tested on Websphere 5.1.1.3 (see Known Issues for Websphere)
- Confluence has now been tested against DB2 8.1 (Linux and Windows)
- The mechanism by which Confluence rebuilds its full-text search index has been rewritten to be significantly less memory-intensive (but may be 10-15% slower). CONF-3340
- An issue that could cause comments or attachments to be removed from the search index when a page was edited has been resolved. CONF-3489
- An issue that could cause index rebuilding to fail (especially on multi-processor systems) has been

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resolved. CONF-3168
- Issues related to the size and reliability of the mail queue were resolved. CONF-3334 CONF-3474
- An exception when creating global templates was fixed. CONF-3386
- Some Javascript errors that were being flagged on Internet Explorer no longer occur. CONF-3422, CONF-3482
- Exporting a space to HTML via XML-RPC now succeeds. CONF-3401
- Creating a blog post via XML-RPC now succeeds. CONF-3412
- ALL CAPS WORDS are no longer linked when CamelCase linking is activated. CONF-3361
- The display of user attachments does not break when the user has not yet set a profile. CONF-3420

Issues Resolved for 1.4.2

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.4.3

Confluence 1.4.3 is a maintenance release that resolves some issues users may have encountered using previous Confluence 1.4 releases. 1.4.3 introduces a new SOAP service provider, and fixes issues related to incoming link tracking, notifications management, serving resources from dynamically loaded plugins, and much more.

1.4.3 is a free upgrade for all customers who purchased their Confluence license after August 17th, 2004.

Who should upgrade?

Confluence 1.4.3 is a bugfix release. While Atlassian recommends customers always run the most recently available stable Confluence release, customers should consult the list of issues resolved to decide whether it is worth their while upgrading.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 to 1.4.2, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.6 or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Changes in 1.4.3

See also: Issues Resolved for 1.4.3

Remote API Changes

Confluence now ships with an second SOAP provider running Apache Axis, alongside the existing Glue SOAP provider. This is the first step towards migrating entirely to Axis as our sole SOAP provider over the next few major Confluence releases. If you use Confluence's SOAP API, you should read this document for information about the migration process and timeframe.

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> All SOAP clients that worked with Confluence 1.4.2 will continue to work with Confluence 1.4.3 with no change.

Other changes made to the remote API:

- A condition under which SOAP faults could be masked by HTML error pages on some application servers was resolved. (CONF-3043)
- Deleting a page via the remote API now places that page in the trash. (CONF-3403)
- Adding space level permissions to a user through the remote API now works as expected. (CONF-3596)

Other Changes and Fixes

- A bug that would cause a page's most recent editor to change when the page was previewed has been fixed (CONF-3424)
- A bug that could cause a page's incoming links not to be displayed has been fixed (CONF-3509)
- A bug that could cause "Watch this space" not to function has been fixed (CONF-3510)
- A bug that could cause Confluence to run out of available file descriptors when exporting a space has been fixed (CONF-3517)
- A bug that could cause an email notification to be sent regarding a page that was restricted by page-level permissions has been fixed (CONF-3573)
- The attachment upload form in the "Insert Image" is more robust against error (CONF-3677, CONF-3676)
- Searching for a page in the Parent Page Picker Popup now functions as expected (CONF-3364)
- Deleting a user now correctly deletes their email notifications (CONF-3619)
- Restoring a page from the trash now re-adds that page's comments to the search index (CONF-3564)
- Attachment links are now not rendered if the user can not view the attachment due to page level permissions (CONF-3553)
- The list of recently edited pages in a user's profile is now more accurate (CONF-2430)
- Plugins uploaded through the web interface can now correctly serve downloadable resources (CONF-3387)
- The {recently-updated} macro and recent blogs pages now work under JDK 1.5 (CONF-3528, CONF-3601)
- The {section} macro's "border" property now works correctly (CONF-3736, CONF-3433)
- The {noformat} macro now has a "nopanel" parameter that will suppress drawing a background or border (CONF-3656)
- Several issues regarding the {tasklist} macro were fixed (CONF-3622, CONF-3633, CONF-3632)
- The {dynamictasklist} macro no longer breaks PDF exports (CONF-3513)
- The informational macros no longer center their text when viewed in Internet Explorer (CONF-3537)
- Links are now parsed in the title of a {panel} macro (CONF-3560)
- The string ?!?! is no longer interpreted by the Wiki/HTML renderer as a broken image

See also: Issues Resolved for 1.4.3

Confluence SOAP Provider Migration

Starting with the release of Confluence 1.4.3, and stretching through the next three major releases, Confluence will be transitioning from using the Glue library to provide a SOAP remote API, to using Apache Axis. Unfortunately, while the SOAP services will stay the same, the WSDL that these libraries generate to interact with the same services *will change*, so SOAP applications that interact with Confluence will need to migrate with us.

The migration should be relatively painless. Since the underlying objects represented by the WSDL are still the same, the process should involve regenerating your SOAP stubs, and a few cosmetic code changes.

The XML-RPC API is unaffected by this change.

Current Status

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1.4.3 and 1.5/2.0	Deploy Axis SOAP service alongside Glue	✅ Completed
(unscheduled)	Allow configuration of default SOAP provider, the default at installation being Axis	❌ Incomplete
(unscheduled)	Remove Glue SOAP provider	❌ Incomplete

Progress on these issues can also be tracked via CONF-3141

The Plan

As of version 1.4.3, Confluence ships with three SOAP endpoints:

Endpoint	WSDL URL	Provider
`/rpc/soap/confluencesoapservice-v1`	`/rpc/soap/confluenceservice-v1.wsdl`	Glue
`/rpc/soap-glue/confluencesoapservice-v1`	`/rpc/soap-glue/confluenceservice-v1.wsdl`	Glue
`/rpc/soap-axis/confluencesoapservice-v1`	`/rpc/soap-axis/confluenceservice-v1?wsdl`	Axis

> ⚠ The Axis and Glue providers produce slightly different WSDL URLs

> ℹ Third-party SOAP RPC Plugins deployed in Confluence will be similarly deployed in three locations

Over the next three major Confluence releases we will:

1. Make the provider of `/rpc/soap/confluenceservice-v1` configurable, then
2. Change the default provider to Axis (but leave it configurable), then finally
3. Remove the Glue provider entirely

What This Means for SOAP Clients

Confluence major releases occur every three or four months. Thus, authors of SOAP clients should keep in mind this timeline, starting with the release of Confluence 2.0 (November 2005)

0-3 months	• All existing SOAP clients written against the Glue provider will continue to function normally. • New clients should be written to the Axis provider in `/rpc/soap-axis` • Existing clients should change their SOAP endpoints to point to `/rpc/soap-glue` (or, better still, move directly to Axis)

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3-6 months	• Confluence will require configuration to work with any client of the Glue provider that has not changed its endpoint • New clients should be written to the Axis provider in `/rpc/soap-axis` • Existing clients will need to migrate to the Axis provider
6+ months	• Confluence will no longer work with clients written against the Glue provider • Both `/rpc/soap` and `/rpc/soap-axis` endpoint s will continue to be served by the Axis provider

Issues Resolved for 1.4.3

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
		Authenticate to retrieve your issues		

Release Notes 1.4.4

Confluence 1.4.4 is a maintenance release that resolves some issues users may have encountered using previous Confluence 1.4 releases. 1.4.4 fixes a number of issues, including many related to the reliability of uploaded plugins

1.4.4 is a free upgrade for all customers who purchased their Confluence license after September 23rd, 2004.

Who should upgrade?

Confluence 1.4.4 is a bugfix release. While Atlassian recommends customers always run the most recently available stable Confluence release, customers should consult the list of issues resolved to decide whether it is worth their while upgrading.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence versions between 1.4 and 1.4.3, you can find instructions here. *We strongly recommend that you backup your `confluence.home` director y and database before upgrading!*

If you are upgrading from Confluence 1.3.6 or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Changes in 1.4.4

Uploaded Plugin Fixes

Prior to Confluence 1.4.4, plugins containing Spring components, XWork actions or velocity templates could not be uploaded through the web interface, and needed to be installed manually in `WEB-INF/lib`. Confluence 1.4.4 fixes these issues.

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Database Indexes

Confluence 1.4.4 now correctly creates database indexes on a clean installation. If you are upgrading an existing Confluence instance, you should consult Performance Tuning for information on indexes that can improve Confluence's performance significantly.

Other Changes and Fixes

See: Issues Resolved for 1.4.4

Issues Resolved for 1.4.4

JIRA Issues				
Type	Key	Summary	Status	Resolution
	Authenticate to retrieve your issues			

Confluence Development Releases

Development releases are interim builds of Confluence that we make available so that interested customers can try out new features, especially those features that you may have been waiting for, and don't want to wait another month for the next official release. Development releases are also called early access program (EAP) releases.

Are you looking for the production releases of Confluence? See **Confluence Release Notes**.

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Current Development Release Cycle

The links below show the latest development releases:

- Confluence 4.3-RC1 Release Notes – 1 August 2012
- Confluence 4.3-Beta1 Release Notes – 6 July 2012
- Confluence 4.3-m11 EAP Release Notes – 31 May 2012

Previous Development Release Cycles

4.2 development

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- Confluence 4.2-Beta3 Release Notes – 27 March 2012
- Confluence 4.2-Beta2 Release Notes – 16 March 2012
- Confluence 4.2-Beta1 Release Notes – 13 March 2012

4.1 development

- Confluence 4.1-rc1 Release Notes – 5 December 2011
- Confluence 4.1-m5 ("Milestone 5") Release Notes – 15 November 2011

4.0 development

- Confluence 4.0-beta2 ("Beta 2") Release Notes – 18 August 2011
- Confluence 4.0-m36 ("Milestone 36") Release Notes – 1 August 2011
- Confluence 4.0-m29 ("Milestone 29") Release Notes – 27 June 2011
- Confluence 4.0-m27 ("Milestone 27") Release Notes – 3 June 2011

3.5 development

- Confluence 3.5-rc1 ("Release Candidate 1") Release Notes – 9 March 2011
- Confluence 3.5-beta3 ("Beta 3") Release Notes – 4 March 2011
- Confluence 3.5-beta2 ("Beta 2") Release Notes – 4 March 2011
- Confluence 3.5-beta1 ("Beta 1") Release Notes – 10 February 2011
- Confluence 3.5-m4 ("Milestone 4") Release Notes – 22 December 2010
- Confluence 3.5-m3 ("Milestone 3") Release Notes – 17 December 2010
- Confluence 3.5-m2 ("Milestone 2") Release Notes – 7 December 2010
- Confluence 3.5-m1 ("Milestone 1") Release Notes – 22 November 2010

3.4 Development

- Release Notes 3.4-m4 ("Milestone 4") 2/SEP/2010
- Release Notes 3.4-m2 ("Milestone 2") 8/AUG/2010
- Release Notes 3.4-m1 ("Milestone 1") 20/JUL/2010

3.3 Development

- Release Notes 3.3-m3 ("Milestone 3") 18/MAY/2010
- Release Notes 3.3-m1 ("Milestone 1") 8/APR/2010

3.2 Development

- Release Notes 3.2-beta ("Beta") 1/MAR/2010
- Release Notes 3.2-m4 ("Milestone 4") 22/FEB/2010
- Release Notes 3.2-m3 ("Milestone 3") 5/FEB/2010

3.1 Development

- Release Notes 3.1-rc1("Release Candidate 1") 27/NOV/2009
- Release Notes 3.1-beta2 ("Beta 2") 19/NOV/2009
- Release Notes 3.1-beta1 ("Beta 1") 9/NOV/2009
- Release Notes 3.1-m7 ("Milestone 7") 5/NOV/2009
- Release Notes 3.1-m6 ("Milestone 6") 26/OCT/2009
- Release Notes 3.1-m5 ("Milestone 5") 8/OCT/2009
- Release Notes 3.1-m4 ("Milestone 4") 22/SEPT/2009
- Release Notes 3.1-m3 ("Milestone 3") 10/SEPT/2009
- Release Notes 3.1-m1 ("Milestone 1") 22/JULY/2009

Other Resources for 3.1:

Confluence 3.1 Deprecated Code Cleanup
Prototype REST API
Confluence 3.1 Newly Deprecated Code

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3.0 Development

- Release Notes 3.0-beta2 ("Beta 2") 16/MAY/2009
- Release Notes 3.0-m9 ("Milestone 9") 28/APRIL/2009
- Release Notes 3.0-m8 ("Milestone 8") 20/APRIL/2009
- Release Notes 3.0-m7 ("Milestone 7") 31/MARCH/2009
- Release Notes 3.0-m6 ("Milestone 6") 16/MARCH/2009
- Release Notes 3.0-m5 ("Milestone 5") 24/FEBRUARY/2009
- Release Notes 3.0-m3 ("Milestone 3") 29/JANUARY/2009

2.10 Development

- Release Notes 2.10-rc1 ("Release Candidate 1") 23/NOV/2008
- Release Notes 2.10-m8 ("Milestone 8") 13/NOV/2008
- Release Notes 2.10-m7 ("Milestone 7") 12/NOV/2008
- Release Notes 2.10-m5 ("Milestone 5") 23/OCT/2008
- Release Notes 2.10-m4 ("Milestone 4") 2/OCT/2008
- Release Notes 2.10-m3 ("Milestone 3") 18/SEPT/2008
- Release Notes 2.10-m2 ("Milestone 2") 08/SEPT/2008
- Release Notes 2.10-m1 ("Milestone 1") 22/AUGUST/2008

2.9 Development

- Release Notes 2.9-rc1 ("Release Candidate 1") 31/JULY/2008
- Release Notes 2.9-m5 ("Milestone 5") 9/JULY/2008
- Release Notes 2.9-m3 ("Milestone 3") 11/JUNE/2008
- Release Notes 2.9-m2 ("Milestone 2") 27/MAY/2008

2.8 Development

- Release Notes 2.8-m9 ("Milestone 9") 26/MAR/2008
- Release Notes 2.8-m7 ("Milestone 7") 11/MAR/2008
- Release Notes 2.8-m6 ("Milestone 6") 05/MAR/2008
- Release Notes 2.8-m4 ("Milestone 4") 08/FEB/2008
- Release Notes 2.8-m3 ("Milestone 3") 30/JAN/2008
- Release Notes 2.8-m2 ("Milestone 2") 16/JAN/2008

2.7 Development

- Release Notes 2.7-rc1 ("Release Candidate 1") 05/DEC/2007
- Release Notes 2.7-m5 ("Milestone 5") 26/NOV/2007
- Release Notes 2.7-m4 ("Milestone 4") 06/NOV/2007
- Release Notes 2.7-m2 ("Milestone 2") 10/OCT/2007

2.6 Development

- Release Notes 2.6-dr1
- Release Notes 2.6-dr2

2.3 Development

- Release Notes 2.3-DR1
- Release Notes 2.3-DR2

1.5 - 2.0 Development

- 1.5-DR1 was not released
- Release Notes 1.5-DR2
- Release Notes 2.0-RC1
- Release Notes 2.0-RC2

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1.4 Development

- Release Notes 1.4-DR1
- Release Notes 1.4-DR2
- Release Notes 1.4-DR3
- Release Notes 1.4-DR4
- 1.4-DR5 was not released
- Release Notes 1.4-DR6
- Release Notes 1.4-DR7
- 1.4-RC1 was not released
- Release Notes 1.4-RC2

1.3 Development

- Release Notes 1.3-DR1
- Release Notes 1.3-DR2
- Release Notes 1.3-DR3
- Release Notes 1.3-DR4
- Release Notes 1.3-final

Confluence 4.3-RC1 Release Notes

1 August 2012

With great pleasure, Atlassian presents **Confluence 4.3 Release Candidate 1 (RC1)**. This EAP (early access program) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. Feel free to comment on the page if you want to provide any feedback or ask any questions. EAP releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

What's in this release?

Please see the new features of Confluence 4.3 described in the **Confluence 4.3-Beta1 Release Notes**. For plugin developers, please see our developer's guide to preparing for Confluence 4.3.

This release candidate is primarily a bug-fix release. These are the changes in Confluence 4.3 RC1:

- Changes to drafts functionality
- Image zoom and table scrolling in Confluence mobile
- Mentions now available via the 'Insert' menu
- Existing templates now migrated on upgrade
- Other items of interest

> **Downloading Confluence**
>
> The Confluence 4.3 RC1 release is available at the download site. When upgrading, please follow the upgrade notes below.

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Please note the following

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  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Changes in this release

1

Changes to drafts functionality

Confluence 4.3 offers the same draft-handling capabilities as Confluence 4.2, with one improvement: You can now have more than one draft of a new page or blog post in the same space. In earlier versions, you could hav multiple drafts of existing pages, but only one new draft.

(You may have noticed that the beta release offered you the option to save a draft when creating or editing a page or blog post. This was a new, experimental way of handling drafts. After usability testing, we decided that this feature is not yet ready for release. For that reason, the ability to explicitly save drafts will not be in the fina release of Confluence 4.3.)

2

Image zoom and table scrolling in Confluence mobile

Have you tried viewing Confluence 4.3 content on your iPhone, iPod touch or Android device?

- You can now tap an image to zoom in, then pinch and expand the image using the standard mobile gestures.
- When a page includes a wide table, you can tap and drag to scroll horizontally.

See the beta release notes for a full description of the new mobile interface in Confluence 4.3.

3

Mentions now available via the 'Insert' menu

In Confluence 4.0 we introduced @mentions, a handy way of mentioning someone in a page or comment. If yo type '@' and someone's name, Confluence sends that person an email notification. Now we have added the user mention option to the editor's 'Insert' menu to help new users discover this useful feature.

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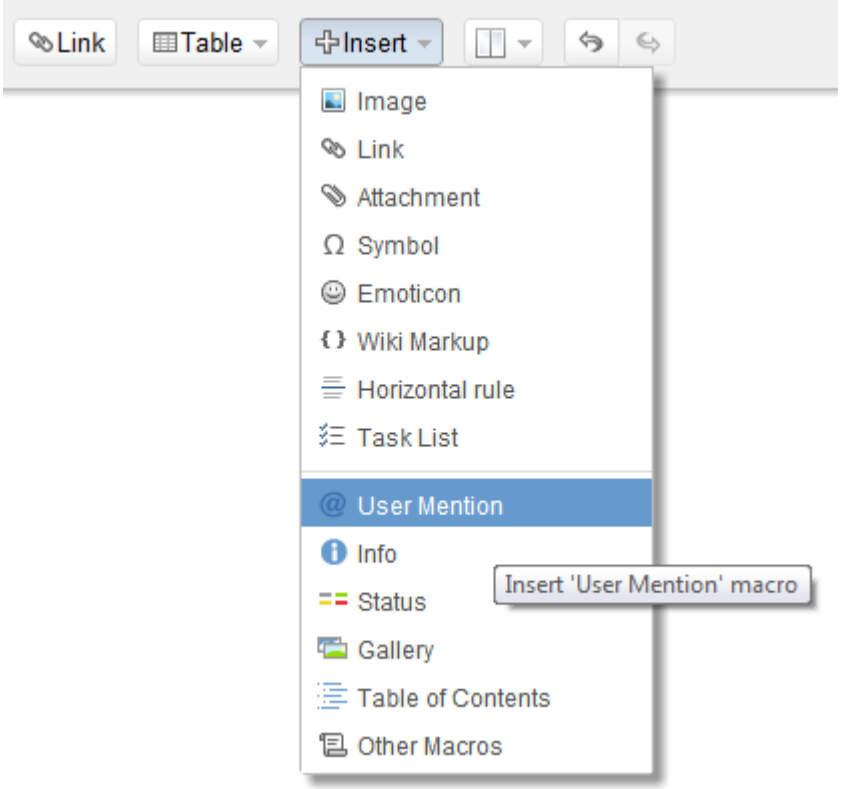

4

Existing templates now migrated on upgrade

As you know from the beta release notes, Confluence 4.3 introduces a rich text editor for templates. When we released the beta, we had not yet included an upgrade task to migrate your existing templates from wiki marku to the new storage format required by the rich text editor. That upgrade task is now present in the RC1 release This process is automatic, and you should not need to take any action. For more details about the upgrade process, see Migration of Templates from Wiki Markup to XHTML-Based Storage Format.

5

Other items of interest

- **Comment and edit alerts not in Confluence 4.3.** The Confluence 4.3 Beta 1 release contained a feature that popped up a message when a new comment arrived or someone updated the page you wer viewing. This feature is not in the final release of Confluence 4.3, as it needed more work to make it shippable.
- **Discoverable space administrators not in Confluence 4.3.** The beta release included a feature that listed space administrators in the space directory and on the 'Advanced' tab of the space. This feature requires more performance tuning, and is not in the final release.

Upgrade notes

These notes assist you in upgrading your test site to this EAP release.

1. **The JIRA Portlet macro is no longer supported.**
   Gadgets replaced portlets in JIRA 4.0 and Confluence 3.1. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and have removed the portlet code in Confluence 4.3. Pages that contain the macro will no longer display information drawn from JIRA. Instead, they will

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show an error reporting that the macro does not exist. To prevent this behaviour, please upgrade to a version of JIRA that supports gadgets, and follow the instructions in How to Migrate from JIRA Issues and JIRA Portlets to Gadgets.

2. **Active Objects is now bundled.**
   Confluence 4.3 ships with the Active Objects plugin. If you have previously installed Active Objects into your Confluence 4.2 site, you will need to uninstall it before upgrading to Confluence 4.3. This is because user-installed plugins override bundled plugins.

Follow the usual upgrade instructions to upgrade your test site to this release.

Confluence 4.3-Beta1 Release Notes

6 July 2012

With great pleasure, Atlassian presents Confluence 4.3 Beta 1. This EAP (early access program) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. Feel free to comment on the page if you want to provide any feedback or ask any questions. EAP releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.3 Beta 1:

- Confluence mobile
- In-app notifications
- Personal tasks
- Tasks on the page
- Rich text templates
- Space archiving
- Improved user invitations and signup options
- Table sorting and highlighting
- Simpler space creation
- Draggable images and macros
- Other improvements
- Infrastructure changes
- A note about changes to drafts – not in Confluence 4.3 final release
- Upgrade notes

> **Downloading Confluence**
>
> The Confluence 4.3 Beta 1 release is available at the download site. When upgrading, please follow the upgrade notes below.

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Please note the following

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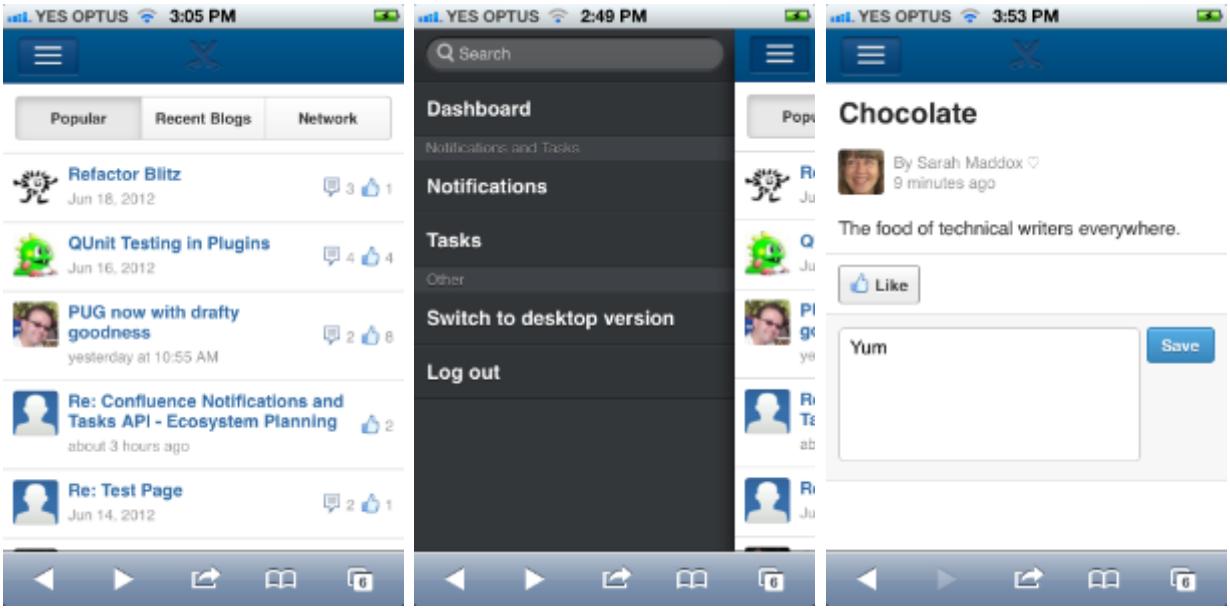
Highlights of Confluence 4.3 Beta 1

1

Confluence mobile

Introducing a new, super-responsive interface optimised for iPhone and Android (currently with beta support) devices. With Confluence mobile you can:

- Browse popular content, recent blog posts and network activity.
- Like pages, blog posts and comments.
- Add comments to pages and blog posts.
- Search Confluence for content and people.
- View the profiles of your colleagues. Tap to call, SMS or email them directly from your mobile device.
- Manage your personal tasks and notifications.



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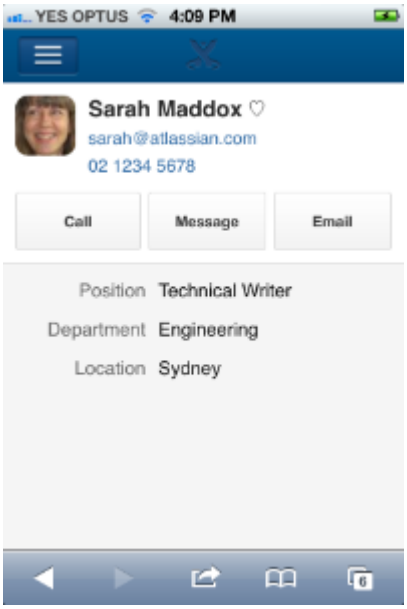
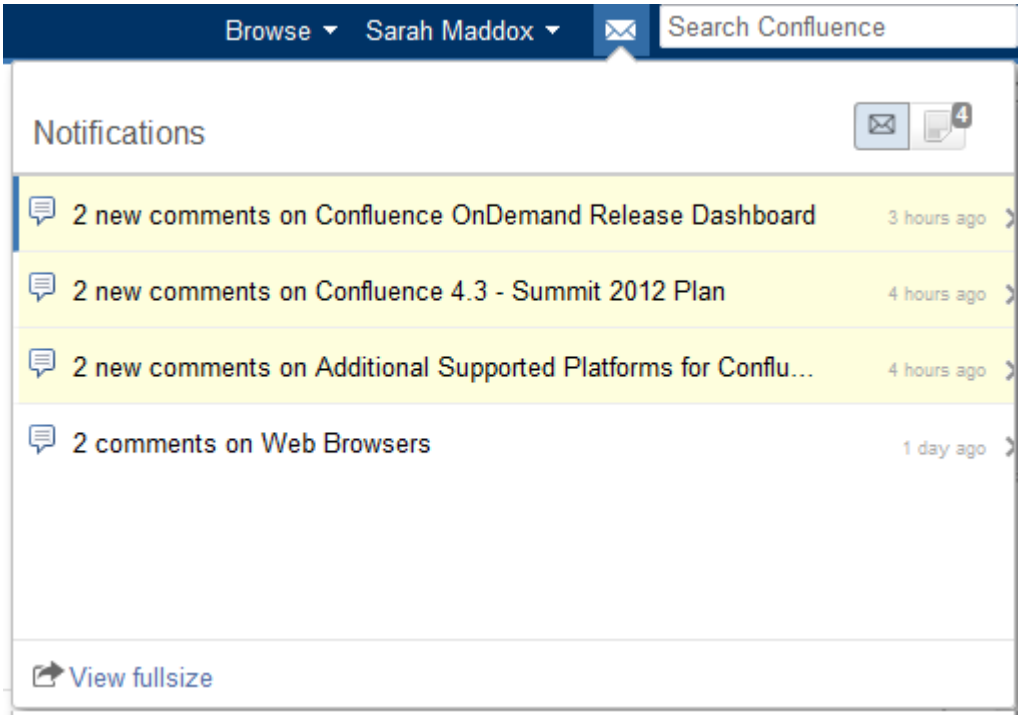


2

In-app notifications

Now you can manage your notifications, mentions and shares all in one place – the new notifications dialog in Confluence. Use the handy inline actions to like and watch pages, and reply to comments. Want to track the items you need to take action on? Convert a notification to a personal task.



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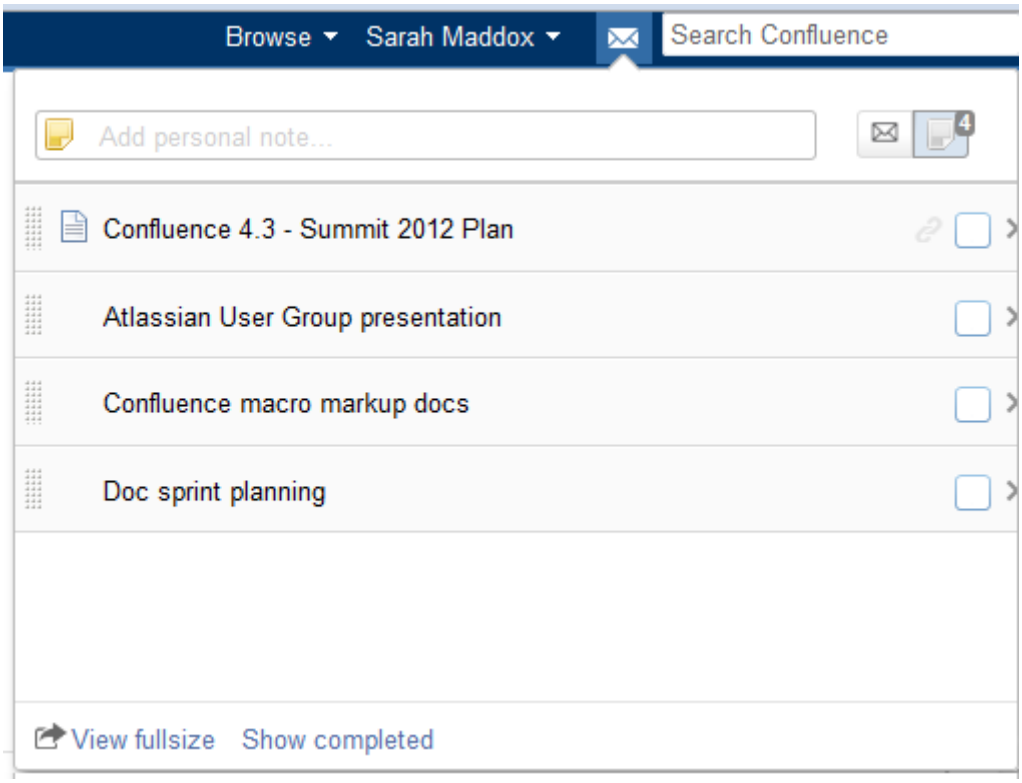
3

Personal tasks

Personal tasks help you stay focused on the task at hand and plan your day's work. You can create tasks, prioritise them by dragging them into order, and manage them entirely within Confluence.



4

Tasks on the page

It's now really simple to track team tasks inside your pages – project tasks, meeting action items and checklists

- **Create task lists**
  Click the new task icon in the editor to start a new task list.
- **Assign tasks using mentions**
  You can @mention a user within a task to assign it to them. These tasks then appear in the personal tas list.
- **Receive instant notifications**
  Users receive a notification when a task has been assigned to them. Page watchers will be notified whe tasks in a page are marked as complete.
- **Track tasks from anywhere**
  View all your assigned tasks in your personal tasks list where you can add notes, prioritise them, and mark them as complete.

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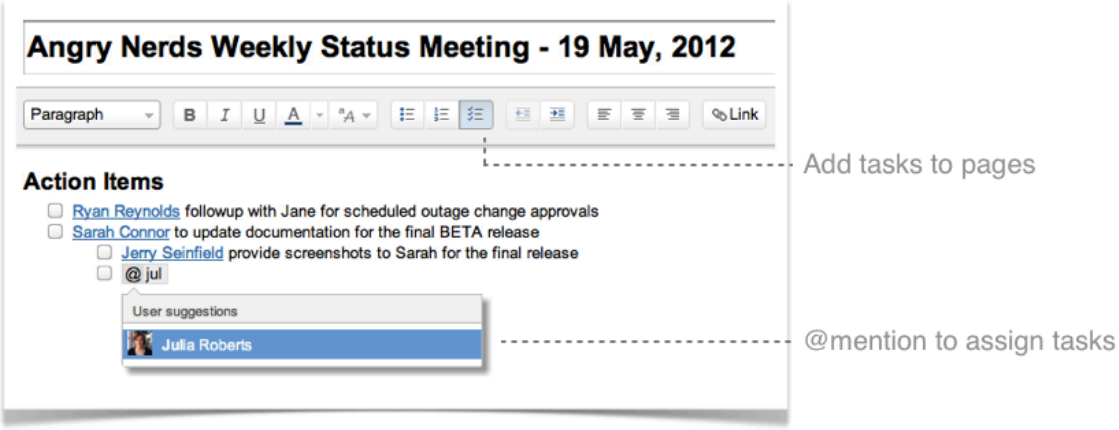
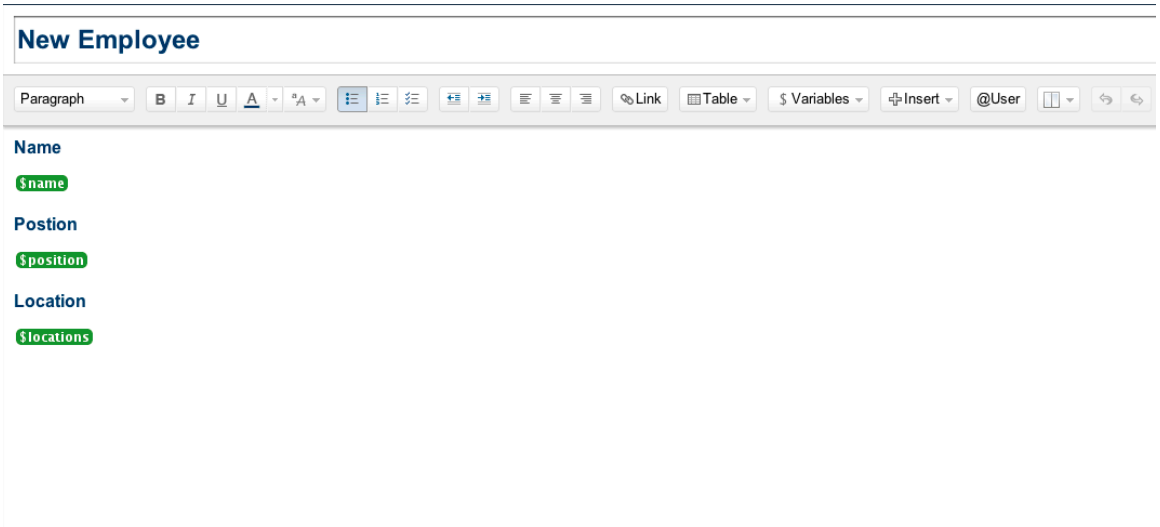


5

Rich text templates

You can now create templates using the rich text editor, so you no longer need to use wiki markup to make anc update your templates. This means that you can now convert an existing page to a template.



6

Space archiving

You can archive a space, so that its content is less visible but still available on your Confluence site. When a space is archived, the pages and other content do not appear in the Confluence search results, activity stream: or dropdown menus. In the space directory, the archived space will appear on a new archive tab.

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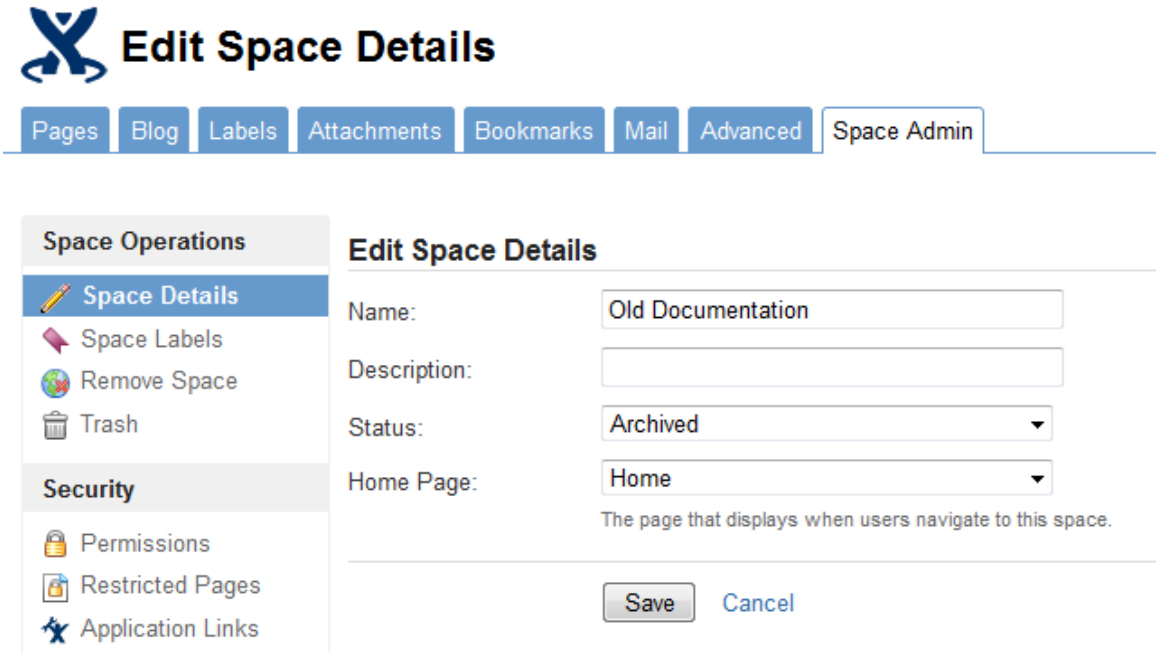

7

Improved user invitations and signup options

If you want to invite people to sign up to Confluence, you can send an invitation via email directly from the Confluence user administration screen, inviting people to join the site. To further encourage people to sign up, the login screen includes a signup option too.

If you choose to add users manually, Confluence can send them an email message informing them of their nev account.

If you want to allow only people from within your organisation to sign up, use the new domain restriction option. People will only be able to sign up if their email address belongs to one of the domains specified. Confluence w send the person an email message, asking them to click a link to confirm their email address.

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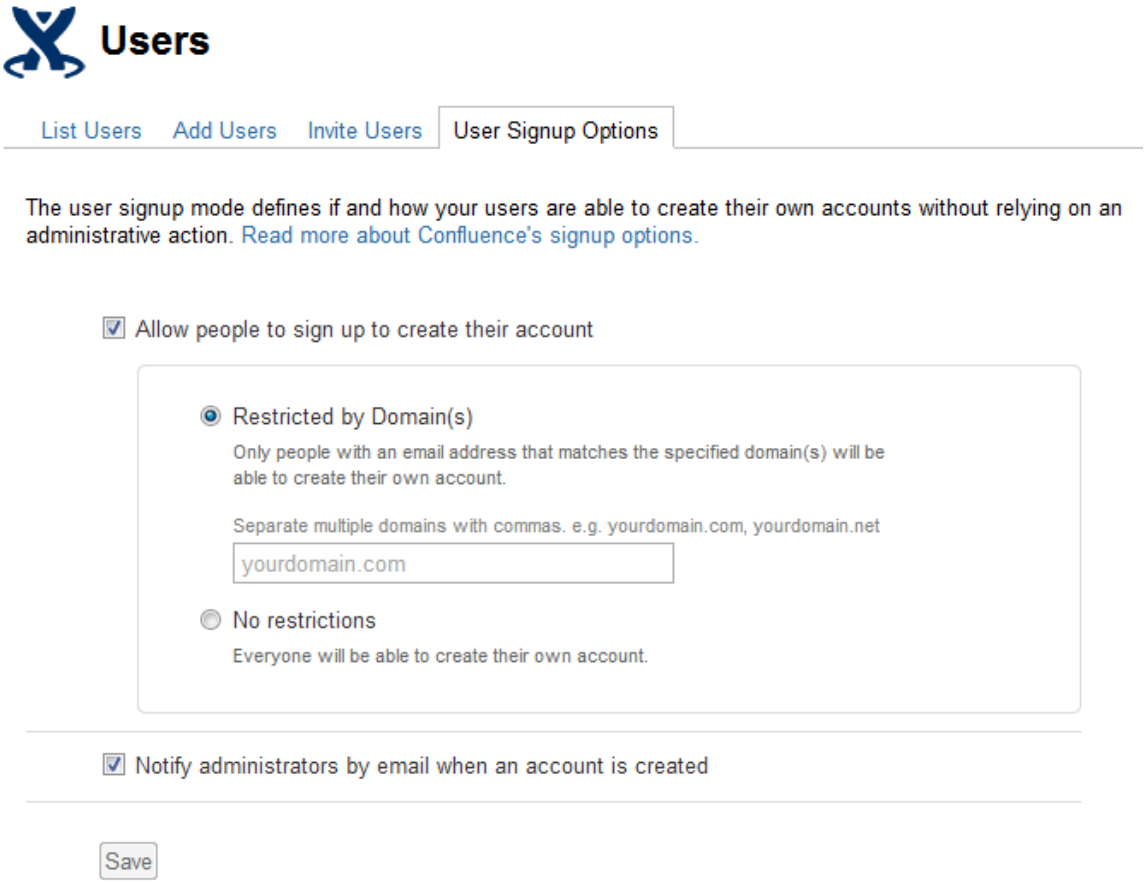
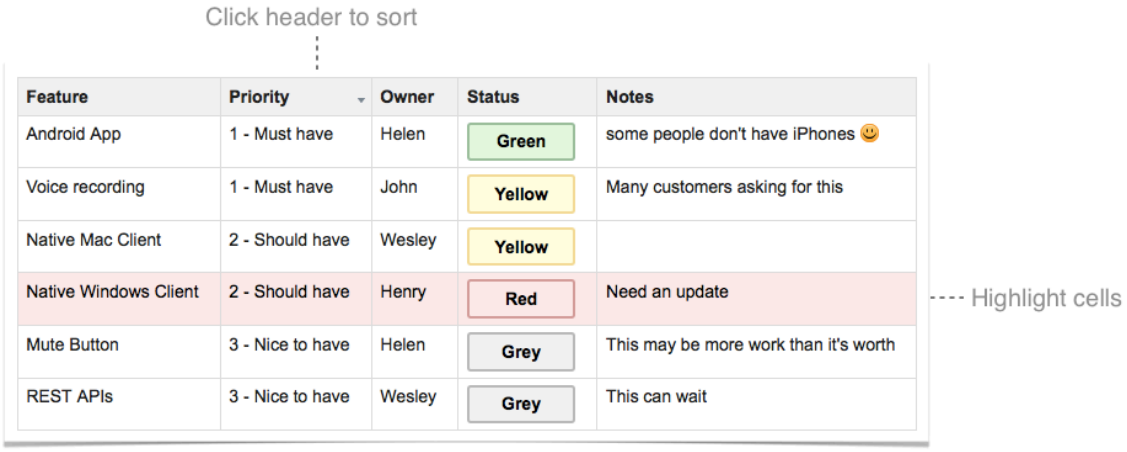


8

Table sorting and highlighting

Enjoy your tables even more!

- **Column sorting**
  When viewing a page, just click the header to sort on any column.
- **Cell highlighting**
  Fill table cells with a custom background colour to highlight important information.



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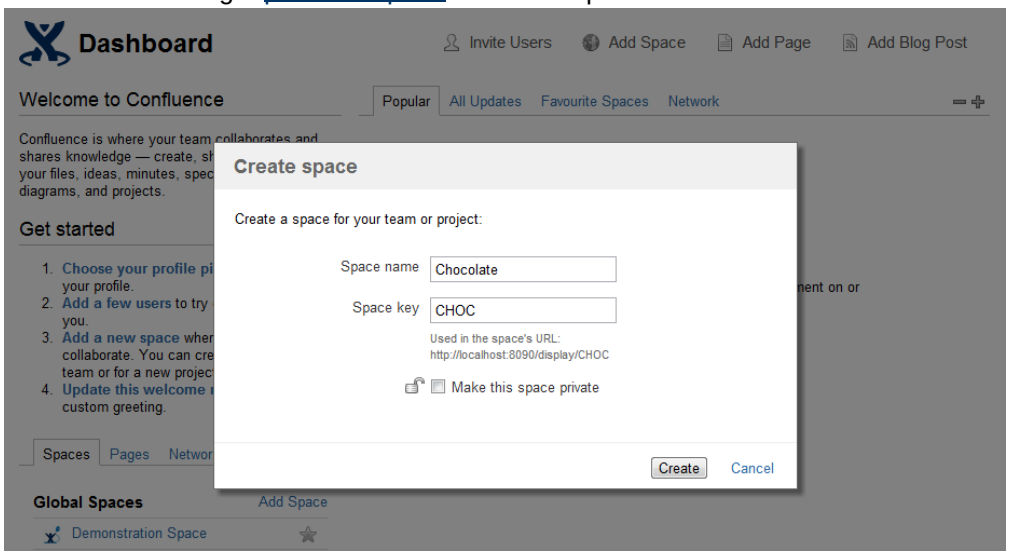
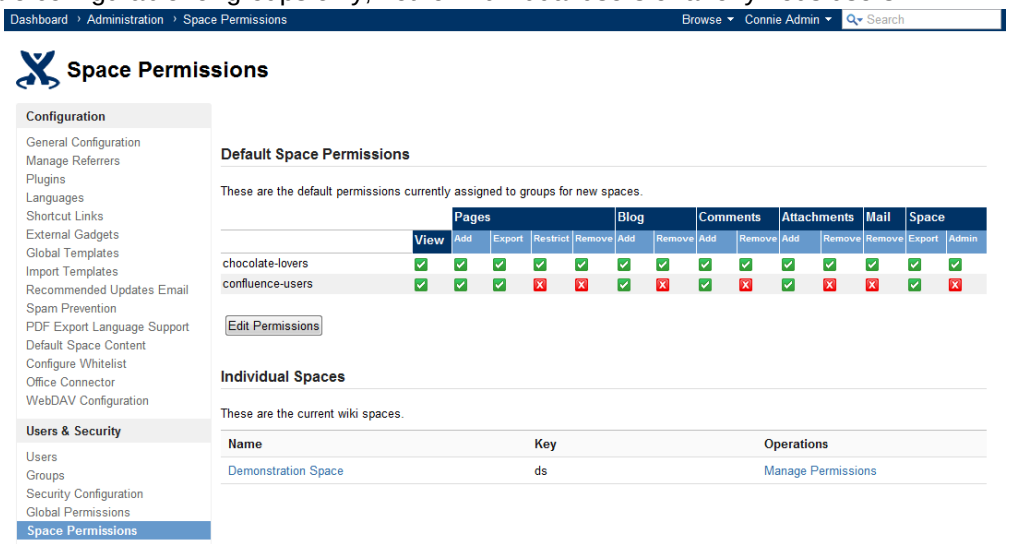
9

Simpler space creation

The quick 'Add Space' option at the top of the dashboard leads you into the new, simplified dialog for adding global spaces, shown below. Adding a personal space is even simpler.



Confluence administrators can now set the default permissions that will be applied to new spaces. The default permissions are configurable for groups only, not for individual users or anonymous users.



10

Draggable images and macros

You can now drag and drop images and macros anywhere on a page that you're editing. This is often a lot fast

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and definitely feels more natural than using cut/paste to move things around. Please note that this feature is nc supported in Internet Explorer 8.

11

Other improvements

- **Comment and edit alerts.** You don't want to miss out on comments and updates just because you've been sitting on the page for a while. Now Confluence will pop up a message when a new comment arrives or someone updates the page you're busy with.
- **Removing attachment versions.** You can now delete a specific version of an attachment.

12

Infrastructure changes

Here are some points of interest for plugin developers.

- **JIRA Portlets gone.** We have removed the JIRA Portlet code from Confluence. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and the JIRA Portlet plugin is no longer bundled in Confluence 4.3.
- **Active Objects bundled.** Confluence 4.3 ships with the Active Objects plugin. Active Objects is a new ORM (object relational mapping) layer into Atlassian products, implemented as a plugin. It enables easie faster, and more scalable data access and storage than the existing Bandana and PluginSettings APIs. Active Objects in Confluence is still under rapid development, and is currently used by only a few plugins If you would like to experiment with it, we would love to hear your feedback.
- **API changes.** Please see our guide to preparing for Confluence 4.3.
- **Experimental API for in-app notifications and tasks.** Confluence 4.3 introduces a new in-app notifications and tasks feature. We have an *experimental* API available and we're requesting your feedback! Here is your chance to help us shape the notifications and tasks API. Details are in our guide preparing for Confluence 4.3.

13

A note about changes to drafts – not in Confluence 4.3 final release

You may notice that this beta release offers you the option to **Save Draft** when creating or editing a page or blo post. This is a new, experimental way of handling drafts. After usability testing, we have decided that the drafts feature is not yet ready for release. For that reason, it will not be in the final release of Confluence 4.3.

Confluence 4.3 will therefore have the same draft-handling capabilities as Confluence 4.2.

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Upgrade notes

These notes assist you in upgrading your test site to this EAP release.

1. **The JIRA Portlet macro is no longer supported.**
   Gadgets replaced portlets in JIRA 4.0 and Confluence 3.1. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and have removed the portlet code in Confluence 4.3. Pages that contain the macro will no longer display information drawn from JIRA. Instead, they will show an error reporting that the macro does not exist. To prevent this behaviour, please upgrade to a version of JIRA that supports gadgets, and follow the instructions in How to Migrate from JIRA Issues and JIRA Portlets to Gadgets.
2. **Active Objects is now bundled.**
   Confluence 4.3 ships with the Active Objects plugin. If you have previously installed Active Objects into your Confluence 4.2 site, you will need to uninstall it before upgrading to Confluence 4.3. This is because user-installed plugins override bundled plugins.

Follow the usual upgrade instructions to upgrade your test site to this release.

Confluence 4.3-m11 EAP Release Notes

31 May 2012

With great pleasure, Atlassian presents Confluence 4.3 Milestone 11 EAP. This is our first public EAP in Confluence 4.3.

This EAP (early access program) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. Feel free to comment on the page to provide any feedback or ask any questions. EAP releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.3 Milestone 11 EAP:

- Confluence mobile
- In-app and mobile notifications
- Personal tasks
- Tasks in pages
- Table improvements
- Other improvements
- Infrastructure changes
- Upgrade notes

> **Downloading Confluence**
>
> The Confluence 4.3 Milestone 11 EAP release is available at the download site. When upgrading, please follow the upgrade notes below.

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Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Highlights of Confluence 4.3 EAP

We recommend that you use Chrome when testing features in this milestone.

1

Confluence mobile

Introducing a new, super-responsive interface optimised for iPhone and Android devices. With Confluence mobile you can:

- Browse popular, recent blog posts and network activity.
- Like pages, blog posts and comments
- Add new comments to pages and blog posts.
- Search Confluence for content and people.
- View the profiles of your colleagues - tap to call, SMS or email them directly from your mobile device.

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2

In-app and mobile notifications

Now you can view and take action on all your important notifications in one place, including:

- Shares and mentions
- Comments and likes
  Note: In order to be able to comment and reply inline, the Confluence remote API must be enabled (see Enabling the Remote API).
- JIRA comments, shares and mentions
  Note: For JIRA notifications to appear, you must create a trusted apps link between JIRA and Confluence and install plugins i

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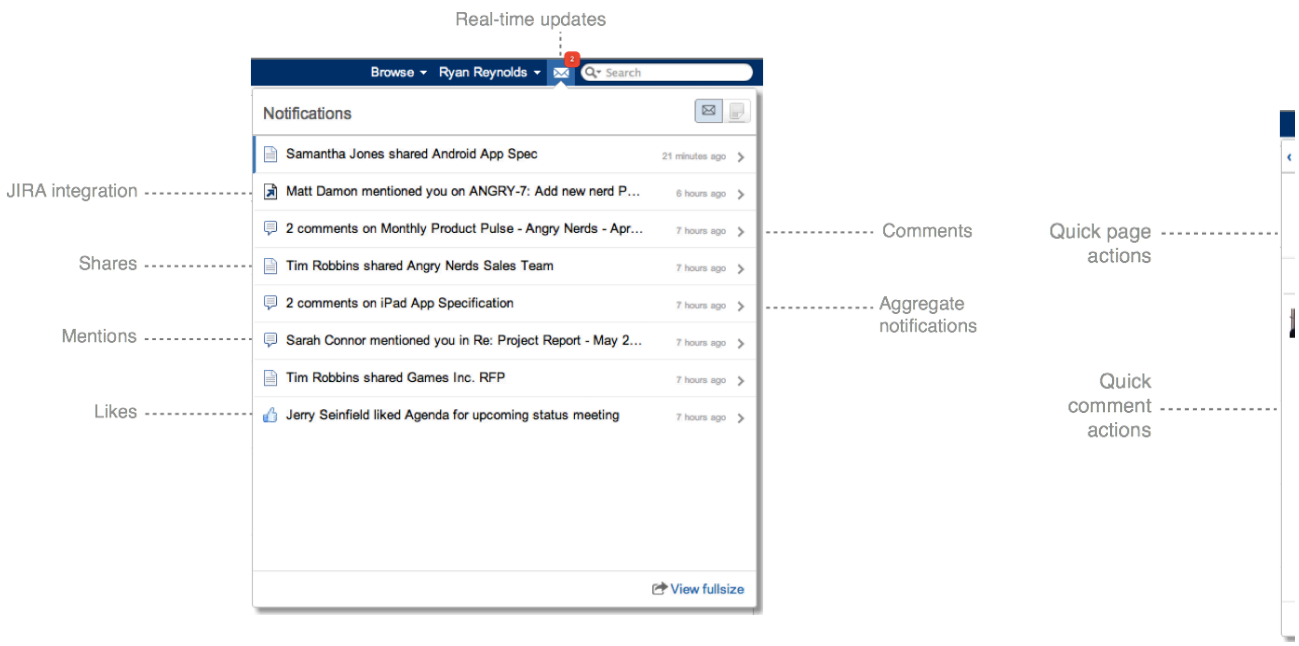
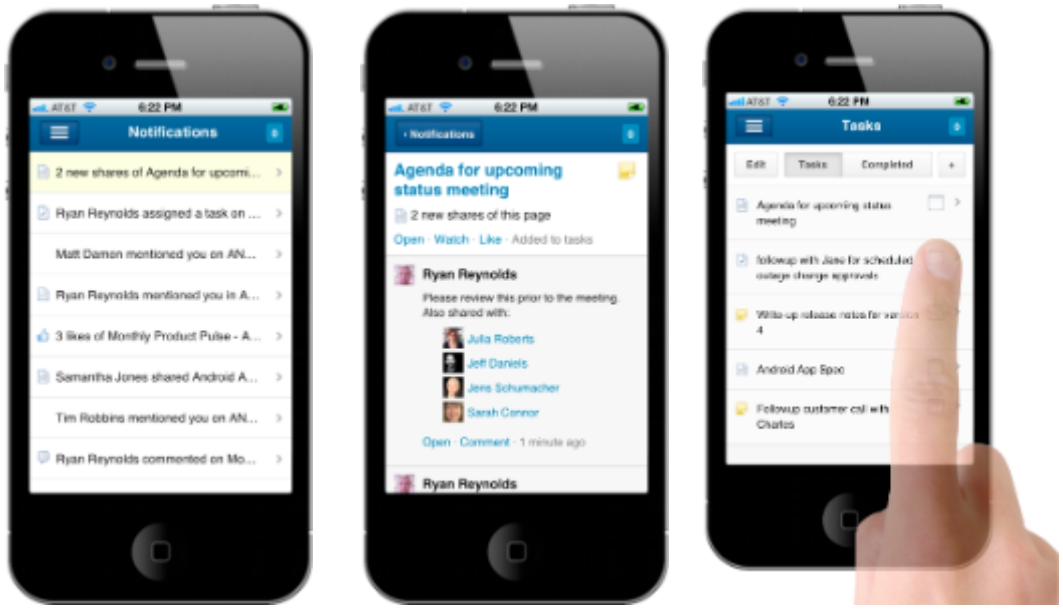
JIRA to push notifications to Confluence (see Confluence 4.3 EAP only - JIRA Integration with Confluence Notifications).



On the run? Confluence Mobile supports in-app notifications too.



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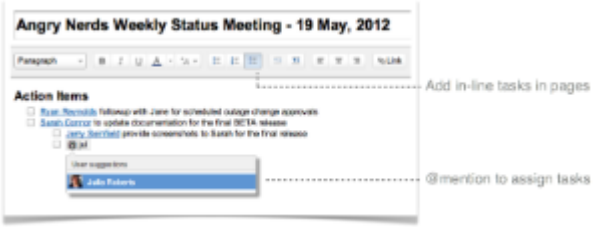
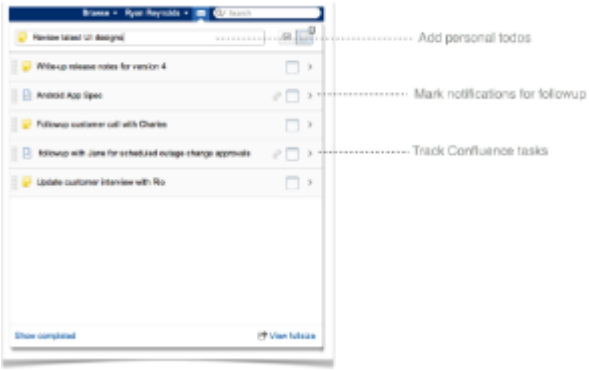
Personal tasks

Personal tasks help you stay focused on the task at hand and plan your day's work.



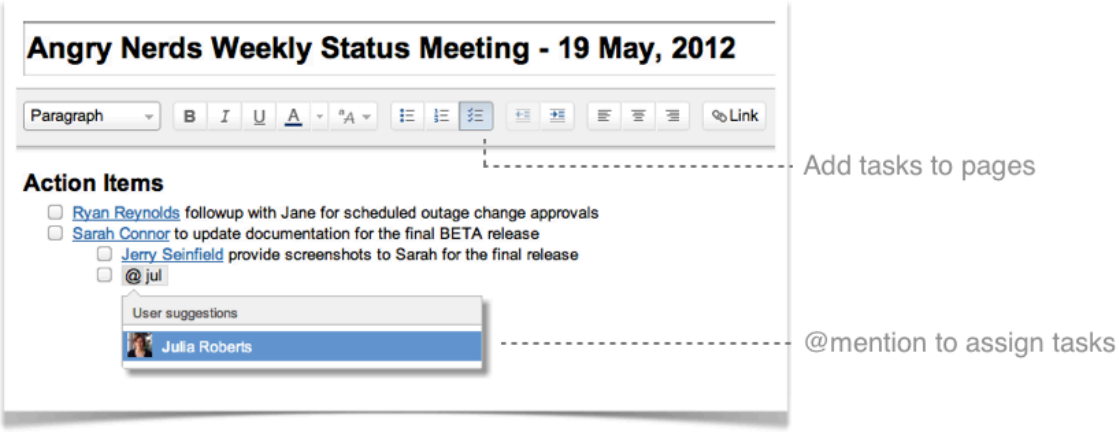


4

Tasks in pages

It's now really simple to track team tasks inside your pages – project tasks, meeting action items and checklists

1. **Create task lists**
   Click the new task icon in the editor to start a new task list.
2. **Assign tasks using mentions**
   You can @mention a user within a task to assign it to them.
3. **Receive instant notifications**
   Users receive a notification when a task has been assigned to them. Page watchers will be notified whe tasks in a page are marked as complete.
4. **Track tasks from anywhere**
   View all your assigned tasks in your personal taskslist where you can add notes, prioritise them, and ma them as complete.



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5

Table improvements

1. **Column sorting**
   When viewing a page, just click the header to sort on any column.
2. **Cell highlighting**
   Fill table cells with a custom background colour to highlight important information.

Click header to sort

Feature	Priority	Owner	Status	Notes
Android App	1 - Must have	Helen	Green	some people don't have iPhones
Voice recording	1 - Must have	John	Yellow	Many customers asking for this
Native Mac Client	2 - Should have	Wesley	Yellow	
Native Windows Client	2 - Should have	Henry	Red	Need an update
Mute Button	3 - Nice to have	Helen	Grey	This may be more work than it's worth
REST APIs	3 - Nice to have	Wesley	Grey	This can wait

---- Highlight cells

6

Other improvements

1. **Send user invitations from Confluence**
   Now Confluence can send emails directly to people inviting them to create an account.
2. **Add spaces quickly and simply**
   A new 'Add Space' button in the top right of the dashboard opens a simplified dialog for adding global spaces.

7

Infrastructure changes

Here are some points of interest for plugin developers.

1. **JIRA Portlets removed**
   We have removed the JIRA Portlet code from Confluence. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and the JIRA Portlet plugin is no longer bundlec in Confluence 4.3. Portlets have been superceded by gadgets. Refer to Adding JIRA Gadgets to a Confluence Page for more information.
2. **Active Objects bundled**
   Confluence 4.3 ships with Active Objects. Active Objects is a new ORM (object relational mapping) laye implemented as a plugin. It enables easier, faster, and more scalable data access and storage than the

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existing Bandana and PluginSettings APIs. Active Objects in Confluence is still under rapid developmen and is currently used by only a few plugins. Please see the Active Objects documentation for more information.

3. **API changes.** Please see our guide to preparing for Confluence 4.3.

Upgrade notes

These notes assist you in upgrading your test site to this EAP release.

1. **The JIRA Portlet macro is no longer supported.**
   Gadgets replaced portlets in JIRA 4.0 and Confluence 3.1. We deprecated the use of JIRA portlets in Confluence 4.2 (see the Confluence 4.2 upgrade notes) and have removed the portlet code in Confluence 4.3. Pages that contain the macro will no longer display information drawn from JIRA. Instead, they will show an error reporting that the macro does not exist. To prevent this behaviour, please upgrade to a version of JIRA that supports gadgets, and follow the instructions in Migrating from JIRA Issues and JIRA Portlets to Gadgets.
2. **Active Objects is now bundled.**
   Confluence 4.3 ships with the Active Objects plugin. If you have previously installed Active Objects into your Confluence 4.2 site, you will need to uninstall it before upgrading to Confluence 4.3. This is because user-installed plugins override bundled plugins.

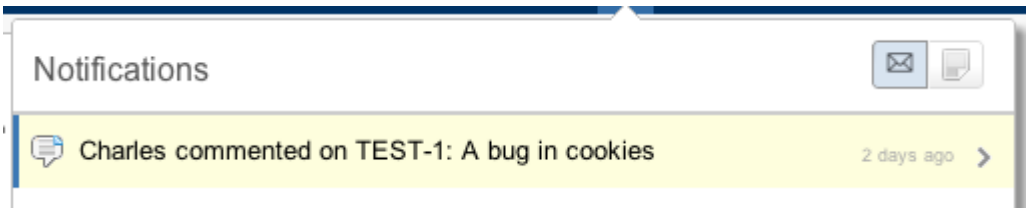
Follow the usual upgrade instructions to upgrade your test site to this release.

Confluence 4.3 EAP only - JIRA Integration with Confluence Notifications

Note: This page does not apply to the Confluence 4.3 production release.
The information on this page relates to the Confluence 4.3-m11 early access (EAP) release only. In-app notifications in Confluence 4.3 do not support JIRA integration.

You can try JIRA integration with Confluence in-app notifications by installing the notification provider plugin on a test JIRA site.

1. Create a Trusted Apps application link between your Confluence 4.3 EAP site and a test site running the latest release of JIRA. In order to create a Trusted Apps link, you will need to make sure you have the same userbase in JIRA and Confluence.
2. Download and install the notifications client plugin in JIRA: myworkday-client-0.9.1426.1.jar
3. Download and install the notifications provider plugin in JIRA: myworkday-jira-provider-0.9.1426.1.jar
4. Test in-app notifications in JIRA by commenting an issue that a user is watching. The user should then receive the notification in Confluence.



Keep in mind that in-app notifications is an EAP feature and comes with the standard caveats for EAP builds. Do not install the client/provider plugins on a production JIRA site.

Confluence 4.2-Beta3 Release Notes

27 March 2012

With great pleasure, Atlassian presents **Confluence 4.2 Beta 3**.

This beta release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see

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the new features in advance. This also provides Atlassian with useful feedback. Beta releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

In this release

This release contains minor fixes only. In particular, we have fixed the LabelManager API, so that is is now backwards compatible. (We broke backwards compatibility in beta 1.) Details are in this issue:

CONF-24902 - Authenticate to see issue details

Please see the new features of Confluence 4.2 described in the Confluence 4.2-Beta1 Release Notes.

Upgrade notes

Upgrading from a previous version of Confluence

Follow the usual upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

Downloading Confluence 4.2 Beta 3

The Confluence 4.2 Beta 3 release is available at the download centre. When upgrading, please follow the upgrade notes below.

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Confluence 4.2-Beta2 Release Notes

16 March 2012

Confluence 4.0 Beta 2 is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. This also provides Atlassian with useful feedback. Beta releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

This release contains minor fixes only. Please see the fixes and improvements reported in the Confluence 4.2-Beta1 Release Notes.

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Downloading Confluence 4.2 Beta 2

The Confluence 4.2 Beta 2 release is available at the download centre. When upgrading, please follow the upgrade notes below.

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
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Upgrade Notes

Upgrading from a previous version of Confluence

Follow the usual upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

Confluence 4.2-Beta1 Release Notes

12 March 2012

With great pleasure, Atlassian presents Confluence 4.2 Beta 1.

Confluence 4.0 Beta 1 is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. This also provides Atlassian with useful feedback. Beta releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.2 Beta 1:

- Page Layouts
- Likes
- Quick Comments
- Popular Content on the Dashboard
- Personalised Summary Email
- Attachment Labels
- Share Notifications Showing All People Notified

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- Gadget Subscriptions
- Other Improvements
- Infrastructure Changes
- Upgrade Notes

Downloading Confluence 4.2 Beta 1

The Confluence 4.2 Beta 1 release is available at the download centre. When upgrading, please follow the upgrade notes below.

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Highlights of Confluence 4.2 Beta 1

1

Page Layouts

Page layouts offer a quick and easy way to add sections and columns to a page. Choose a predefined layout, add the content to each section, and you're done. It's a great way of creating a common page structure, so that readers know where to find the information on each page. Don't worry, the Section and Column macros are stil available too.

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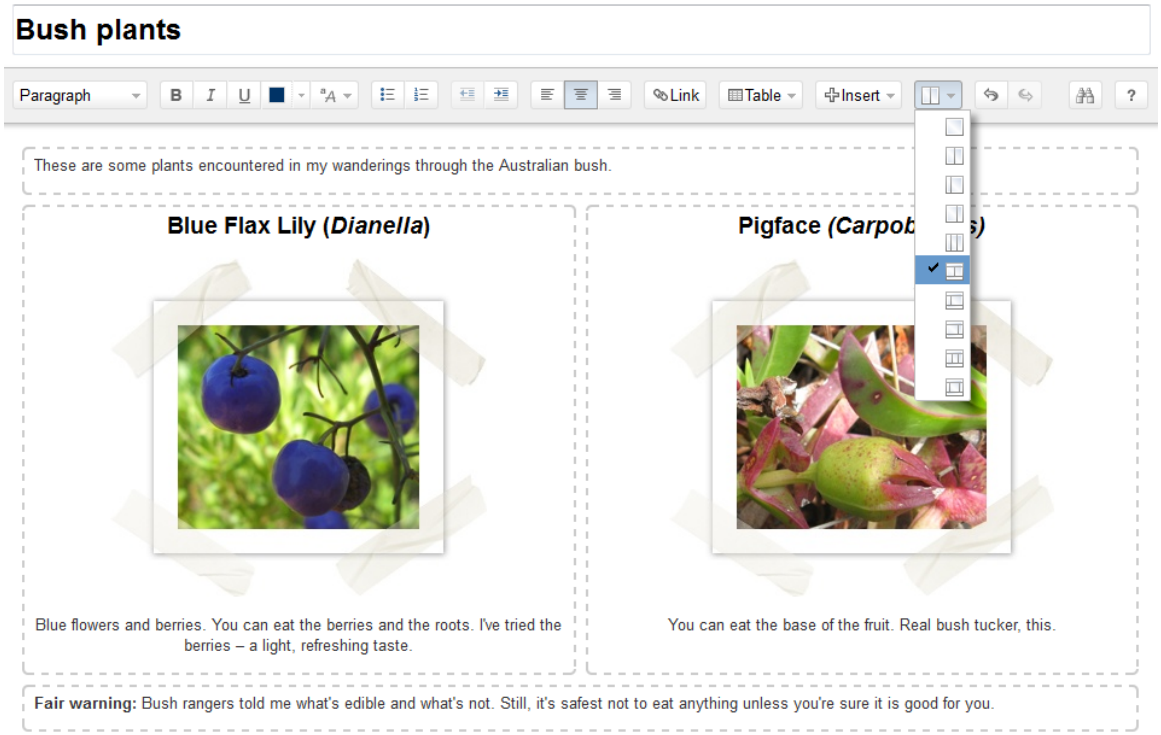

A two-column page layout in edit mode

2

Likes

Has someone written a mind-blowingly cool post on Confluence? Click the **Like** button to them know. It's quick and easy to make their day! Confluence has like buttons on every page, blog post and comment. If enough people like your post, it will show on the dashboard's new popular tab. The information in your personalised summary email is based on the number of people in your network who have liked the content.

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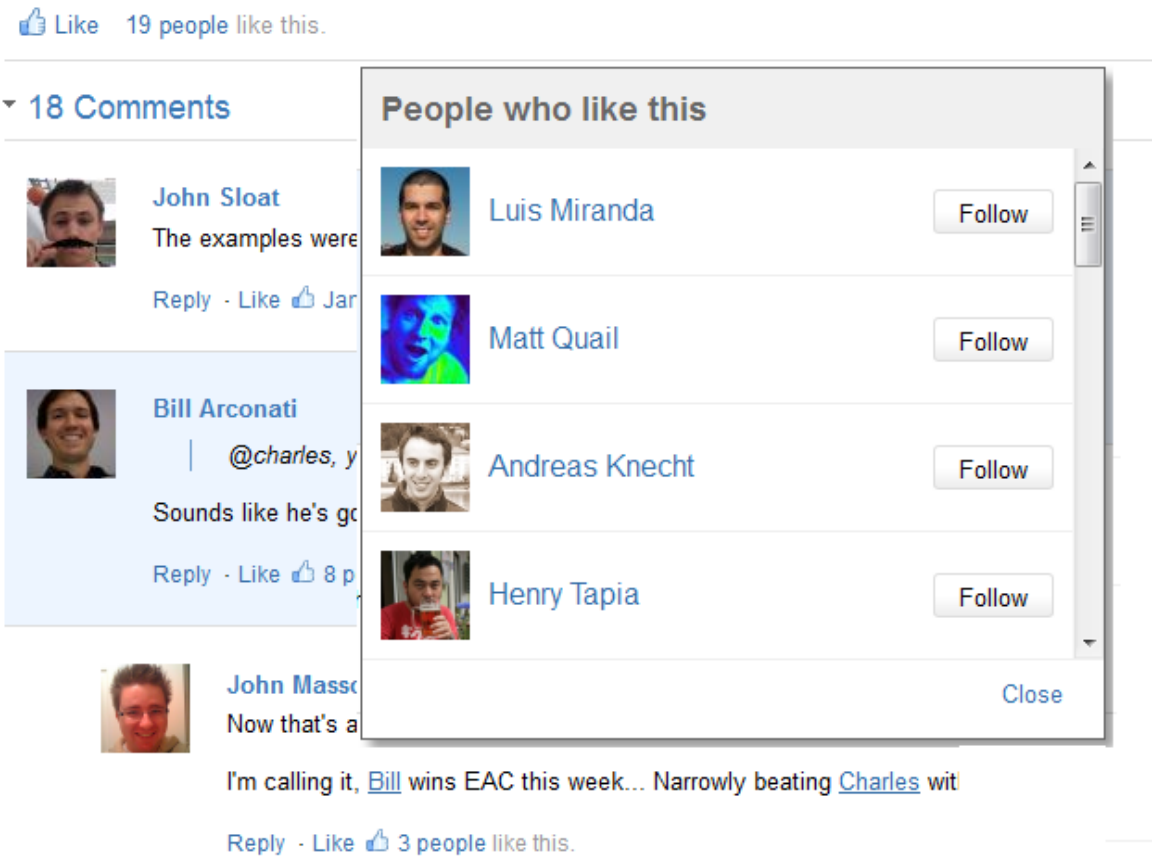

Likes on a page and on comments

Quick Comments

Showing people a picture of themselves is a great way to encourage them to say something! We want to encourage people to comment on Confluence pages and blog posts, so we have added an inviting empty comment, showing the user's avatar, at the bottom of the page. This replaces the rather uninviting **Add Comment** button in earlier versions. And here's what we are really proud of: When you click the box to write a comment, the full editor loads instantly. **Boom!** No page refresh required.

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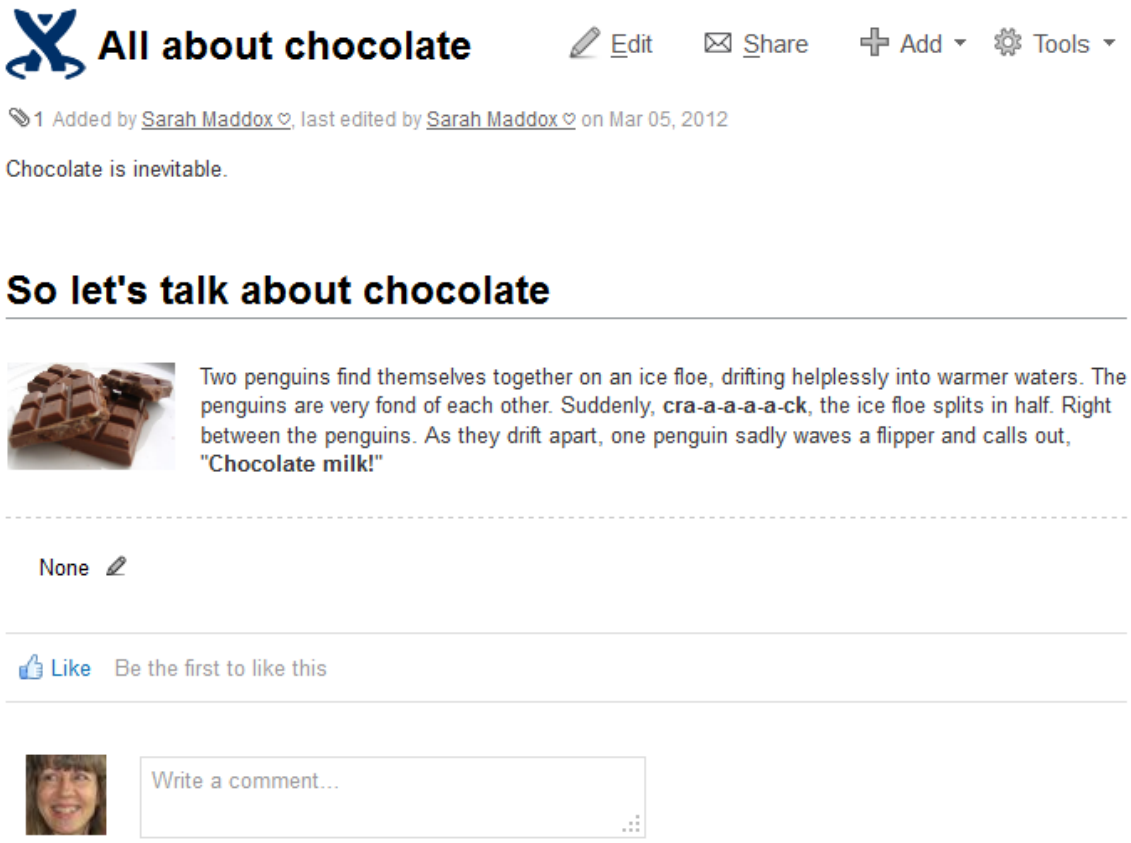

Invitation to add a comment

4

Popular Content on the Dashboard

Want to see what's trending? The new **Popular** tab on the dashboard shows the pages and blog posts that attracting most attention, based on the number of comments and likes.

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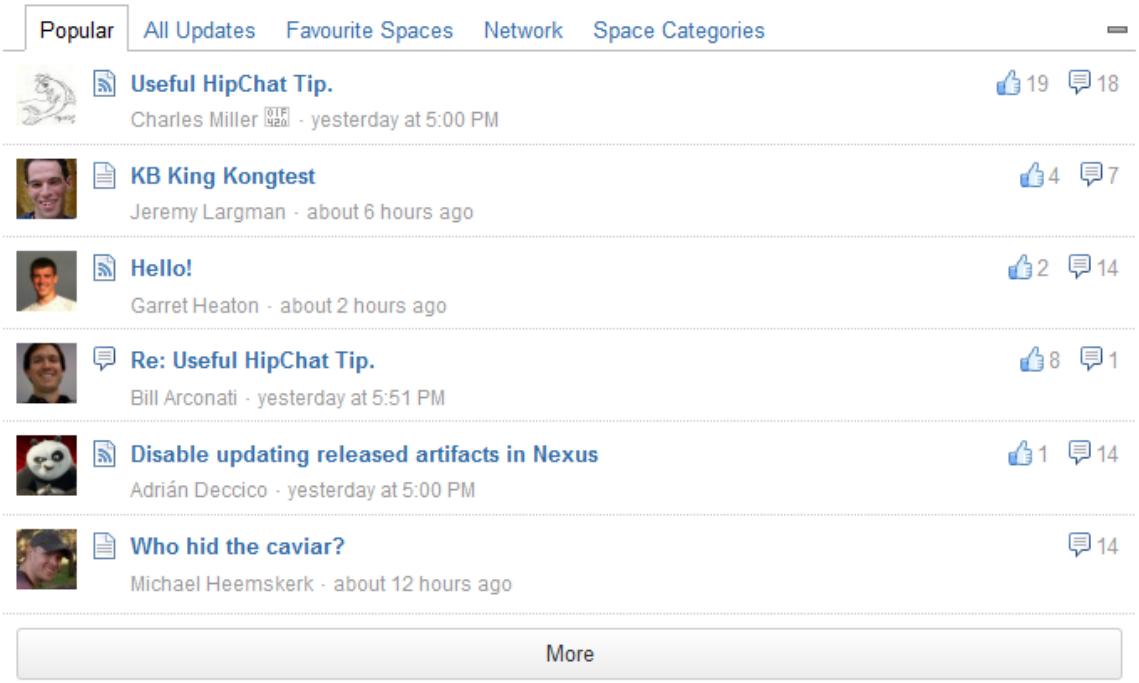
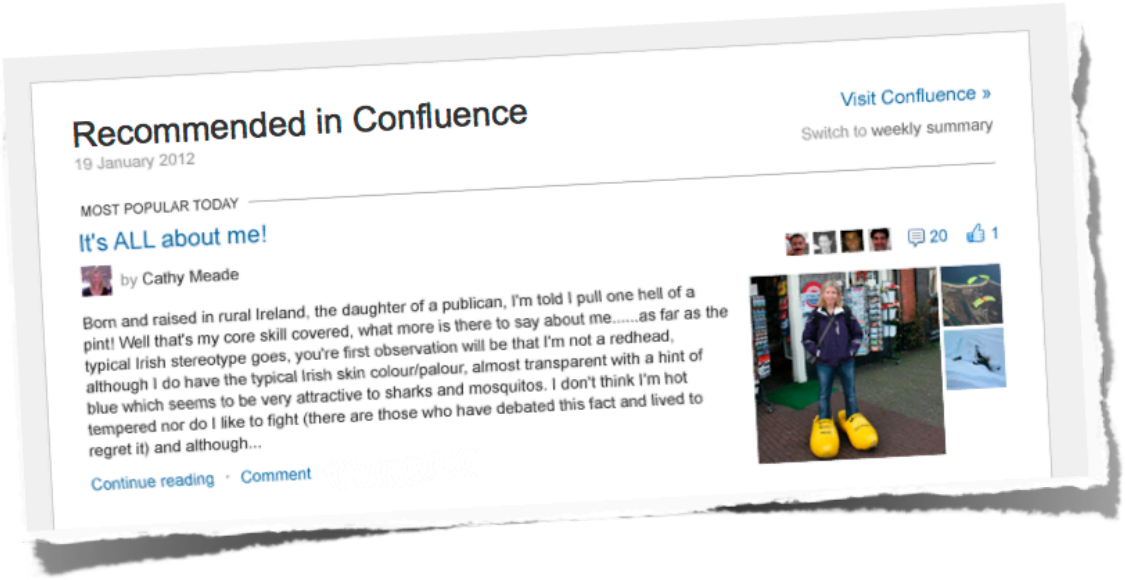


New popular content tab on the dashboard

5

Personalised Summary Email

Confluence sends out a weekly summary of the news that interests you. Each email message is tailored according to the spaces you follow and your network. This is a great way of drawing people into the wiki discussions even if they are infrequent users of Confluence. You can opt in or out of the recommended updates summary via an option on the email settings page of your user profile.



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6

Attachment Labels

You can now label attachments, just as you can label pages and blog posts. Using the Attachments macro, you can filter to show documents or other attachments with a specific label. The Content by Label macro also displays attachments (alongside pages, blog posts and spaces) with a given label.

Labels on attachments

7

Share Notifications Showing All People Notified

If someone shared a page with you, it's nice to know who else they shared it with. We introduced sharing of pages and blog posts in Confluence 3.5. Just click **Share** and follow the prompts. Confluence sends an email message to the people that you have specified. In this release, when someone shares a page with you, the email message shows the other people they shared it with too.

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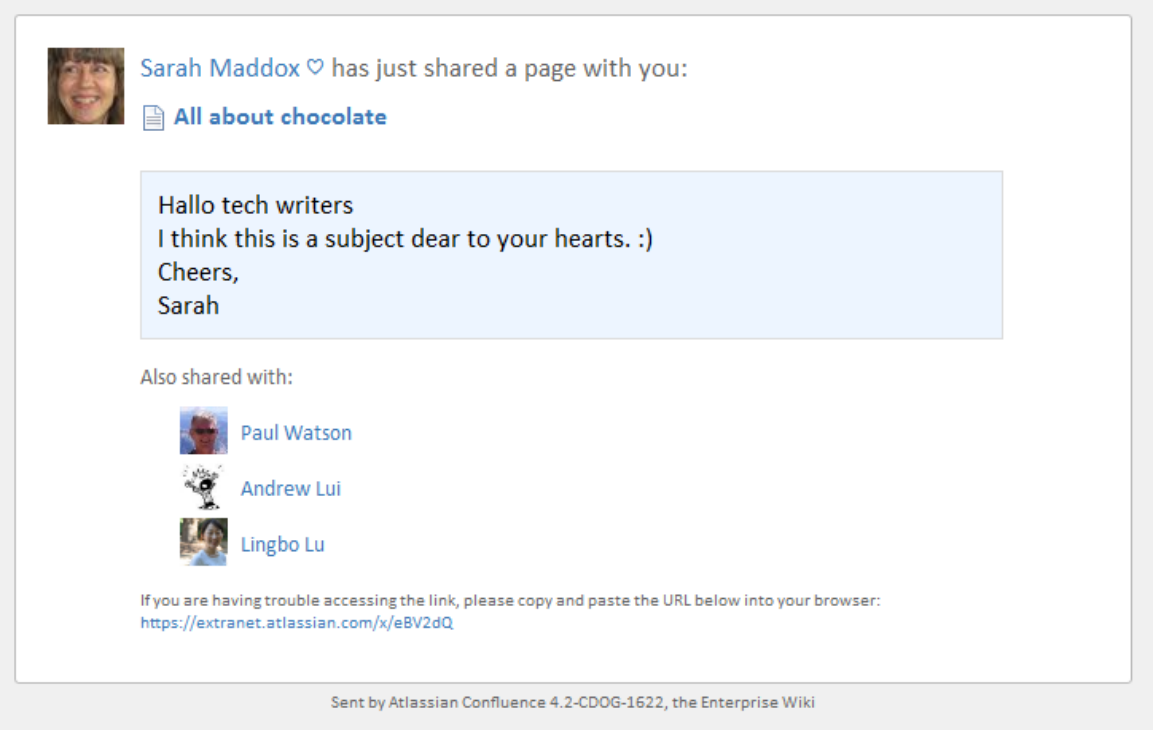
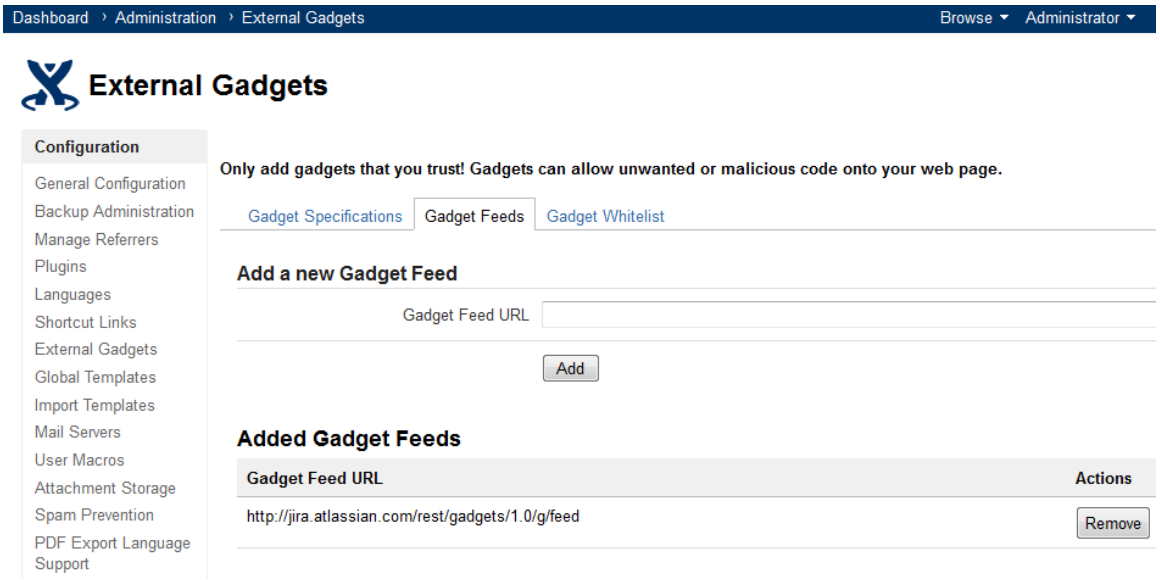


Other people sharing the page

8

Gadget Subscriptions

Confluence 4.2 includes Atlassian Gadgets 3.2, with gadget subscriptions. This means that you can quickly ac all the gadgets from your JIRA, Bamboo, FishEye or Crucible site – or from another Confluence site – to your Confluence gadget directory, for easy addition to your Confluence pages. To subscribe to another site's gadget go to **Confluence Admin** > **External Gadgets** and click the new **Gadget Feeds** tab.



Subscribing to another application's gadgets

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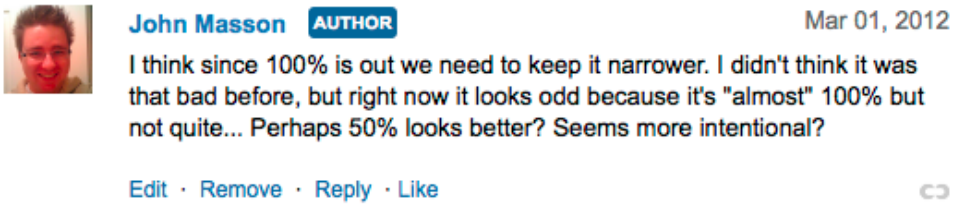
9

Other Improvements

- We have fixed the following bug: CONF-6246 - Authenticate to see issue details
- The permissions for personal spaces are now more in line with Confluence's philosophy of encouraging collaboration. When you create a personal space, the option that allows registered users to update content is selected by default. You will also be assigned as a watcher of your new personal space.
- Blog comments now include an 'author' lozenge to allow you to quickly scan a page for comments from the author.



10

Infrastructure Changes

- Confluence now uses version 2.0 of the Universal Plugin Manager (UPM).
- Confluence 4.2 includes Atlassian Gadgets 3.2
- From this release of Confluence, we support PostgreSQL 9.0 as well as 8.2, 8.3 and 8.4.
- The implementation of quick comments required some pretty significant changes to the editor's initialisation code. This will have consequences for some Confluence plugins. Details are in this blog pos JavaScript Changes Required for Confluence 4.2 Compatibility. .

Upgrade Notes

Upgrading from a previous version of Confluence

Follow the usual upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

Confluence 4.1-rc1 Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete.

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Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

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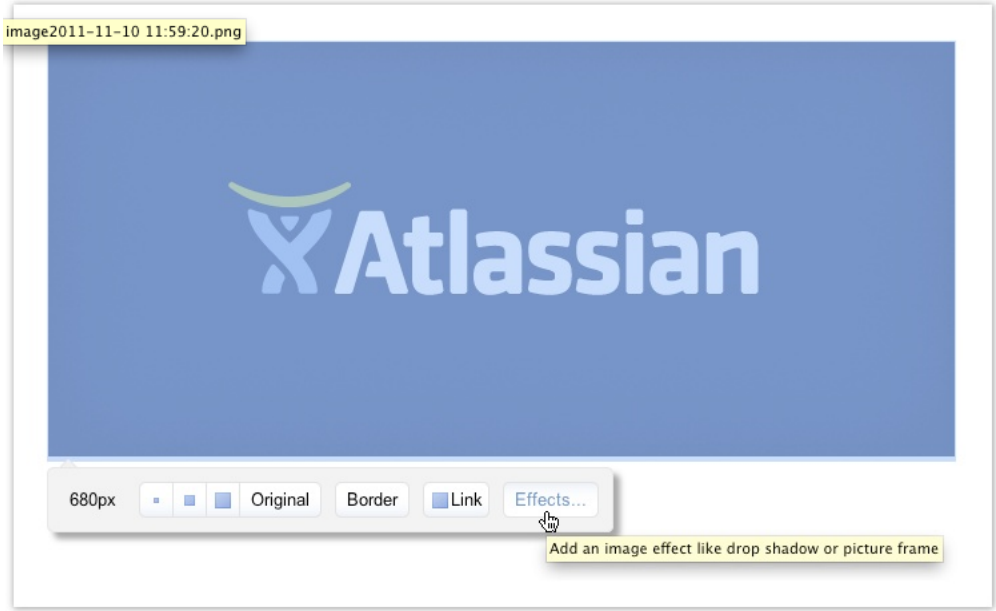
> **Important information for plugin developers**
>
> If you are a plugin developer testing for compatibility against Confluence 4.1, it is **very important** that you read the information at the bottom of these release notes about Velocity templates and deprecation.

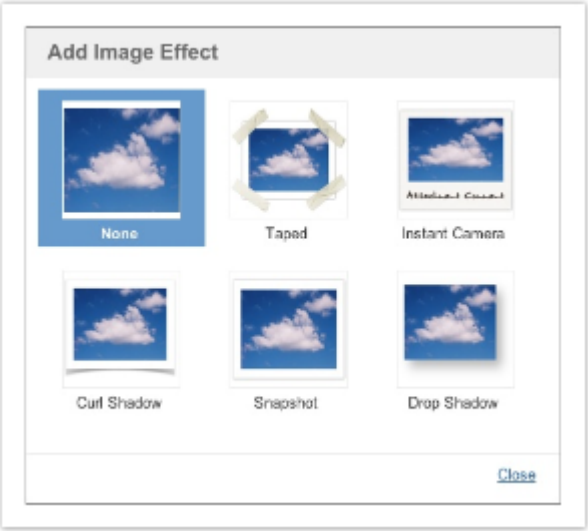
Highlights of this Release

1. Image Effects

After inserting an image, you can now apply one of five effects to the image by clicking the new **Effects** button and choosing from one of the following:

- Taped,
- Instant Camera,
- Curl Shadow,
- Snapshot,
- Drop Shadow.





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The images above are displayed using the 'Snapshot' Image Effect.

2. Autoconvert Pasted Links

Linking to things in Confluence is much too hard. Sometimes you already have the URL from some other tab and just want to paste it in. If it's a link to a system Confluence knows about, why should you have to mess around with doing it "properly" by looking it up in the link dialog or the issue dialog just because you want it to get refactored later?

For example, if you paste in https://jira.atlassian.com/browse/CONF-23567 then some people will give you grief for not using the insert JIRA issue link to make it

> **CONF-23567** - Authenticate to see issue details . The new Autoconvert feature will automatically convert pasted links into a useful macro. You have to see it to believe it. It works for:

- Pasting Links to JIRA issues
- Pasting JIRA JQL links
- Pasting Youtube URLs
- Most widget connector URLs (like Skitch links)
- Any shortcut link

3. Editor Find & Replace

This will be a welcomed feature to users who used to copy wiki markup out into another text editor to do a find replace then paste it back in. Now everyone will be able to do it right from the editor.

> **CONF-4042** - Authenticate to see issue details

4. Dashboard Network Tab

Having a difficult time finding relevant content in the dashboard activity stream? This allows you to see recent updates from just the people you follow in Confluence. As part of this work there were some changes made in the background to the way the Dashboard works meaning

- a lot less DB queries
- the dashboard recent updates macro now accepts a 'users' parameter (which drives the Network tab)
- adding any new tabs will be a lot easier for the developers

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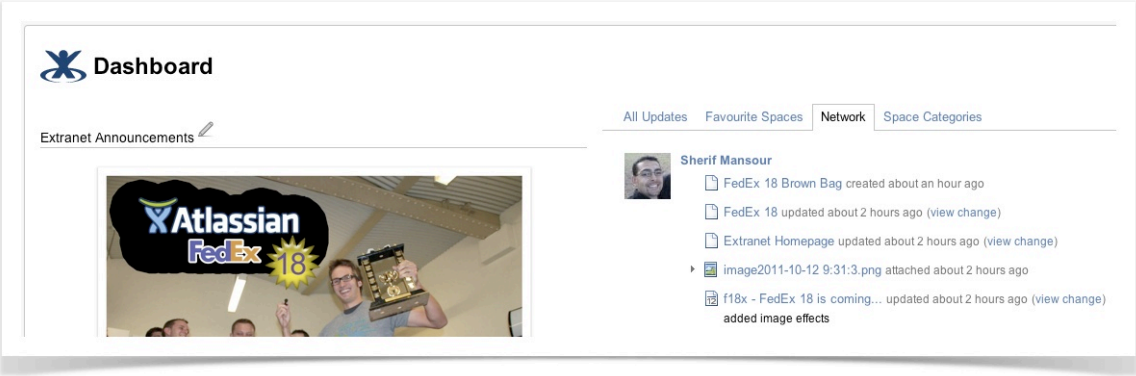

5. Editor Copy / Paste Improvements

Copy / Paste Multiple Rows or Whole Tables

We've spent time focusing on a number of editor efficiency issues, most recently being the ability to easily copy and paste multiple table rows or whole tables within a page, across pages, across Confluence installs or even from other sources (eg: HTML tables on the web). Additionally (which didn't happen in Wiki Markup where users could previously copy/paste rows fairly simply) you can now overwrite existing cells by pasting into them and where the clipboard contents are bigger than the existing table, it will automatically be adjusted with additional columns to fit. This is a big usability improvement.

Oh and one more thing, you can now use Alt+Up Arrow or Alt+Down Arrow to add a new row above or below your current one, which works beautifully with the new easy to copy/paste rows.

CONF-23408

CONF-23929

Copy / Paste list items

Fixing another similar pain point, we also spent some time working on the pasting of list items into existing lists, making this more consistent with what you'd expect. If you copy a couple of list items from one part of a list, or another one, and paste them into the middle of a list, they are added at the same level, not indented. This is the first of a number of tweaks to the way lists work which will be a big usability improvement.

CONF-23842

6. Favourites Page

The concept of a personal label has been removed and you'll now see a newly named and cleaner Favourites ta b in your personal space. Additionally the list of favourites is now paginated and uses AJAX to un-favourite pages on the page.

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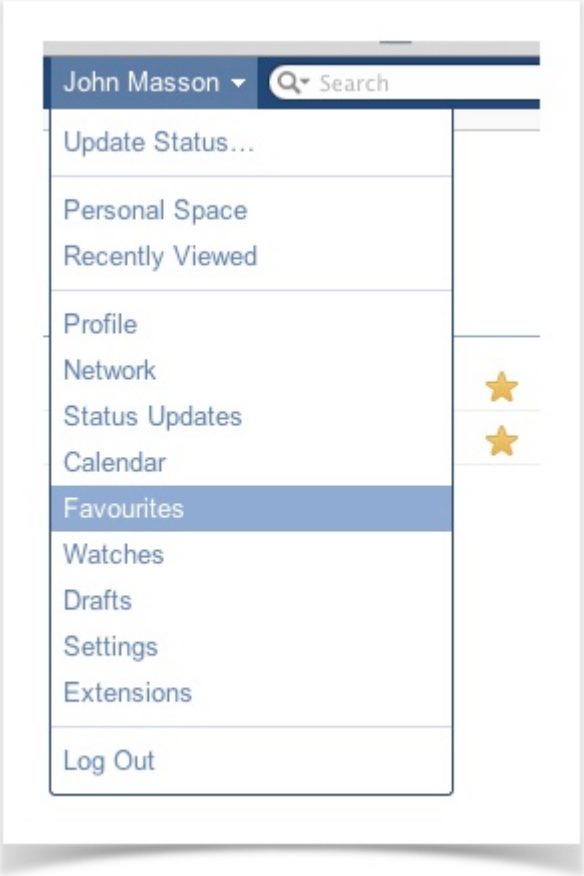

7. Global Stylesheets

Now a custom PDF stylesheet can be set at the global level, just like custom layouts, so where there is no specific individual space stylesheet defined when a PDF space export is done it will fall back to this global stylesheet, meaning users won't have to apply the same stylesheet to all their individual spaces if they want the same behaviour.

8. (No More) Page Title Character Restrictions

You can now use "special" characters such as : or @ or % in your page titles, as in the screenshot below. Various new features like this are now possible, thanks to the move to the new Confluence editor.

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9. Global plugin & macro timeout setting

CONF-9344, CONFDEV-27

There is now a globally configurable timeout setting which will stop pages going into a permanent loading state leaving users no easy way to edit them to sort out the offending macros or plugins. In the worst case scenario this had the potential to bring down Confluence itself before.

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10. New Logo and Icons

As you may know, Atlassian introduced a new logo in October. Now, Charlie 2.0 has made it to Confluence.

You'll also notice a bunch of new icons to give some of your favourite features in Confluence a fresh look. Here are some examples of the new page and blog post icons.

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8 Child Pages

- 2011-11-29 - Confluence - Find & Replace Blitz - Joey Corea
- David Taylor's findings -- Find & Replace Blitz
- Don Willis's findings -- Find & Replace Blitz
- Edwin Dawson's findings -- Find & Replace Blitz
- Henry Tapia's findings -- Find & Replace Blitz
- John Masson's Findings
- Nabeelah's Findings - IE8
- Zhuang's observations

Blog Posts

- Confluence 4.1 Release Notes - Build 1130-1176 created by John Masson
- Confluence Desynchronisation created by Jonathan Gilbert
- Confluence 4.1 Release Notes - Build 1109-1129 - Page Layouts! created
- Confluence 4.1 Release Notes - Build 1055-1109 created by John Masson
- Confluence 4.1 Release Notes - Build 1016-1055 created by John Masson

Important note for plugin developers

As of Confluence 4.1, Confluence will now log a warning every time a Velocity template makes a call to a deprecated Java class or method. Under Confluence's deprecation policy, deprecated code is likely to be removed in future releases of the product, and plugin developers are *strongly advised* to stop using it as early as possible.

When you run Confluence in Developer Mode, these warnings will instead cause an exception to be thrown and the processing of the template to be aborted. This is to give plugin developers much more immediate (and harder to ignore) feedback about potentially dangerous code. Developer Mode is turned on by the Atlassian SDK, so if you use the SDK to build or test your plugin you should know right away if there's something dangerous going on in your Velocity files.

If you want to switch this behaviour back to just logging a warning, you should start Confluence with the `-Dconfluence.velocity.deprecation.strictmode=false` system property set.

Confluence 4.1-rc1 Upgrade Notes

Upgrade Procedure

If you are already running a version of Confluence, please follow these instructions to upgrade to the latest version:

1. Before you upgrade, we strongly recommend that you **back up your Confluence Home directory and database**. The Confluence Home directory is the folder where Confluence stores its configuration information, search indexes and page attachments. If you are using the embedded HSQLDB database supplied for evaluation purposes, the database files are also stored in this directory.
   ✅ Tip: Another term for 'Home directory' would be 'data directory'. Read more about finding your Home directory.
2. If your version of Confluence is earlier than 3.5.x, then you *should* upgrade to Confluence 3.5.x before upgrading to Confluence 4.0.x.
3. If your version of Confluence is earlier than 4.0, read the release notes and upgrade guides for **all releases** between your version and the latest version.
   In particular:
   - Please read the Confluence 4.0 Upgrade Notes.

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- Please read the Confluence 3.5 Upgrade Notes.
- If you are upgrading from 2.1 or earlier, please also read the 2.2 release notes.

4. Download the latest version of Confluence.
5. Follow the instructions in the Upgrade Guide.

Confluence 4.1-m5 EAP Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

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If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

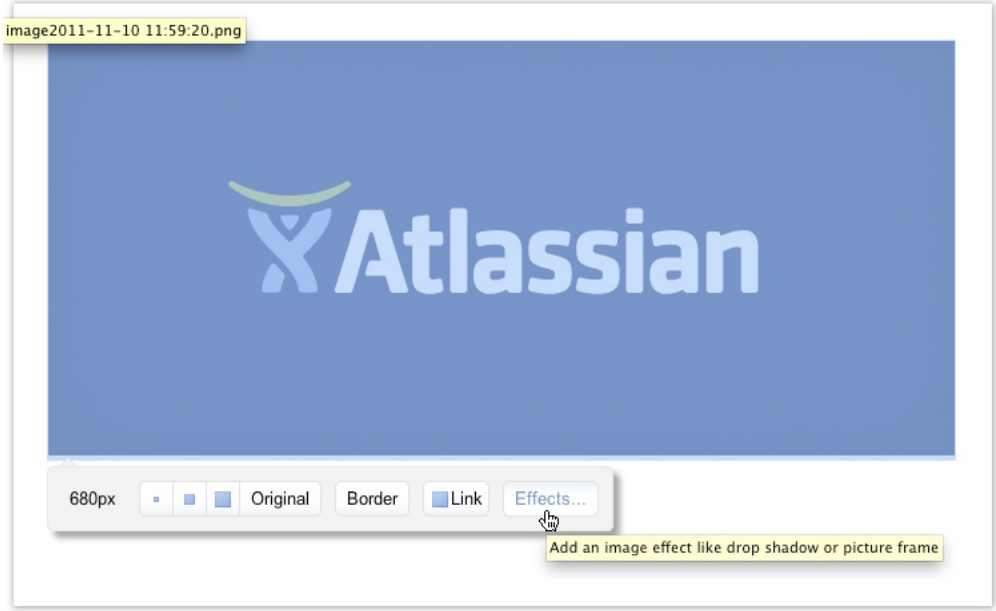
Highlights of this Milestone

1

Image Effects

After inserting an image, you can now apply one of five effects to the image by clicking the new **Effects** button and choosing from one of the following:

- Taped,
- Instant Camera,
- Curl Shadow,
- Snapshot,
- Drop Shadow.



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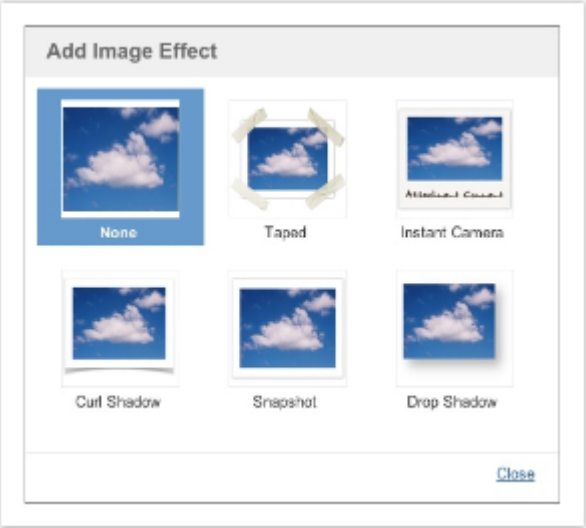

The images above are displayed using the 'Snapshot' Image Effect.

2

(No More) Page Title Character Restrictions

You can now use "special" characters such as : or @ or % in your page titles, as in the screenshot below. Various new features like this are now possible, thanks to the move to the new Confluence editor.

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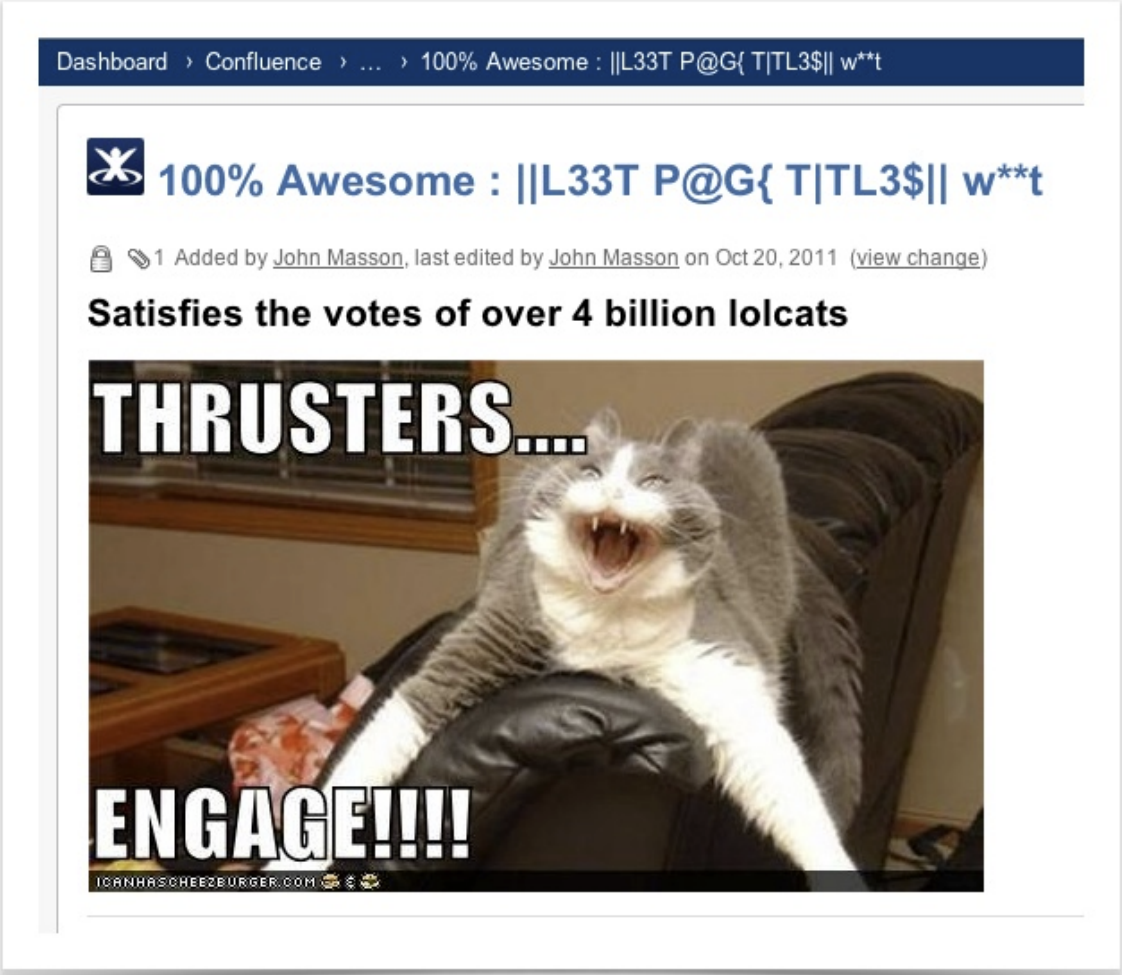

Confluence 4.0-beta2 ("Beta 2") Release Notes

18 August 2011

With great pleasure, Atlassian presents Confluence 4.0, Beta 2.

Confluence 4.0 Beta 1 was an internal release. This beta release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance. This also provides Atlassian with useful feedback. Beta releases also give plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.0 Beta 2:

- Brand New Editor
- Simplified Editing Experience
- New Macros
- Faster Editing Experience
- Introducing @mentions
- Improved Page Comparison Functionality
- Email Notification Improvements
- New Confluence Installer and Guided Upgrades
- New Editor Plugin Points for Developers
- Other Improvements
- Helping You Transition to Confluence 4.0

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- We Welcome Your Feedback
- Upgrade Notes

More:

- Read the Upgrade Notes for important information about this release.
- See the full list of issues resolved in this release.

Downloading the Confluence 4.0 Beta

The Confluence 4.0 Beta release is available here. When upgrading, please follow the Upgrade Notes below.

Got Questions? Want to learn more?
We have a lot of resources available for Administrators, Plugin Developers and End Users to help you transition to Confluence 4.0. Checkout our Planning for Confluence 4.0 page for resources.

Learn more
about Confluence 4.0

Do not use in production

- **EAP releases are not safe** — EAP releases are snapshots of the ongoing Confluence development process. As such:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because EAP releases represent work in progress, we **can not** provide a supported upgrade path between EAP releases, or from any EAP to the eventual final release. Thus, any data you store in a Confluence EAP release may not be able to be migrated to a future Confluence release.

Highlights of Confluence 4.0

1

Brand New Editor

We've rebuilt the Confluence editor from the ground up, bringing you an editing experience that's simpler, faste and more intuitive.

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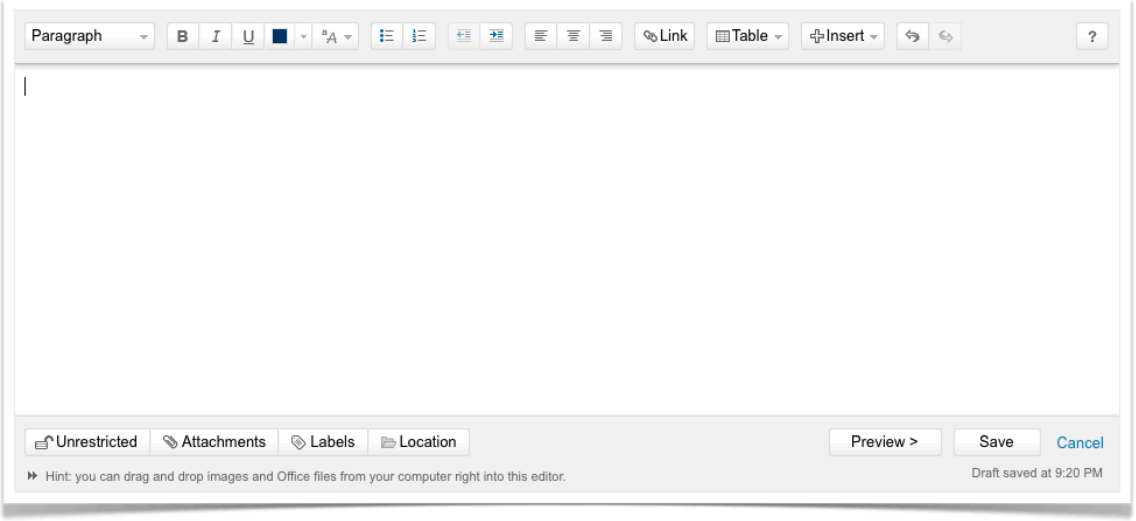

The new Confluence editor delivers many advantages:

- Just one editor!
- Align left, centre or right, without using macros.
- Indent paragraph blocks and lists from the toolbar.
- A new colour picker.
- A New, streamlined user interface.

2

Simplified Editing Experience

Confluence 4.0 introduces macro placeholders, a visual representation of your macros while editing. Create ric content with new and existing macros, without the tools getting in the way.

Simplified Macro Editing

Makes macros easier to manage when editing.

- **A more visual experience**
  Making it easier to visualise what the page will look like when you publish it.
- **Macro properties panel**
  Every macro has a properties panel. The property panels for particular macros, such as the Status and View File macros have additional functionality, described below.
- **Quick access to macro editing**
  Double-click the macro to open the Macro Browser for parameter editing. Contents of some macros can be modified directly from the editor.

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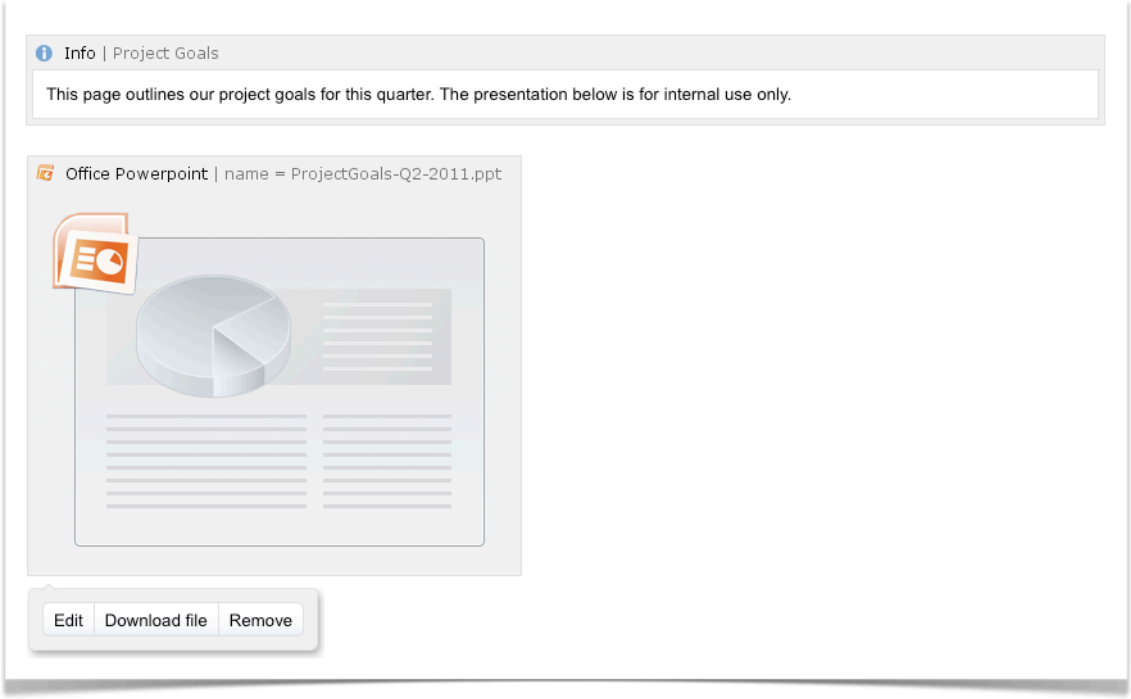
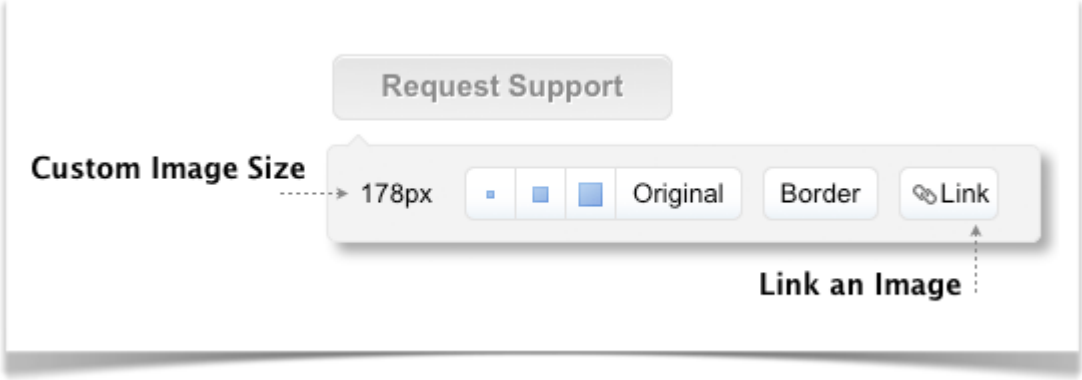


Improved Image Handling

- **Paste Images From Clipboard (Firefox and Chrome only)**
  Just copy any image to your clipboard and hit CTRL-V in the editor. The image will get attached and embedded directly into your page. There's nothing to install on your desktop, it just works!
- **Turn Images into Links**
  Now you can turn images into links. This is especially handy for turning images into a button like the Atlassian Documentation team is known to do. Previously, this was only available in wiki markup but car now be done in the shiny new Confluence 4.0 editor via the properties panel. We're still working on the link icon.
- **New Default Image Sizes**
  We've received a lot of feedback indicating that there isn't much difference between the preset image sizes. So, we've tweaked the sizes so that you can choose from a wider range of options. The small option remains the same at 100 pixels, medium has increased slightly to 300 pixels and large has changed to 500 pixels.
- **Custom image sizes**
  If you don't like the preset image sizes, you can now specify an exact image width.



- **Search Images**
  You can now embed and search images through a new "Search" tab in the image browser. Previously, this could only be done through Autocomplete (!).

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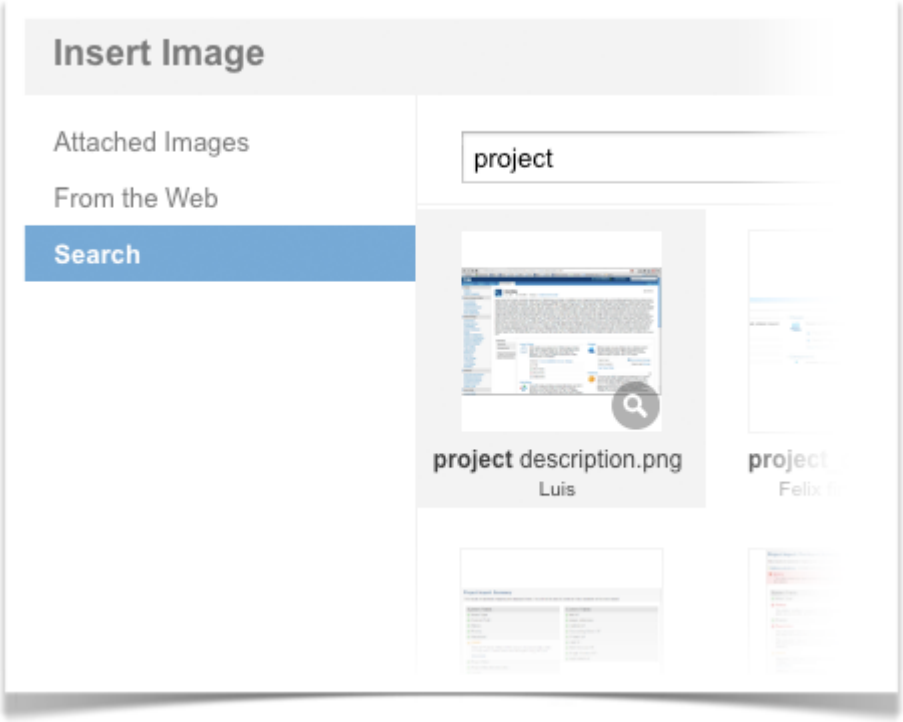
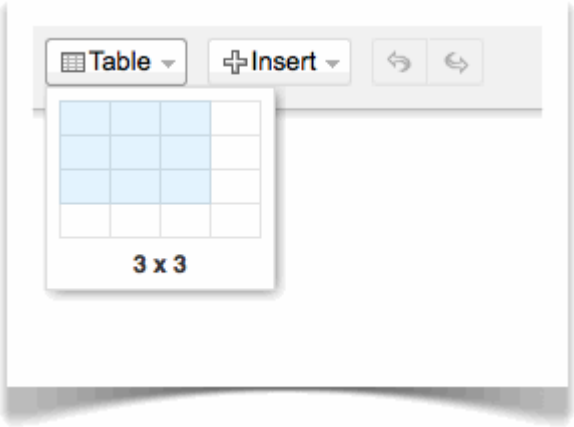


Advanced Table Editing

We've made table operations better in Confluence 4.0 with the following features:

- **Drag to Insert Tables**
  Inserting tables is now easier and truly "WYSIWYG" with this new feature. Just click on the New Table dropdown and drag your mouse to choose the number of rows and columns you'd like in your new table Oh, and don't worry if you like inserting tables with your keyboard, you can still use autoformatting or CTRL+SHIFT+I to insert a table.



- **New In-Context Table Toolbar**
  The new table toolbar removes the need for a context menu and only appears when you add a table to the page.
- **Merge and Split Table Cells.**
- **Highlight cells, rows or columns.**
- **Cut, copy and paste table rows.**

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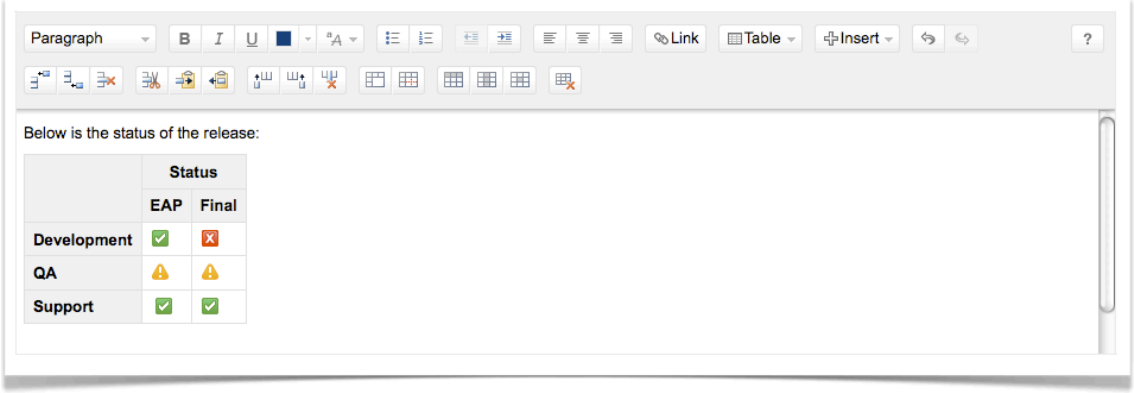
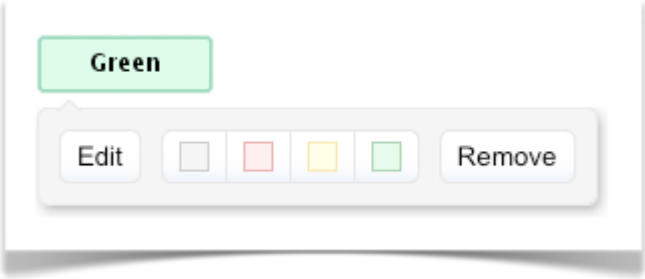


3

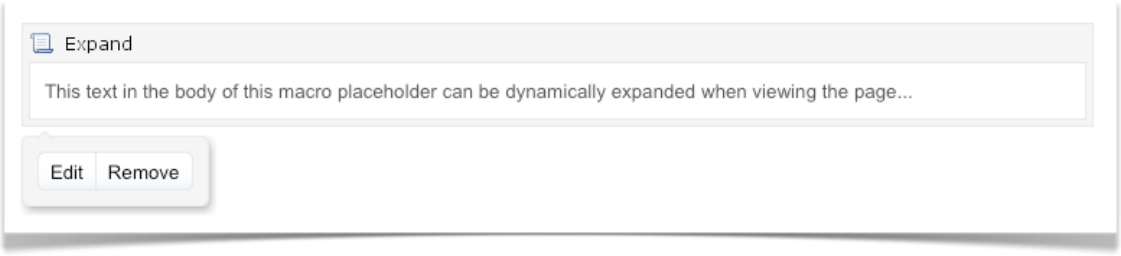
New Macros

We've bundled more macros with Confluence, and made some of the existing macros better, to help you easily include and present relevant content:

- **Status Macro**
  The Status macro displays a coloured lozenge in the editor, so you can see the status directly. You can use the properties panel to change the status while editing, without having to use the Macro Browser.



- **Expand Macro**
  The Expand macro allows you to add a dynamically expandable section of text to your page.



- **Profile Picture Macro**
  The Profile Picture macro displays a users profile picture on a page. Useful for creating Team Pages.

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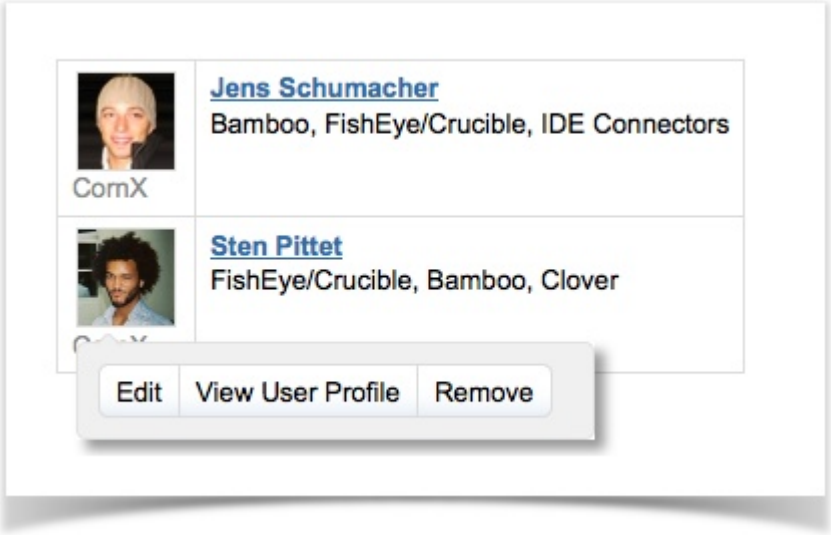

4

Faster Editing Experience

Write Wiki Markup ... Fast!

Many of Confluence's biggest fans are avid wiki markup users. For you aficionados, we wanted to give you the fastest editing experience possible, while preserving the speed and efficiency of your existing wiki markup skills So, we present you with Autoformatting!

Autoformatting lets you type wiki markup into the editor this new feature will "auto-format" your text on the fly. T learn more, click on the "?" help button in the editor and select the **Wiki Markup** tab.

Try these and see what you think:

- **Font Formatting**
  Bold, underline, strikethough, italic, superscript, subscript – just type the markup, such as *Bold*, and watch it convert to **Bold** on the fly!
- **Basic Tables**
  Try typing |||||| , or || Heading 1 || Heading 2 || , then hit enter to to instantly see this:

Heading 1	Heading 2

- **Emoticons**
  All of our emoticons convert on the fly. Try typing (/) in the editor to instantly see this: ✅ .
- **Lists**
  For numbered lists, type # and a space at the start of each line.
  For bulleted lists, type * and a space at the start of each line.
- **Headings**
  Type h4. then some heading text to see a level 4 heading.

Instant Links, Media and Macros

Introduced in a previous release of Confluence (see details in this blog post), adding links, media and macros

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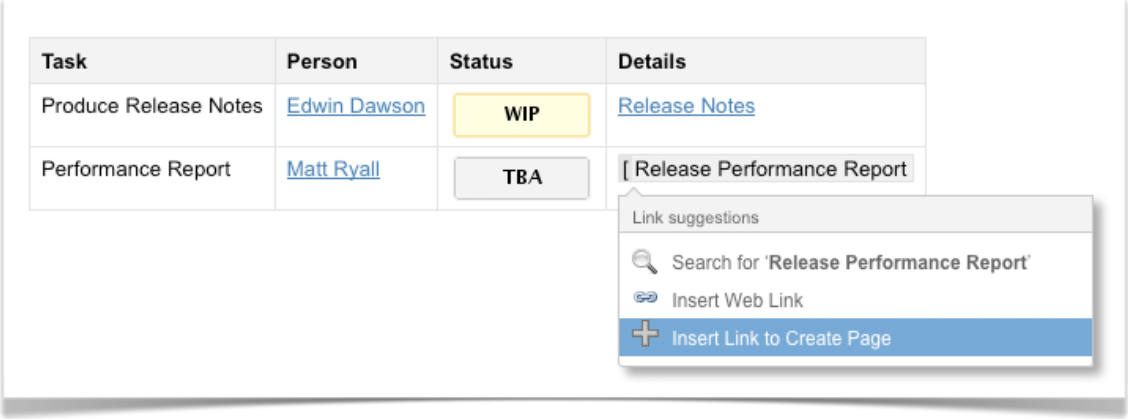
can be quickly added by typing [, ! or { in the editor to add various kinds of content to your page. There's also some small improvements added onto previous autocomplete functionality:

- The first item in the list is pre-selected to make editing faster,
- The macro autocomplete list now loads much faster,
- The macro autocomplete list now inserts most macros directly, without launching the Macro Browser, unless the macro requires a parameter.
- New Page Links
  Quickly insert a link to create a page with Autocomplete for links. Simply type '**[**' in the editor and as you type, Confluence will display a Create Page link if a page with that title does not already exist in your current space.



5

Introducing @mentions

Confluence 4.0 includes the new @mentions feature. This allows you to easily bring collaborators into a conversation: if you are mentioned in any Confluence content (a page, blog, comment or status update), you w be notified by email.

To mention someone, type @ and their name, when editing. Mentions will instantly suggest people you are following in your network, so you can quickly find and involve your friends.

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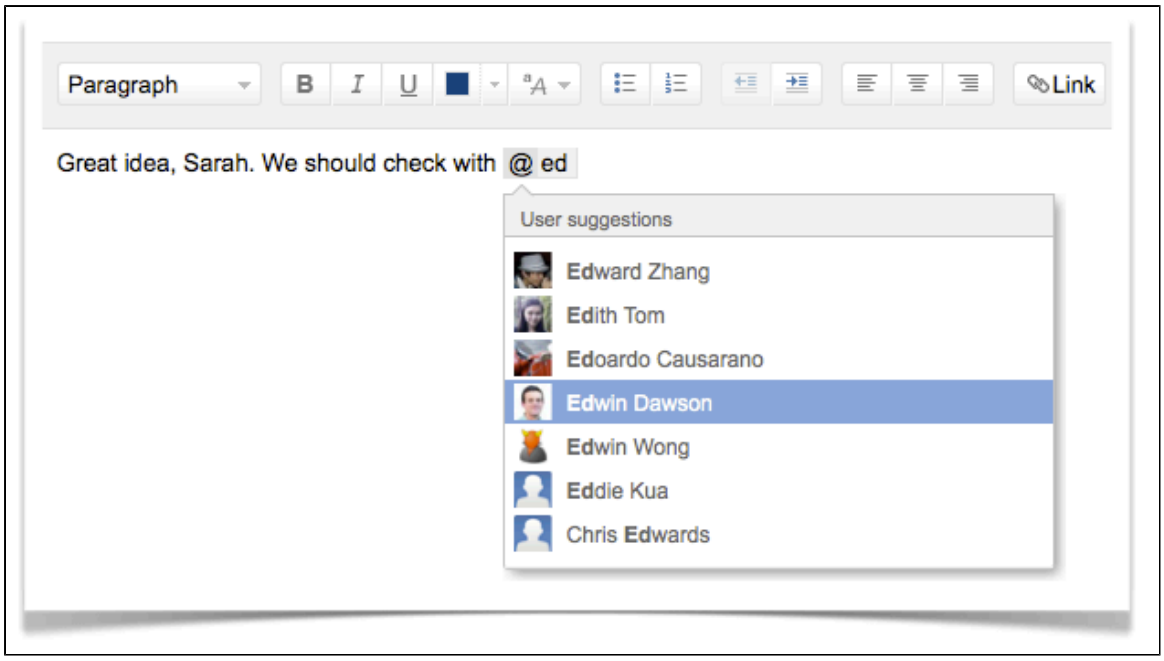

6

Improved Page Comparison Functionality

We've got a better way to view changed content in Confluence.

Improved Page Diffs

We've simplified page diffs to make them easier to read. Additionally, page diffs now show changes to both formatting and macros.

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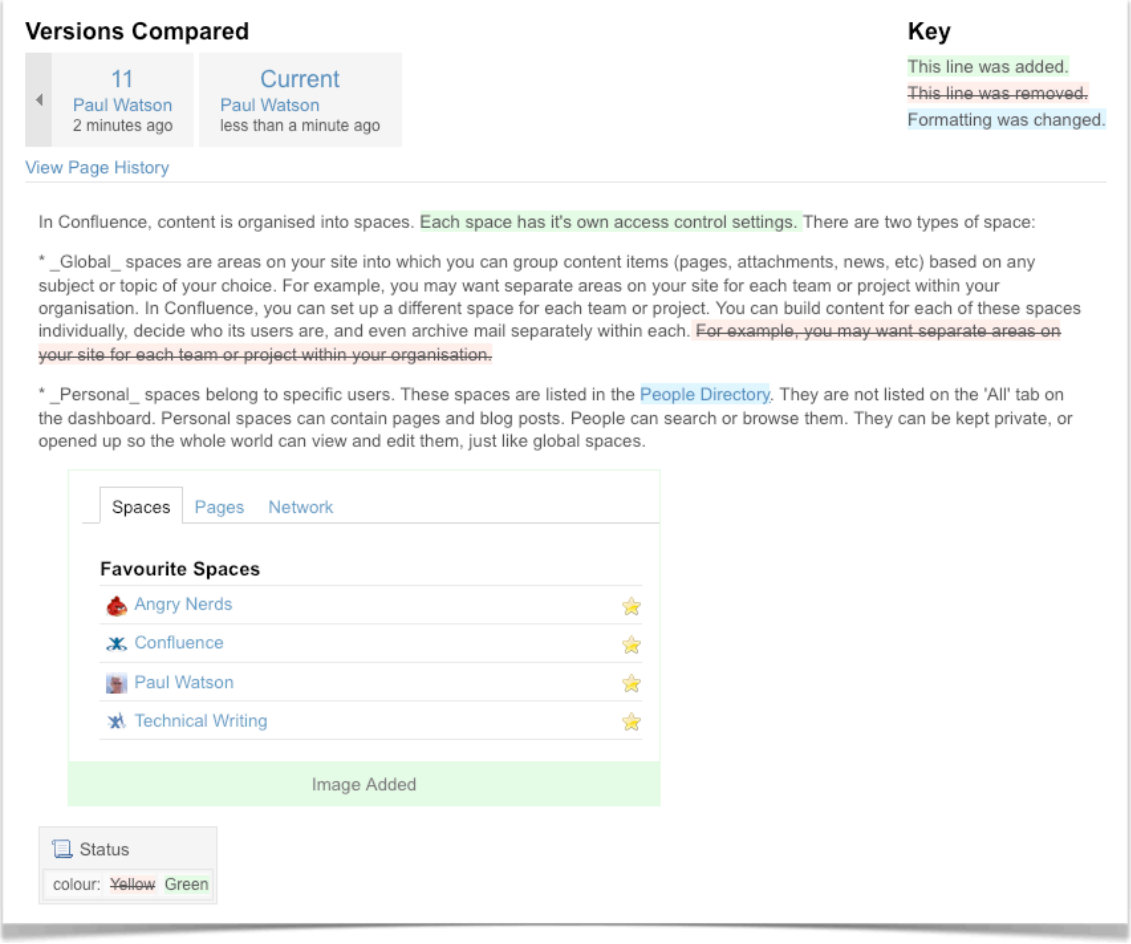
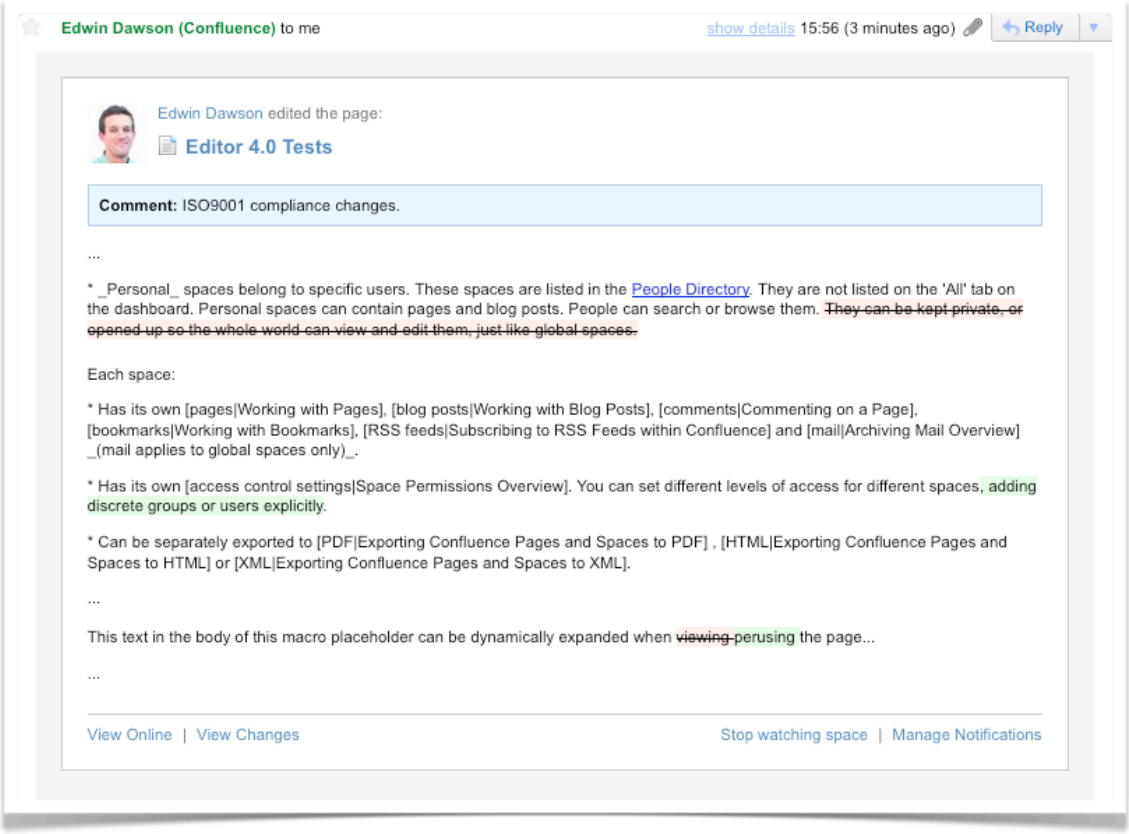


Diffs in Email

Where possible, email notifications now show page differences exactly as they appear in Confluence. These ar now rendered in your email view with the correct diff colour coding.



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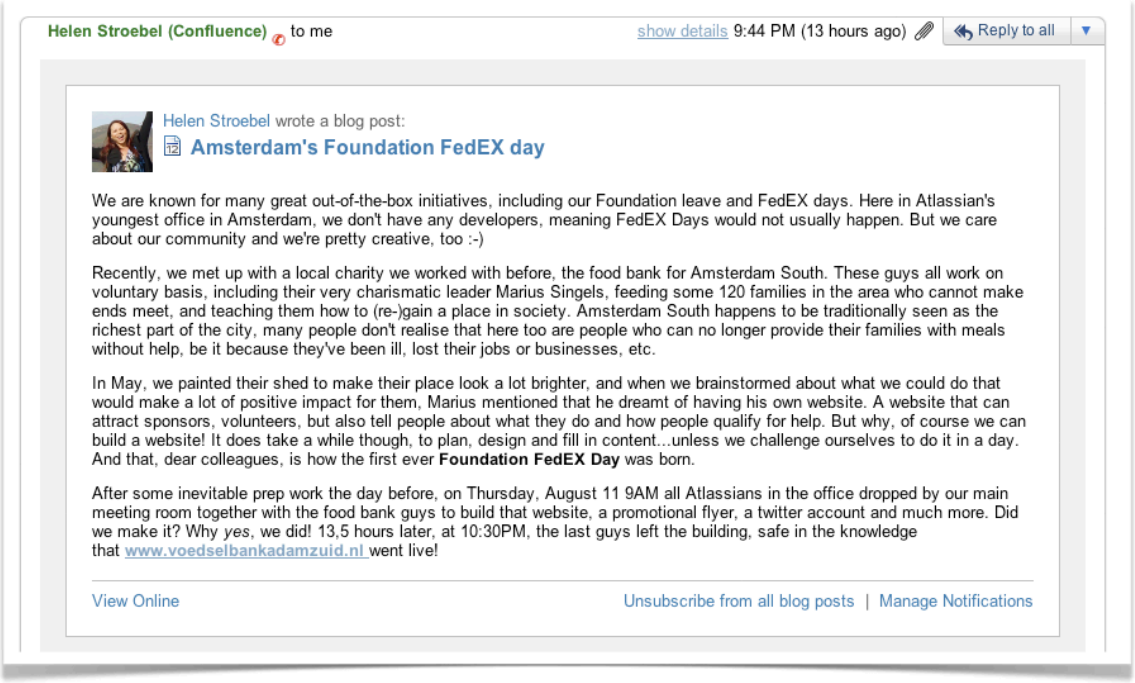
7

Email Notification Improvements

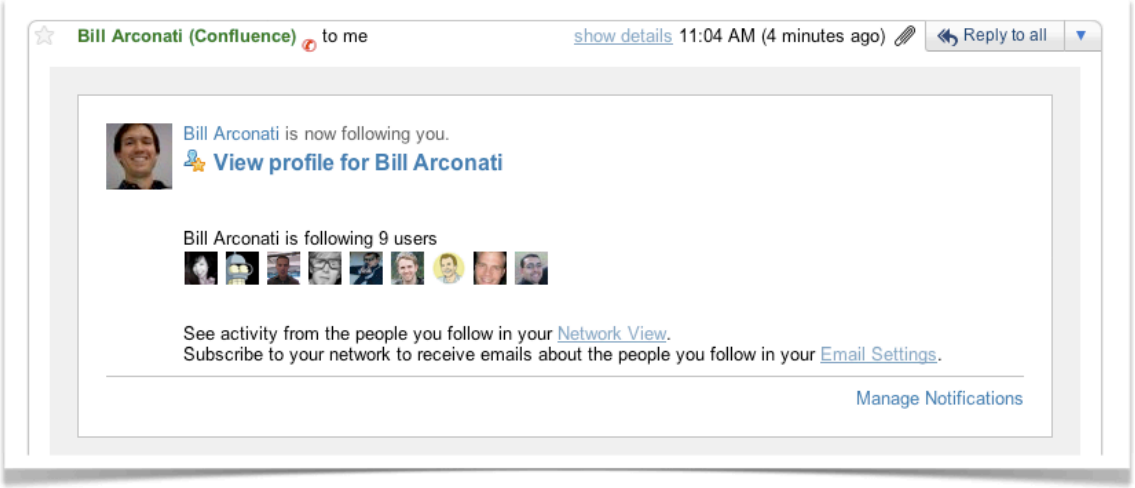
New Email Design

All email notifications in Confluence now have a new design. This works in major email clients as well as on the iPhone.



Follow Notifications

Confluence now sends email when someone follows you.



8

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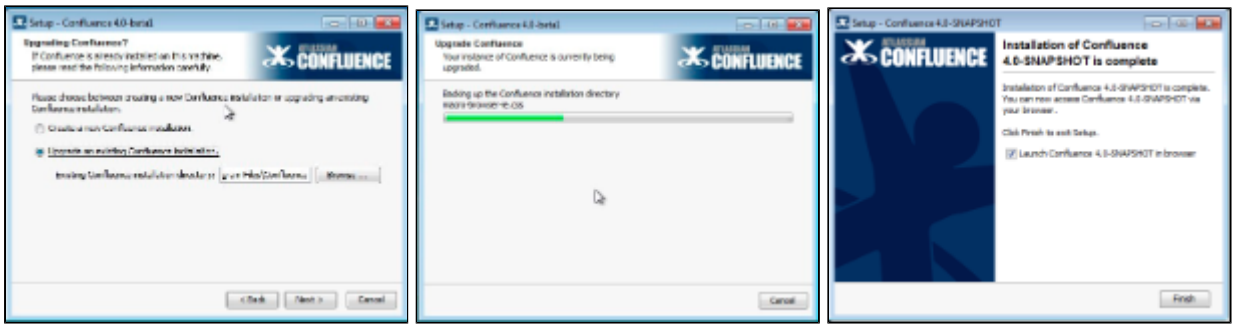
New Confluence Installer and Guided Upgrades

Much to the delight of any sysadmins that are installing any new instances of Confluence, the Windows (.exe) and Linux (.bin) guided installers are now available.

Simplified Installation Process

- **Guided installer:** The guided install wizard has been implemented for Confluence 4.0 on both Windows and Linux operating systems. Installing a new instance is a breeze.
- **Windows UAC support:** You will be prompted for elevated privileges in order to permit the full array of install options.
- **New instance vs Upgrade selection:** You can choose to install a new instance or upgrade an existing instance.
- **Install & Home directory selection:** Default folders are provided depending on the user being an admin/root or standard user (based on respective OS write permissions).
- **Port selection:** Choose your ports during the guided install process. Also, the ports in Confluence have changed! Take note: The default running port is now 8090 with the control port at 8009.
- **Install as a service:** Assuming you have elevated privileges, you have the option on both Windows and Linux to install Confluence as a service. This is practical for production instances.
- **Evaluation license generation:** As a recap, we added a simplified workflow in Confluence 3.5 to assist in generating licenses for evaluators.



Easy JIRA Integration

- **Setup wizard process improvements:** Hook Confluence up with JIRA, right within the in-application setup wizard.

New Guided Upgrades

The new Linux and Windows Installers from our EAP release now include an option that allows you to upgrade an existing Confluence 3.5.x or later installation. This upgrade automates the following tasks for you:

1. Backs up the Installation and Home Directories of the existing Confluence installation to be upgraded,
2. Installs **Confluence 4.0.x**whilst migrating the following from your existing Confluence installation to the new installation:
    - TCP port values in your existing Confluence installation's server.xml file,
    - The upgrade feature detects and notifies you of any other files in the confluence subdirectory of your existing Confluence Installation Directory, which had been deleted, added or modified from a 'default' Confluence installation. This informs you of any customisations you will need to migrate manually over to your upgraded Confluence installation directory.

9

New Editor Plugin Points for Developers

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We've added more editor plugin points for developers. Notable improvements include:

Extend the Macro Property Panel

Plugin developers can add buttons to the Macro Property Panel in the editor.
For example, insert a Gliffy diagram or see the tutorial on how to do this.

Render an Image in the Macro Placeholder

A plugin developer can now render an image instead of a placeholder for bodyless macros. For more information, check out the tutorial on how to do this.

Custom Parameter Rendering in Placeholders

You can choose to display any parameter in the macro placeholder in the editor, instead of having the placeholder automatically show the first few parameters.

New Pluggable Format Menu

Plugin developers can add items to the editor's Format menu. See this tutorial for details.

View Storage Format

To assist with plugin developers and help with developer issues, developers running in Dev mode and Confluence administrators can view the page storage format form the "Tools" menu in Confluence.

New API Changes

We have disabled the getPage() and getBlogEntry() read methods in the XML-RPC/SOAP API. If you have a script that primarily reads or appends to existing pages, it will break. Creating pages and overwriting existing pages will still work.

Plugin Developer Resources

We have created a landing page for Confluence 4.0 planning. This includes resources for plugin developers to help you create new plugins and make use of the new plugin points available as well as upgrade your existing plugins.

Learn more
about Confluence 4.0

Infrastructure Changes

This release includes a number of improvements in the APIs and under the covers as well.

- **Anti-XSS Mode**
  Anti-XXS mode is now enabled by default for plugins.
- **Alignment and Border Parameters**
  The alignment and border properties in the macro definition template have been removed.
- **Thumbnail Settings**
  The 'Thumbnail maximum height' and 'Thumbnail maximum width' settings have been removed from the General Configuration page.
- **Link Browser**
  The Link browser is no longer built in GWT and is now built in core JavaScript.
- **Integration Platform 2.12.0**
- **Upgrade to AUI 3.5.0**

Other Improvements

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As always, we have made various small improvements to Confluence screens, functionality and supported platforms.

- **Microsoft Office 2010 support**
  The Office Connector now supports Microsoft Office 2010.
- **Chrome and Internet Explorer 9 Support**
  See the upgrade notes for more information about browser support.
- **Administrator's task list in the Admin Console**
  This new task list in the Admin Console helps administrators get started after a new install.
- **New keyboard shortcuts:**
  - **CMD+S** to save a page from the change comment field.
  - **CMD+SHIFT+e** to preview when you are in the editor; hit 'e' to get back to the editor.
  - **CMD+SHIFT+d** to display the Wiki Markup dialog.
- **Option to disable the "secure" cookie**
  When using HTTPS, you can disable the "secure" cookie, just for the login page.
- **Help tips in the administration screens**
  The help tips have been moved into the field descriptions.
- **Backup and Restore page**
  The Backup and Restore page has been redesigned.
- **404 page**
  The 404 page now has a dashboard breadcrumb.
- **Quicknav Improvements**
  Quicknav now indicates the space the page is coming from. This helps you find a page that might have the same title across multiple spaces, as well as selecting the first search result by default, making it quicker to open the link.
- **New Emoticons**
  Confluence 4.0 comes with a shiny new set of emoticons.
- **Remember Last Tab**
  Some of the feedback you gave us:
  "*...I find it frustrating that "add a web link" is an extra click away after I open the link dialog. I use that at least as often as I link to another Confluence page...*"
  We've taken some of the pain out of this process, by having the link browser remember the last tab you clicked. So if always use web links, it will always open to the web links tab for you. We're investigating taking this a step further, by allowing users to insert a web link from the "search tab as well."
- **Advanced Linking**
  We've updated the Link dialog to cater for these link types: shortcut links, anchor Links, and undefined links (which you can do via Autocomplete).
  To round out this improvement, we've implemented an "Advanced" tab in the Links Dialog. This basically covers the "remaining link types" that were available in Wiki Markup.
- **Improved Conflict Merging**
  Make this one sentence: Now if you're editing a page at the same time as someone else, Confluence wi intelligently merge your changes with the other person's change when you save. This means you'll be seeing the "another user has made changes to this page since you started editing" warning a lot less often. In the cases where Confluence cannot merge the changes, it will show the diffs and prompt you tc either overwrite or discard your changes. We've also made merging table conflicts much more reliable.

10

Helping You Transition to Confluence 4.0

We've created a set of resources to help you manage the transition away from wiki markup. We know your people have become experts with using wiki markup in Confluence, but we think you'll really appreciate the nev

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editor, and we want to make it as easy as possible for you to make the change. The change management resources are listed under the current documentation.

Support for Macros that are not yet Confluence 4.0 Compatible
You can upgrade to Confluence 4.0 with macros that are not yet 4.0 compatible. If you upgrade and a macro is not yet 4.0 compatible, wiki markup will be maintained for that macro. Once these plugins are 4.0 compatible, a administrator will receive a new task in the administration console to run an update. We will have some more information on this shortly.

Copy and Paste Wiki Markup

Many people tell us they like to take notes in wiki markup, then paste them into Confluence. We've also spoker to customers who have lots of scripts that produce wiki markup and are manually inserted into pages. For these folks, we present the Insert Wiki Markup dialog. Simply select '**Wiki Markup**' from the '**Insert**' menu to launch tl Wiki Markup dialog. From there you can insert any wiki markup, even macros.

"View Source" for the new editor

Some of you might be thinking, "what about the view wiki markup?". A lot of people used the **View Wiki Marku** option to see how pages were made and to copy the underlying markup. We've implemented "view source" (accessible from the Tools menu) so that you can see what macros were used to create the selected page and copy them to your own page.

We Welcome Your Feedback

To make it easy for you to provide EAP feedback we've created a simple "Got Feedback" button in the Confluence navigation bar:

Let the Confluence team know what you think of the EAP by providing feedback!

Upgrade Notes

Upgrading from a previous version of Confluence

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*

When upgrading from a previous version of Confluence, if you have customised your cache settings (as documented in Cache Performance Tuning) then you may run into memory problems during the wiki to XHTML migration. We are working to fix this in a later release, but in the meantime you can revert your `ehcache.xml` to the default version.

- If you still experience problems, try reducing the '`maxElementsInMemory`' attribute on each cache to a very small value such as 50.
- Note that any cache changes you make to work around migration problems should only be considered temporary. You should restore caching to it's original settings again after migration has been successful.

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Removed Functionality

Features removed from Confluence

- The **Edit Page in Word** functionality
  This is being removed in Confluence 4.0. **Note:** This is a different feature to "Edit attachment in Word".
- **Mail Page Plugin**
  The Mail Page plugin is no longer bundled in Confluence. With the introduction of the "Share Page" feature in 3.5 this is no longer needed.
- **Social Bookmarking Plugin**
  The Social Bookmarking plugin is no longer bundled in Confluence but is still supported.
- The **SnipSnap importer** has been removed from the admin console.

Settings removed from Confluence

- The **CamelCase Links** setting, from general configuration.
- The **Number of Ancestors to Show in Breadcrumbs** setting.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better!

Confluence 4.0-m36 EAP Release Notes

1 August 2011

Today we are happy to announce our third public EAP build for Confluence 4.0. An Early Access Preview (EAP) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance and provide us with some useful feedback. It also gives plugin developers an opportunity to test and fix their plugins in advance of an official release.

Please see previous 4.0 EAP release notes for the complete list of 4.0 changes:

- Confluence 4.0-m27
- Confluence 4.0-m29

Highlights of Confluence 4.0 EAP:

- New Confluence Installer
- Improved Image Handling
- Links Dialog: Remember My Tab
- Improved Conflict Merging
- Set Page Location On Save
- Infrastructure changes
- We Welcome Your Feedback

More:

- Read the upgrade notes for important information about this release.
- See the full list of issues resolved in this release.

> **Downloading the Confluence 4.0 EAP**
>
> The Confluence 4.0-m36 EAP Release is available here. When upgrading, please follow the upgrade notes below.

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Do not use in production

- **EAP releases are not safe** — EAP releases are snapshots of the ongoing Confluence development process. As such:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because EAP releases represent work in progress, we **can not** provide a supported upgrade path between EAP releases, or from any EAP to the eventual final release. Thus, any data you store in a Confluence EAP release may not be able to be migrated to a future Confluence release.

Highlights of this Milestone

1

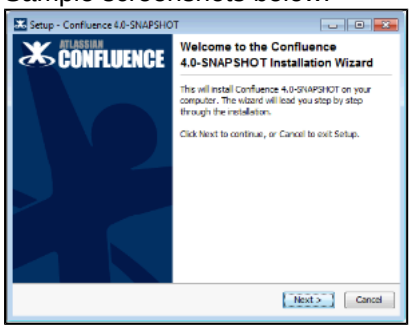
New Confluence Installer

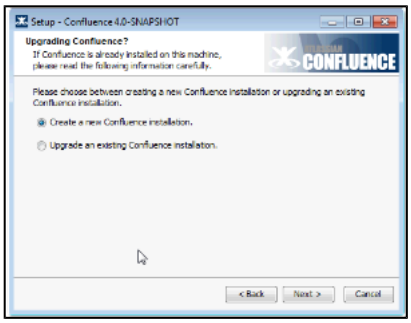
Much to the delight of any sysadmins that are installing any new instances of Confluence, the Windows (.exe) and Linux (.bin) guided installers are now available.

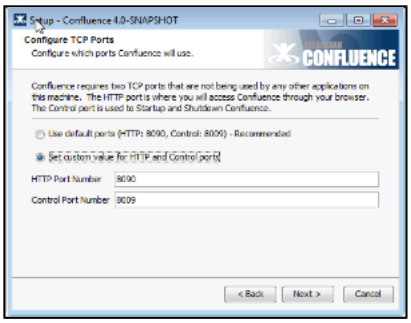
Simplified Installation Process

- **Guided installer:** The guided install wizard has been implemented for Confluence 4.0 on both Windows and Linux operating systems. Installing a new instance is a breeze.
- **Windows UAC support:** You will be prompted for elevated privileges in order to permit the full array of install options.
- **New instance vs Upgrade selection:** You can choose to install a new instance or upgrade an existing instance (the upgrade capability will be available in a subsequent release)
- **Install & Home directory selection:** Default folders are provided depending on the user being an admin/root or standard user (based on respective OS write permissions)
- **Port selection:** The ports in Confluence have changed! Take note: The default running port is now **8090** with the control port at **8009**
- **Install as a service:** Assuming you have elevated privileges, you have the option on both Windows and Linux to install Confluence as a service. This is practical for production instances.
- **Evaluation license generation:** As a recap we added a simplified workflow in Confluence 3.5 to assist generating licenses for evaluators.

Sample screenshots below:







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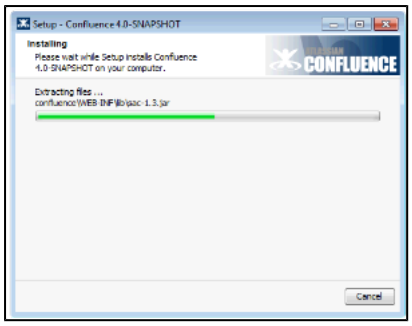

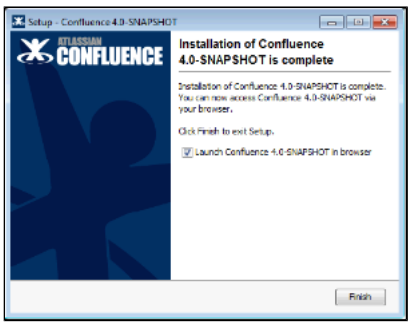

Easy JIRA Integration

- **Setup wizard process improvements:** Hook up Confluence with JIRA right within the in-app setup wizard (huge thanks to the Integration team for taking this work on)

2

Improved Image Handling

Turn Images Into Links
Now you can turn images into links. This is especially handy for turning images into a button like the Docs team is known to do. (Previously this was only available in wiki markup but can now be done in the shiny new Confluence 4.0 editor via the properties panel.) - We're still working on the link icon.

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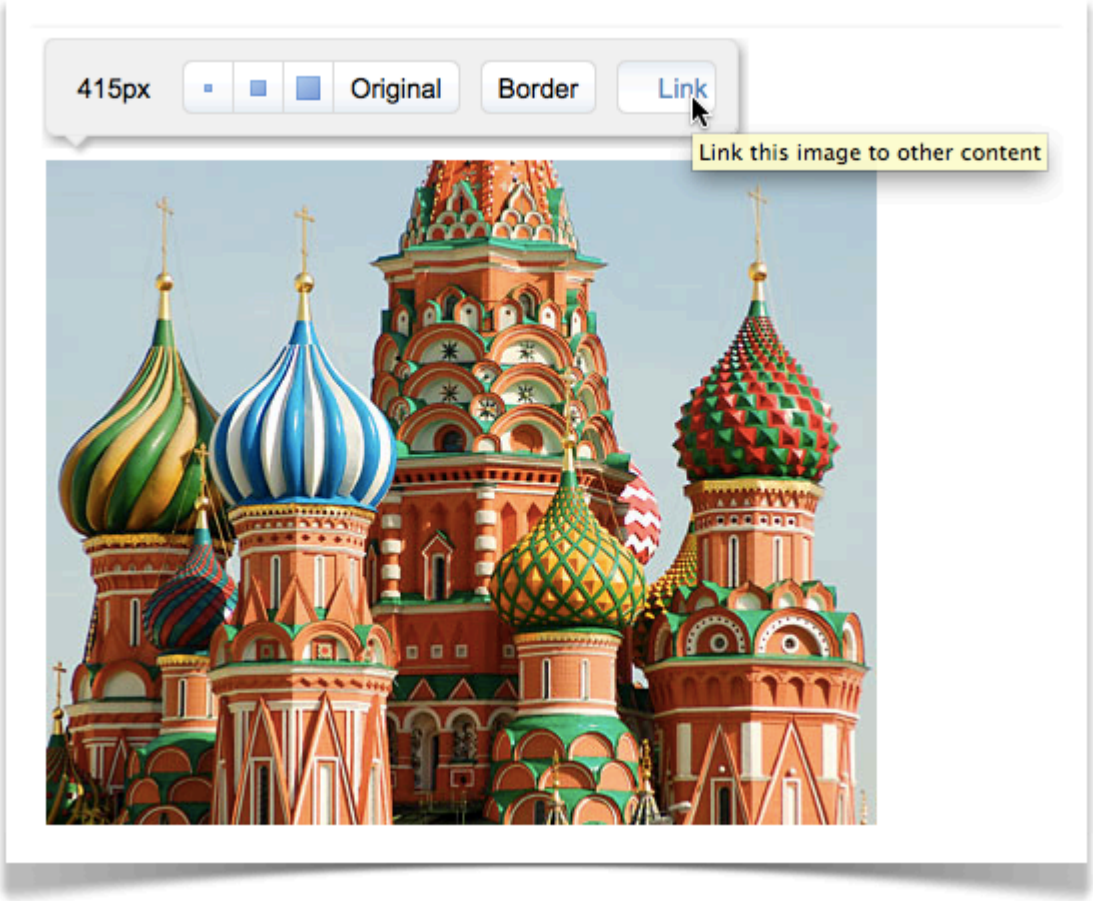
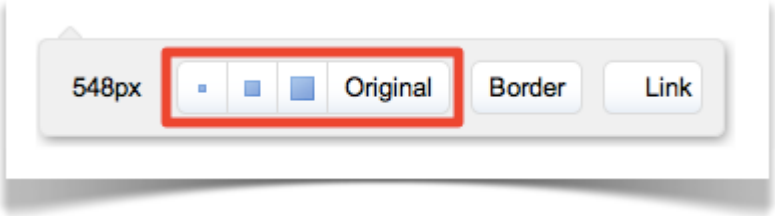
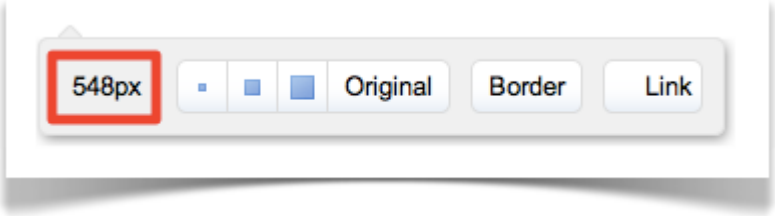


New Default Image Sizes
We've gotten a lot of feedback that there isn't much difference between the pre-set image sizes. So we've tweaked the sizes so you can choose from a wider range of options. Small remains the same at 100px, mediur has increased slightly to 300px and large is now 500px.



Custom image sizes
If you don't like the pre-set image sizes you can now specify an exact image width:



3

Links Dialog: Remember My Tab

Some of the feedback you gave us:

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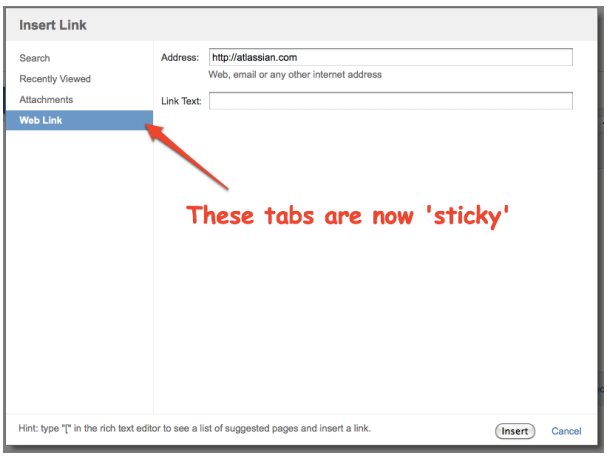
> *...I find it frustrating that "add a web link" is an extra click away after I open the link dialog. I use that at least as often as I link to another confluence page...*

We've taken some of the pain out of this by having the link browser remember the last tab you clicked. So if always use web links, it will always open to the web links tab for you. We're investigating taking this a step further by allowing users to insert a web link from the "search tab as well."



4

Improved Conflict Merging

This feature is back into Confluence 4.0. Now if you're editing a page at the same time as someone else, Confluence will intelligently merge your changes with the other person's change when you save. This means you'll be seeing the "another user has made changes to this page since you started editing" warning a lot less often. We've also made merging table conflicts much more reliable.

5

Set Page Location On Save

We've heard a lot of feedback from new users that understanding where their page fits in the Confluence page hierarchy is not very intuitive. To help solve this problem when you create a new page and save it, users will be prompted and asked where they would like to save the page.

6

Infrastructure changes

- Remove 'Thumbnail maximum height' and 'Thumbnail maximum width' settings from the General Configuration page
- Update upgrade task to blow away thumbnails directory
- Link browser is no longer build in GWT and is in core JavaScript
- Upgrade Plugins to 2.8.0
- Integration Platform 2.12
- Update personal sidebar preference to use browser local storage instead of cookies

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7

We Welcome Your Feedback

To make it easy for you to provide EAP feedback we've created a simple "Got Feedback" button in the Confluence navigation bar: GOT FEEDBACK?
Let the Confluence team know what you think of the EAP by providing feedback!

Important Note - Comments Editor

You will notice in this milestone we have a new, simplified comments design. Please note - this design was experimental for internal dogfooding and will not be shipping in Confluence 4.0. It will be removed in the next EAP release.

Upgrade Notes

- **Upgrading from a previous version of Confluence.** Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*
- When upgrading from a previous version of Confluence, if you have customised your cache settings (as documented in Cache Performance Tuning) then you may run into memory problems during the wiki to XHTML migration. We are working to fix this in a later milestone release but in the meantime you can revert your `ehcache.xml` to the default version.
  - If you still experience problems you should try reducing the 'maxElementsInMemory' attribute on each cache to a very small value such as 50.
  - **Note** that any cache changes you make to work around migration problems should only be considered temporary. You should restore caching to it's original settings again after migration has been successful.
- Note that the '**Edit Page in Word**' functionality of Confluence is being removed in Confluence 4.0.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

Confluence 4.0-m29 EAP Release Notes

27 June 2011

Following our first public EAP milestone of Confluence 4.0 earlier this month, we present you with our 2nd public EAP build. An Early Access Preview (EAP) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance and provide us with some useful feedback. It also gives plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.0 EAP:

- Paste images into the editor (Firefox and Chrome)
- Drag to Insert Tables
- New "View Source" for pages and blogs
- Other Features and Improvements
- We Welcome Your Feedback

More:

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- Read the upgrade notes\ for important information about this release.
- See the full list of issues resolved in this release.

Downloading the Confluence 4.0 EAP

The Confluence 4.0-m29 EAP Release is available here. When upgrading, please follow the upgrade notes below.

Default Port Number Change

The default port for the Confluence installer has changed from 8080 (http) and 8005 (shutdown) to 8880 and 8805 respectively. If you are upgrading from the previous EAP you may have to update your deployment configuration to reflect this change.

Do not use in production

- **EAP releases are not safe** — EAP releases are snapshots of the ongoing Confluence development process. As such:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because EAP releases represent work in progress, we **can not** provide a supported upgrade path between EAP releases, or from any EAP to the eventual final release. Thus, any data you store in a Confluence EAP release may not be able to be migrated to a future Confluence release.

Highlights of this Milestone

1

Paste images into the editor (Firefox and Chrome)

Just copy any image to your clipboard and hit CTRL-V in the editor. The image will get attached and embedded directly into your page. There's nothing to install on your desktop...it just works!

This is **turned off by default** at the moment. You'll need to turn it on from the Universal Plugin Manager.

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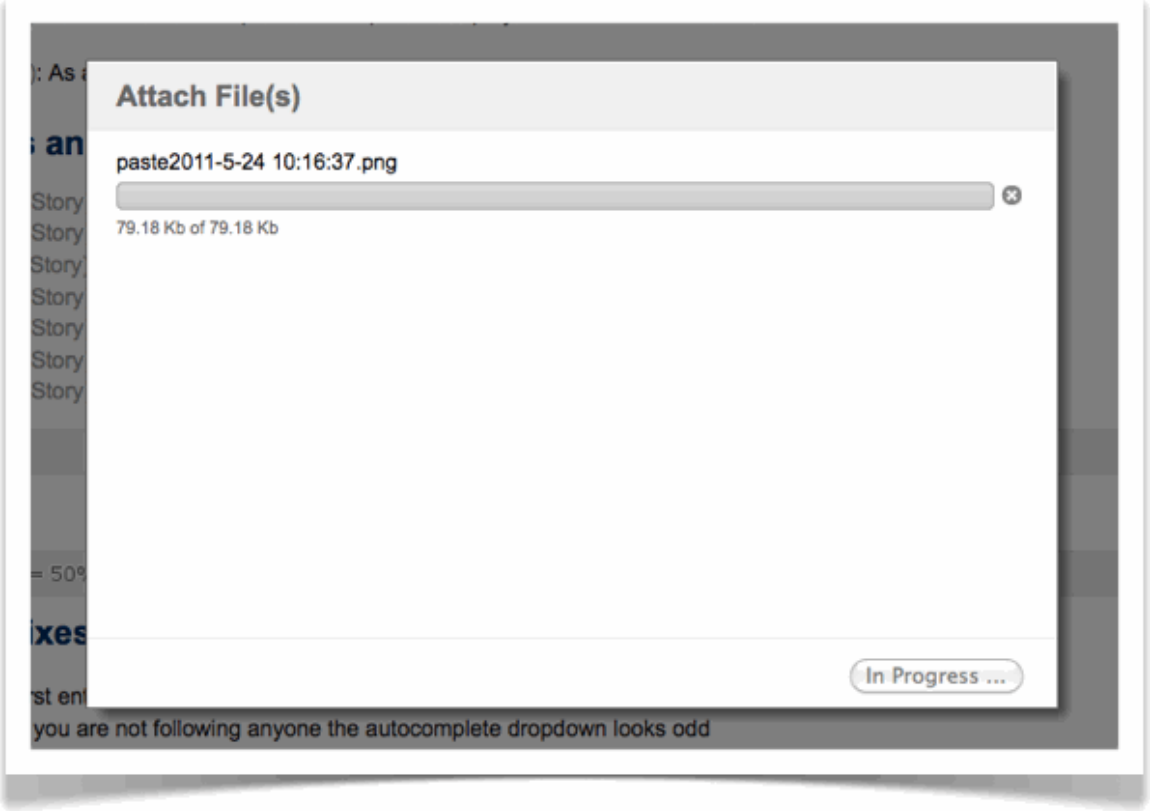
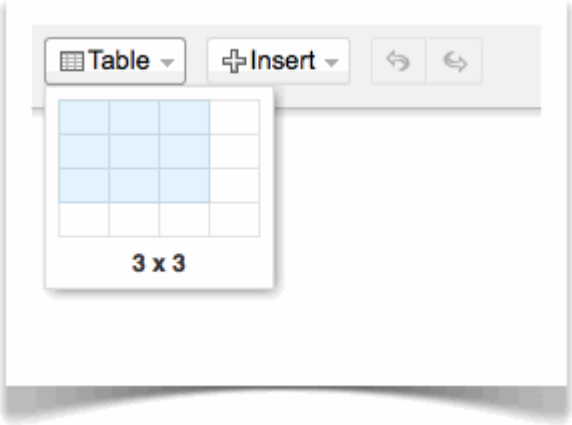


2

Drag to Insert Tables

Inserting tables got even more "WYSIWYG" and easier with this feature. Just click on the new Table dropdown and drag your mouse to choose the number of rows and columns you want in your new table. Oh, and don't worry if you like inserting tables with your keyboard, you can still use autoformatting or CTRL+SHIFT+I to inser a table.



3

New "View Source" for pages and blogs

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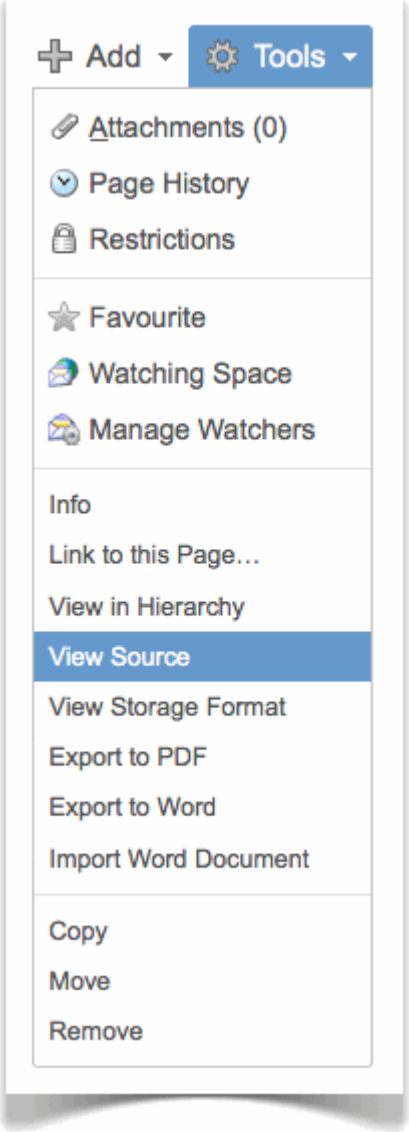
A lot of people used the "view wiki markup" option to see how pages were made and to copy the underlying markup. Now that wiki markup is gone, we've implemented "view source" (accessible from the Tools menu) so that you can see what macros were used to create the selected page and copy them to your own page.



4

Other Features and Improvements

- HTML Diffs can display a macro's icon
- Allow administrators to specify the number of reindexing threads at reindex time
- Render tables inside a wrapping DIV to make them easier to style in themes
- Implement end of link markers as a dark feature
- Expose image uploader in drag and drop plugin so it can be used by paste plugin

5

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We Welcome Your Feedback

To make it easy for you to provide EAP feedback we've created a simple "Got Feedback" button in the Confluence navigation bar:

Let the Confluence team know what you think of the EAP by providing feedback!

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  - **Note** that any cache changes you make to work around migration problems should only be considered temporary. You should restore caching to it's original settings again after migration has been successful.
- Note that the '**Edit Page in Word**' functionality of Confluence is being removed in Confluence 4.0.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

Confluence 4.0-m27 EAP Release Notes

3 June 2011

With great pleasure, Atlassian presents our first public milestone of Confluence 4.0.

An Early Access Preview (EAP) release is a snapshot of our work in progress, primarily focused on allowing Confluence users to see the new features in advance and provide us with some useful feedback. It also gives plugin developers an opportunity to test and fix their plugins in advance of an official release.

Highlights of Confluence 4.0 EAP:

- Simplified Editing Experience
- Introducing Macro Placeholders and New Macros
- Autoformatting – Write Wiki Markup In the Editor
- New Wiki Markup Dialog
- Autocomplete Improvements
- Introducing Confluence Mentions
- Improved Table Operations
- Improved Page Comparison Functionality
- New Email Design
- New Editor Plugin Points for Developers

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- Other Improvements
- Infrastructure Changes
- Helping You Transition to Confluence 4.0
- We Welcome Your Feedback

More:

- Read the upgrade notes for important information about this release.
- See the full list of issues resolved in this release.

Downloading the Confluence 4.0 EAP

The Confluence 4.0-m27 EAP Release is available here. When upgrading, please follow the upgrade notes below.

Do not use in production

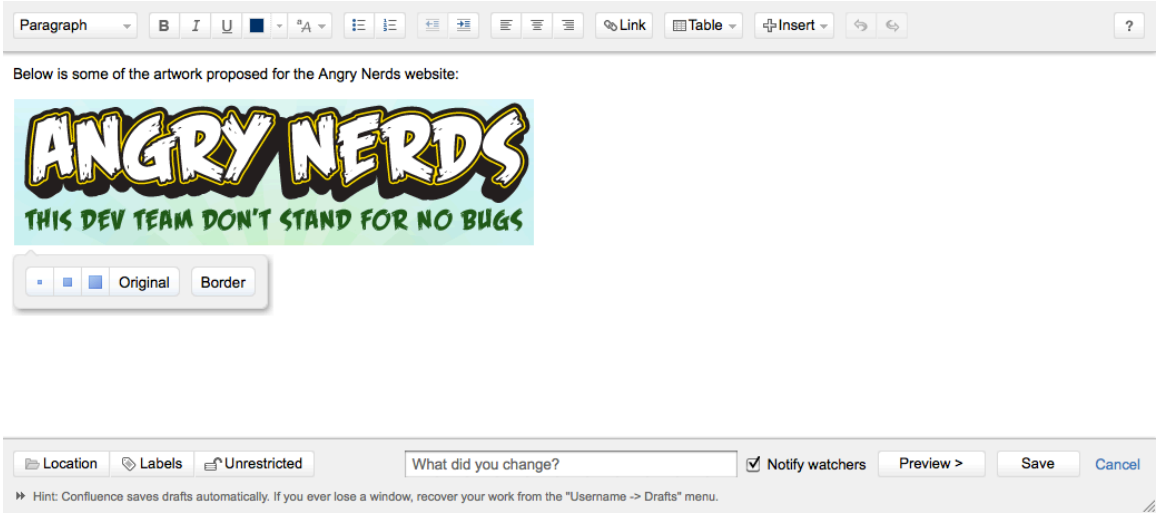
- **EAP releases are not safe** — EAP releases are snapshots of the ongoing Confluence development process. As such:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because EAP releases represent work in progress, we **can not** provide a supported upgrade path between EAP releases, or from any EAP to the eventual final release. Thus, any data you store in a Confluence EAP release may not be able to be migrated to a future Confluence release.

Highlights of Confluence 4.0

1

Simplified Editing Experience

We've rebuilt the Confluence editor from the ground up, to bring you an editing experience that's simpler, faster and more intuitive.



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- Just one editor!
- Left, Centre, Right align, without any macros.
- Indent paragraph blocks and lists from the toolbar.
- New Colour Picker.
- The user interface has been streamlined.

2

Introducing Macro Placeholders and New Macros

Confluence 4.0 introduces macro placeholders, a visual representation of your macros while editing. Create ric content with existing and new macros, but without them getting in the way.

Easy Macro Management

To make macros easier to manage when editing, the editor now uses macro placeholders. Placeholders offer the following advantages:

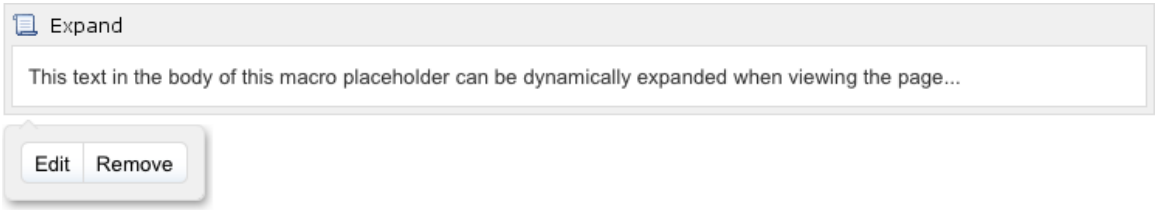
- **Quick access to macro editing**
  Edit the content of a macro directly in the editor, or double-click the placeholder to open the Macro Browser for parameter editing.
- **Macro placeholder properties panel**
  Every macro placeholder has a properties panel. The properties panels for particular macros, such as th Status and View File macros, have additional functionality, as described below.

New and Improved Macros

We've bundled more macros with Confluence, and made some of the existing macros better, to help you easily include and present relevant content:

- **New: Status Macro**
  The Status macro displays a coloured lozenge in the editor, so you can see the status directly. You can use the properties panel to change the status while editing, without having to use the Macro Browser.

- **New: Expand Macro**
  The Expand macro allows you to add a dynamically expandable section of text to your page.



- **Improved: Include Page Macro**
  The properties panel for the Include Page macro has a 'Go to included page' button that allows you to quickly check the page you have included, while still in the editor.

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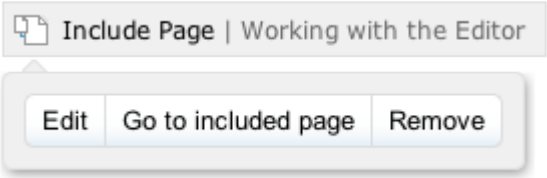
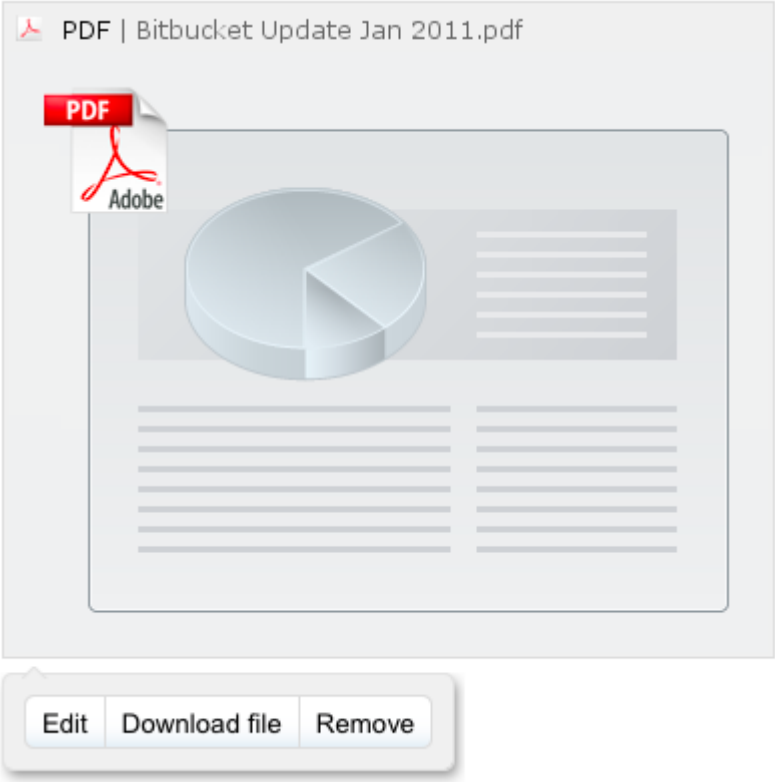


- **Improved: JIRA Issues Macro**
  You can quickly open up the JIRA issue or filter, right from the editor, using the new 'View in JIRA' butto in the properties panel.

- **Improved: View File Macro**
  The placeholder for the View File macro displays an image according to the file type (for example PDF c Word file). And you can easily download the file while you are editing the page, using the new 'Downloa file' button in the properties panel.



3

Autoformatting – Write Wiki Markup In the Editor

Many of Confluence's biggest fans are avid wiki markup users. For you aficionados, we wanted to give you the fastest editing experience possible, while preserving the speed and efficiency of your existing wiki markup skills So, we present you with Autoformatting!

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Autoformatting lets you type wiki markup into the editor and "auto-formats" your text on the fly. To learn more, click on the "?" help button in the editor and select the "Wiki Markup" tab.

Try these and see what you think:

- **Font Formatting**
  Bold, underline, strikethough, italic, superscript, subscript – just type the markup, such as *Bold*, and watch it convert to **Bold** on the fly!
- **Basic Tables**
  Try typing |||||| , or || Heading 1 || Heading 2 || , then hit enter to get a table header like this:

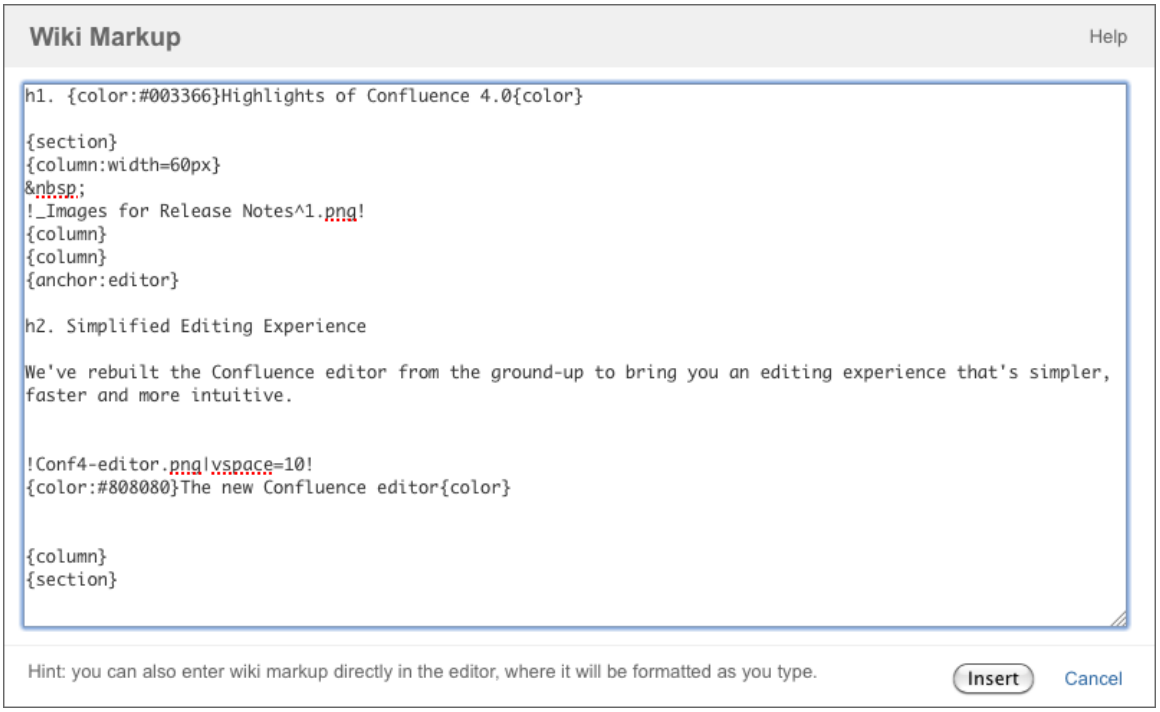
Heading 1	Heading 2

- **Emoticons**
  All of our emoticons convert on the fly. Try typing (/) in the editor to instantly see this: ✅ .
- **Lists**
  For numbered lists, type # and a space at the start of each line.
  For bulleted lists, type * and a space at the start of each line.
- **Headings**
  Type h4. then some heading text to see a level 4 heading.

4

New Wiki Markup Dialog

Many people tell us they like to take notes in wiki markup, then paste them into Confluence. We've also spoker to customers who have lots of scripts that produce wiki markup and are manually inserted into pages. For these folks, we present the Wiki Markup dialog. Simply select '**Wiki Markup**' from the '**Insert**' menu to launch the Wik Markup dialog. From there you can insert any wiki markup, even macros.



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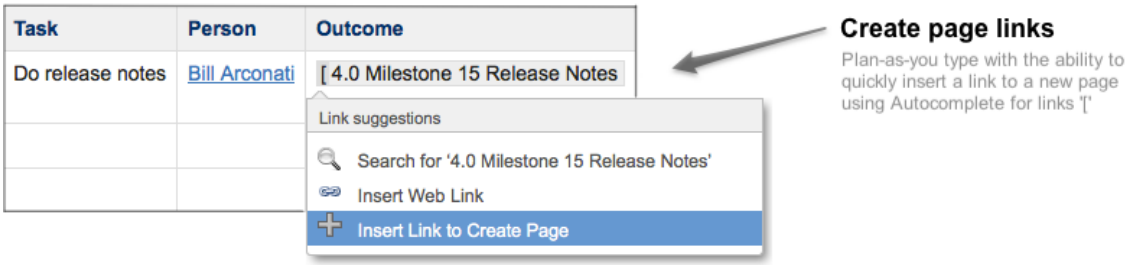
5

Autocomplete Improvements

Autocomplete uses wiki markup syntax to quickly link to content, embed images and other media and insert macros into the page. If you haven't experienced autocomplete, you should see this blog post. Be sure to try th following:

New Page Links

Quickly insert a link to create a page with Autocomplete for links. Simply type '**[**' in the editor and as you type, Confluence will display a Create Page link if a page with that title does not already exist in your current space.



Instant Link, Media and Macro Creation

Type [, ! or { in the editor to add various kinds of content to your page:

- The first item in the list is pre-selected to make editing even faster.
- The macro autocomplete list now loads much faster.
- The macro autocomplete list now inserts most macros directly, without launching the Macro Browser, unless the macro requires a parameter.

6

Introducing Confluence Mentions

Confluence 4.0 includes the new Mentions feature. This allows you to easily bring in collaborators to a conversation: if you are mentioned in any Confluence content (a page, blog, comment or status update), you w be notified by email.

To mention someone, type @ and their name, when editing. Mentions will first suggest people you are followin in your network, so you can quickly find and involve your friends.

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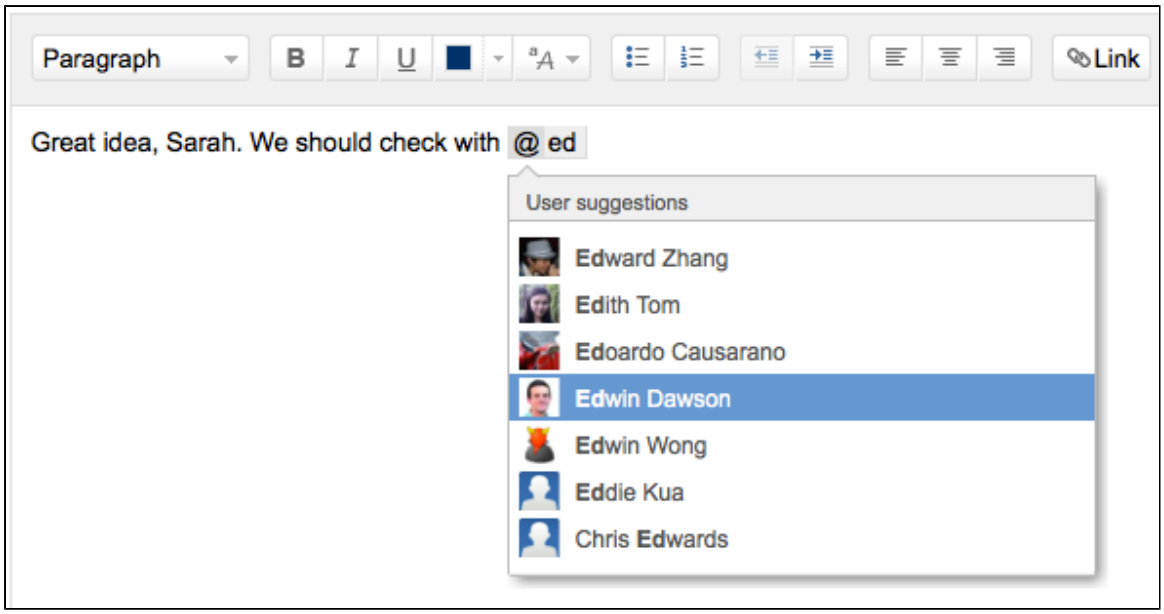


7

Improved Table Operations

We've made table operations better in Confluence 4.0 with the following features:

New In-Context Table Toolbar

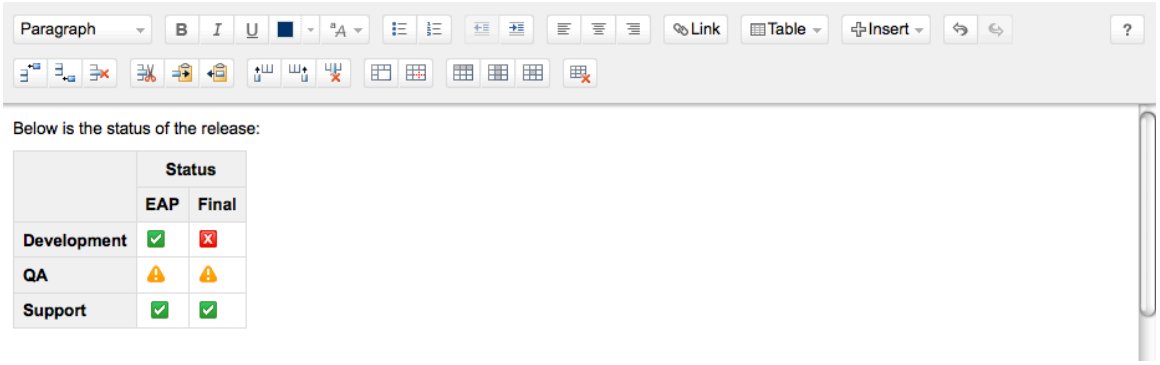
The new table toolbar removes the need for a context menu and only appears when you add a table to the pag

New Table Operations

New table manipulation buttons are available for highlighting discrete cells, rows or columns and for copying or pasting rows.

Merge and Split Table Cells

You can now merge and split cells in a table. This feature satisfies the single most popular issue on our issue tracker!



8

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Improved Page Comparison Functionality

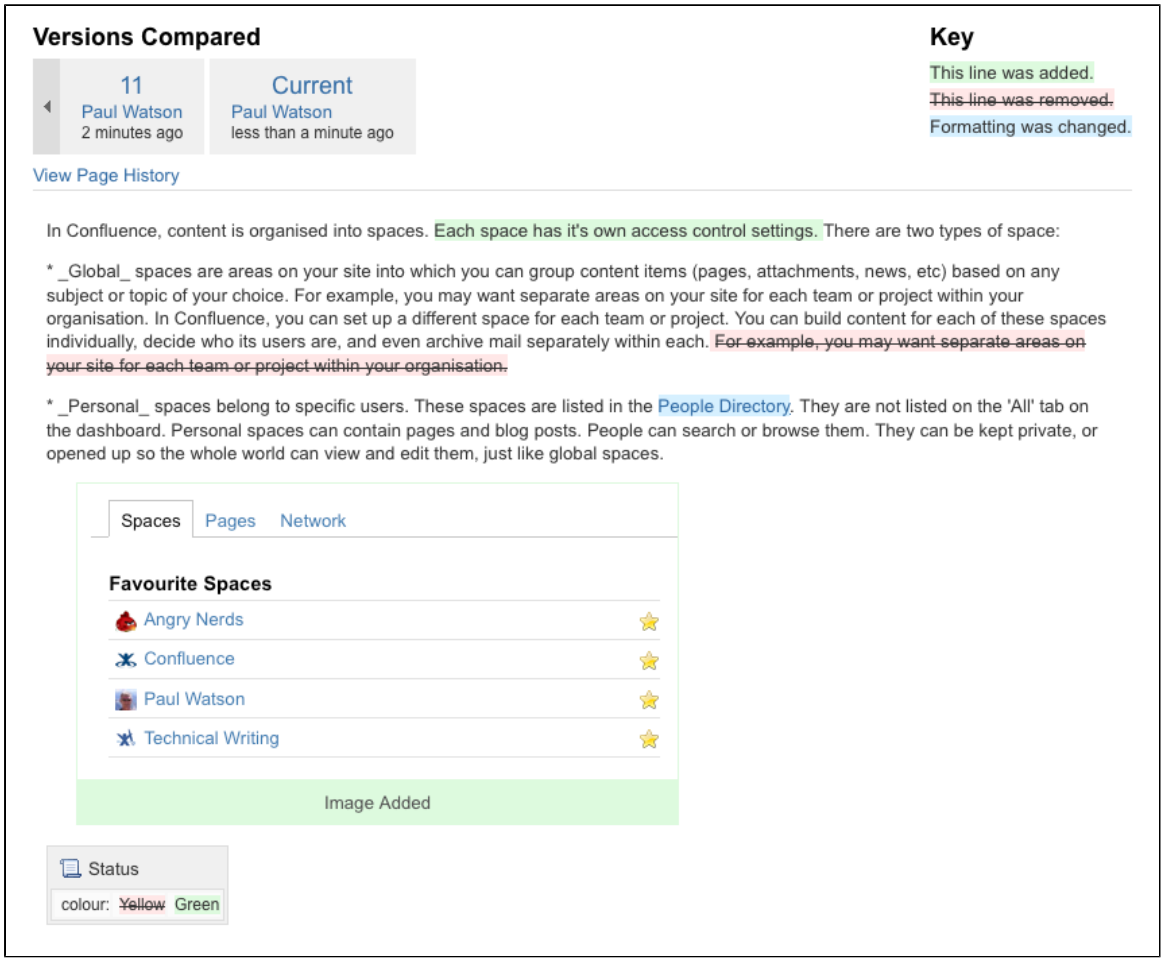
We've got a better way to view changed content in Confluence.

Improved Page Diffs

We've simplified page diffs to make them easier to read. Additionally, page diffs now show changes to both formatting and macros.

Diffs in Email

Where possible, email notifications now show page differences as they appear in Confluence. These come through with the diff colour coding.



9

New Email Design

All email notifications in Confluence now have a new design. This works in major email clients as well as on the iPhone.

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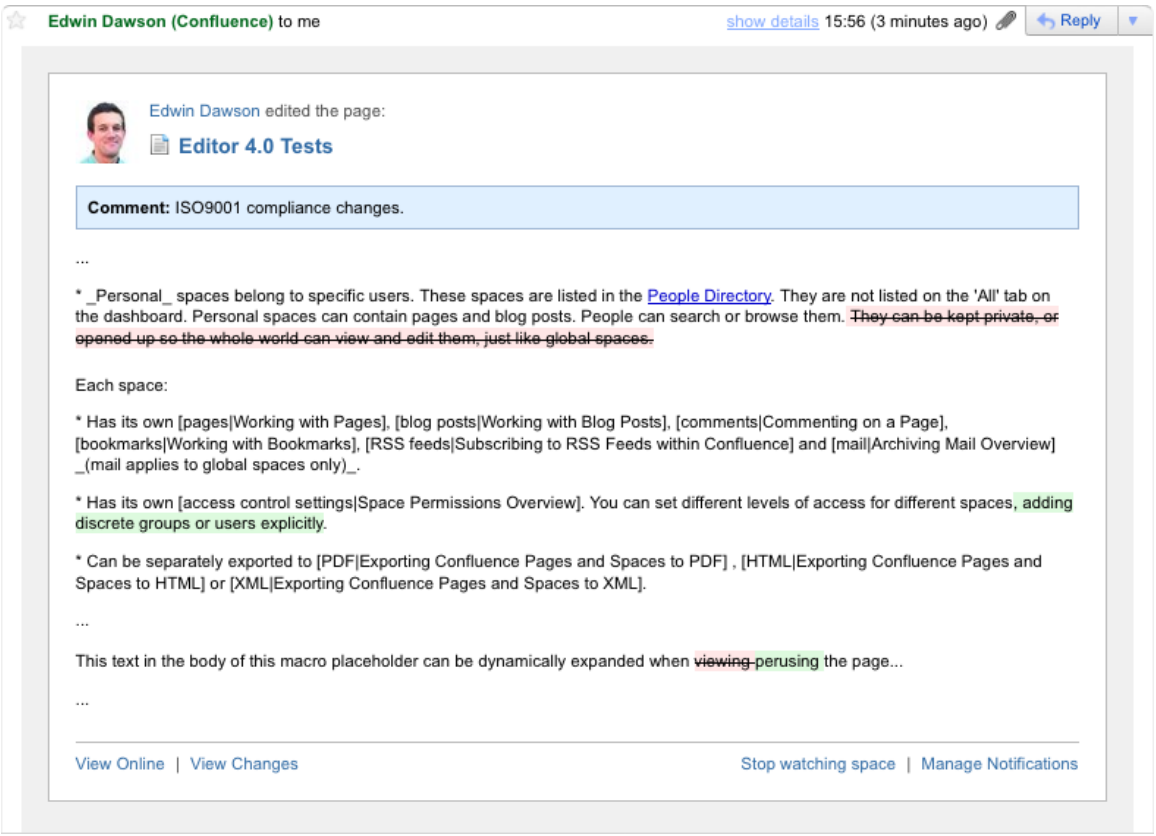


10

New Editor Plugin Points for Developers

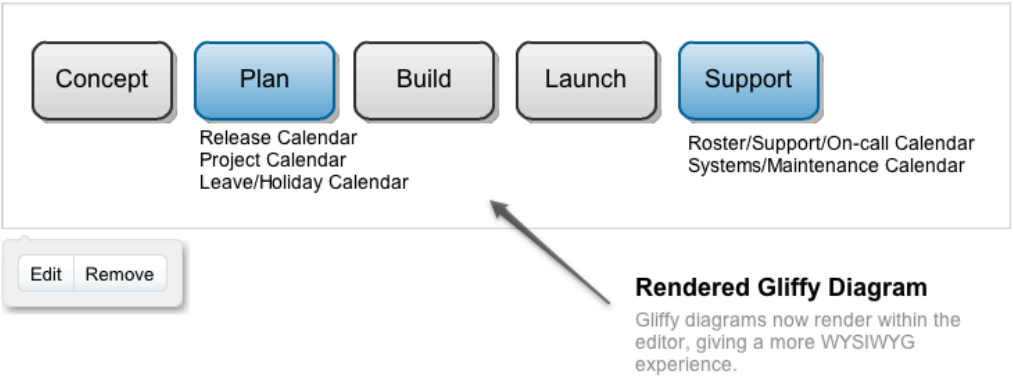
We've added more editor plugin points for developers. Notable improvements include:

Extend the Macro Property Panel

Plugin developers can add buttons to the Macro Property Panel in the editor.
For example, insert a Gliffy diagram or see the tutorial on how to do this.

Render an Image in the Macro Placeholder

A plugin developer can render an image instead of a placeholder for bodyless macros. Here is an example, showing a Gliffy image rendered inside the editor:



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For more information, check out the tutorial on how to do this.

Custom Parameter Rendering in Placeholders

You can choose to display any parameter in the macro placeholder in the editor, instead of having the placeholder automatically show the first few parameters.

New Pluggable Format Menu

Plugin developers can add items to the editor's Format menu. See this tutorial for details.

11

Other Improvements

As always, we have made various small improvements to Confluence screens and functionality.

- **Administrator's task list in the Admin Console**
  This new task list in the Admin Console helps administrators get started after a new install.
- **New keyboard shortcuts:**
  - **CMD+S** to save a page from the change comment field.
  - **CMD+SHIFT+e** to preview when you are in the editor; hit 'e' to get back to the editor.
  - **CMD+SHIFT+d** to display the Wiki Markup dialog.
- **Better Image Handling**
  In the Insert Image dialog, we've introduced the Search tab so you can insert images from other pages. And all images now embed as clickable thumbnails.
- **Option to disable the "secure" cookie**
  When using HTTPS, you can disable the "secure" cookie, just for the login page.
- **Help tips in the administration screens**
  The help tips have been moved into the field descriptions.
- **Backup and Restore page**
  The Backup and Restore page has been redesigned.
- **404 page**
  The 404 page now has a dashboard breadcrumb.

12

Infrastructure Changes

This release includes a number of improvements in the APIs and under the covers as well.

- **Support for Chrome**
  We now offer support for Chrome in Confluence 4.0. See the upgrade notes for more information about browser support.
- **API Changes**
  We have disabled the getPage() and getBlogEntry() read methods in the XML-RPC/SOAP API. If you have a script that primarily reads or appends to existing pages, it will break. Creating pages and overwriting existing pages will still work.
- **Upgrade to AUI 3.4**
  Confluence 4.0 uses AUI 3.4.
- **Anti-XSS Mode**

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Anti-XXS mode is now enabled by default for plugins.

- **Mail Page Plugin**
  The Mail Page plugin is no longer bundled in Confluence.
- **Alignment and Border Parameters**
  The alignment and border properties in the macro definition template have been removed.

13

Helping You Transition to Confluence 4.0

We've created a set of resources to help you manage the transition away from wiki markup. We know your people have become experts with using wiki markup in Confluence, but we think you'll really appreciate the nev editor, and we want to make it as easy as possible for you to make the change. The change management resources are listed under the current documentation.

14

We Welcome Your Feedback

To make it easy for you to provide EAP feedback we've created a simple "Got Feedback" button in the Confluence navigation bar:

Let the Confluence team know what you think of the EAP by providing feedback!

Upgrade Notes

- **Upgrading from a previous version of Confluence.** Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you back up your Confluence Home directory and your database before upgrading.*
- When upgrading from a previous version of Confluence, if you have customised your cache settings (as documented in Cache Performance Tuning) then you may run into memory problems during the wiki to XHTML migration. We are working to fix this in a later milestone release but in the meantime you can revert your `ehcache.xml` to the default version.
  - If you still experience problems you should try reducing the 'maxElementsInMemory' attribute on each cache to a very small value such as 50.
  - **Note** that any cache changes you make to work around migration problems should only be considered temporary. You should restore caching to it's original settings again after migration has been successful.
- Note that the '**Edit Page in Word**' functionality of Confluence is being removed in Confluence 4.0.

A big **thank you** to everyone who helps us ensure that Confluence keeps getting better and better.

Confluence 3.5-rc1 ("Release Candidate 1") Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases,

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which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
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> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

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If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

Previous Betas and Milestones

- Confluence 3.5-beta3 ("Beta 3") Release Notes – 4 March 2011
- Confluence 3.5-beta2 ("Beta 2") Release Notes – 4 March 2011
- Confluence 3.5-beta1 ("Beta 1") Release Notes – 10 February 2011
- Confluence 3.5-m4 ("Milestone 4") Release Notes – 22 December 2010
- Confluence 3.5-m3 ("Milestone 3") Release Notes – 17 December 2010
- Confluence 3.5-m2 ("Milestone 2") Release Notes – 7 December 2010
- Confluence 3.5-m1 ("Milestone 1") Release Notes – 22 November 2010

Bugs fixed

- Scheduled jobs administration bug fixes
- Editor bug fixes
- Dashboard bug fixes
- User management bug fixes
- Other bug fixes

Scheduled jobs administration bug fixes

- Fixed an unhandled exception in the scheduled jobs administration screen when Gliffy is installed.
- Removed the daily backup job from the scheduled jobs administration screen. It can still be controlled via the backups screen.
- Made wording changes in the scheduled jobs administration screen.

Editor bug fixes

- Fixed drag and drop not working properly in the editor in Internet Explorer.
- Fixed position of the comment editor, which was showing below the notation guide when using the Easy Reader theme.
- Fixed JavaScript error thrown by drag and drop in IE8 when native XMLHttp support is disabled.

Dashboard bug fixes

- Added backwards compatibility with 3.4 for dashboard-recently-updated macro parameters.
- Fixed problem: Unable to select certain category labels with special characters on the dashboard spaces and updates lists.

User management bug fixes

- Improved incremental license counting, so the licensed user count is now accurate immediately after adding or removing users.
- The old-style seraph group joining authenticators will now work with the new user management system, so users don't have to edit their seraph-config.xml to get Confluence 3.5 working. We still recommend customers use the standard Confluence (or Crowd SSO) authenticators, and configure whether users from their directories should join groups when they log in through the User Directories administration console.
- Fixed migration of local groups with LDAP users.

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Other bug fixes

- The "what's new" dialog will no longer show for milestone and beta development releases.
- Comments are back to being correctly imported during a site or space restore.
- Better handling of failure to create unique constraint in DB2.
- Fixed: Mail servers configured before Confluence 2.8 trigger ClassCastExceptions when extracting email from name.
- French and German translations have been updated for 3.5.
- Space directory filter no longer removes search results on every keystroke.
- Space Directories will now show in two-column layout on screens with a resolution as low as 1024x768.
- Upgraded to Social Bookmarks plugin 1.3.8, to resolve sort ordering issues.
- Reduced memory footprint when loading bundled plugins and the demo site.

Known Issues

- The bundled Support Tools plugin does not start up and outputs a stack trace to the server logs at startup. This will be fixed in the final release.

Confluence 3.5-beta3 ("Beta 3") Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

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- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

Previous Betas and Milestones

- Confluence 3.5-beta2 ("Beta 2") Release Notes – 4 March 2011
- Confluence 3.5-beta1 ("Beta 1") Release Notes – 10 February 2011
- Confluence 3.5-m4 ("Milestone 4") Release Notes – 22 December 2010
- Confluence 3.5-m3 ("Milestone 3") Release Notes – 17 December 2010
- Confluence 3.5-m2 ("Milestone 2") Release Notes – 7 December 2010
- Confluence 3.5-m1 ("Milestone 1") Release Notes – 22 November 2010

New Features and Improvements

Highlights of this release:

- Improved Crowd SSO configuration
- Bugs fixed

Improved Crowd SSO configuration

Confluence 3.5 now ships with everything you need to configure SSO when using a Crowd server for centralised user authentication. To enable this, administrators just need to:

1. Ensure the Crowd directory is configured in the User Directories administration console
2. Configure crowd.properties with the details for the Crowd server (including the application name and

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password)

3. Configure seraph-config.xml with the new SSO authenticator:

```
<authenticator
class="com.atlassian.confluence.user.ConfluenceCrowdSSOAuthenticator"/>
```

Customers with an existing Confluence 3.4 SSO configuration should not need to change anything for this to work, but we recommend all customers using SSO switch to use this new authenticator.

Bugs fixed

- JIRA Issues macro can now show on a single line when it shows a single issue.
- Resolved issues migrating user configurations with multiple LDAP directories configured.
- Crowd System Password Encoders is now properly listed in the System Plugins section of the plugins administration console.
- Upgraded to Share plugin 1.5, to resolve javascript errors in IE7.
- Upgraded to Drag and Drop plugin 1.0.16, to resolve more corner cases.
- Fixed font sizes and colours in the Macro Browser and Preview dialogs.
- Fixed square buttons on dialogs on Mac OSX
- Insert image dialog shows previews once again
- Added migration for mail server configurations so customers with mail settings unchanged since Confluence 2.7 will still be able to send emails.
- Fixed invalid HTML markup for dashboard updates with profile pictures disabled

Confluence 3.5-beta2 ("Beta 2") Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

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Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

Previous Betas and Milestones

- Confluence 3.5-beta1 ("Beta 1") Release Notes – 10 February 2011
- Confluence 3.5-m4 ("Milestone 4") Release Notes – 22 December 2010
- Confluence 3.5-m3 ("Milestone 3") Release Notes – 17 December 2010
- Confluence 3.5-m2 ("Milestone 2") Release Notes – 7 December 2010
- Confluence 3.5-m1 ("Milestone 1") Release Notes – 22 November 2010

New Features and Improvements

Highlights of this release:

- Support Tools Plugin
- Improved Share Button
- Improved Delegated LDAP User Directory Configuration
- Bugs fixed
  - Space Directory bug fixes
  - Other bug fixes
- Improvements for developers
- Known issues

Support Tools Plugin

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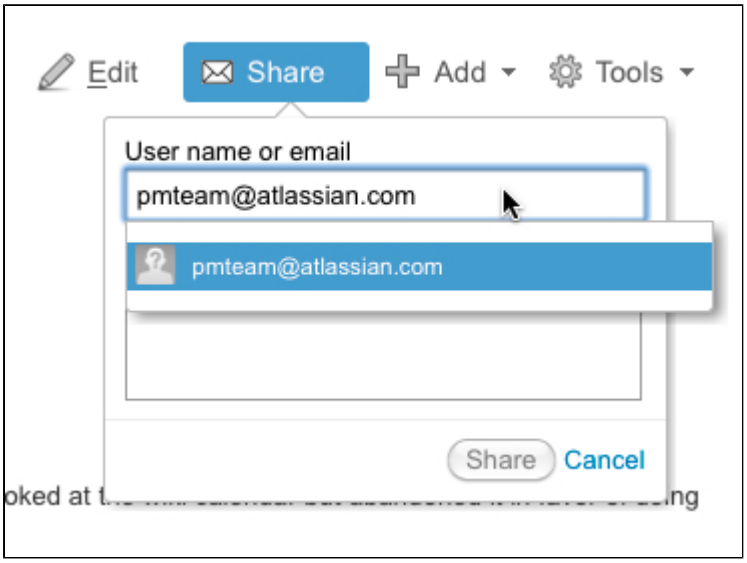
Support's Support Tools Plugin is now bundled into Confluence. It provides a log analyser to help sysadmins identify known issues with their instance, and a new improved support request feature.

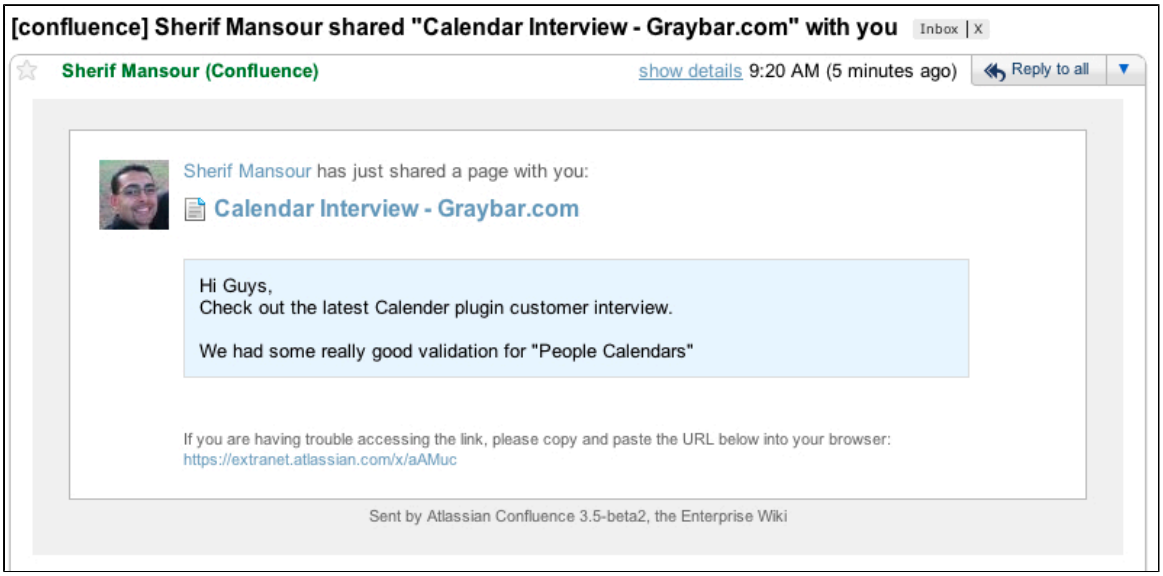
Improved Share Button

We've improved the new "Share" button introduced in Confluence 3.5. Notable changes:

- **Share with email**
  You can now easily share a page with someone by entering just their email address.



- **Share for blog posts**
  The Share button now works for blog posts as well as pages.
- **New email style and short link in email**
  We've been using the Share button as an opportunity to explore some new email notification designs.



We hope to follow this format for all the other email notifications in the near future. Additionally, to make sure your link doesn't break we now email users the "short link" for a Confluence page instead of the full page URL.

Improved Delegated LDAP User Directory Configuration

We have added an option to copy users automatically from the LDAP server to Confluence when they authenticate for the first time. Copied users can also be assigned automatically to default groups.

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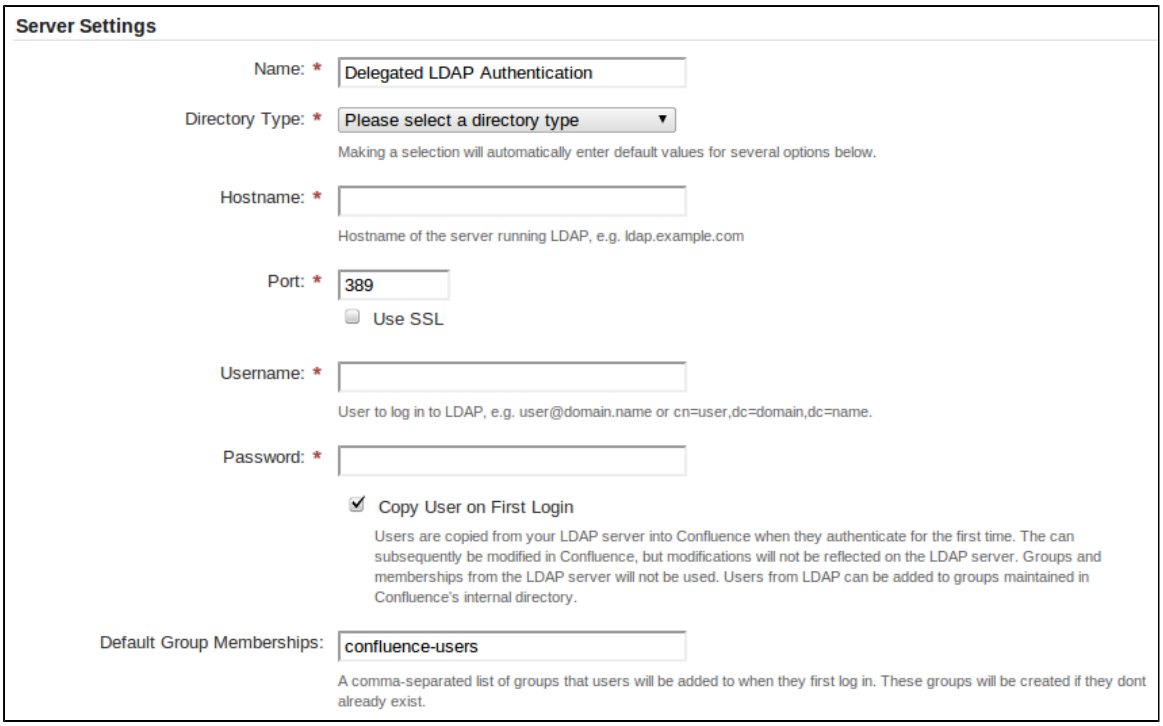
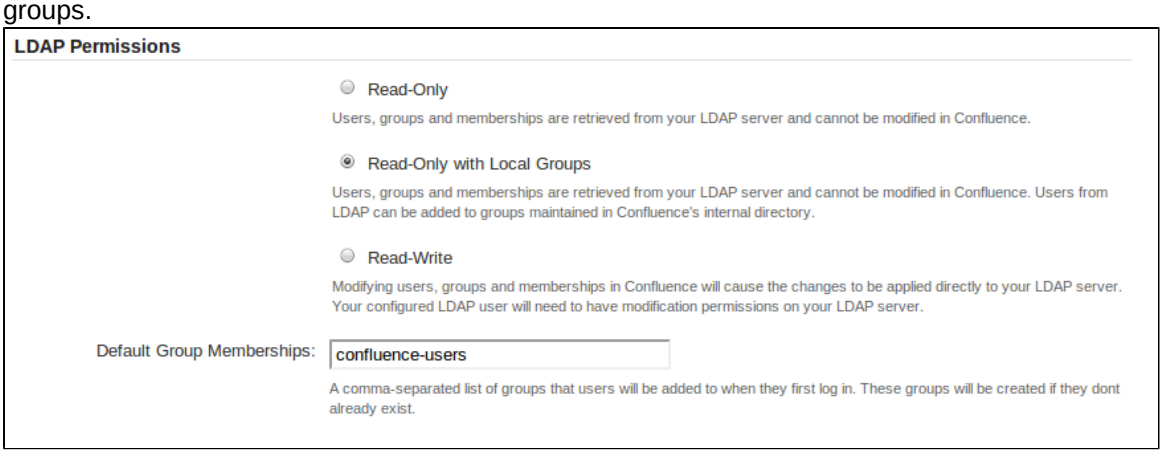


Users in directories marked as "Read Only, with Local Groups" can also automatically be added to default groups.



Bugs fixed

Space Directory bug fixes

- Search filters now fire more reliably, and results are now sorted by the DB, reducing result rendering time
- Only team categories are shown for each space, rather than personal labels or favourites.
- We now show personal space icons rather than the generic space icon.
- Pagination fixes

Other bug fixes

- Performance results are much improved across the board.
- Probably the last ever WYSIWYG round-trip bug fix: the HTML macro now safely round-trips its content (CONF-8441).
- The demonstration space (example site) has been updated with content for Confluence 3.5
- Reshuffled administration console entries, so that security is no longer the top of the list.
- Fixed a bug with watch all blog posts for space receiving notifications for any change, not just blog posts. Also fixed who is listed as watching the space, rather than watching just the blog posts on that space.
- Fixed notification emails showing the wrong unsubscribe links for space blog watches.
- The username for anonymous users can now be translated for email notifications.
- Notifications are now sent using the right locale.

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- Global logo descriptions will now be autogenerated, if none was found.
- Errors from the old lucene index format should now be much less verbose or worrying.
- Child page lists are now loaded via AJAX, rather than on initial page render. Users no longer have to wait for a page refresh to expand this list.
- Fixed a bug where malformed label names were always reported as being too long.
- Upgraded to Tomcat 6.0.32 in the Confluence distribution.
- Upgraded to Social Bookmarks Plugin 1.3.7.
- Upgraded to Drag and Drop Plugin 1.0.15.
- Upgraded to Plugin Framework 2.7.1, to reduce the amount of logging for some minor issues.

Improvements for developers

- Added support for EventPublisher @EventListener style listeners to the listener plugin module descriptor. Developers can now configure their listeners in their atlassian-plugin.xml using the standard:

```
<listener name"Something Happened Listener" key="SomethingHappenedListener"
class="com.example.SomethingHappenedListener">
    <description>Listener for something happened events</description>
</listener>
```

Known issues

Local users cannot log in when using Crowd or Delegated LDAP

Whatever directories appear after a Crowd or Delegated LDAP directory in the User Directories admin UI will not be consulted, as these two directories currently throw an authentication-failed error, rather than a user-not-found error for users they do not contain. This is being fixed in Crowd now, and will be included in the next build.

Migration error when importing from backup (CONFDEV-3172)

The performance fix for caching crowd Application objects introduced this issue. It's fixed in Crowd now, and will be included in the next build.

What's New showing for beta software

The What's New dialog should not be enabled on a beta install of Confluence, but it is. We're investigating why, and will have a fix before we build another beta/milestone.

Local groups are not imported when doing in place upgrades or restoring from backup

Users currently have to be manually reassociated with their old groups. We're working on fixing it!

Note about CONFDEV issues

The Confluence team is using an internal JIRA project for tracking development with GreenHopper. The CONFDEV issues refer to our internal tracking numbers for user stories or bugs discovered and fixed within the scope of a release.

Confluence 3.5-beta1 ("Beta 1") Release Notes

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a

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snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

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Upgrade Procedure

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upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

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Previous Milestone(s)

- Confluence 3.5-m4 ("Milestone 4") Release Notes – 22 December 2010
- Confluence 3.5-m3 ("Milestone 3") Release Notes – 17 December 2010
- Confluence 3.5-m2 ("Milestone 2") Release Notes – 7 December 2010
- Confluence 3.5-m1 ("Milestone 1") Release Notes – 22 November 2010

New Features and Improvements

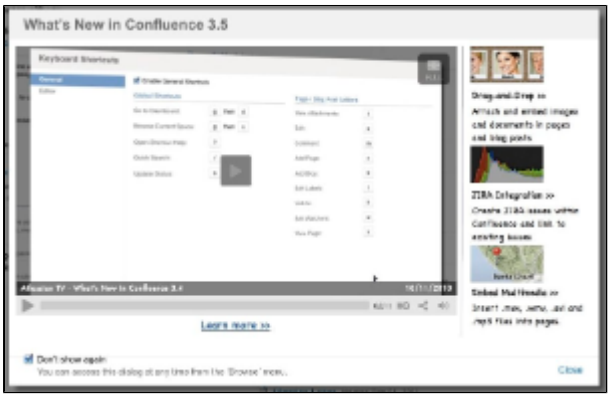
Highlights of this release:

- "What's New"
- Revised Dashboard Layout
- New Insert JIRA Issue dialog
- Improved JIRA issues macro
- Share a Page
- More Notification Improvements
  - One-click 'stop watch' links
  - Even more improvements
  - Space Blog Watches
- Drag-and-Drop Improvements
- New {code} macro
- Space Directory Improvements
- Scheduled Job Administration
- Applinks
- Performance / Stability
- Security
- Other improvements
- Small Improvements Gallery

"What's New"

When a user first logs in to Confluence 3.5, they'll be presented with an AUI dialog box promoting new product features. (We aim to eventually work this feature into all our products.)

The content on this dialog is retrieved from Atlassian's web servers - the following screenshot is a mockup of what the final dialog box might look like.



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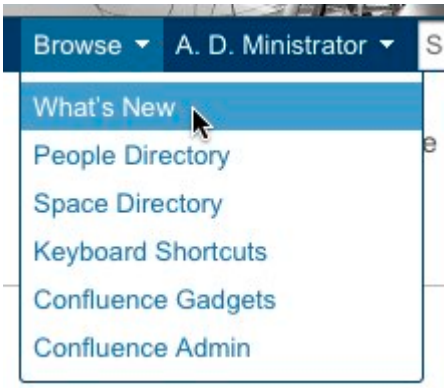
Like other products that encourage you to actually read their release notes before continuing, the What's New dialog will keep ~~annoying~~ appearing on login until the user clicks "Don't show again". However, you can always access this dialog box again from the Browse Menu:



Revised Dashboard Layout

Previously in Confluence, you could filter the "Recently Updated" section on your dashboard by selecting a tab in the spaces list. For example, clicking on the Favourite tab in the spaces list on the left would limit recent updates on the right to your favourite spaces only).

This was a source of confusion for many users not expecting a tab change on the bottom left to update the recent updates on the top right.

To address the issue, the recent updates section has been given its own set of tabs (which now function independently of the spaces list). In the process, the tabs were also given a face lift and the recent updates section now takes up the entire right hand side of the dashboard.

New Insert JIRA Issue dialog

If you have configured one or more application links (aka 'applinks') to a JIRA server, you can insert a JIRA Issue link into your Confluence page while you're editing the page. You can access this feature via a new JIRA button on the editor toolbar.

When you click it or press Ctrl + Shift + J, you get:

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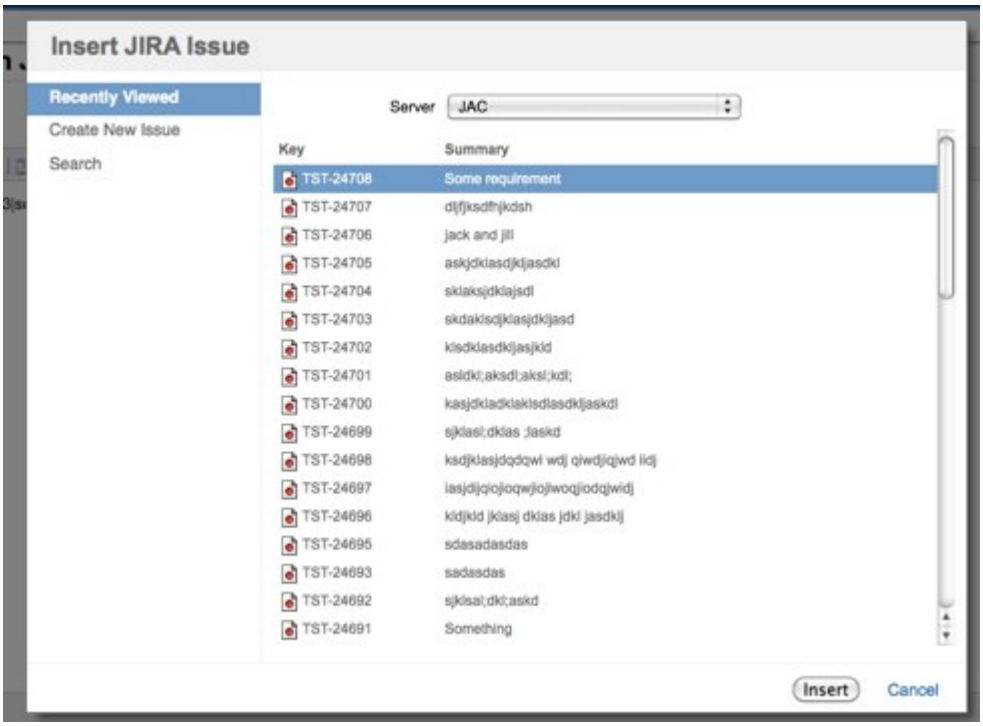

From here you can:
- Embed recently viewed issues
- Create a new issue
- Search for issues

Improved JIRA issues macro

Completely overhauled to support applinks, the JIRA issues macro now supports a single issue key, multiple comma separated issue keys or a JQL query. We've also changed the macro to use the name "jira" (although "jiraissues" will still work).

Finally, the macro now supports OAuth-based authentication from Confluence to JIRA. Note that all new features of the JIRA issues macro require a JIRA application link to be configured.

Here are some examples of using the improved JIRA issues macro:

What you type	What you get
{jira:JRA-9}	
{jira:assignee=currentUser()}	a table with all issues assigned to you
{jira:JRA-9,JRA-10,JRA-12}	a table containing the individual issue keys listed

Share a Page

How many times have you copied a page link, pasted it into an email and sent it off to someone with a little note? The new "Share a page" feature makes this common activity super quick.

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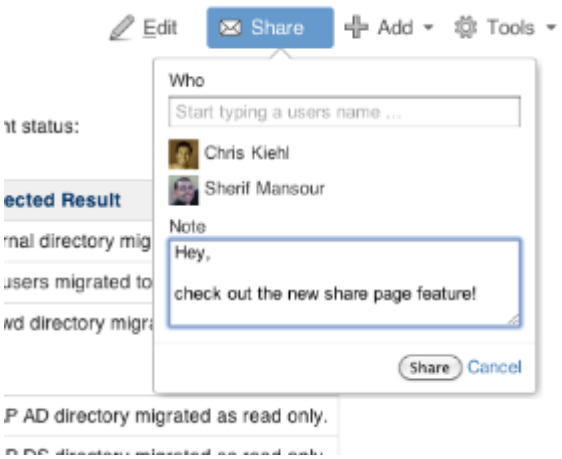


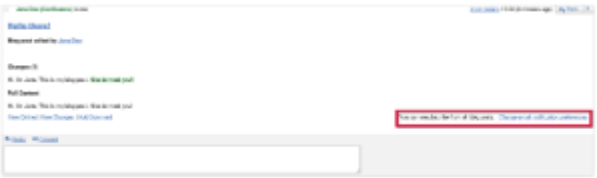
More Notification Improvements

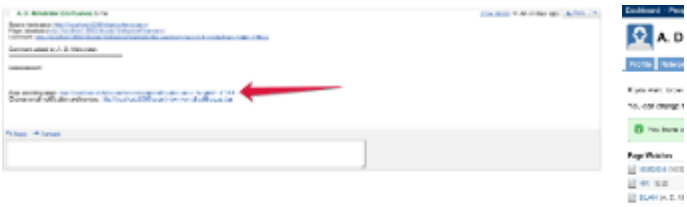
One-click 'stop watch' links

- **Ask and you shall receive** - Clicking the 'Stop watching this page' link in email notifications now automatically removes the watch for you without requiring a confirmation. You can still undo this if you clicked the link by accident.

Even more improvements

- **Straight to edit mode** - Clicking the 'Change notification preferences' link now takes you directly to edit mode for your email preferences.
- **More information** - We've added more information at the bottom of email notifications for when you're watching all blogs.
- **Links in Plain text** - The stop watch links have been made available for those of you receiving emails in plain text.





Space Blog Watches

CONF-6478 is a highly voted for issue, with over 100 votes. The idea is that blog posts are newsworthy updates so you might want to get email notifications for new blog posts without getting emailed for all other activity in the space.

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Drag-and-Drop Improvements

Powered by HTML 5 - Drag-and-drop is now powered by HTML5. That means:

- Drag-and-drop works in all browsers, including Chrome!
- If you use a browser that fully supports HTML 5, you'll never get that annoying prompt to install Gears again. It just works.

Drag-and-drop multimedia files - Confluence 3.5-m4 introduced the Multimedia Macro. In this release we added drag and drop - Dragging a multimedia file onto a page will automatically insert the multimedia macro for you.

New {code} macro

The newcode macro project has now been bundled into Confluence, replacing the original code macro in atlassian-renderer. The new code macro has a number of improvements over the original macro (wider syntax support, copy/paste without getting line numbers in the clipboard).

Space Directory Improvements

We've improved the Space Directory since last milestone. Notable additions since then are:

- Clicking on the space category now switches tabs to that category
- Partial name search in space directory

Scheduled Job Administration

A new Confluence administration screen to monitor, and manage scheduled jobs. This is available through the "Scheduled Job Administration" link in the Confluence admin console. Here are some screenshots:

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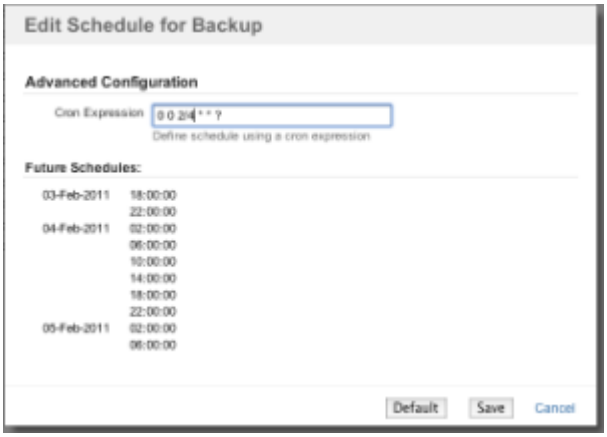
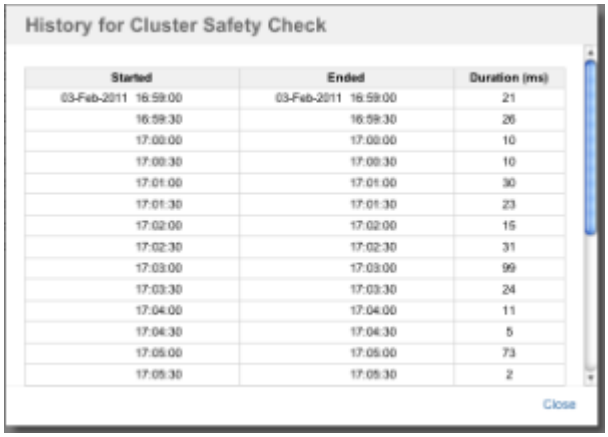




Applinks

The first cut of applinks has been integrated into Confluence. We will use this as the basis for delivering deeper JIRA integration later in this release.

Performance / Stability

A cache has been added to store page diffs. This should prevent the situation where RSS feeds with diffs can slow down Confluence.

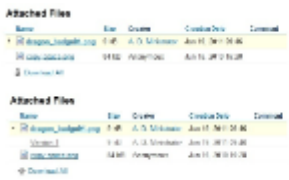
Security

The underlying user management code has been updated so that it now enforces permissions on directories at a low level. This means remote API calls that create or modify users or groups on read only directories will fail and no longer write to the directory as they did in previous 3.5 milestones.

Other improvements

- Fix CSS vendor prefix antipattern
- Multimedia macro UX/UI improvements
- Media items in the image/media autocomplete now display an appropriate icon
- Change Team Labels to Space Categories
- Change blue collapsing arrows to grey
- Display the default welcome message on the General Configuration Admin page
- Display default contact administrator message on General Configuration admin page
- Fix for broken fonts on Windows
- Upgrade to AUI 3.3
- Fix and improve printing DOC theme in IE7
- Log in and Sign up links misaligned
- Capitalise the first letter of category labels in the spaces list and recently updated dashboard macros

Small Improvements Gallery



Bugs fixed

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> **MySQL Configuration Change Required**
>
> The default transaction isolation mode of MySQL will cause issues with missing LDAP and other remote directory user permissions, and is no longer supported. Users must reconfigure their MySQL instances to use READ_COMMITTED instead. See MySQL Crowd configuration for instructions.

User management bug fixes

- CONFDEV-2404 - Fix migration of crowd user directories
- CONFDEV-2068 - Infinite redirect during login for users with confluence admin but not system admin permission
- CONFDEV-1638 - Fix duplicate initialisation of application object
- CONFDEV-1414 - User Directories menu option should only appear for system administrators

Drag and drop bug fixes

- CONFDEV-2711 - Drag and Drop should indicate multiple file uploads
- CONFDEV-2155 - Drag and drop produces incorrect file size if the file already exists

Other bug fixes

- CONFDEV-2678 - Blog comment links contain {0}
- Improved Thumbnail Rendering
  - Thumbnails for transparent images (PNG & GIF) now render properly.
  - Thumbnail rendering does not cause OOM errors even if the image is very large by delegating to a stream based renderer (this should solve the problem mentioned in Studio Multi-Tenant Reliability Proposal)

Improvements for developers

- CONFDEV-2730 - Bump AUI version from 3.3.0 to 3.3.1
- CONFDEV-2359 - Crowd upgraded to 2.2.0-m4. Embedded Crowd upgraded to 1.0-alpha26

Known Issues

- Insert JIRA issue dialog does not work if you are running confluence on the root context path. For example, http://servername, instead of http://servername/confluence. You can download a new version here that fixes it
- Imports from XML site backups may not work under certain circumstances if running an Oracle database.
- Installers for Mac and Windows have not been released for this version. They will be released for beta 2.

Note about CONFDEV issues

The Confluence team is using an internal JIRA project for tracking development with GreenHopper. The CONFDEV issues refer to our internal tracking numbers for user stories or bugs discovered and fixed within the scope of a release.

Confluence 3.5-m4 ("Milestone 4") Release Notes

> **For testing use only**
>
> Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin

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developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

Previous Milestone(s)

- Confluence 3.5-m3 ("Milestone 3") Release Notes

Features

Notification Improvements

We have continued work further notification improvements in this milestone. Notifications about changes are now sent with From address of the email including the name of the user who made the change. This behaves the same as in JIRA and should make it a lot easier to decipher Confluence notifications in your inbox.

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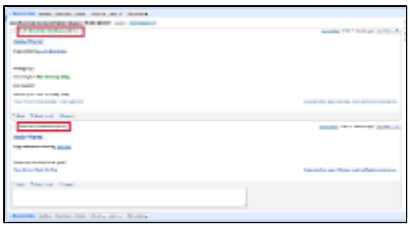


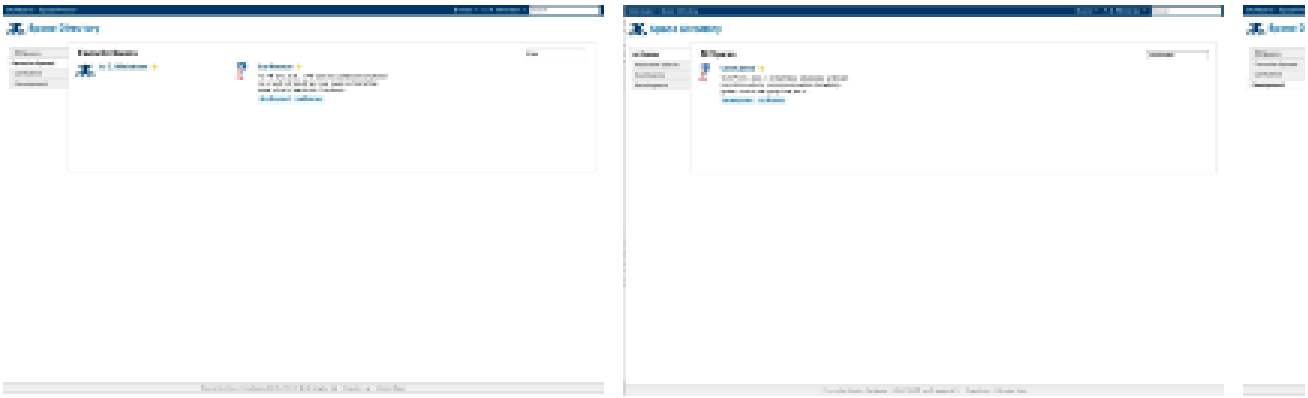
The format of the From address used in emails can be customised by Confluence administrators under the Mail Servers configuration, using the same formats as in JIRA. The default format is “<user’s full name> (Confluence)”.

Automatic Language Detection

This milestone includes the ability to select a user's preferred language automatically, by respecting the Accept-Language header which the user's browser sends. Unless a language preference has been made in the profile settings, the closest matching language to the one suggested by the browser will be used.

New Space Directory

One of the biggest problems facing customers with large installations of Confluence is the scalability of the dashboard. It's a well-known problem that the list of spaces on the dashboard doesn't scale for sites with more than a few dozen spaces. We've added a new screen called the Space Directory where you can browse every space without having to use the Dashboard.



The Space Directory will eventually make the 'All' list of spaces on the dashboard obsolete, and make the performance of the dashboard much better for our large customers.

Multimedia Autocomplete

We have also continued work on editor improvements for Confluence 3.5. In this milestone, you can now embed multimedia files into your page via autocomplete. Try it out by hitting “!” in the editor and entering the name of a movie file attached in Confluence.

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Remote API for Watching and Managing Watchers

We've added a bunch of new methods into the Confluence SOAP and XML-RPC APIs for watching and managing watchers. The new methods in the remote API mimic the watch functionality exposed through the UI:

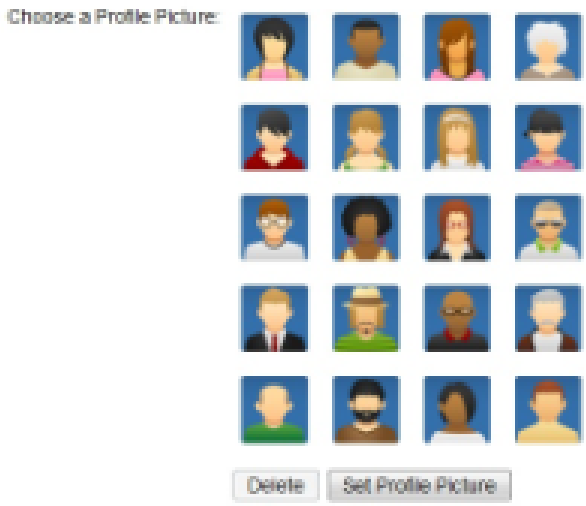
- *boolean watchPage(String token, long pageId)* – watch a page or blog post, returns false if a space, page or blog is already being watched
- *boolean watchSpace(String token, String spaceKey)* – watch a space, returns false if the space is already watched
- *boolean watchPageForUser(String token, long pageId, String username)* – add a watch on behalf of another user (space administrators only)
- *boolean isWatchingPage(String token, long pageId, String username)* – check whether a user is watching a page (space administrators only, if the username isn't the current user)
- *boolean isWatchingSpace(String token, String spaceKey, String username)* – check whether a user is watching a space (space administrators only, if the username isn't the current user)
- *RemoteUser[] getWatchersForPage(String token, long pageId)* – return the watchers for the page (space administrators only)
- *RemoteUser[] getWatchersForSpace(String token, String spaceKey)* – return the watchers for the space (space administrators only).

There's also a very obscure old method called getBlogEntryByDayAndTitle which only allowed you to look up a blog post *in the current month*. We've added a new method to look up *any* blog post by date and title:

- *RemoteBlogEntry getBlogEntryByDateAndTitle(String token, String spaceKey, int year, int month, int dayOfMonth, String postTitle)* – retrieve a blog post by specifying the date it was published and its title.

Small improvements

- CONFDEV-1792 - Change edit-page "comment" to "what did you change? (user testing showed that "comment" was confusing)
- CONFDEV-1614 - Change link styling in Confluence
- CONFDEV-1409 - New set of avatars
- CONFDEV-977 - Add tips at the bottom of all dialogs for which there's a keyboard shortcut



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Bug fixes

Multimedia Macro bug fixes

- CONFDEV-1955 - Fixed the help link in the multimedia macro

User management bug fixes

- CONFDEV-1682 - Attempting to remove an LDAP group in Confluence UI throws an unhandled exception
- CONFDEV-1499 - Update the message shown to users when there are more users than the license allows

Other bug fixes

- CONFDEV-1936 - Removed the BundleUserMacrosUpgradeTask upgrade task as it wasn't needed
- CONFDEV-1924 - Fixed broken personal sidebar layout in documentation theme
- CONFDEV-1855 - {attachments} macro ordering reversed
- CONFDEV-1840 - Support zip should no longer be created when atlassian-user.xml doesn't exist
- CONFDEV-1805 - External gadget urls don't work for https
- CONFDEV-1742 - LuceneUtils has very verbose warnings when index is using old format

Improvements for developers

- CONFDEV-1896 - Updated AUI to 3.2.1
- CONF-21462 - Plugin authors can now sign their plugins
- CONFDEV-1877 - Fix Confluence in IDEA 10: webapp has compile dependency on confluence core

Known issues

- CONFDEV-2112 - Spaces with custom decorators built after 3.5-m3 fail with an error
- CONFDEV-2120 - Logos don't work in the Space Directory

Note about CONFDEV issues

The Confluence team is using an internal JIRA project for tracking development with GreenHopper. The CONFDEV issues refer to our internal tracking numbers for user stories or bugs discovered and fixed within the scope of a release.

Confluence 3.5-m3 ("Milestone 3") Release Notes

> **For testing use only**
>
> Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

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  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

Previous Milestone(s)

- Confluence 3.5 Milestone 2

Features

HTML5, character encoding and IE rendering mode

A bundle of small markup improvements have been made for Confluence 3.5-m3:

- Confluence's DOCTYPE declaration has been switched from HTML 4.01 Strict to HTML5, which is automatically strict as well.
- X-UA-Compatible is now explicitly set to EDGE, to ensure IE always renders in latest standards mode
- Character encoding is now set at the document level according to the encoding setting in General Configuration

Multimedia Macro

The new multimedia macro has been expanded to support many more file types. You can now embed MP3, MOV, AVI files and many more. Try it out by searching for 'multimedia' in the macro browser.

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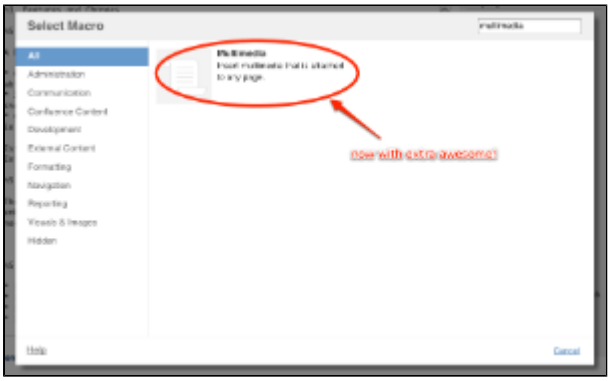


User management improvements and bug fixing

- CONFDEV-1642 - Membership caching handles nested groups correctly
- CONFDEV-1636 - Build against Crowd 2.1.0 release version
- CONFDEV-1441 - Test migration of user preferences when upgrading
- CONFDEV-1318 - Handle exception when removing a directory that is synchronising

Notifications bug fixing

- CONFDEV-1819 - Unwatching a page via email no longer says "Stopped watching 'null'"

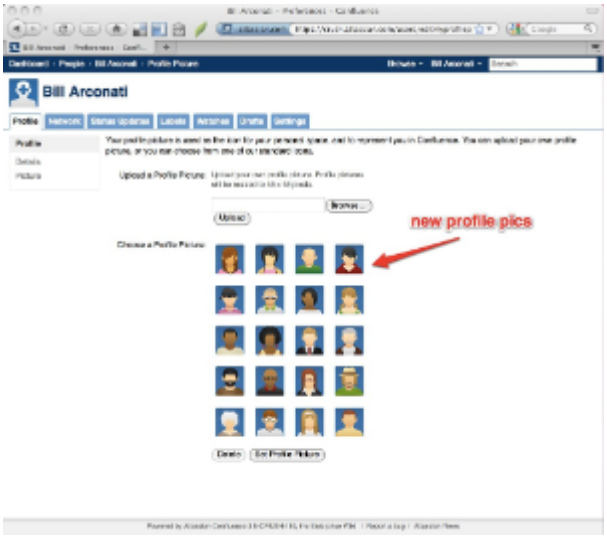
Administrative improvements

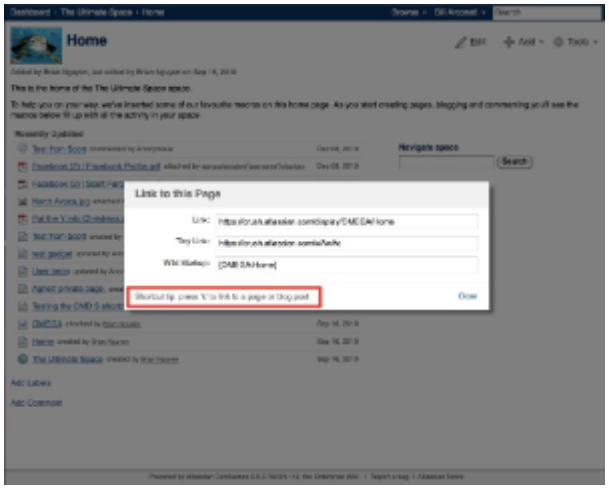
- CONF-3987 - Confluence now respects `atlassian.mail.senddisabled` and `atlassian.mail.fetchdisabled`, as in JIRA
- CONF-21323 - Improved RSS feed contextual logging information (also in 3.4.5)

Small improvements

- CONFDEV-977 - Tips displayed for dialogs with keyboard shortcuts
- CONFDEV-1023 - Title colour attribute added to panel macro
- CONFDEV-1013 - Include page macro is now able to render blog posts
- CONFDEV-1409 - New set of standard profile pictures

Small improvement screenshots





Bug fixes

- CONF-21144 - Copy and paste of emoticons is working again (also in 3.4.5)

Performance Fixes

- CONF-21376 - Improve performance of attachments in RSS feeds (also in 3.4.5)

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Known issues

- CONFDEV-1924 - Personal sidebar looks broken in documentation theme

Note about CONFDEV issues

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Confluence 3.5-m2 ("Milestone 2") Release Notes

> **For testing use only**
>
> Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

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However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

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Downloads

All development releases are available from the development releases page on the Atlassian website.

Previous Milestone(s)

- Confluence 3.5 Milestone 1

Features

Improved Notifications

Autowatch your content

How many times have you created a page or blog post and then forgot to watch it? Confluence now lets you automatically watch any pages you add, edit or comment on. This is **turned on by default** for all new users and upgraded users (yes, that means you!), and you can turn off autowatch via your Email Settings page.

Enabling this setting will improve your ability to keep track of your contributions on the wiki:

- Automatically watch any page/blog post that you add
- Automatically watch any page/blog post that you edit
- By default, have the the 'watch this page' checkbox ticked when you write a new comment.

Easier to stop watching content

Getting too many emails from Confluence? In this milestone, we've made it much easier to stop watching pages, spaces and users. When you get a notification email now, (most of the time) there's a handy link at the bottom allowing you to quickly unsubscribe from your existing watches. The link will change depending on why you got the email in the first place (e.g. whether you were watching the space, page or network).

The link takes you straight to your Manage Watches page (for space and page watches) or to your network page (for users you follow) and gives you a prompt to easily remove the appropriate watch:

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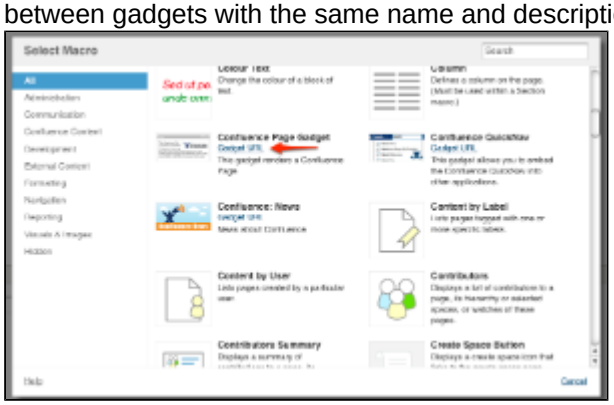
These notification improvements are the result of a 20% project by Anna Katrina Dominguez, who joined our team earlier this year. The project is still a work-in-progress, so please let us know what you think as per the *Fee dback* section below.

Multimedia Macro

Previously, the only way to embed multimedia items (videos and audio) in Confluence was through Wiki Markup. This milestone introduces a new *multimedia macro* so you can embed multimedia using the macro browser, eliminating the dependency on wiki markup. The first cut of this macro only supports SWF files but we will be adding support to more formats and advanced settings in later milestones. This macro is available via Autocomplete for Macros and the Macro Browser.

Small Improvements

- Previously, it was not possible to differentiate between two gadgets with the same name and description. We've now updated the macro browser to show a gadget's URL so users can more easily distinguish between gadgets with the same name and description (CONF-17991):



  Note: This still style will change slightly in a later milestone.
- Minor UI tweaks:
  - Black headings on the dashboard for consistency with other Atlassian applications
  - All dialog close and cancel buttons have now been changed to links

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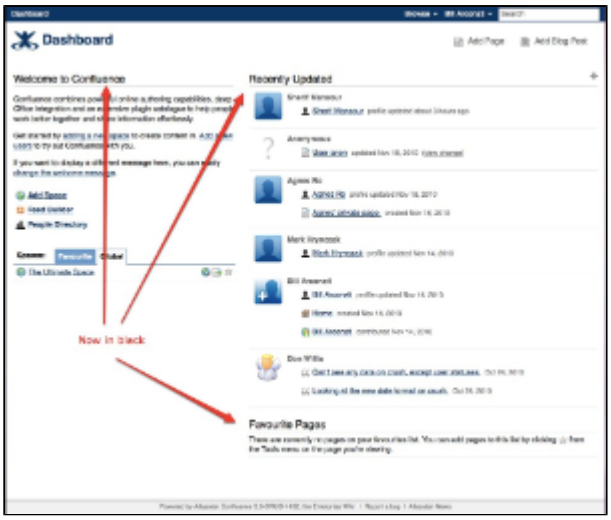

- When adding a new user macro, the template field is shown pre-populated with a simple example

- Prototype and Scriptaculous libraries have been removed. This can lead to a minor improvement in page load time.
- The number of images requested on the dashboard have been reduced leading to a small improvement in dashboard load time.

Performance Fixes

- Re-enabled caching of PropertySet results. This will allow high performance lookups of UserPreferences once again.
- Added caching for plugin module descriptors inside the plugin framework. All callers of the PluginAccessor methods that return these objects should see a noticeable improvement in lookup time.

With these fixes, page rendering is now much faster than m1 – more than 100ms in our own testing – and roughly on par with 3.4.x. Work continues to make performance even better.

Bugfixes

- CGP-153: Gadget security token is "malformed" when page is open for a long time
- CGP-155: Gadget dialog close button should be a link

Known issues

- CONFDEV-1742: Lots of error messages generated until reindex is completed
- CONFDEV-1752: Card and deck macros no longer work properly
- CONFDEV-1686: Unless you've come from an email link, the Watches page always shows 'You have

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already stopped watching "null".'

Feedback

We'd love to hear any feedback you have from testing this milestone of Confluence. Please raise any issues you discover in our issue tracker against the Confluence project with affects-version "3.5 (EAP)", or comment on this page.

Confluence 3.5-m1 ("Milestone 1") Release Notes

For testing use only

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Who should upgrade?

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Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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All development releases are available from the development releases page on the Atlassian website.

Previous Milestone(s)

This is the first milestone in Confluence 3.5 development.

Features

Improved user management – better LDAP support and more

This milestone includes the first release of the new improved user management in Confluence trunk bringing a number of significant user management improvements to Confluence:

- **Support for nested groups in LDAP, the most highly-voted issue for Confluence** (CONF-17150)
- Much improved support for LDAP integration, with configuration UI for administrators and many bug fixes
- Predefined configuration settings for all LDAP servers supported by Confluence and Crowd
- Improved performance and consistent behaviour across all remote directory types – LDAP, Crowd and JIRA – through a new database-backed storage and periodic synchronisation system
- New, faster database schema for user management with improved foreign keys, constraints and indexes
- Integrated support for JIRA as a user management system, supporting JIRA 4.2 and earlier via read-only JDBC access, and JIRA 4.3 and later via read-write REST API
- Integrated support for Crowd as a user management system, offering a new faster REST API with Crowd 2.1 and later
- Improved permission checking performance (CONF-20475)
- Improved user management caching, with fewer bugs and better performance
- Read-write LDAP support for most LDAP servers
- In-application testing of LDAP configuration before saving
- Consistent UI for user management configuration in JIRA 4.3+ and Confluence
- Automatic migration from `atlassian-user.xml` and `crowd.properties` configuration into the new administration UI for all supported configurations (*not yet complete*)
- Data migration for users, groups, memberships and user preferences into the new database schema (*not yet complete*).

That said, there is still a bit of work to get this ready for release. Outstanding work on user management for Confluence 3.5 includes:

- Further work on performance improvement
- Completion of work on testing and documenting the upgrade process for all the supported existing user management configurations
- Improving a few areas of our user management with the new search and management APIs
- Writing automated tests to verify several of the new features are actually fixed and working correctly. (All are automatically tested in isolation, but not in Confluence.)

Feedback welcome. If you can test an upgrade of Confluence in your test environment and Confluence does not correctly upgrade your user management configuration or data, we would love to hear from you. Please raise an issue as covered in the *Feedback* section below.

Screenshots

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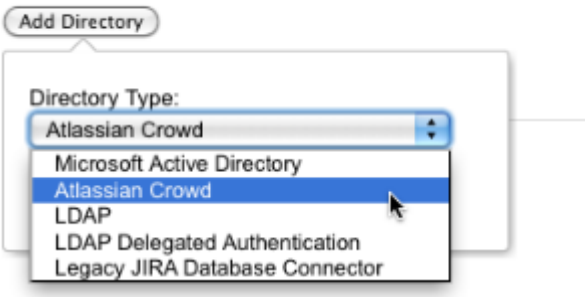
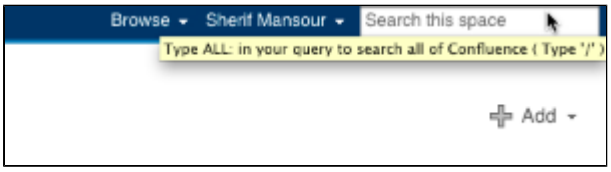


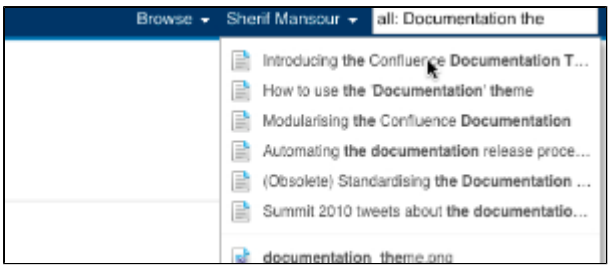
Documentation theme improvements

We have added a neat improvement to the Documentation theme where you can configure the search box to limit searches to the current space by default. We think this will be really useful for knowledge base or documentation spaces, where searching in the current space is the most common use case.

- You configure the search setting in the theme configuration screen:



- To override the space-specific search when entering your search terms, you can prefix the search with '**all :**' or just change the filter setting when you arrive at the search page.



Keyboard shortcut improvements

Building on top of the Confluence 3.4 keyboard shortcut improvements:

- '**[**' – New keyboard shortcut added to show/hide the Documentation theme's sidebar. This shortcut is the same as the one used in the Issue Navigator in JIRA 4.2, and is handy for getting a quick glimpse of the full content of a page.

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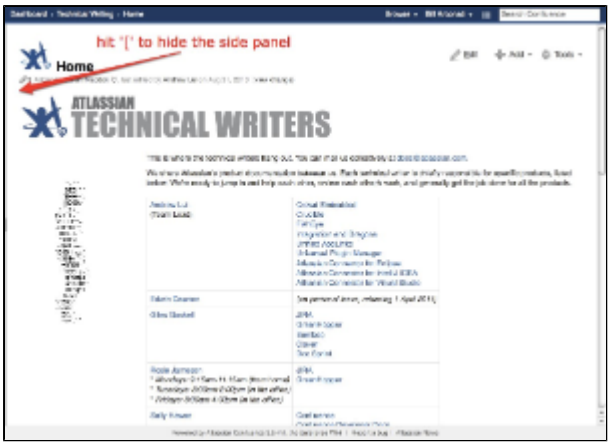

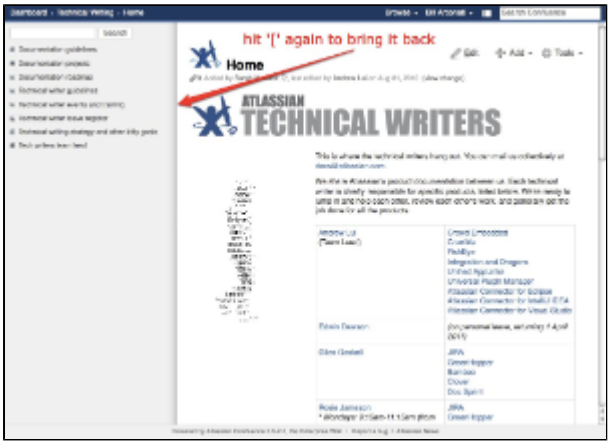

- '**k**' – When you open the 'Link to this page' dialog, the 'Tiny Link URL' is now automatically selected in Chrome and Safari. Previously, it only worked this way in Firefox and Internet Explorer.

Other improvements

The dashboard icons now use CSS sprites, which should make for faster initial and subsequent load times when viewing the Confluence dashboard.

API changes

The user management changes have results in significant API changes in this area of the application. Specifically, the following change has broken some of our plugin test code:

- To modify an existing user, you need to create a new `com.atlassian.user.impl.DefaultUser` instance to call `setFullName()` or `setEmail()` because these methods are no longer on the `com.atlassian.user.User` interface.

We aim to preserve complete backwards-compatibility for plugins where possible, so please raise an issue if your plugin is broken in a way that cannot be backwards-compatible.

Feedback

We'd love to hear any feedback you have from testing this milestone of Confluence. Please raise any issues you

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discover in our issue tracker against the Confluence project with affects-version 3.5.

Release Notes 3.4-beta1 ("Beta 1")

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Milestone release advisory

For testing use only

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Previous Milestone(s)

Previous milestones in the 3.4 release:

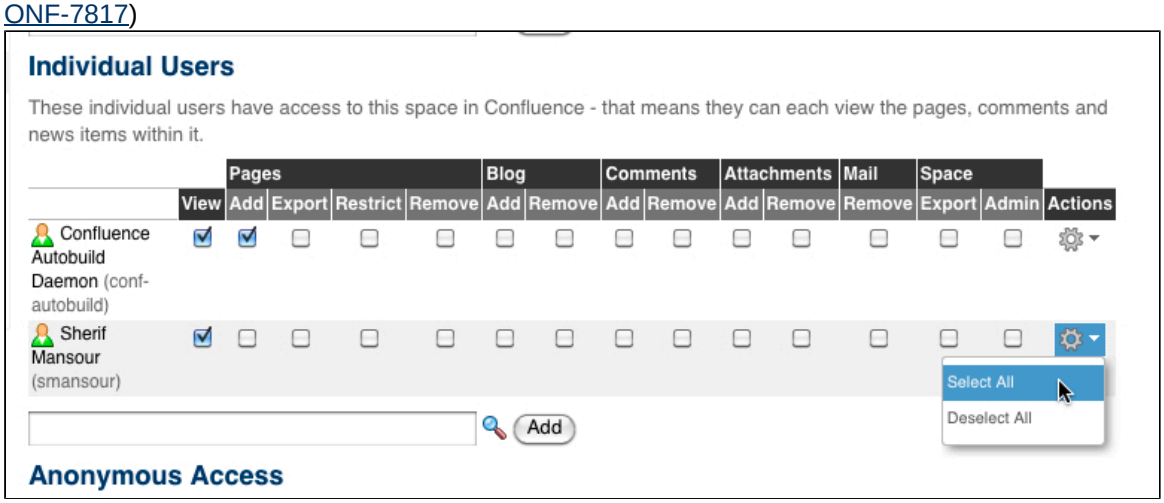
- Release Notes 3.4-m4 ("Milestone 4")
- Note: 3.4-m3 was not released due to some critical bugs.
- Release Notes 3.4-m2 ("Milestone 2")
- Release Notes 3.4-m1 ("Milestone 1")

Features

There are no new features in this release, it's mostly improvements and bug fixes to prior releases.

Other Improvements

- Universal Plugin Manager has been upgraded and minor issues adressed
- Browse > Advanced > PDF/HTML/XML Export page layouts updated for spaces.
- Dropdown menu containing 'select all' and 'deselect all' options added to Edit Space Permissions form. (CONF-7817)



- New AUI version includes new, redesigned shadows (now true drop shadows rather than the old three-side shadow effect)

Known issues

- AUI drop shadows disabled in IE while a Confluence bug is resolved (this means no shadows on dropdowns and dialogs in IE for beta1)
- IE renders some JavaScript errors for the new keyboard shortcuts

Improvements

Improvements in 3.4-beta1 (6 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-20599	Space details form should have display/viewing mode in the same (space admin) tab	Resolved
	CONF-20550	Improve error reporting	Resolved

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		when creating a child page with the same page as a parent	
	CONF-20204	The URL context and source IP (and headers?) should be logged when an login fails	Resolved
	CONF-19279	Slimmer blog pushes long titles down in global spaces	Resolved
	CONF-16013	Browse > Advanced >Export page layouts lack elegance	Resolved
	CONF-7817	Provide select-all and deselect-all options in Edit Space Permissions dialogue (or "remove user")	Resolved

Bug Fixes

Bugs Fixed in 3.4-beta1 (6 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-20841	Update Advanced Macros to 1.11, two issues fixed in this release	Resolved
	CONF-20754	License Details: Links in	Resolved

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		error message are broken.	
	CONF-20369	A user can access a space's PDF Layout/Style sheets without global Confluence admin permissions.	Resolved
	CONF-20290	Dropshadow missing from dashboard dropdown	Resolved
	CONF-20199	Propery Panels, Autocomplete have lines in the corners that shouldn't be there in IE	Resolved
	CONF-13890	Tooltip showing number of attachments is showing for all items in the Browse menu	Resolved

Release Notes 3.4-m4 ("Milestone 4")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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Previous Milestone(s)

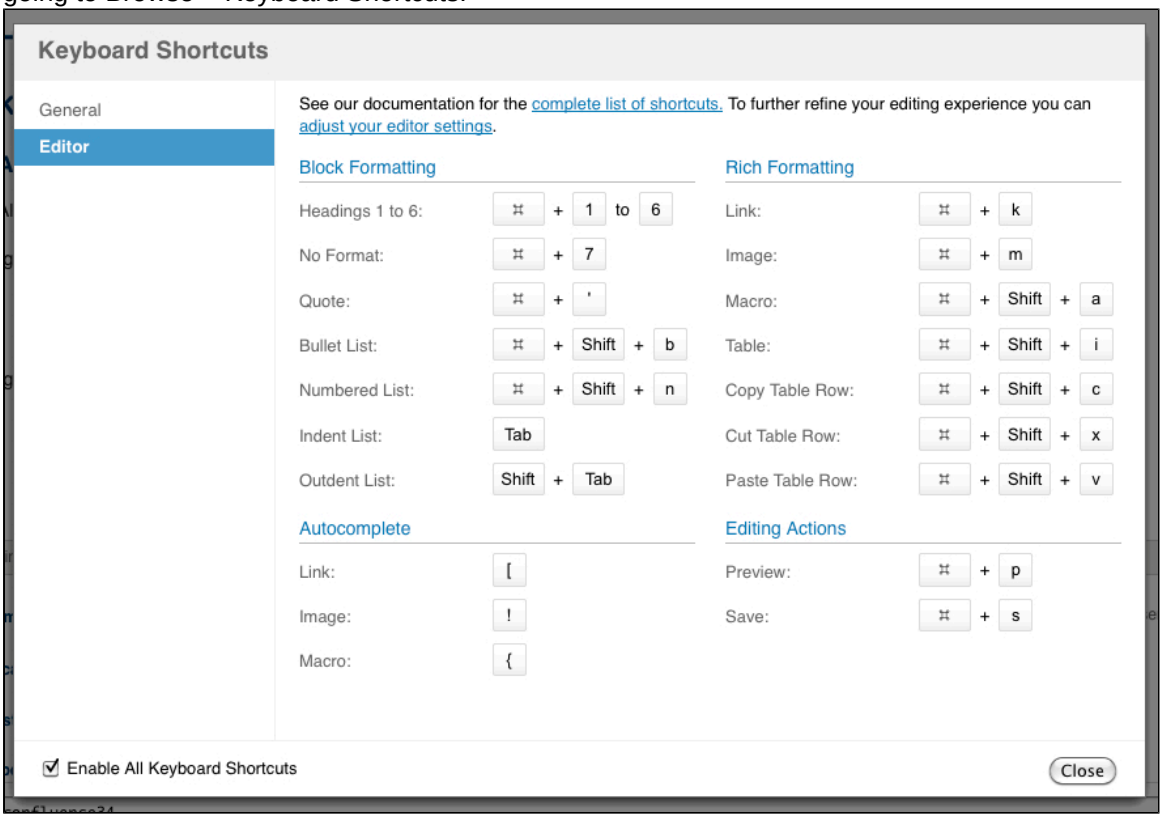
Previous milestones in the 3.4 release:

- Note: 3.4-m3 was not released due to some critical bugs.
- Release Notes 3.4-m2 ("Milestone 2")
- Release Notes 3.4-m1 ("Milestone 1")

Features

Keyboard shortcuts dialog

Confluence now has a keyboard shortcuts dialog. This dialog is accessible by pressing '?' on your keyboard or going to Browse > Keyboard Shortcuts.



New Keyboard shortcuts

- 'e' to edit
- 'm' to comment
- 'l' to label
- '/' to quick search
- 'g' then 'd' to go to the dashboard
- ... and lots more. Go to Browse > Confluence Keyboard Shortcuts to discover more of them...
  Note: There are some known issues with Safari for Mac, but we are ironing them out and they should be fixed next release. Some of these keyboard shortcuts are likely to change.

Notable Bug Fixes

- Preview in FireFox now works
- Move page dialog now works

Other Improvements

- Recently updated on dashboard now tells you what the user did (eg updated, commented) and has a timestamp for each activity.

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Note: The space description no longer renders wiki markup
- UPM has been upgraded to the latest milestone
- Browse > Advanced > Space details form has been converted to AUI style forms

Improvements

Improvements in 3.4-m4 (5 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-20749	Improve sitemesh decoration performance	Resolved
	CONF-20685	Update Confluence Dashboard Macros to version 1.16, 2 issues fixed in this release	Resolved
	CONF-20601	websudo annotation backwards compatibility (Confluence 3.3)	Resolved
	CONF-20570	Add timestamp to the end of every item in the dashboard recently updated macro	Resolved
	CONF-20502	Update add and subtract icons	Resolved

Bug Fixes

Bugs Fixed in 3.4-m4 (6 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-21905	CLONE - Editor preview doesn't expand to show complete content	Resolved

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	CONF-20617	Cannot build REST documentation for Confluence 3.3.1	Resolved
	CONF-20608	Page gadgets fail with an internal server error	Resolved
	CONF-20441	Editor preview doesn't expand to show complete content	Resolved
	CONF-20343	sudo is decorated with global decorator	Resolved
	CONF-19738	bootstrapPluginManager is still available to plugins system - is not thrown away.	Resolved

Release Notes 3.4-m2 ("Milestone 2")

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Milestone release advisory

For testing use only

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Who should upgrade?

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  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
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- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

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Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

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Downloads

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Previous Milestone(s)

Previous milestones in the 3.4 release:

- Release Notes 3.4-m1 ("Milestone 1")

New Features

Universal Plugin Manager

Confluence is now bundled with Universal Plugin Manager (UPM). The UPM allows you to see and manage the plugins that you have installed in Confluence, and it allows you to discover, download and install new plugins from the Atlassian Plugin Exchange. You can read more about the UPM here.

User Macros in the Macro Browser

User macros are now available in the Macro Browser and can have the same amount of metadata as existing plugin macros. The current default is to hide user macros from browse/search in the Macro Browser until the admin updates them. Below is a screenshot of what the user macro form looks like (*Note: This will slightly change in a later milestone*)

Confluence administrators and user macro developers can enter macro and parameter meta-data via the admin console. This meta-data will reflected in the macro browser. Below is an example snippet of the new syntax that is available in a user macro:

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```
## @param author:title=Author(s)|type=string|required=false|desc=Include pages
created or modified by these authors. Separate each author with a comma.
## @param showLabels:title=Show Labels for Each
Page|type=boolean|required=false|default=true
## @param showSpace:title=Show Space Name for Each
Page|type=boolean|required=false|default=true
## @param excerpt:title=Display
Excerpts|type=boolean|required=false|default=false|desc=Displays the first line
of excerpts for each page.
## @param maxResults:title=Maximum number of
results|type=int|required=false|default=15
## @param title:title=List Title|type=string|required=false
## @param spaces:title=Spaces|desc=These are case-sensitive. Separate each item
with a comma or single space.|type=string|required=false
## @param sort:title=Sort
By|type=enum|required=false|enumValues=title,creation,modified|default=modified
##
## .... (rest of the macro content)
```

More detailed User Macro API docs will be provided later, explaining how to enable user macros in the macro browser and how to develop user macros for the macro browser.

Improvements

Improvements in 3.4-m2 (4 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-20483	Add new component for OSGi plugins to get the active Hibernate session	Resolved
	CONF-20429	Replace default avatar and add avatar images	Resolved
	CONF-20274	Make real request and response objects available during Word export	Resolved
	CONF-16655	Display user macros in the macro browser	Resolved

Bug Fixes

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Bugs Fixed in 3.4-m2 (8 issues)			
Type	**Key**	**Summary**	**Status**
	CONF-22327	CLONE - Global Theme is incompatible with Page Restrictions	Resolved
	CONF-20454	Doc Theme is incompatible with Page Restrictions	Resolved
	CONF-20448	User options menu is unaligned	Resolved
	CONF-20428	The "Server Base URL must be set to the same URL" message on editgeneralconfig.vm uses the doc macro to generate a link to the knowledge base, which doesn't work	Resolved
	CONF-18962	Some pdf files don't get correctly indexed	Resolved
	CONF-18403	Users with a whitespace in username cannot add favourites or apply page restriction	Resolved
	CONF-10911	PDF Extractor unable to index chinese and Japanese characters	Resolved
	CONF-5825	Confluence can't index	Resolved

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		certain types of PDF files	

Release Notes 3.4-m1 ("Milestone 1")

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Milestone release advisory

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Upgrade Procedure

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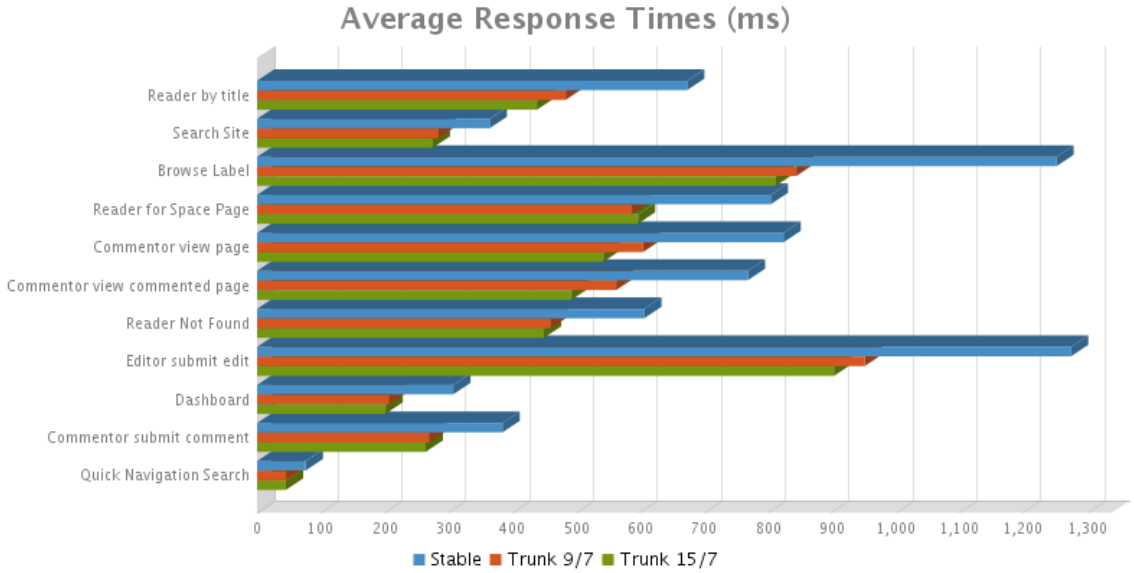
Improvements

Faster

Confluence 3.4-m1 contains some performance boosts (CONF-20264). The green bar below highlights current performance.



Supportability

Database Support

Confluence 3.4 now has support for:

- SQL Server 2008 (CONF-12879)
- Postgres 8.4 Support (CONFDEV-28)

Lots of bug fixes

Bugs resolved in 3.4-m1 (90 issues)				
Type	**Key**	**Summary**	**Status**	**Resolution**
	CONF-24022	Confluence password regex does not match the password regex set in Crowd	Resolved	Fixed
	CONF-23149	contentbylabel macro does not sort ASCII characters properly	Resolved	Fixed
	CONF-21157	Recently-Updated macro does not show user information when added to a page in Confluence 3.3 and 3.3.3	Resolved	Fixed
	CONF-21046	Upgrade to Confluence 3.4 throws	Resolved	Fixed

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		NoSuchMethodError when using Crowd SSO		
	CONF-21000	a link in the admin screen to the knowledge base regarding theServer Base Url change returns no result	Resolved	Fixed
	CONF-20991	The modification detection (Modz detector) is not working.	Resolved	Fixed
	CONF-20964	XSS vulnerability in Tasklist macro	Resolved	Fixed
	CONF-20963	XSS vulnerability in Office Connector	Resolved	Fixed
	CONF-20958	Confluence features that require password confirmation (websudo, captcha) do not work with custom authentication	Resolved	Fixed
	CONF-20898	Gadgets Malformed Security Token	Resolved	Fixed
	CONF-20831	IE8 and IE7 crash if you click Add Page and Add Blog too fast multiple times	Resolved	Fixed
	CONF-20793	Confluence logs a ClassCastException Tomcat 6.0.27 or later when accessing Oracle.	Resolved	Fixed
	CONF-20765	Page gadget doesn't render preview or content	Resolved	Fixed
	CONF-20740	XSS vulnerability in Confluence Space Names	Resolved	Fixed
	CONF-20738	Ziputility adds files with wrong name	Resolved	Fixed
	CONF-20726	Unable to search for word that is followed by a number for filenames separated by underscores	Resolved	Fixed
	CONF-20720	toggleStar in favourite.js uses elements that could	Resolved	Duplicate

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		not be found in the document		
	CONF-20715	User link hovering does not work in the recent changes macro	Resolved	Fixed
	CONF-20683	Default Theme: Breadcrumbs hidden in IE	Resolved	Fixed
	CONF-20633	Spaces cannot be unmarked as favourites	Resolved	Fixed
	CONF-20616	Edit in Word does not work when a custom authenticator is configured	Resolved	Fixed
	CONF-20526	Doc Theme is incompatible with Page Restrictions	Resolved	Fixed
	CONF-20508	Secure Administrator Sessions feature can be bypassed	Resolved	Fixed
	CONF-20496	Can't uncheck Macro has a body in the user macro screen	Resolved	Fixed
	CONF-20487	Did You Mean option not retained in 3.3	Resolved	Fixed
	CONF-20400	Restoring a XML site backup into 3.3 fails with "No enum const class..." exception	Resolved	Fixed
	CONF-20398	French translations for some of Rich Text Editor's features are not reflected	Resolved	Fixed
	CONF-20339	Edit in "Page" word feature causes nullpointer exception.	Resolved	Fixed
	CONF-20338	Upgrade Dashboard Macros plugin to 1.14	Resolved	Fixed
	CONF-20322	EmbeddedCrowd migration always creates an internal directory	Resolved	Duplicate
	CONF-20321	EmbeddedCrowd	Resolved	Fixed

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		migration does not create directories in the correct order		
	CONF-20318	NetworkAndSiteNotificationTypesUpgradeTask fails when upgrading to 3.3 on Oracle (and probably others)	Resolved	Fixed
	CONF-20311	Best Practice Code revisions	Resolved	Fixed
	CONF-20308	Update atlassian renderer to 6.1	Resolved	Fixed
	CONF-20302	EmbeddedCrowd migration does not merge user and group DNs correctly	Resolved	Fixed
	CONF-20301	ObjectQueue handles is not syncronized causing: ConcurrentModificationException	Resolved	Fixed
	CONF-20298	NullPointerException error logged by scheduled office connector cleanup job at 02:00	Resolved	Fixed
	CONF-20288	Web Sudo: "Drop access" link does not work when language is set to german	Resolved	Fixed
	CONF-20275	Setup footer contains the "print-only" message	Resolved	Fixed
	CONF-20266	Logging from plugin framework does not get sent to log file, instead goes to standard error with unusual format	Resolved	Fixed
	CONF-20254	Null PE from plugin-status macro	Resolved	Fixed
	CONF-20218	TinyMceInsertMenuTest fails across builds	Resolved	Fixed
	CONF-20200	Macro Browser doesn't handle browser zooming well	Resolved	Fixed
	CONF-20189	Logout Button /		Fixed

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		Option Missing for some LDAP user accounts	Resolved	
	CONF-20186	On IE7 "followers" have small lines between thumbnail pictures	Resolved	Fixed
	CONF-20184	When editing a comment on a page, the right side is chopped off	Resolved	Fixed
	CONF-20181	Headings in Page Gadgets scroll sideways with the page	Resolved	Fixed
	CONF-20167	Overlapping Text in Browse menu for French Admin users	Resolved	Fixed
	CONF-20150	View file macro dialog does not allow a file to be uploaded	Resolved	Fixed
	CONF-20044	Page Gadet tools menu grows white space and is not styled correctly	Resolved	Fixed
	CONF-20040	Widget Connector does not render all of Wufoo widget	Resolved	Fixed
	CONF-20021	Apostrophes are double escaped in the Page Gadget title	Resolved	Fixed
	CONF-20012	The gadget tools menu and the scroll bar overlap in Safari	Resolved	Fixed
	CONF-19956	Page Gadget error message for inaccessible content needs to be tidied up	Resolved	Fixed
	CONF-19932	Confluence page gadget viewfile macro requires a refresh to re-size correctly	Resolved	Fixed
	CONF-19552	Remove group confirmation screen logs error when trying to display members	Resolved	Fixed
	CONF-19482	Restoring a personal space still gives user	Resolved	Fixed

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		menu choice to create personal space causes collision of space keys		
	CONF-19453	Turkish locale causing System Error when Global Permission is edited	Resolved	Fixed
	CONF-19313	Cannot execute Tools -> Restrictions from Personal Spaces of users with whitespace in their user name	Resolved	Fixed
	CONF-19285	[Doc import] Importing document of size bigger than attachment limit yields "Page Not Found" error	Resolved	Fixed
	CONF-19169	Word footnotes import in Doc Import is broken	Resolved	Fixed
	CONF-19157	Graphs don't display properly when using sheet parameter in viewfile	Resolved	Fixed
	CONF-19148	Can't use value names which have a double-bytes numeric character	Resolved	Fixed
	CONF-19060	Edit in Word function adds // for blank lines inside code and noformat macros, which are then visible in output	Resolved	Fixed
	CONF-19032	Move Page dialog: Text is too long and wraps incorrectly in German	Resolved	Fixed
	CONF-18892	Office Connector Freezes Confluence When Loading Excel 2007 File With Date Macro	Resolved	Fixed
	CONF-18853	Doc Import stuck in loop when duplicate titles are included in the Word Document	Resolved	Fixed
	CONF-18430	Usernames with	Resolved	Fixed

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		spaces do not work with page restriction auto-complete		
	CONF-17414	Doc Import allows empty title	Resolved	Fixed
	CONF-17231	Language pack related warning messages in logs when editing user preferences	Resolved	Fixed
	CONF-17217	Left Navigation Theme does not include the "Custom HTML : At end of the BODY" in the output HTML	Resolved	Fixed
	CONF-16897	Labels List macro gives misleading parameter info in the Macro Browser	Resolved	Fixed
	CONF-16876	"Expected 'xref' at start of table" when rendering PDF file version 1.4 and later in viewfile macro	Resolved	Fixed
	CONF-16525	Errors indexing PDF documents	Resolved	Fixed
	CONF-16490	Blog Posts macro - the Content Type parameter does not work as expected	Resolved	Fixed
	CONF-16383	Dynamic Tasklist V2 fails in IE7	Resolved	Fixed
	CONF-16368	ClassCastExceptions after upgrading plugins when trying to click on "Configure"	Resolved	Obsolete
	CONF-16067	Restore fails with "Too many open files" error	Resolved	Fixed
	CONF-15594	Hover Profile and People Directory look rubbish when the Profile macro has been disabled	Resolved	Fixed
	CONF-14628	pages/create(blogpost|page).action with a spaceKey containing the null character causes org.springframework	Resolved	Fixed

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		.dao.DataIntegrityViolationException		
	CONF-13875	Confluence Daily Mail Notification eats up CPU performance	Resolved	Fixed
	CONF-13836	Plugin Repository's "Installed Plugins" filter shows non-installed plugins	Resolved	Fixed
	CONF-13819	Compound database index missing for ATTACHMENTDATA table	Resolved	Fixed
	CONF-13082	Database Connection Transaction Isolation level is not displaying at all and the Database Driver Version for jtds-1.2.2.jar is incorrect in System Information page	Resolved	Fixed
	CONF-12571	JIRA Issue Macro displays too wide, doesn't auto-scroll properly	Resolved	Fixed
	CONF-12421	Don't use distrbuted cache for storing Captcha's in a cluster	Resolved	Fixed
	CONF-11818	"view wiki markup" menu item produces error in IE6 on XP	Resolved	Won't Fix
	CONF-4805	Reusable show more/less component for content lists	Resolved	Fixed
	CONF-4182	NPE in SpaceHelper borks page....	Resolved	Fixed
	CONF-3322	Userlister online and offline status broken	Resolved	Fixed

Release Notes 3.3-beta3 ("Beta3")

Beta release advisory
Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

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The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
>
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Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

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> All development releases are available from Development Releases on the Atlassian website.

Welcome to the Confluence 3.3 Beta program

The Confluence team is really excited to share with you the Confluence 3.3 Beta 3 release. We still have a few bugs to fix, but overall we feel that most of the features below will be ready to ship by the final 3.3 release later this month.

New Features

Highlights of this release:

- Confluence Page Gadget
- Editing Features
  - Image Properties Panel
  - Link Properties Panel
  - Macro Autocomplete
- Notification Features
  - Email Notification for Network and Blogs
  - Manage Page Watchers
  - Change Comments on Blog Posts
- Engine Room
  - Secure Administrator Sessions ('Web Sudo')
  - Login Captcha
  - XSRF Protection on Comment Creation
  - Login Information
  - Infrastructure Changes
  - Deprecation Notice
- General Improvements
  - General Configuration UI
  - Accessibility Improvements
  - Improvements to Importing Word Documents
  - Version-Specific Help Links
  - Library Upgrades
  - New Dashboard Actions
  - New Welcome Message
  - Slimmer Blog View

Confluence Page Gadget

Confluence now provides a gadget many have been requesting: the Page Gadget. This allows the display of any Confluence page within a gadget, with optional 'View' and 'Edit' links.You can embed this gadget into your JIRA dashboard or another Confluence instance.

Page gadget configuration

With autocomplete for space names and page titles:

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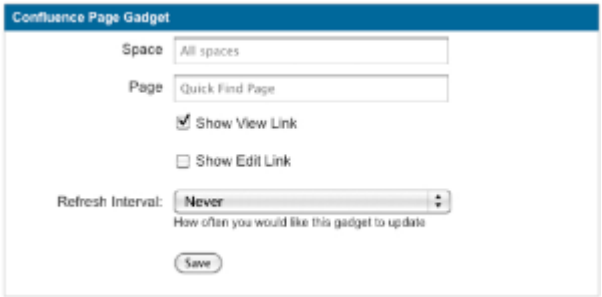
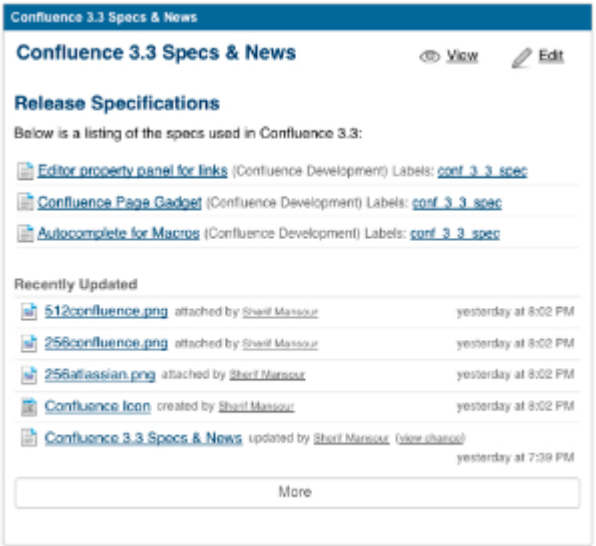


Rendering macros in the gadget

The gadget renders macros that occur in the page. Most major macros work within the Confluence Page gadget, such as the Content by Label and the Recently Updated macros:



Additionally, you can embed rich content with the View File macro within a Page gadget:

There are still a few minor issues with the Confluence Page gadget. At present the gadget supports most bundled macros within Confluence, but not all. We will publish the full details of the supported macros in the next release. Additionally, iGoogle/Gmail integration requires further testing.

Editing Features

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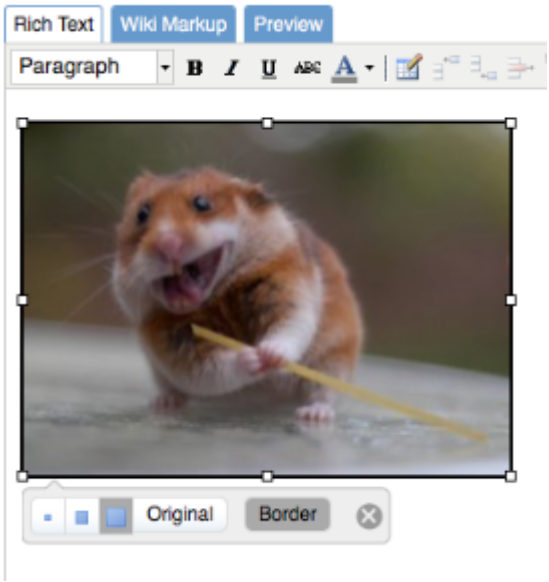
Image Properties Panel

Introducing a new image properties panel! Manipulating images is now possible in the Rich Text Editor. Simply click (or select via keyboard with shift and arrow keys) an existing image and the image property panel will be available.



You can resize an image into small, medium and large preset sizes as well as add a border to an image without having to leave the Rich Text Editor.

Link Properties Panel

Editing links in the Rich Text Editor is now easier with the new properties panel. You can easily see the link and edit or unlink existing links on the page. Just place your cursor somewhere inside the link.

Macro Autocomplete

We have extended the autocomplete feature introduced in Confluence 3.2 to include macros. You can now type '**{**' in the Rich Text Editor to trigger macro autocomplete. Just continue typing to search for a particular macro and open it in the macro browser.

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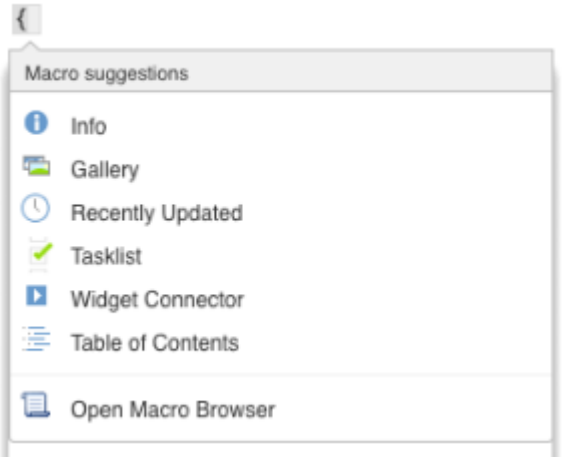
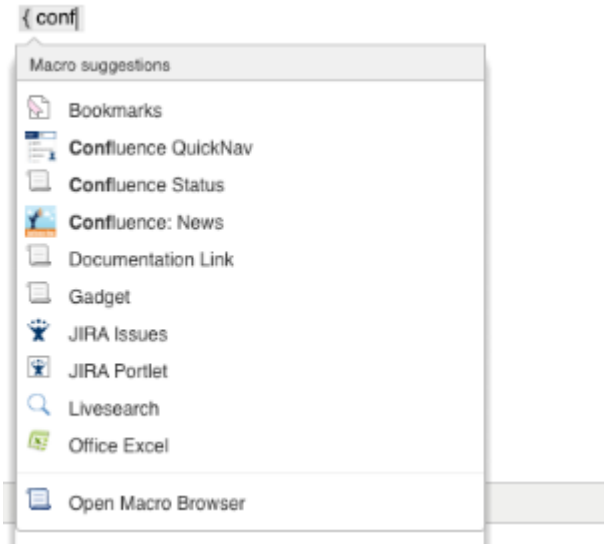
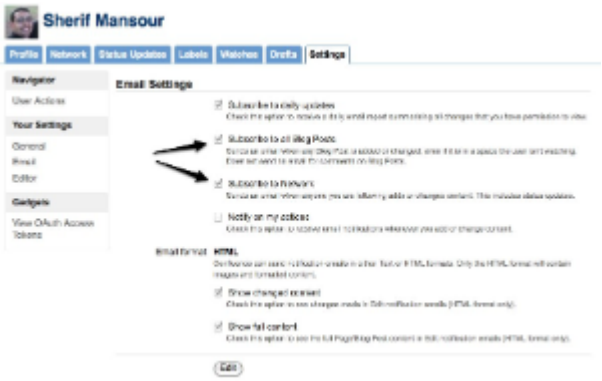




Notification Features

Email Notification for Network and Blogs

For their Atlassian Fedex 14 project, Don Willis and David Taylor enhanced email notifications for blogs and networks. The 'Subscribe to all Blog Posts' option gives you notifications for all the blogs in the system, subject to permissions. If you select 'Subscribe to Network', you will get notifications when anyone you are following edits content or changes their status, also subject to permissions. You can configure these options in your email settings:



Manage Page Watchers

An implementation of Matt Ryall's FedEx 14 project is available in this version of Confluence: a dialogue to view and manage watchers on pages and blog posts, as well as view all watchers of a space. This option is only currently available to space administrators. It addresses CONF-5032 and most of CONF-3703 for approximately 150 votes. Screenshots below:

New menu option

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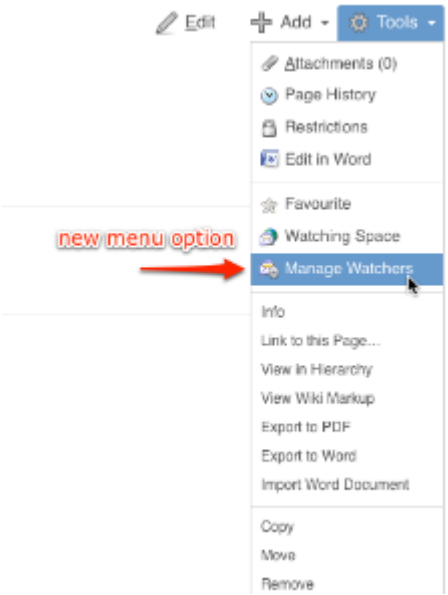
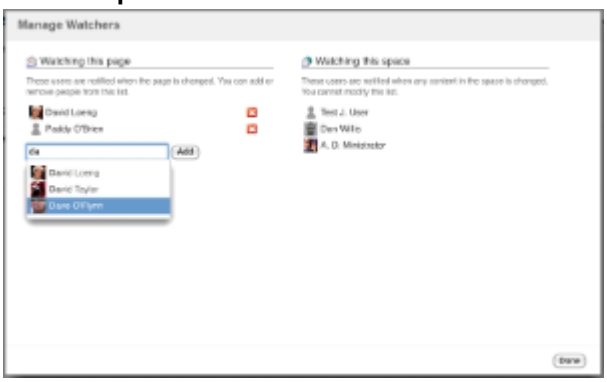


New dialog

Autocomplete



A few minor issues with icons, keyboard navigation, displaying usernames and wrapping of long names will be fixed in the next release.

Change Comments on Blog Posts

You can now comment on the updates you make to blog posts, in the same way as you can for pages.

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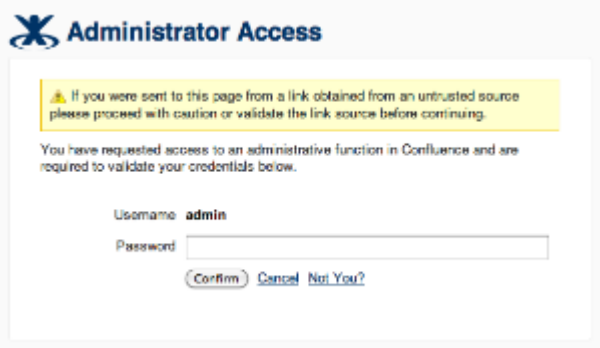
Engine Room

Secure Administrator Sessions ('Web Sudo')

Confluence has another line of defence against hijackers of administrator sessions. All features in the Administration section of Confluence (and some in the Space Administration section) will require the user to validate their credentials before proceeding.

After validating, a message at the top of each page reminds you of your temporary administrator session. The temporary session will expire after 10 minutes of administrator inactivity and can also be terminated manually.



The secure administrator settings are configurable via the Confluence Administration Console.

Login Captcha

As another important security improvement Confluence now requires the user to answer a Captcha question after a given number of failed login attempts.

This security mechanism protects not only the login page but the RPC-interface as well. After a configurable number of failed login attempts via the RPC interface, the user is required to log in using the web interface which then presents the Captcha image.

This feature is enabled by default but can be disabled in the Confluence Administration Console. The configuration options include the number of failed login attempts. The default threshold for login attempts is three.

XSRF Protection on Comment Creation

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This security mechanism requires an XSRF token to be present when adding a comment. Don't worry though, a system is in place so that your session will not expire and you can take your time to write the perfect comment!

All the bundled themes have been updated to use this feature. There is also an option in the new Security Configuration screen to disable this feature if you need to keep using a theme that does not yet support the feature.

Login Information

Confluence now captures metadata about login attempts, including the dates of the last failed and successful login and the number of failed logins.

In addition, a Confluence administrator can now reset the number of failed logins for a particular user.

Infrastructure Changes

Various changes to aid plugin development:

- All ContentEntityObjects can now be commented on
- UserStatus now optionally belongs to a space
- Custom space types are available
- Upgrade to Bandana 2.0
    - Custom context objects
    - Key enumeration
    - Item removal
    - Custom serialisation

Deprecation Notice

DWR has been deprecated as of 3.3-m1. Support for the client side JavaScript proxies has been moved into the *Confluence Legacy Web Resources* plugin which is going to be **disabled** by default. If you need any of the following web resources you will need to enable this plugin:

- DWR framework
- DWR JavaScript proxies for label operations (add, remove, suggest) or editor operations (heartbeat, draft saving, editor preferences)

You will also need to make the following resource a required resource in your view template: `legacy.confluence.web.resources:dwr-confluence`
This will embed the DWR client-side JavaScript files in your plugin's view output.

General Improvements

General Configuration UI

The General Configuration screen in the Administration Console has finally been given a face lift. It now uses an AUI form style.

Accessibility Improvements

We've added labels, legends and skip links so that Confluence is now more 508-compliant. We still have a *long* way to go, but these pages should now be more screen-reader friendly:

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- Dashboard
- General pages
- Profiles
- Set your Password
- Attachments
- People Directory
- User Status

Improvements to Importing Word Documents

The structure of the 'Tools' > 'Import Word Document' feature has been improved to make it more intuitive.

Version-Specific Help Links

Confluence now follows the Atlassian Help Link specification. All help links will now redirect to the version of the Confluence documentation that matches the version of the Confluence application that you are using.

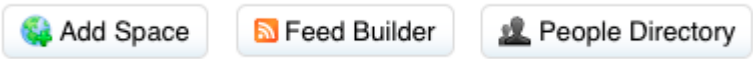
If you wish, you can configure the redirecting of the help links by editing the `help-paths.properties` file. You could do this if you need to point Confluence help links to an internal documentation site.

Library Upgrades

- AUI 3.0-m3
- Atlassian Plugins 2.5

New Dashboard Actions

The dashboard actions are now buttons. On mouse-over, the text turns blue. When clicked, the button is indented. They have also been moved – they appear above 'Spaces'.



New Welcome Message

The dashboard welcome message has been updated.

Slimmer Blog View

The blog view has been modified as shown in the screenshot below.

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Changes shown in the screenshot:

- The old calendar has gone. It has been replaced by a sidebar that simply lists the month and all the blog posts for that month. You can scroll through the months that have blog posts in them.
- The view has been streamlined. We have removed some unnecessary information on the page.
- In a global space, the view you see via 'Browse' > 'Blogs' has the blogger's picture attached to the blog for easier identification.

Other changes not visible:

- The dates have been internationalised. Until now they were restricted to English.
- The 'Browse' > 'Blogs' view allows you to see older and newer posts, no longer restricted to the most recent 15.

Release Notes 3.3-m3 ("Milestone 3")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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Back after a month of silence...

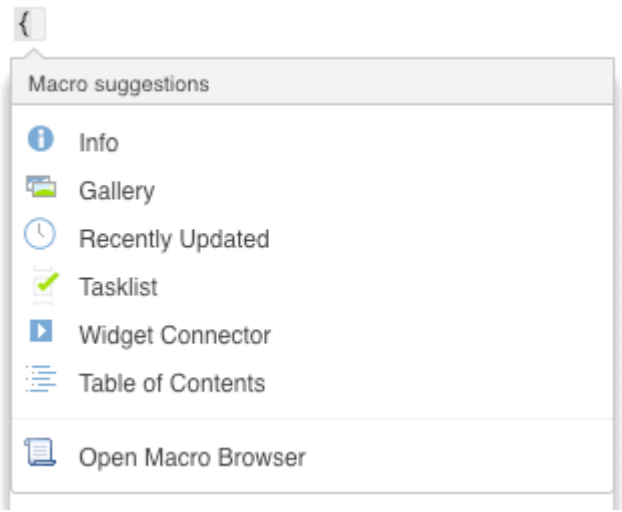
Hello everyone! As you might have noticed, we went dark for a whole month, skipping Milestone 2. Why is that, you wonder? To be quite honest with you, M2 was considered too rude. What was supposed to be an easter-egg went berserk, telling its unassuming user to ... well, we can't print that here. So we decided to not publish M2, and waited until M3 was complete. We have since then washed Connie's mouth with soap, and Confluence 3.3 Milestone 3 presents itself shiny, friendly and non-abusive as ever. :-)

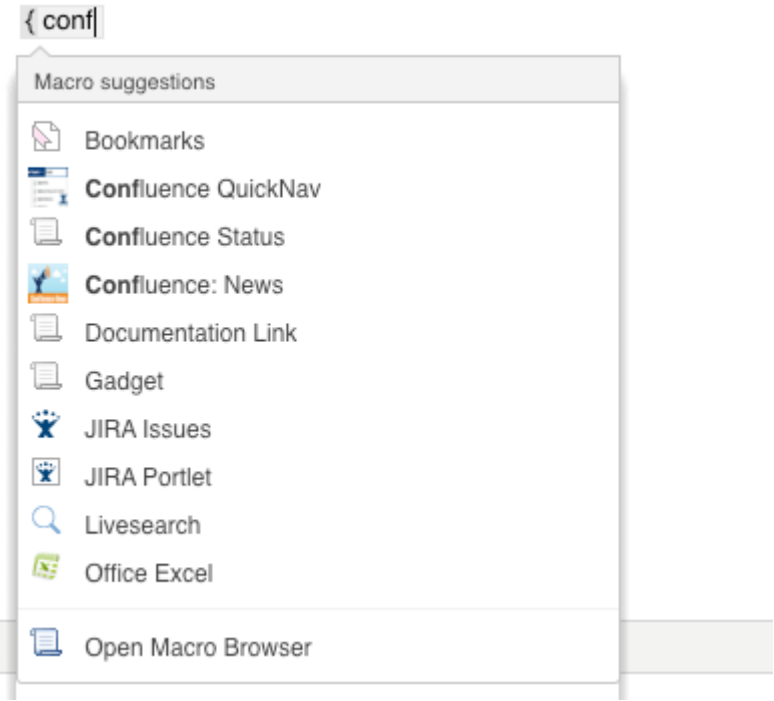
We're currently planning to go Beta in about 2 weeks, just in time for Atlassian Summit, and to ship in mid to late June.

New Features

Macro Autocomplete

You can now type '**{**' in the Rich Text Editor to trigger macro autocompletion! Just continue typing to search for a particular macro and open it in the macro browser.





Known issue: The searching/ordering is not ideal yet, and you get quite unspecific search results at time (as

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seen above). Sometimes it's good to be fuzzy, sometimes not. We'll probably disable searching by description (and just do that in the macro browser). Watch (and provide feedback on) CONF-19598

Link Properties Panel

Editing links in the RTE is now easier with the new properties panel. You can now easily see the link, edit and unlink existing links on the page. Simply place your cursor somewhere inside the link!

There's a known issue (CONF-19608) in IE where the "Unlink" button is deleting the link text as well; this will be fixed for the next milestone.

The next two weeks we'll be applying property panels to images as well. If you have any feedback on this panel already, please tell us so we can fix it up before the Beta.

BTW, we're planning to make the UI between Autocomplete and Property Panel a bit more consistent in the next milestone, and we will display the URL that the link points too as well. It's just a beta, after all.

General Improvements

General Configuration UI

The Admin General Configuration screen has finally been given a face lift! It has been converted over to use an AUI form style.

Accessibility Improvements

We've added labels, legends and skiplinks so that Confluence is now **more** 508-compliant. We still have a **long** way to go but these pages should now be more screen-reader friendly:

- Dashboard
- General pages
- Profiles
- Set your Password

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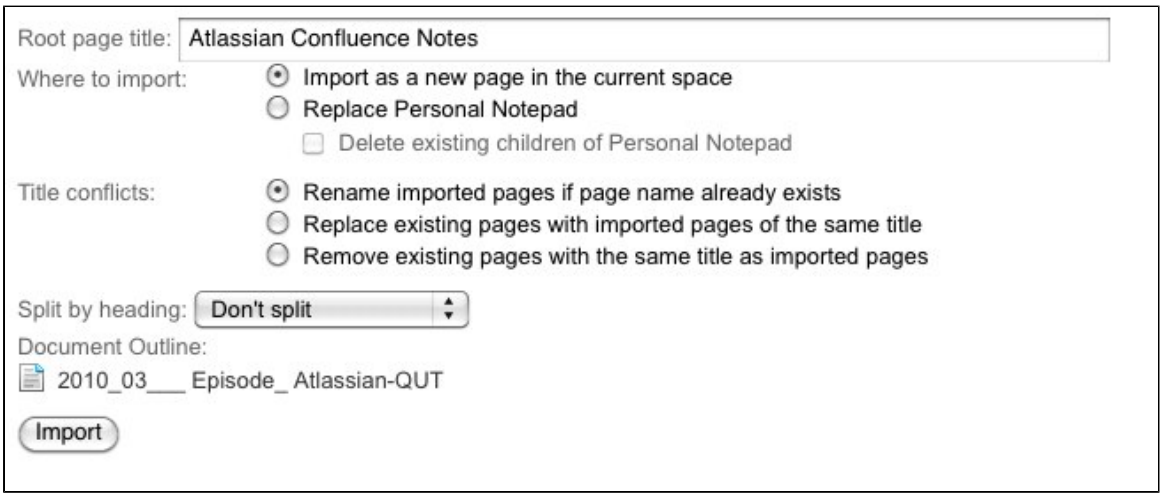
- Attachments
- People Directory
- User Status

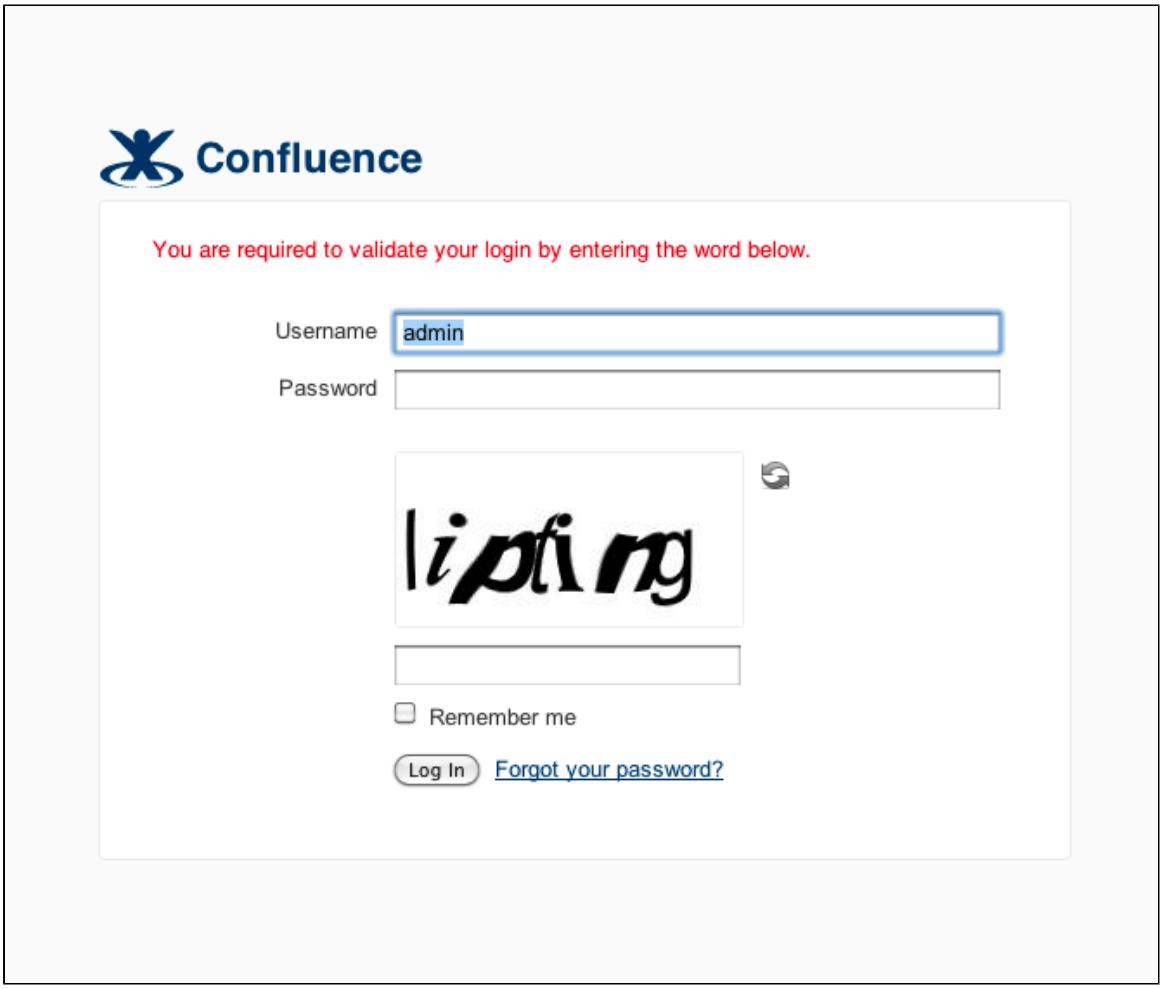
Import Word Improvements

The 'Tools' > 'Import Word Document' feature structure has been improved to make it more intuitive.



Login CAPTCHA

As another important security improvement Confluence now requires a CAPTCHA after 3 failed login attempts.



This security mechanims not only protects the login page but the RPC-interface as well. After 3 failed login

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attempts via the RPC interface the user is required to log in using the web interface which then presents the CAPTCHA image.

This feature is enabled by default but can be disabled in the admin panel. The configuration options include the number of failed login attempts. The default threshold is 3.

Login information

Confluence now captures login meta information. This includes the dates of the last failed and successful login and the number of failed logins.
The administrator is now able to reset the number of failed logins for a particular user.

Version-Specific Doc Links

Confluence now follows the Atlassian Help Link spec and all help links will now redirect to the version of the Confluence Documentation that matches the version that you are using.

Users can edit where the links are directed by editing `help-paths.properties`.

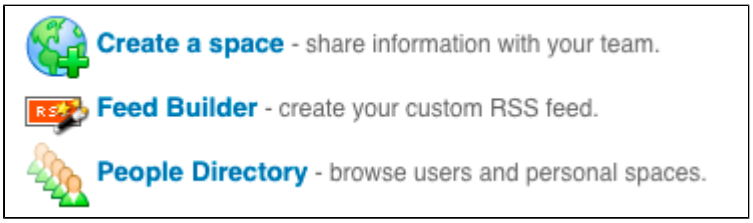
Library Upgrades

- AUI 3.0-m3
- Atlassian Plugins 2.5

New dashboard actions

The dashboard actions are now buttons, which on mouse over the text turns blue and when clicked is indented. They have also been moved to be above 'Spaces'.

Old:



New:

New welcome message

The dashboard welcome message has been updated.

Old:

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Welcome to Confluence

Confluence is the enterprise wiki designed to make it easy for you and your team to share information with each other, and with the world.

Where do I start?

All content in Confluence is organised into *spaces*. So to start browsing content, simply click on one of the spaces listed below.

New:

Welcome to Confluence

Confluence combines powerful online authoring capabilities, deep Office integration and an extensive plugin catalog to help people work better together and share information effortlessly.

Get started by creating a new space and adding users to join you.

You can change this message to whatever you like.

Change comments on blog posts.

Don W changed 1 line of vm and wrote some tests so that change comments are enabled on blog posts.

Change comments on blog posts.

Don W changed 1 line of vm and wrote some tests so that change comments are enab

All Implemented Issues

{jiraissues:url=http://jira.atlassian.com/sr/jira.issueviews:searchrequest-xml/temp
/SearchRequest.xml?jqlQuery=project+%3D+CONF+and+status+in+%28Resolved%2
%22%29+and+fixVersion+%3D+%223.3-m2%22&tempMax=50|columns=key,summary
3.3-m2|renderMode=static}

See

Hint: type "!" to see images attached to the page and insert one of them.

Comment: Remembered that I did change-comments on blogs

XSRF Protection on Comment Creation

This security mechanism requires an XSRF token to be present when adding a comment. Don't worry though, a system is in place so your session will not expire and you can take your time to write the perfect comment!

All the bundled themes have been updated to use this feature, and an option in the new Security Configuration screen to disable it if you still can't live withtout an old theme.

Release Notes 3.3-m1 ("Milestone 1")

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Milestone release advisory

For testing use only

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This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
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In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

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Overview

Milestone 1 is a fairly minor step from a user perspective, but since there are a number of changes that could potentially impact plugin development we wanted to get it to you as soon as we could. Read on for the changes as described directly by the developers.

Infrastructure Changes

Various changes to aid plugin development

- All ContentEntityObjects can now be commented on
- UserStatus now optionally belongs to a space
- Custom space types
- Bandana 2.0
    - Custom context objects
    - Key enumeration
    - Item removal
    - Custom serialisation

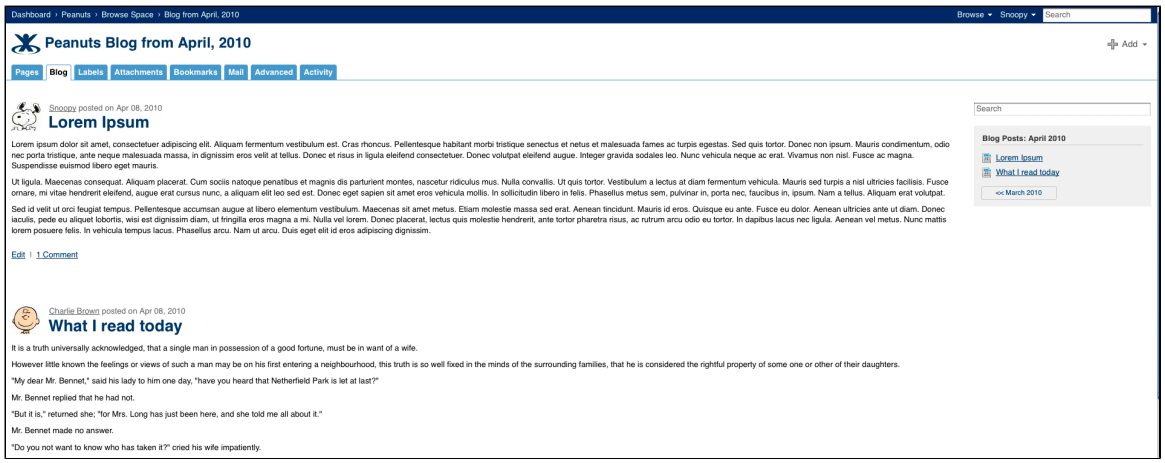
Deprecation notice

DWR has been deprecated as of 3.3-m1. Support for the client side Javascript proxies has been moved into the *Confluence Legacy Web Resources* plugin which is going to be **disabled** by default (it currently isn't - automatically disabling the DWR web resources when updating Confluence will be in Milestone 2). If you need any of the following web resources you have to enable this plugin:

- DWR framework
- DWR Javascript proxies for label (add, remove, suggest) or editor operations (heartbeat, draft saving, editor preferences)

Slimmer Blog View

The blogs view has been modified as shown in the screen shot below.



Changes shown in the screenshot:

- The old calendar has gone. It's been replaced by a sidebar that simply lists the month and all the blogposts for that month, and allows you to scroll between the months that have blogposts in them.
- The view's been streamlined - we've gotten rid of some of the unnecessary information on the page.
- In a global space, the view you get in Browse > Blogs has the user's picture attached to the blog for easier identification.

And the additional changes not visible:

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- The dates have been internationalised - until now they were stuck in English.
- The Browse > Blogs view allows you to see older/newer posts, not just the most recent 15.

All Implemented Issues

Issues Implemented in 3.3-m1 (0 issues)		
Key	**Summary**	**Status**

Confluence 3.2 Beta Release Notes

These are not the release notes you are looking for! The final Confluence 3.2 Release Notes are over here.

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Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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Welcome to the Confluence 3.2 Beta program

With great pride we bring to you the Confluence 3.2 Beta release. We still have a few bugs to fix, but overall, this is how 3.2 will get rolled out to customers in mid March. And we want your feedback.

Note to partners and translators: The preliminary translation diff files can be found as a subpage of this overview page: Translations for Confluence Releases

Advance warning

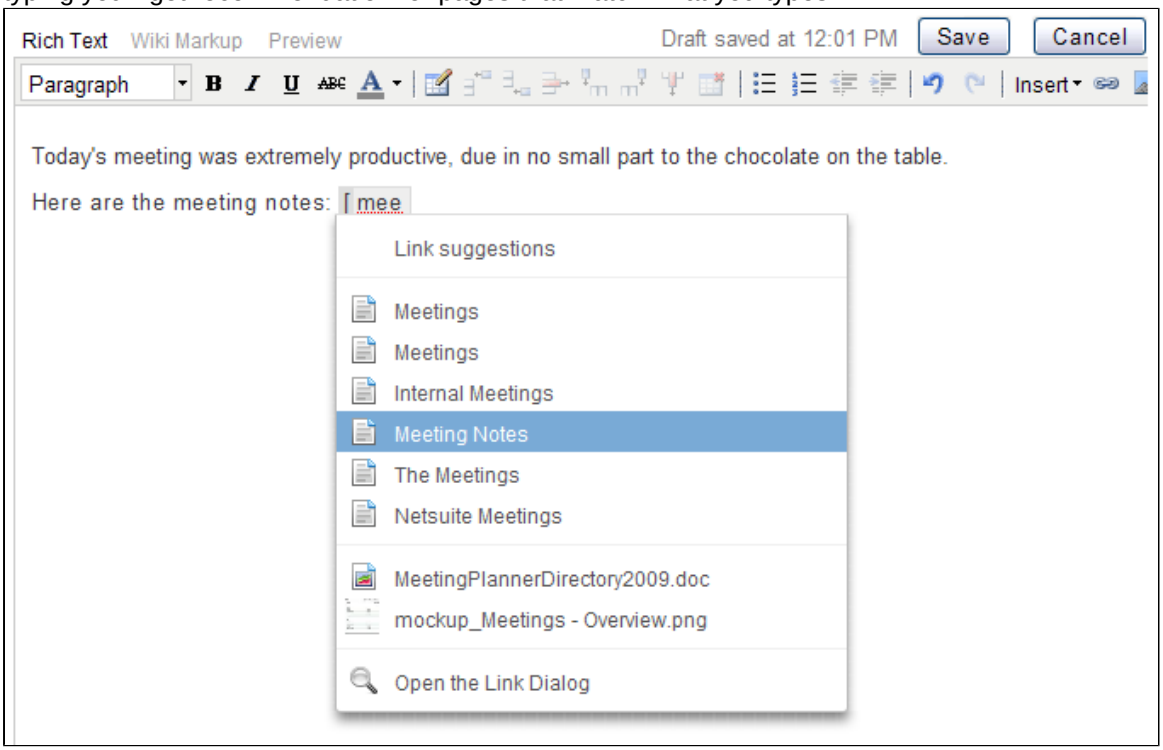
This release is the last one to officially support Internet Explorer 6. Read the upgrade notes and the original announcement over here.

This release is the last one to officially support application servers other than Tomcat. From the next release on, Websphere and Weblogic and JBoss will not be supported anymore. For further information on this, please see the end of support announcements page

1

Autocomplete in the editor

We are adding a new feature called Autocomplete to the Rich Text Editor. In this beta it only works in Firefox and Safari, but the goal is to make it work on Internet Explorer as well by the time the 3.2 release ships.
You can type "**[**" at the start of a line to display your browsing history and link to those pages, and if you keep typing you'll get recommendation for pages that match what you types:



If you type "**!**" you'll see the attached images to the current page, and if you keep typing you'll be able to link to any image in your deployment.

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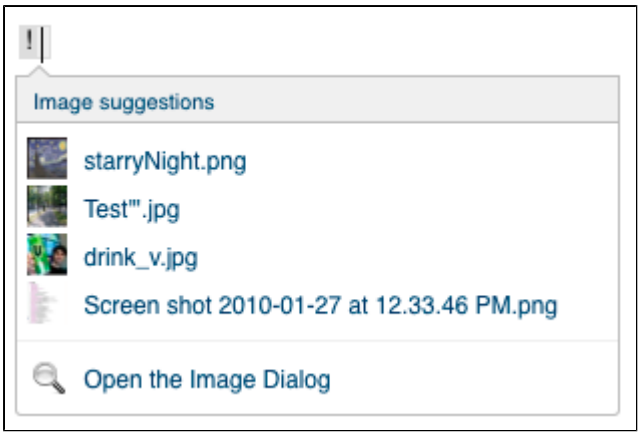


This feature's goal is to make the RTE even faster than using wiki markup. Try it out and tell us what you think!

Note: May require a re-index of your system to show attachments

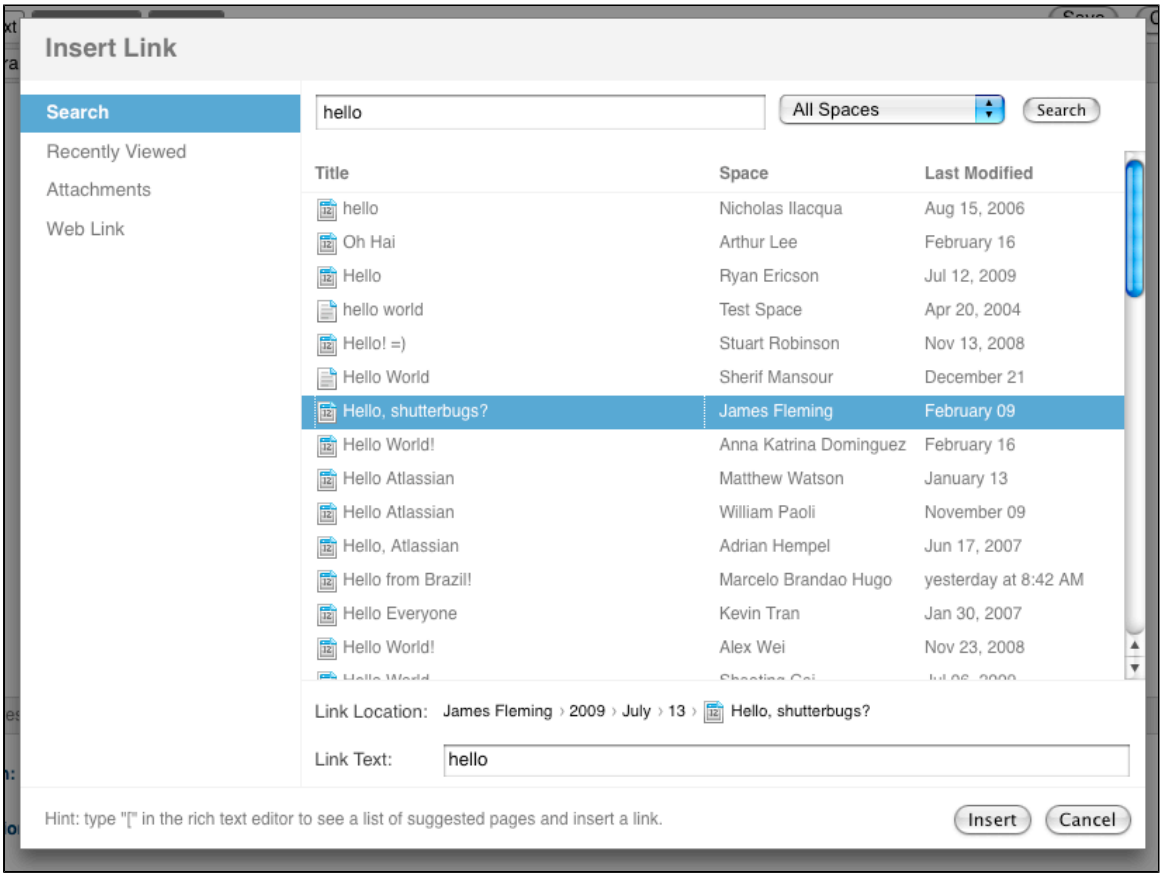
Known issues

- CONF-18281 - doesn't work in IE yet

2

New Links Dialog

We have rewritten the way you add links in Confluence. The new links dialog is faster, better looking, and more powerful.



3

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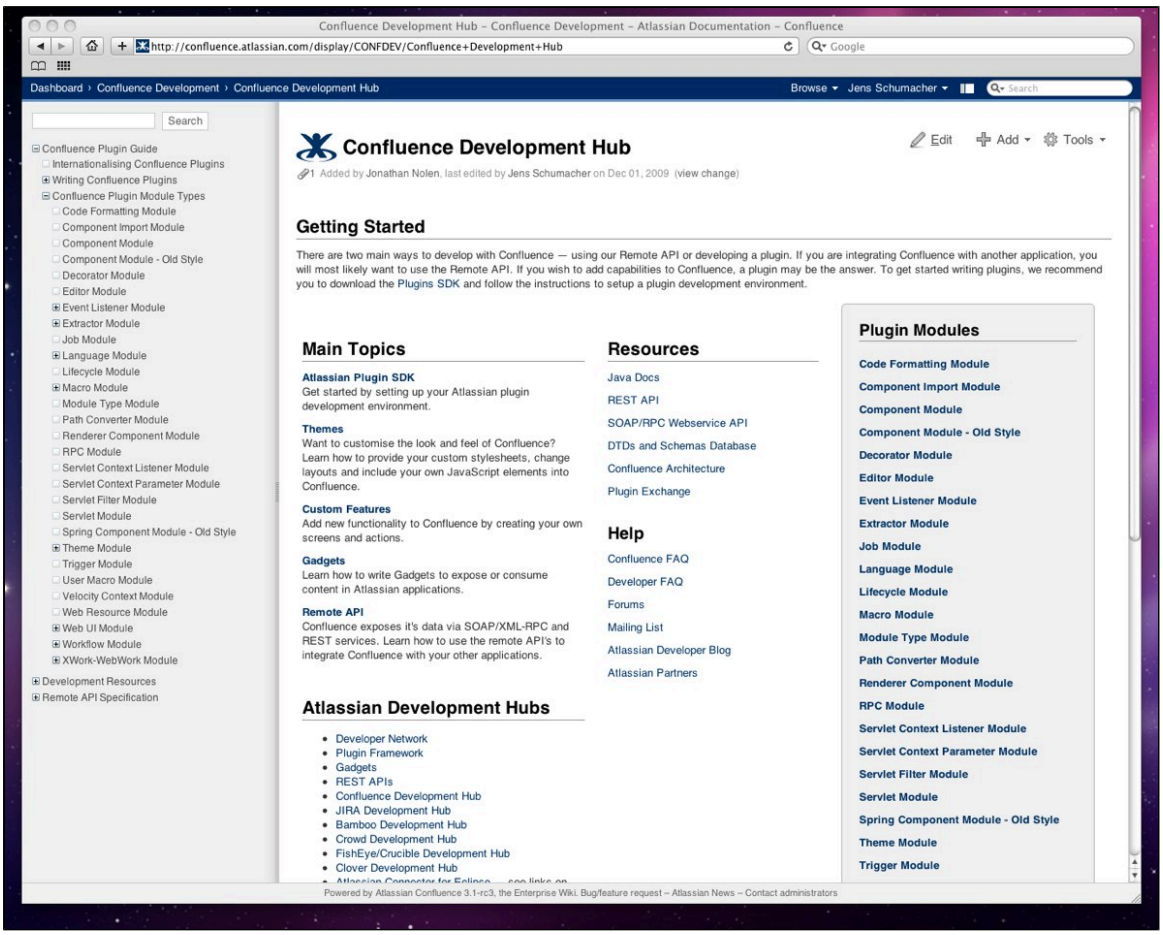
New "Documentation Theme"

Confluence now comes bundled with our hugely successful "Documentation Theme". See https://plugins.atlassian.com/plugin/details/16393 for details about the theme.



This theme replaces the old "Left Navigation Theme". We are still shipping the Left Nav theme, but it is deprecated and will stop shipping in a later release.

4

New "Easy Reader" Theme

With today's huge monitors, it can become hard to read large amounts of text that spans the whole screen. We are introducing a new theme which, like most websites, only uses a portion of the screen, to facilitate readability.

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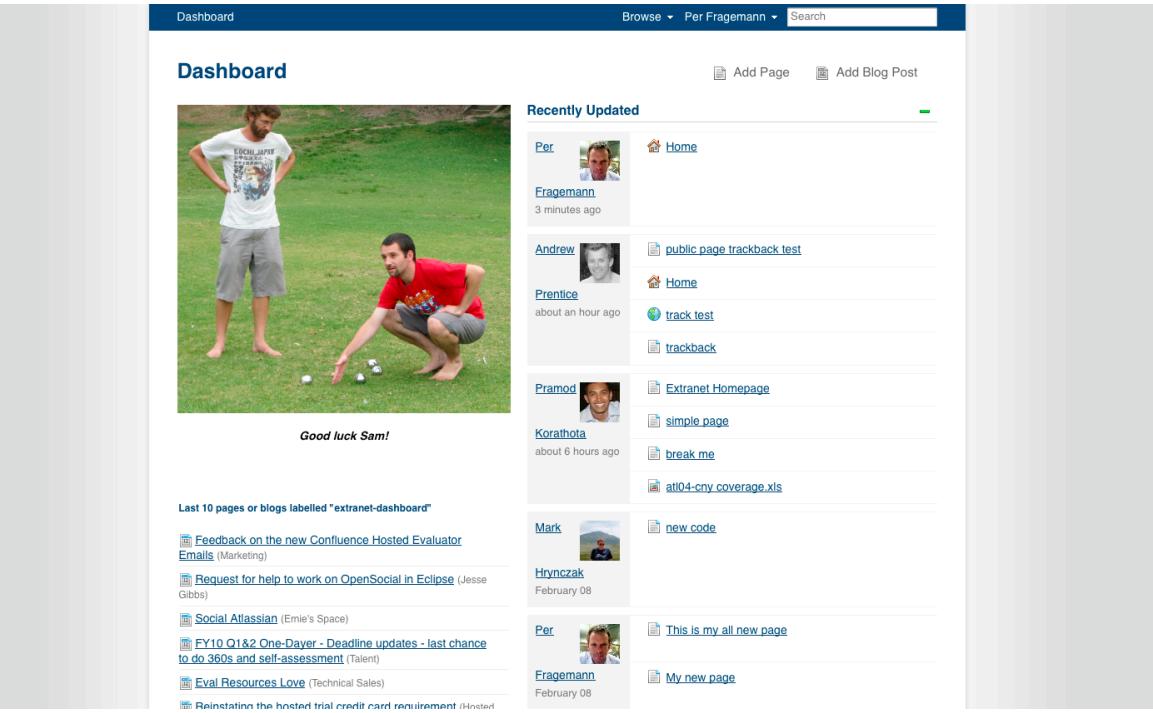

This theme replaces the old "Clickr Theme". We are still shipping the Clickr theme, but it is deprecated and will stop shipping in a later release.

5

Bundled templates and new template marketplace

The Bundled Templates 20% project is actually a framework to allow customers and Atlassian to deploy bundles of templates to a Confluence instance.

3.2 includes the framework plugin and a bundle of default templates[1]; these are available to the administrator to import into their instance as either space templates or global templates.

The templates import framework allows the administrator to preview a template before importing it as well as view the associated wiki-markup.

[1] Current default template bundle will be changed, pending list from Matt and Bill.

Documentation on how to write your own template plugin can be found here: Creating A Template Bundle.

Please visit PAC for the new category. TODO: add link

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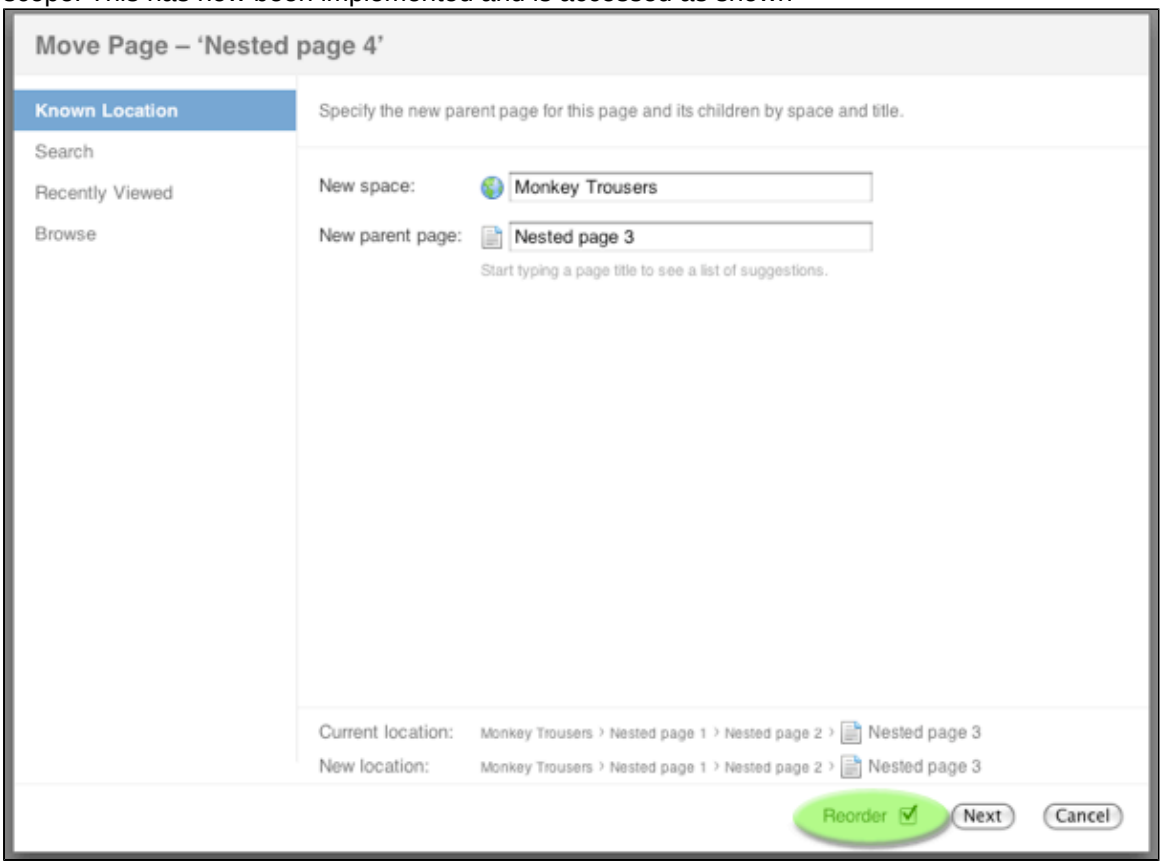
6

Better Move Page Dialog

We introduced a new page move dialog in Confluence 3.1 but the ability to change the order of pages fell out of scope. This has now been implemented and is accessed as shown -



And looks like -

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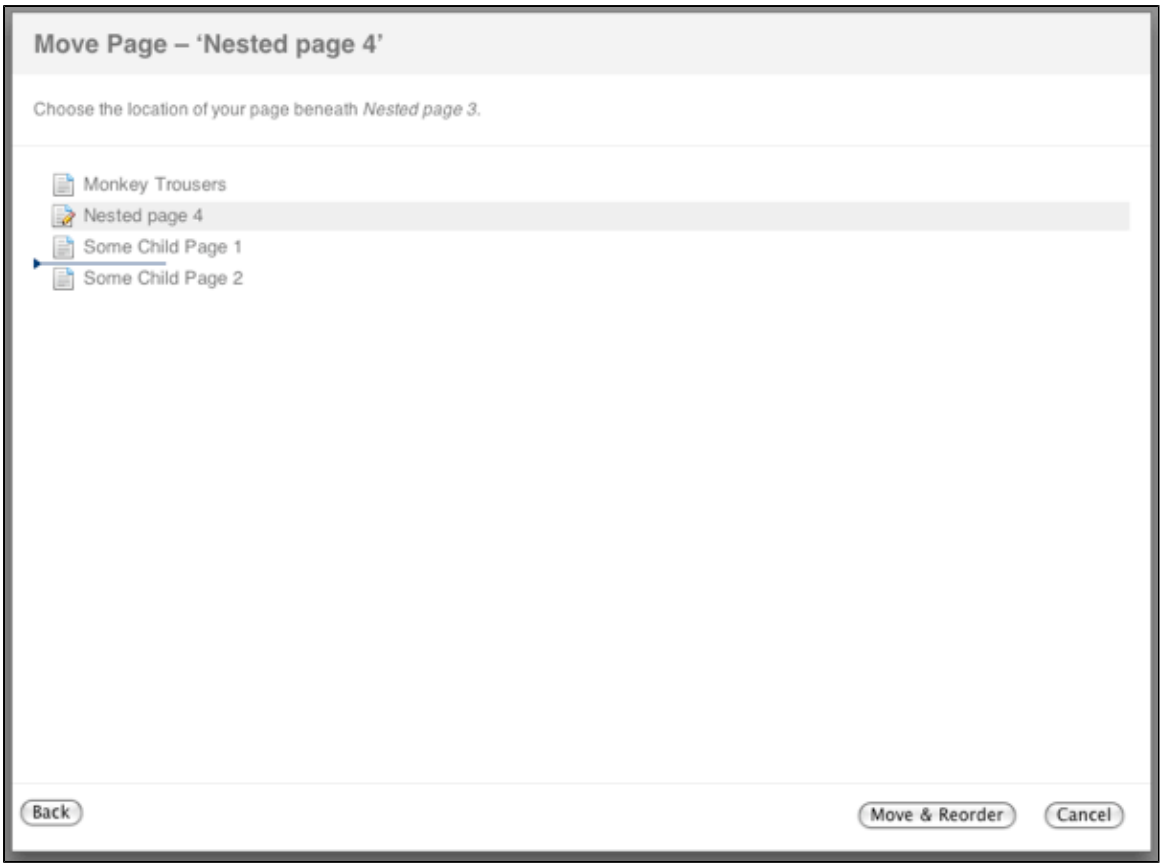

7

REST APIs

New REST Resources

- Attachment Resource
  Request: https://confluence.example.com/rest/prototype/1/attachment/161

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<attachment niceType="Image" version="1"
comment="image of Sydney harbour"
fileName="harbour.jpg" type="attachment" id="161">
<ownerId>69518087748064278</ownerId>
<title>harbour.jpg</title>
<lastModifiedDate date="2004-11-21T23:20:18-0600" friendly="Nov 21, 2004"/>
<createdDate date="2004-11-21T23:20:18-0600" friendly="Nov 21, 2004"/>
</attachment>
```

Some fields removed

More in-depth documentation coming soon.

8

Useful Improvements and Enhancements

Page History

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What used to look like this...

.. now is a bit more understandable:

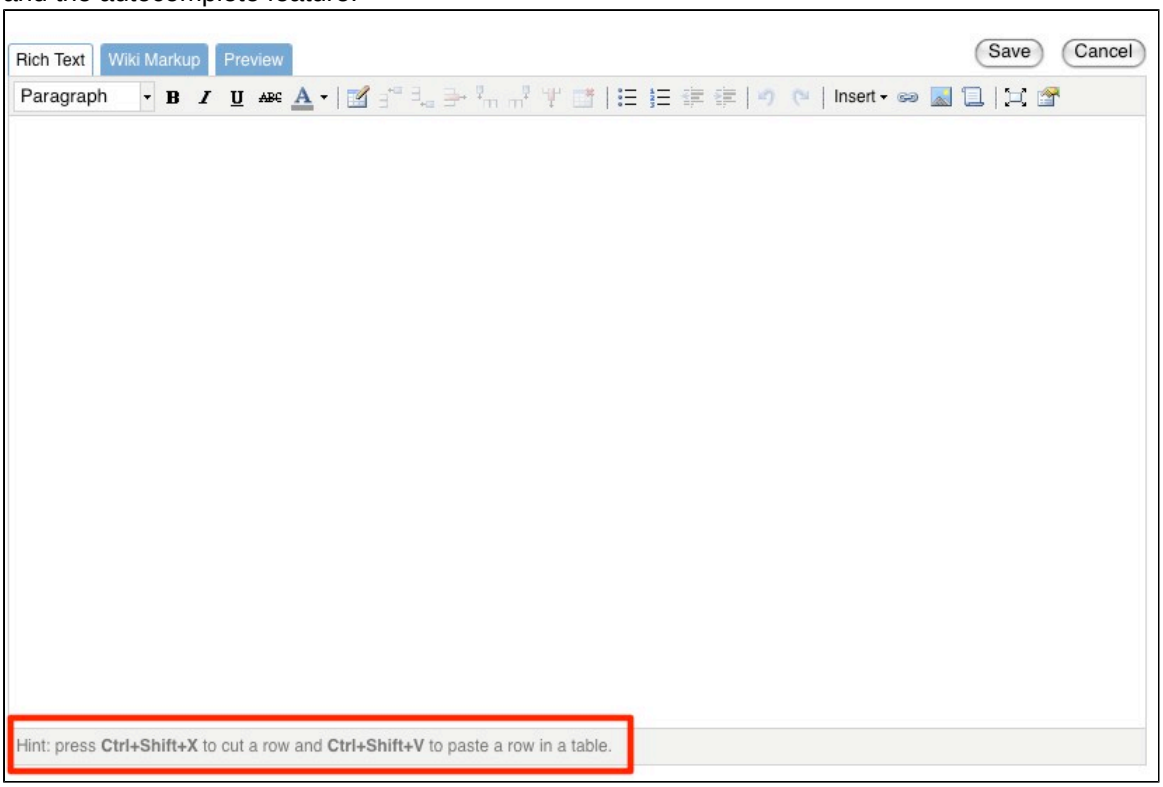
RTE Shortcuts Added

The following RTE shortcuts have been added, please try them out!

- Ctrl+Shift+C Copy table row
- Ctrl+Shift+X Cut table row
- Ctrl+Shift+V Paste table row
- Ctrl+Shift+B Bullet lists
- Ctrl+Shift+N Numbered lists
- Ctrl+Shift+F Full screen mode
- Ctrl+Shift+S Strikethrough
- Ctrl+Shift+T Insert Table
- Ctrl+Shift+A Macro Browser

RTE Hints

At the bottom of the RTE, useful editor hints get displayed. This will help promote the new keyboard shortcuts and the autocomplete feature.



Images in search results

If an image is found, it will be displayed in the search results. The main point here is that we've made it possible to write plugins to spice up search results. You could write custom display for any kind of attachment types, or

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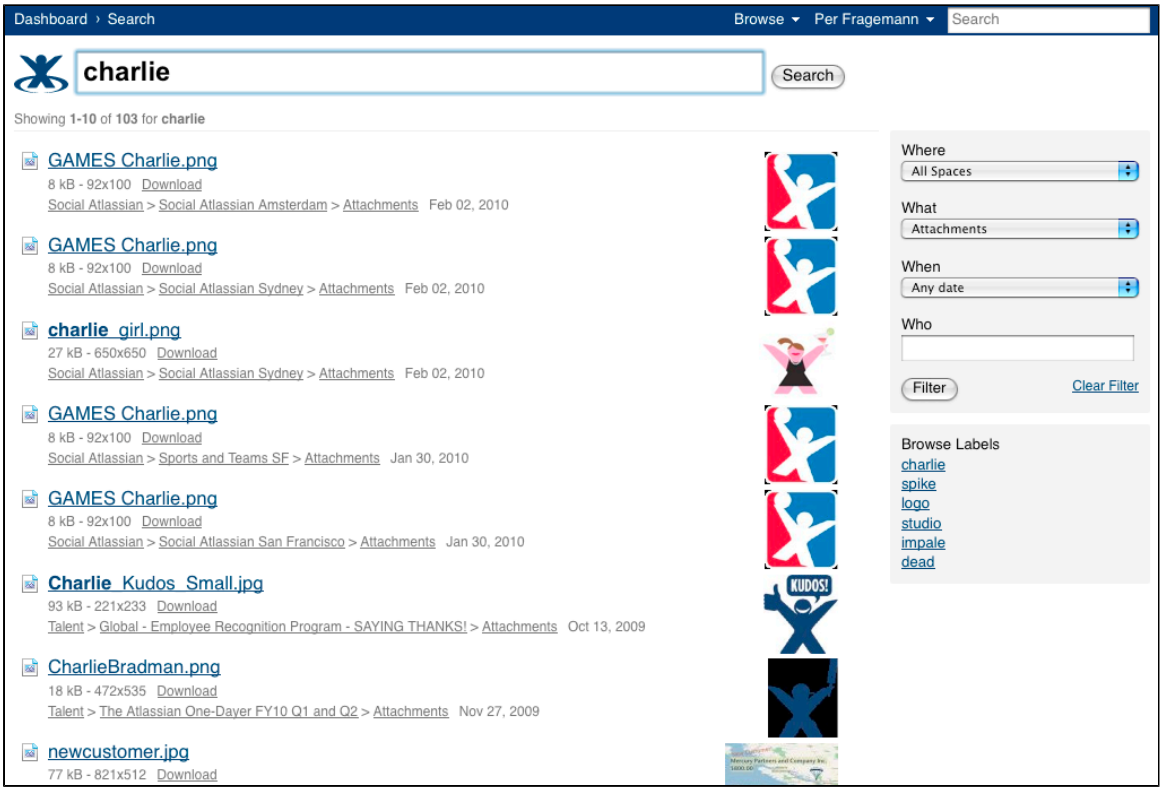
even change what the regular pages look like.

A tutorial for how to write your own renderer is located over at the Confluence Dev space



Bundled JDBC drivers

To improve the Evaluator experience, we're now bundling a few of the most common JDBC drivers.

Improved RSS feed builder screen

The RSS feed builder looks a bit more polished and less scary.

Bug fixes and stability improvements

A host of old bugs have been fixed. Most notable:

- it is now possible to install language packs without restarting the server.
- When adding new pages or posts, there used to be a white-space overlapping the right part of the editor. This is now fixed.
- Removed many instances of hard-coded colours (mostly blue) that prevented colour schemes applying correctly.
- Enhancement for modern browsers: added CSS to handle common forms of over-sized content, so it gets a localised scrollbar instead of making the whole page scroll
- Properly set backgrounds for email and editor popups, so they don't (incorrectly) pick up backgrounds from the main wiki window.

Release Notes 3.2-m3 ("Milestone 3")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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Welcome back

it's been a while since we shipped Confluence 3.1 in December. Since then, we've been having heaps of fun at our second Lab Week, during which we experimented with all sorts of new technology and crazy ideas, mainly around the editor. We've been busy coding up new features over the last weeks, but also various back-end changes. Milestones 1 and 2 were internal only and didn't show much visual anyway, but now we're getting there.

The Confluence 3.2 development cycle is going to be a short one. We are currently aiming at shipping in Mid March. There will probably be one a M4 milestone in two weeks, but then we're in Beta mode already.

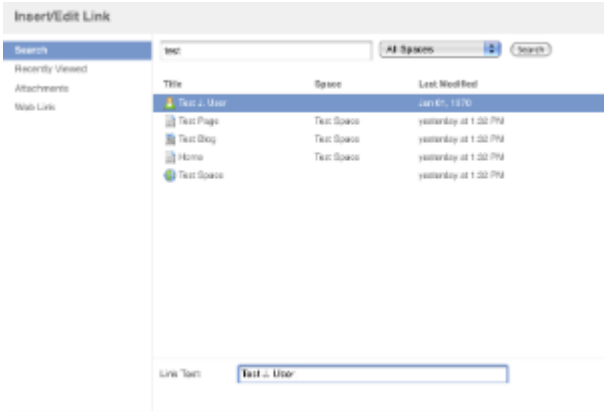
The features

New Links Browser

The new link browser is now available in the editor toolbar (the old one is still there as a backup).

Note: this funky icon is temporary

This new browser now has all the functionality present in the current link popup, except for the recently modified tab. You can now add links to attachments and recently viewed pages, which weren't available in m2. Please raise any bugs found against the linking component in Confluence.



Know issues

- quick search only returns pages
- error messages from the server aren't displayed yet
- usability work still to come (like cursor placement and keyboard navigation)

Documentation theme

We are going to bundle the new Documentation Theme,

Fixed Width Theme

We are introducing a theme that by default has sidebars. The main work here is behind the scenes, fixing up our HTML and CSS so that 3rd-party theme developers will benefit and be able to write such themes more easily.

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If you're wondering where the 'sudden green' has come from, it has originated from Confluence's product colour on our website.

Naturally the colour scheme is customisable:

Known issues

- Space Admin screens still need work (site admin screens don't get themes applied, but space admin does)
- There's more polish to go into this theme - mostly small spacing and font size adjustments
- Our minimum resolution is 1024x768; content that doesn't fit at that size won't fit in the fixed width theme either.
- There is a certain discussion around the colours, and wether we should be a bit more conservative in terms of the background. We will keep discussing.
- The main point here is that many bugs have been fixed, and that 3rd-party theme developers will benefit from many under-the-hood bugfixes to our html and css.

Anatoli's 20% project: RSS improvements

- CONF-18372 : changed the feed builder UI so that now you can chose comments/attachments for either pages, blogs, both or none. The new UI will generate slightly different parameters so that they don't interfere with old RSS query format.

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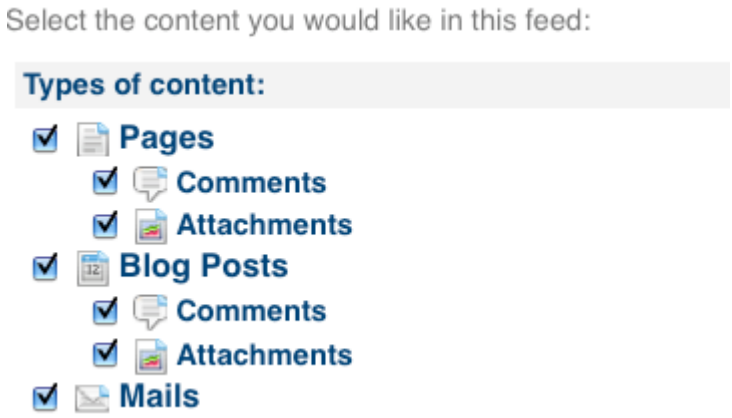

There are plans to further improve the UI.

- CONF-9312: changed the behavior of rss feed when filtering by label. Now when you ask for comments and pages with a particular label you will get the labeled pages and comments on those pages.

Backend changes

The Engine Room has upgraded plenty of libaries:

- Many common modules were upgraded.
- Migrated our Sal Plugin into Confluence
- REST Service for retrieving Recently Viewed pages
- Start of REST service for Confluence searches

More documentation about REST will soon follow.

Next steps

There are still heaps of improvements that will make it into 3.2, so stay tuned for M4 and Beta1, both due this month.

Cheers,
The Confluence Development Team

Release Notes 3.2-m4 ("Milestone 4")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
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  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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With great pride we bring to you the best milestone of this release cycle. We are now more or less feature-complete. There are a few usability issues which we still want to fix, and yes, there are still plenty of bugs. We didn't manage to bundle a few of our new great plugins yet, and have large chunks of code to review. That's why we didn't call this Beta yet, but named it M4

But overall, this is how 3.2 will get rolled out to customers. We want your feedback: Speak now or forever hold your peace. 🙂

Note to partners and translators: The preliminary translation diff files can be found as a subpage of this overview page: Translations for Confluence Releases

1 Engine Room

New REST Resources

- Attachment Resource
  Request: https://confluence.example.com/rest/prototype/1/attachment/161

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<attachment niceType="Image" version="1"
comment="image of Sydney harbour"
fileName="harbour.jpg" type="attachment" id="161">
   <ownerId>69518087748064278</ownerId>
   <title>harbour.jpg</title>
   <lastModifiedDate date="2004-11-21T23:20:18-0600" friendly="Nov 21,
2004"/>
   <createdDate date="2004-11-21T23:20:18-0600" friendly="Nov 21, 2004"/>
</attachment>
```

Some fields removed

More in-depth documentation coming soon.

Other News

- Integrate auto-complete and Link Browser to use REST search and attachment resources
- Bug Fixes

2 Autocomplete

We are adding a new feature called Autocomplete to the Rich Text Editor, which currently only works in Firefox and (try your luck!) Safari. You can type "**[**" at the start of a line to display your browsing history and link to those pages, and if you keep typing you'll get recommendation for pages that match what you types. If you type "**!**" you'll see the attached images to the current page, and if you keep typing you'll be able to link to any image in your deployment.

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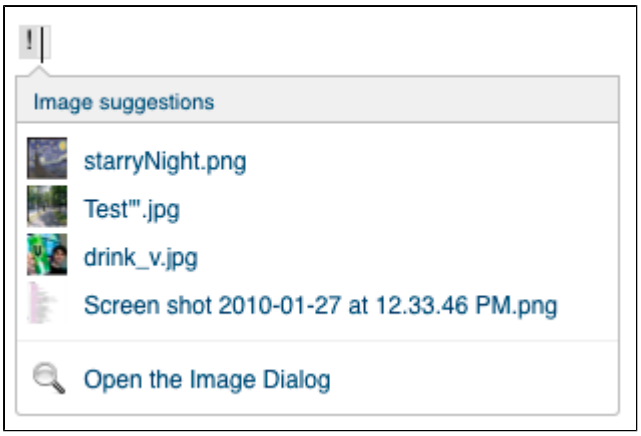


This feature's goal is to make the RTE even faster than using wiki markup. Try it out and tell us what you think!

Note: May require a re-index of your system to show attachments

Known issues

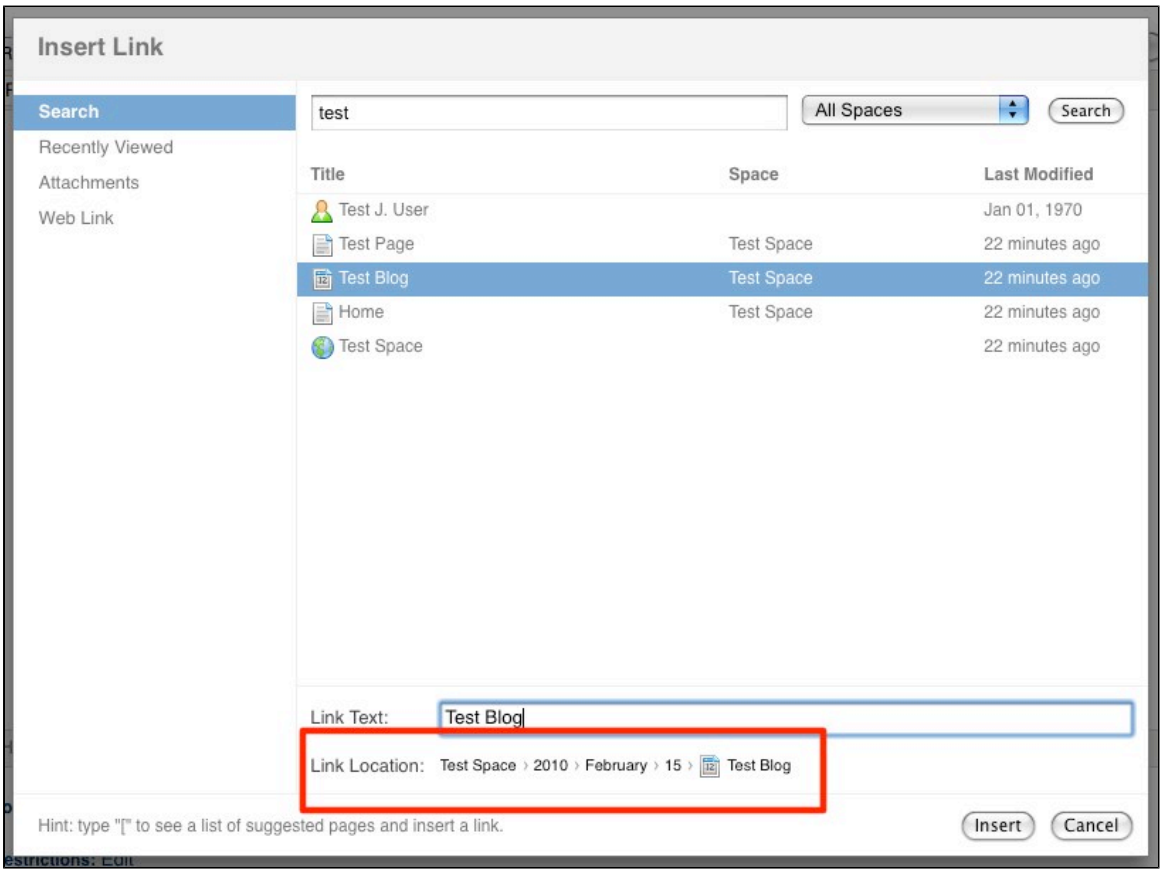
- CONF-18281 - doesn't work in IE yet
- CONF-18584 - when both the RTE and outer frames are scrolled the dropdown location is incorrect
- Plenty of small niggly bugs.

3

New Links Browser

The Links Browser is now feature complete and has been enabled as the default insert link button in the editor.

The breadcrumbs in the search panel of the dialog is new in this milestone. This is particularly helpful when editing existing links.



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Know issues

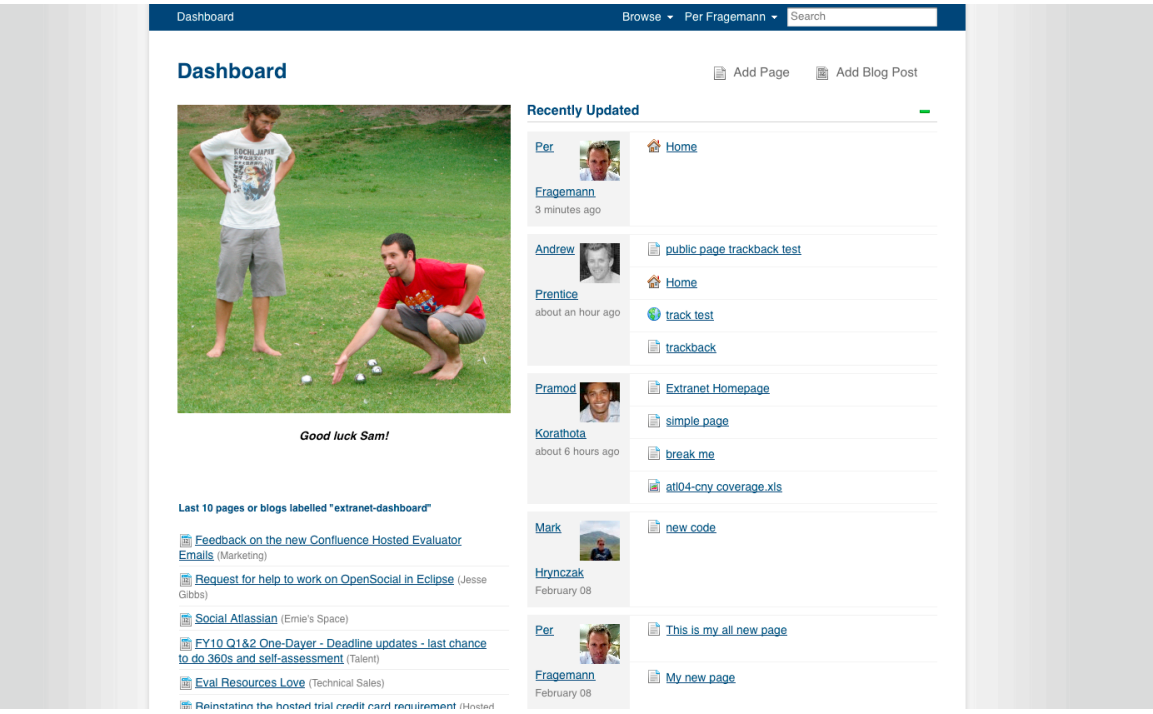
- CONF-18589 IE 6 caches responses for recently viewed and attachments tabs
- CONF-18575 Pressing enter on the search field leaves the page in IE7
- CONF-18455 After viewing a user profile, the recently viewed tab displays no pages

4

New Theme

Our new Fixed Width Theme (proper name still tba) now has

- new fancy gradient
- soothing blue colour scheme
- personal sidebar folds away neatly
    - we tried floating it over content, but people weren't so keen on that.
- tidier grid than last milestone
- comment threading now far more robust, comments RTE toolbar collapses or scrolls instead of truncating (this solution will be migrated to core code after trial use in fixed width - the problem can also happen in default)
- key bugfixes: space admin screens and RTE spacing



Known issues

- The header nav dropdowns don't line up with the bottom of the header yet
- Personal info sidebar has some bugs to resolve after final design change (mainly: IE6 breaks, sidebar overlaps "navigate space" in some browsers)
- Attachments page is getting truncated in some circumstances
- Some RTE messages wrap poorly

Note for bug tracking: bugs that also occur in the default Confluence at 1024x768 are not theme bugs per se, even if they're being investigated at the same time.

5

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Bugfixes

Errors were reported by the JIRA trusted connection.

- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (11 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due
	CONF-18489	The Download All as zip is using the wrong mime type	Andrew Lynch [Atlassian]	Brad Baker [Atlassian]		Resolved	Fixed	Feb 04, 2010	Feb 16, 2010	
	CONF-18397	Error message for invalid space labels is incorrectly encoded	Ryan Thomas [Atlassian]	Mark Hryncza k [Atlassian]		Resolved	Fixed	Jan 28, 2010	Mar 10, 2010	
	CONF-18218	LDAP users with uppercase usernames cannot add favourites	Xu-Heng Tjhin [Atlassian]	Gurleen Anand [Atlassian]		Resolved	Fixed	Jan 11, 2010	Mar 24, 2010	
	CONF-18195	Impossible to select a user using mouse from an autocomplete dropdown box in a search filter "Who"	Xu-Heng Tjhin [Atlassian]	Vincent Chang		Resolved	Fixed	Jan 07, 2010	Mar 27, 2010	
	CONF-16629	Uploading large fonts for	Ryan Thomas [Atlassia	Igor Minar		Resolved	Won't Fix	Aug 12, 2009	Feb 17, 2010	

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		PDF export fails with XSRF error	n]							
	CONF-16578	When Confluence license is invalid in confluence.cfg.xml, Confluence fails with "Upgrade failed" in the browser	Ryan Thomas [Atlassian]	Roy Hartono [Atlassian]		Resolved	Fixed	Aug 06, 2009	Mar 27, 2010	
	CONF-16058	CreateRssFeedAction doesn't handle multiple RSS types in request nicely	Ryan Thomas [Atlassian]	David Taylor [Atlassian]		Resolved	Fixed	Jun 08, 2009	Mar 27, 2010	
	CONF-15317	Edit User Groups unreadable in Firefox	Brian Nguyen [Atlassian]	Maleko Taylor [Atlassian]		Resolved	Fixed	Apr 23, 2009	Mar 09, 2010	
	CONF-15180	Class Cast Exception being thrown when error encountered during mail queue flushing	Brian Nguyen [Atlassian]	Tim Wong [Atlassian]		Resolved	Fixed	Apr 13, 2009	Aug 27, 2010	
	CONF-13763	Moving attachments may silently	Ryan Thomas [Atlassian]	Chris Kiehl [Atlassian]		Resolved	Fixed	Nov 17, 2008	Apr 20, 2010	

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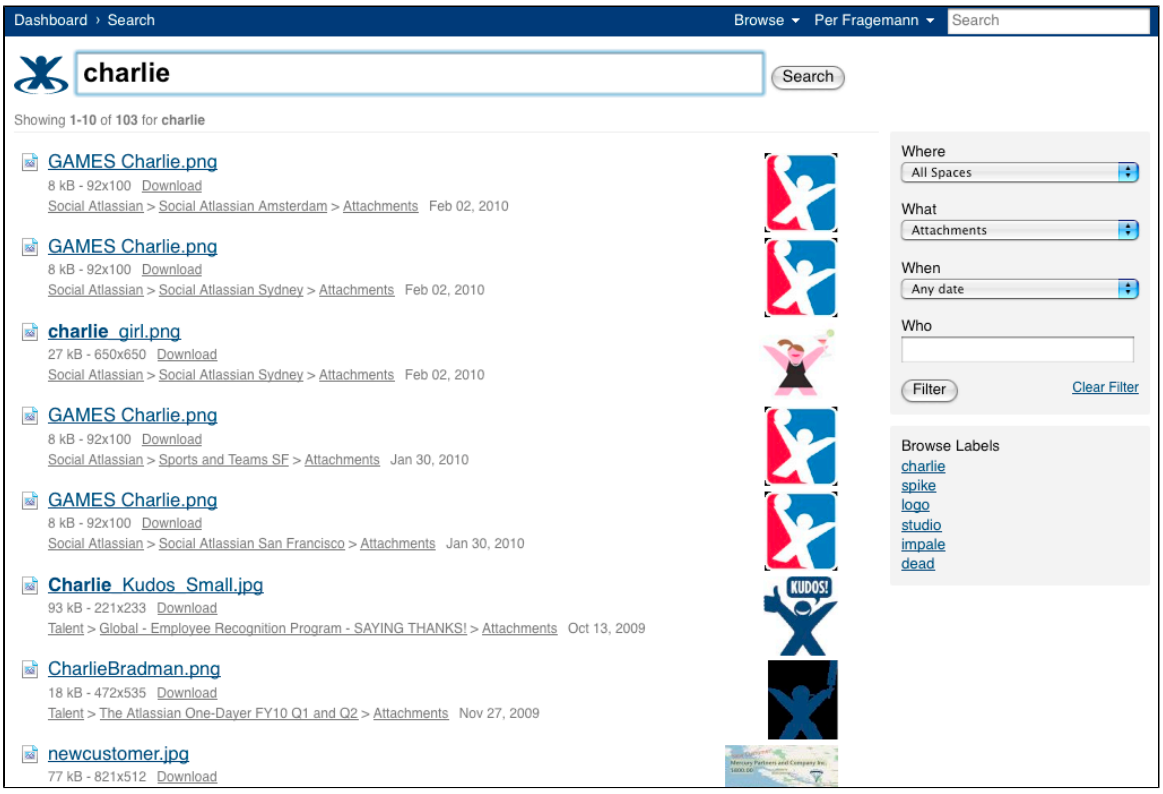
		fail to move the actual file								
	CONF-7473	Confluence uses the server's locale for dates and not the default language	Xu-Heng Tjhin [Atlassian]	Agnes Ro [Atlassian]		Resolved	Fixed	Dec 18, 2006	Feb 23, 2010	

6

Daniel's 20% project: Images in search results

If an image is found, it will be displayed in the search results. **The main point here is that we've made it possible to write plugins to spice up search results.** You could write custom display for any kind of attachment types, or even change what the regular pages look like.

A tutorial for how to write your own renderer is located over at the Confluence Dev space



7

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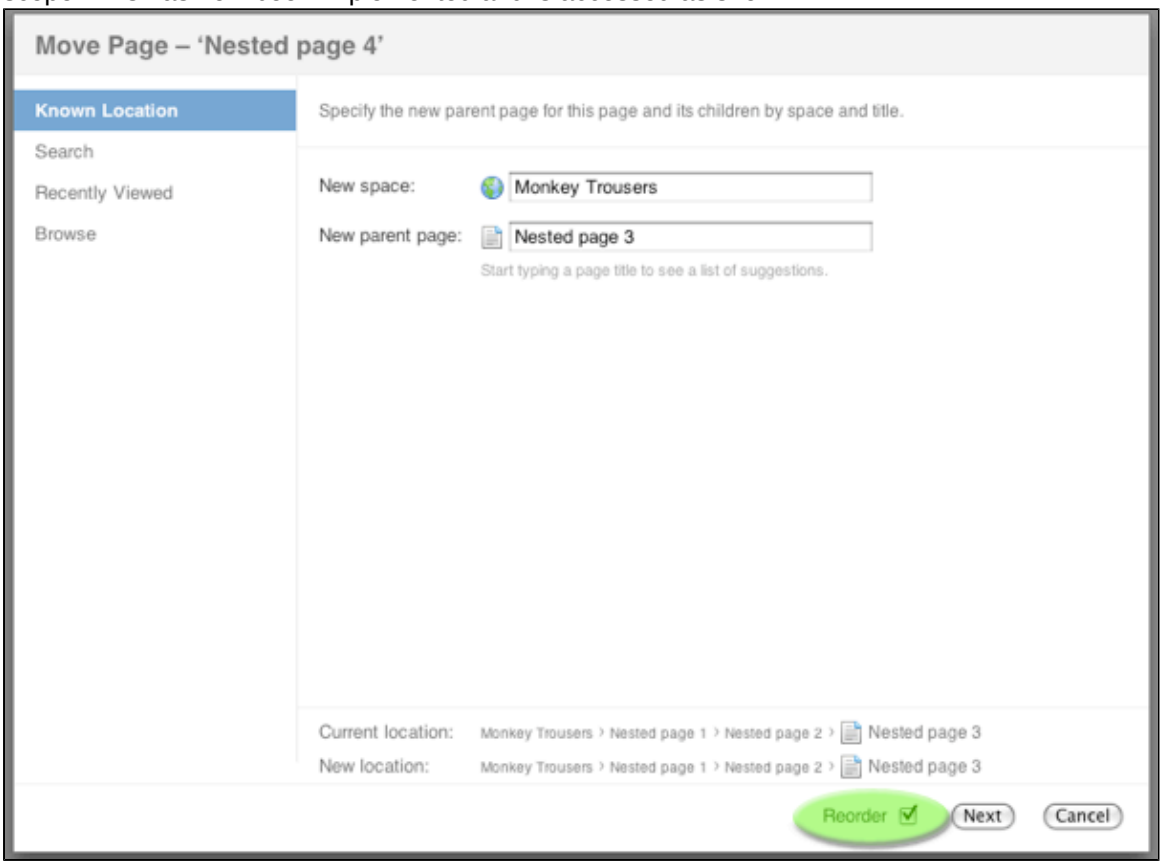
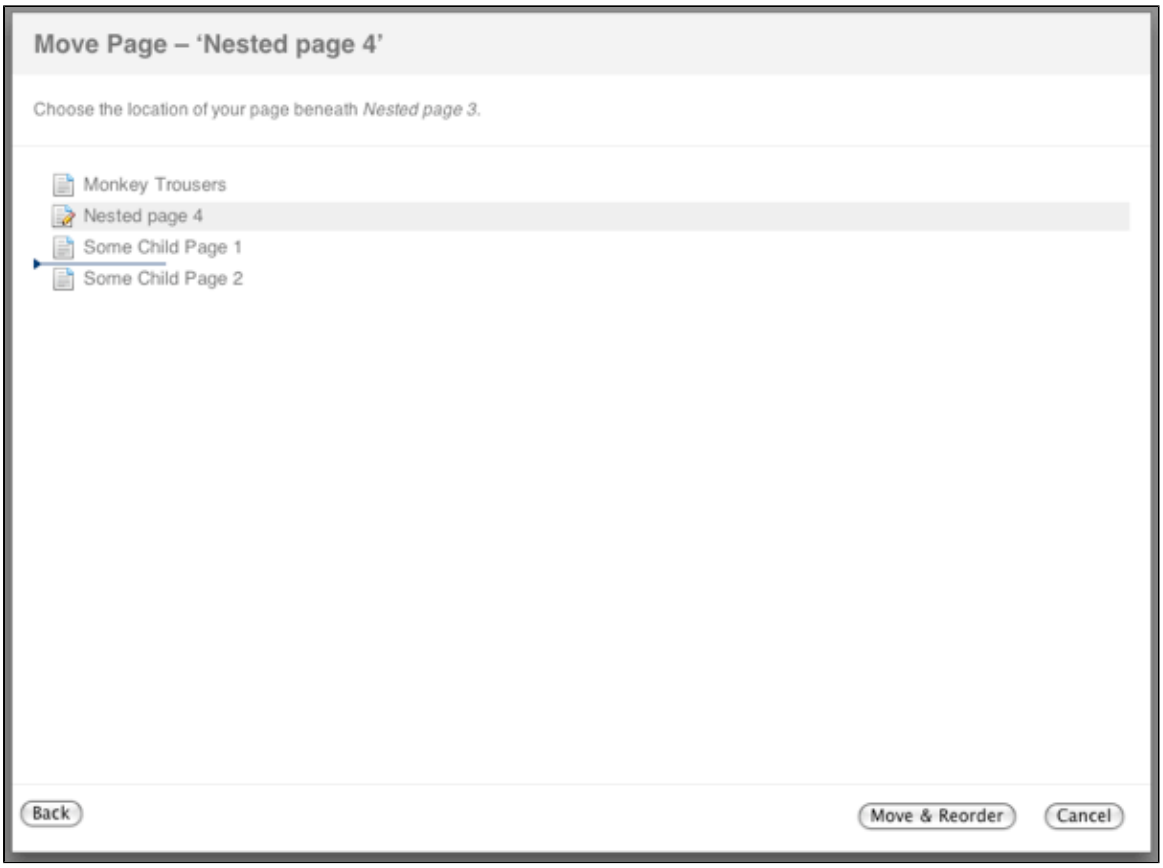
Paul's 20% project: Finishing the page move dialog

We introduced a new page move dialog in Confluence 3.0 but the ability to change the order of pages fell out of scope. This has now been implemented and is accessed as shown -



And looks like -



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8

Small (yet awesome) Improvements

Page History

Say Hi to the new and (largely) improved Page History navigation.

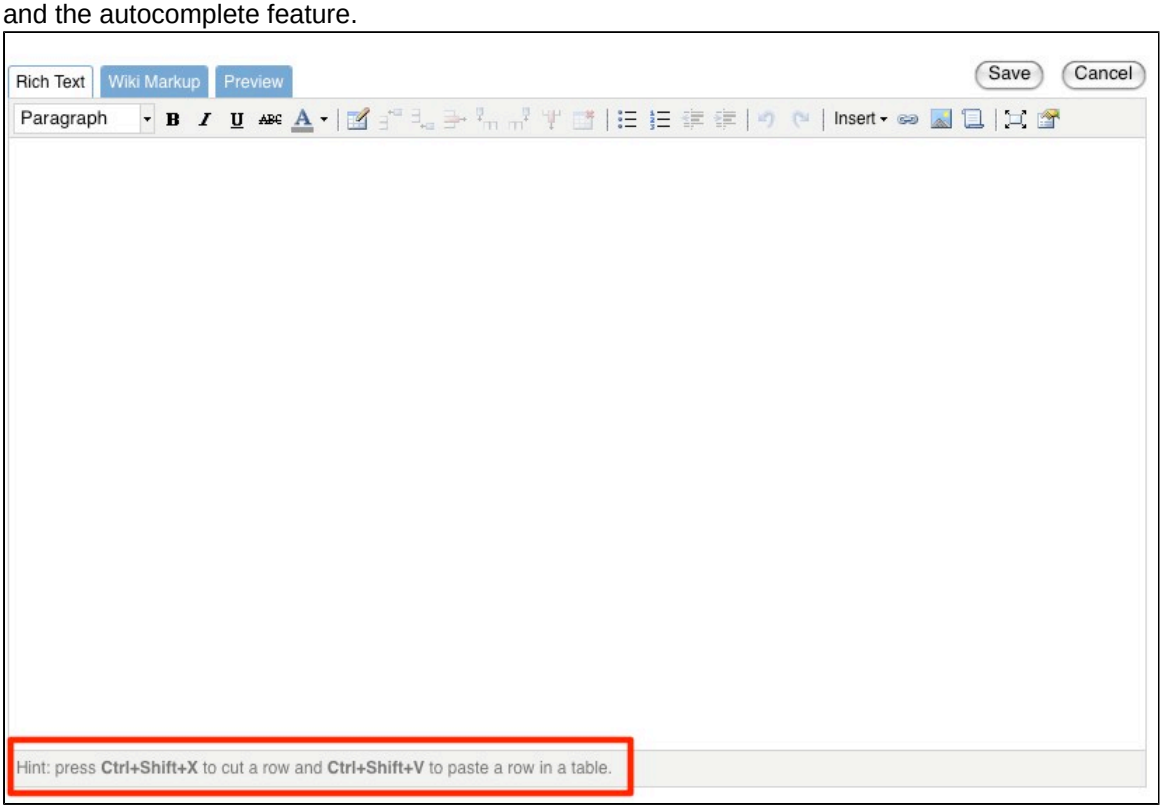
RTE Shortcuts Added

The following RTE shortcuts have been added, please try them out!

- Ctrl+Shift+C Copy table row
- Ctrl+Shift+X Cut table row
- Ctrl+Shift+V Paste table row
- Ctrl+Shift+B Bullet lists
- Ctrl+Shift+N Numbered lists
- Ctrl+Shift+F Full screen mode
- Ctrl+Shift+S Strikethrough
- Ctrl+Shift+T Insert Table
- Ctrl+Shift+A Macro Browser

RTE Hints

At the bottom of the RTE, useful editor hints get displayed. This will help promote the new keyboard shortcuts and the autocomplete feature.



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Confluence 3.1 Release Candidate 1 Release Notes

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Milestone release advisory

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  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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While you were away...

You can see all the feature details in the beta 2 announcement. This update about the Release Candidate is just for developers and evaluators who want to know what changed between the Beta 2 and the Release Candidate. Not much! 🙂

Changes in RC1

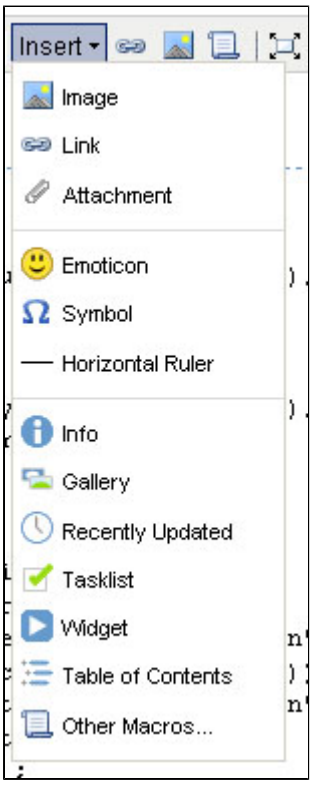
It's should come as no surprise that we have mainly been bugfixing since the Beta 2.

Faster Editor

But, in order to make our Selenium builds pass more reliably, Agnes had to spend some time on making the editor faster. And she did! 🙂

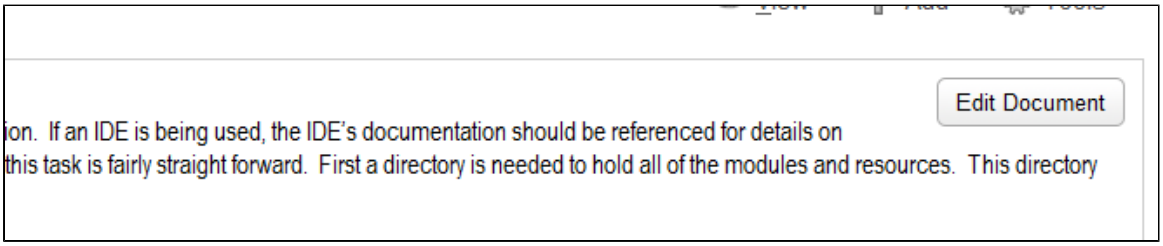
UI tweaks

Matt came up with a better widget connector icon, we've added the table-of-content which had been forgotten, and Stephen came up with a great fullscreen icon that really grabs your attention and means something.



Office file preview has a more prominent edit button

A common complaint at Atlassian Summit was that people didn't realize that you could launch your editor directly from the file preview so we've made it more obvious.



Road ahead

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We aim at turning the RC into the Final Release and ship it on Thursday the 3rd December.

Confluence 3.1 Beta 2 Release Notes

Confluence 3.1 Beta 2 is a public **development release** ("Beta") leading up to the official release of Confluence 3.1, which we aim to ship in Q4, 2009.

Confluence versions marked "Milestone", "Beta" or "Release Candidate" (RC) are development releases, which are preliminary releases leading up to the official release of a major Confluence version. They are a snapshot of our work in progress and provide an advance preview of new features to our customers and the general public. Confluence plugin developers can also use development releases to test and fix their plugins in advance of an official release.

The main distinction between a beta and a milestone release is that milestone releases typically acquire new features with each subsequent milestone version, whereas beta releases are predominantly feature-complete. Beta releases still undergo bug fixing and occasionally, existing features may be enhanced or added in subsequent beta versions. Release candidates are close to being ready for final release, but may still undergo changes before the final release.

> **Do not use in production**
>
> Development releases should not be used in production environments as they are not officially supported.

For all production use and testing of Confluence, please use the latest official release.

Who should try this out?

With development releases, the Confluence development team aims to provide plugin developers with an opportunity to see the latest changes in the code.

Furthermore, if you are a Confluence customer who is eager to see the new features and provide us with feedback on our upcoming major release, we encourage you to try out our development releases.

> **Please note the following**
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> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
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Each development release has passed all our automated tests, has undergone some performance testing and has been used for one week on our official internal Confluence server. Furthermore, most of the solved issues have been reviewed.

Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

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If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

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Known Issues

Below are some known issues associated with Confluence 3.1.

On this page:

- JIRA/Crowd and Confluence deployment
- JIRA Gadgets in Confluence
- Bamboo integration
- PDF exports only render gadgets as links
- Problematic Confluence Gadgets window when running Confluence on Java 6
- Other issues

JIRA/Crowd and Confluence deployment

Confluence will not start up or will display strange behaviour (drop down menus not working) if JIRA 4.0/4.0.1 or Crowd 2.0.x is running on the same application server installation, for example, by attempting to run Confluence and JIRA 4.0 in the same Apache Tomcat server installation. This problem results from a bug in JIRA (tracked as JRA-19894) that is scheduled to be fixed in JIRA 4.0.2. Crowd will be fixed in the 2.1 release. In the meantime, please read our KB article on how to resolve this issue.

In the meantime, you can run JIRA or Crowd and Confluence in different 'instances' of the same application server, for example two separate Apache Tomcat server installations. If you already do so, or have installed both the Confluence distribution and JIRA 4.0 distribution, or Crowd 2.0.x, you can ignore this known issue.

JIRA Gadgets in Confluence

As of Confluence 3.1, users can embed gadgets into Confluence pages. When integrating JIRA gadgets into Confluence pages, you may encounter UI problems like a missing "Login"-button which is required to make the gadget authenticate with the JIRA server. This problem can be circumvented by setting up JIRA and Confluence to use Trusted Apps communication (since it removes the need for manual authentication). See KB article for details.

Bamboo integration

Our continuous integration product Bamboo exposes gadgets which can be embedded into Confluence pages. However, some of these exhibit problems once embedded onto a Confluence page:

- BAM-4900 : Unable to edit Bamboo gadgets in Confluence
- BAM-4890 : Bamboo gadget added in JIRA dashboard is not saving the preferences

These bugs are being fixed in Bamboo 2.5, which will ship in January 2010.

PDF exports only render gadgets as links

If you place any gadget on a Confluence page and export the page to PDF, the gadget output will not be rendered in the PDF output. Instead, each gadget is rendered on a page as a box containing the name of the gadget, the latter of which is hyperlinked. Clicking this hyperlink, opens the gadget contents itself in a new

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browser window or tab.

Problematic Confluence Gadgets window when running Confluence on Java 6

The Confluence Gadgets window may indicate that '**An error has occurred while trying to load the Gadget Directory**' and prevent you from accessing the URLs of your Confluence gadgets. This problem can occur if you are running Confluence on Java 6. After you install Confluence 3.1 or upgrade an existing Confluence installation to this version, please check the Confluence Gadgets window immediately after starting the Confluence server.

If you see this error message and cannot access your Confluence gadgets, it can be resolved by restarting Confluence. (You may need to do this more than once.)

For more information about this issue, please refer to CONF-17417.

Other issues

Refer to our JIRA site for a list of Confluence 3.1-specific bugs.

Highlights of Confluence 3.1

Highlights of this Release:

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- Bamboo integration
- PDF exports only render gadgets as links
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- Other issues

Introducing Gadgets
Drag & Drop
Office 2007 Support
New 'Move Page' Feature
Enhanced Image Browser
Draft Comparisons
Page Restrictions Dialog Box
Web Browser Version Support
Other Editor Enhancements
- Edit Mode Exit Notification
- New Rich Text Editor Insert Menu
- Macro Browser Smart Fields
- Editor speed

Other Improvements
- Add Pages or Blog Posts from the Dashboard
- New 'Link to this page' feature
- 'More' option on Activity Streams
- User Interface Performance Improvements
- Other Small Enhancements and Improvements to Confluence

1

Introducing Gadgets

Gadgets are small objects that offer dynamic content and functionality which may be served by any OpenSocial-compliant web application, such as JIRA 4.0+, Confluence or non-Atlassian applications such as

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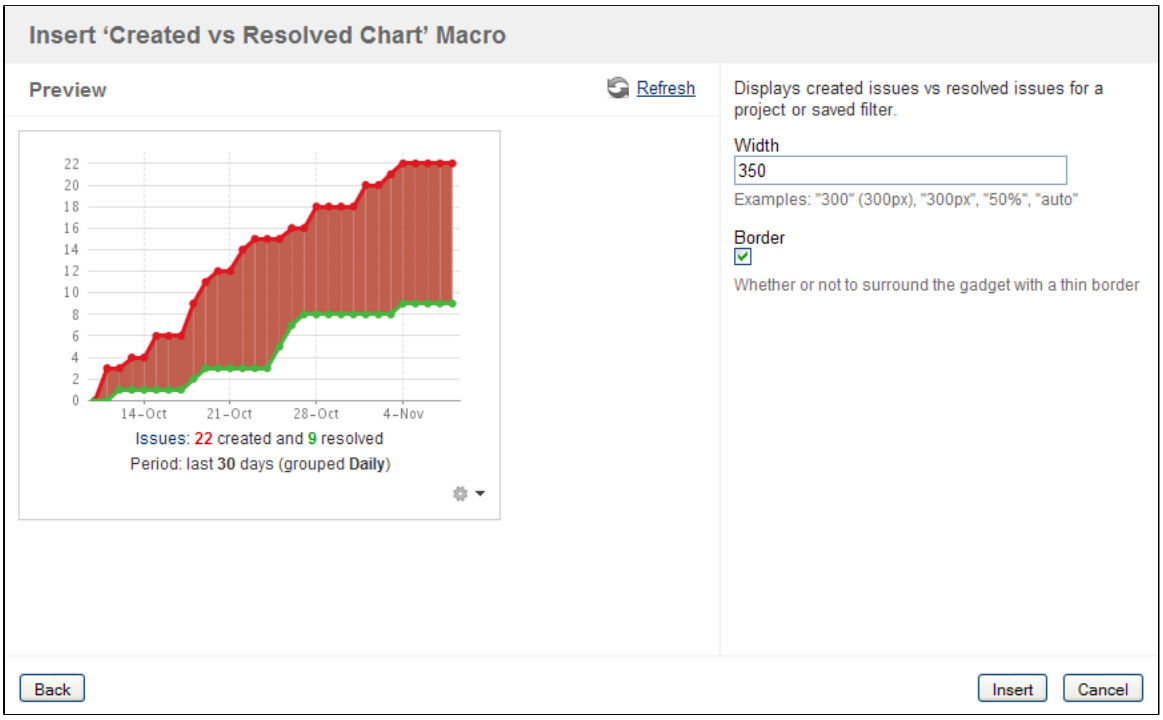
iGoogle and Gmail.

- Confluence supports the use of gadgets in pages and blog posts, which are accessible through the macro browser.
- Confluence can also serve its own gadgets, for use in any other OpenSocial-compliant web application. Two such gadgets are bundled with Confluence:
  - **Activity Stream** — This gadget shows a list of recent activities that have occurred on the Confluence server, such as the addition of new pages, blog posts or comments, content edits, status updates and so on.
  - **Quick Navigation Aid** — This gadget provides heading and content search capabilities on a Confluence server.
    Your Confluence installation can also serve these gadgets in any of its own pages or blog posts.

Inserting a JIRA Gadget onto a Confluence Page



2

Drag & Drop

The new 'drag and drop' feature allows you to drag one or more file(s) which are accessible from your computer and drop them directly into a Confluence page or blog post.

- Files can be attached to a page or blog post by dropping them directly onto the page view or the 'Attachments' list associated with the page.
- Image files can be attached to a page or blog post by dragging them from your computer directly onto the Image Browser.
- Image and Office files can be added directly into your Confluence page or blog post content by dropping them into the rich text editor's editor window.

Download Video

For more information about this feature and on how to set it up, refer to the Using Drag-and-Drop in Confluence documentation.

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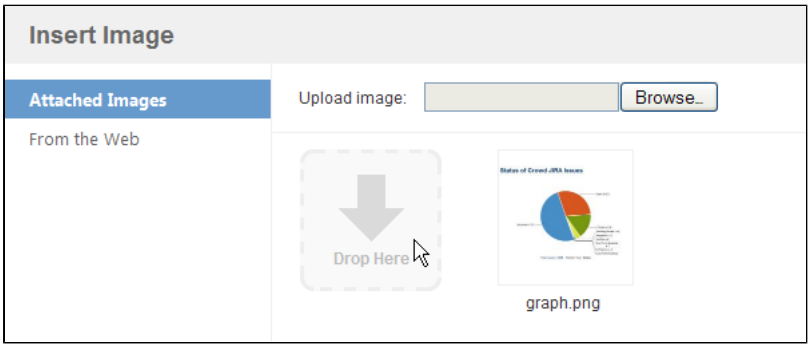
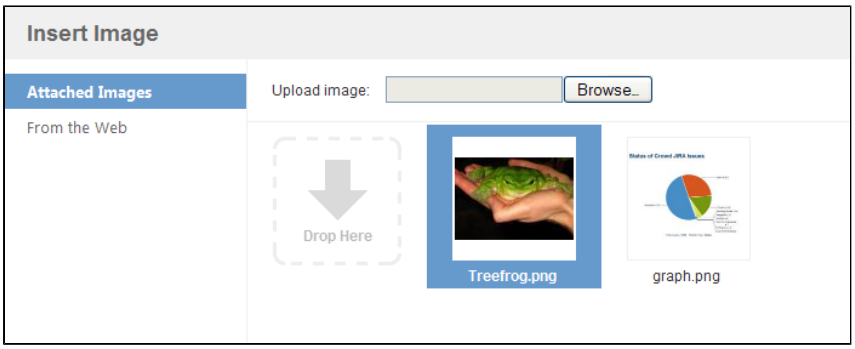
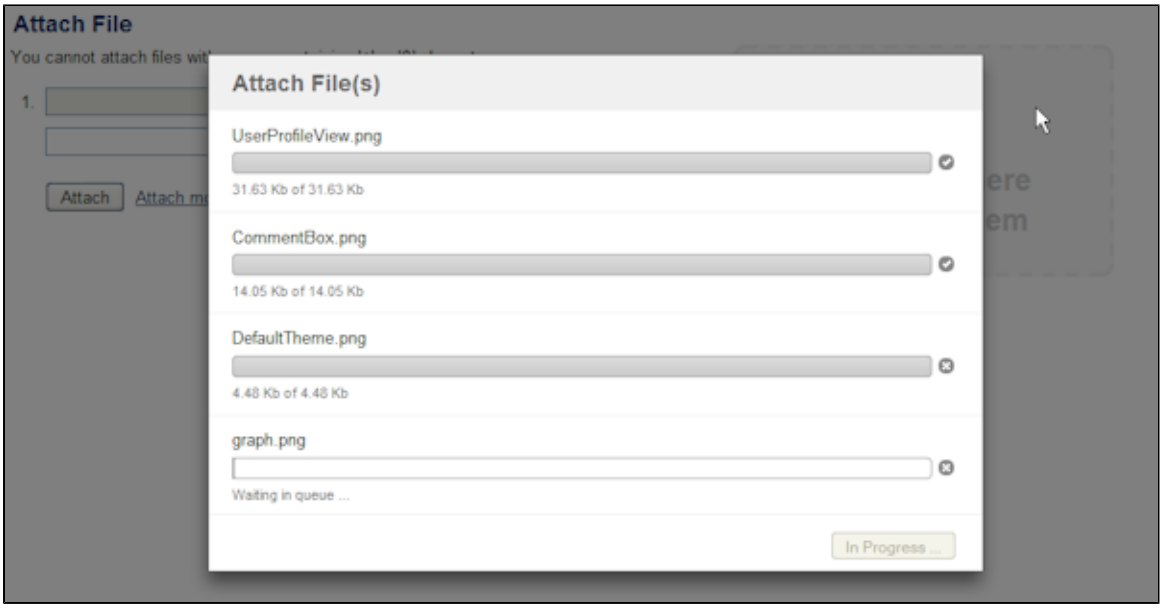
Screenshots: Attaching an Image to the Image Browser





Screenshot: Attaching Multiple Files to an 'Attachments' list



3

Office 2007 Support

Confluence now provides full support for the new Office 2007 file formats, allowing you to view and edit content from Microsoft Word 2007 (`.docx` and `.dotx`), PowerPoint 2007 (`.pptx` and `.potx`) and Excel 2007 (`.xlsx`) files.

- Along with existing Microsoft Office versions, Confluence now fully indexes Microsoft Office 2007 files and their content can be searched by Confluence.
- Using Confluence's Office connector macros, you can insert Word, PowerPoint or Excel 2007 files directly into your Confluence page or blog post.
- Office files can be edited directly from any page or blog post or their list of attachments.
  If you use the Firefox browser to work with Confluence, don't forget to reconfigure the Firefox add-on (

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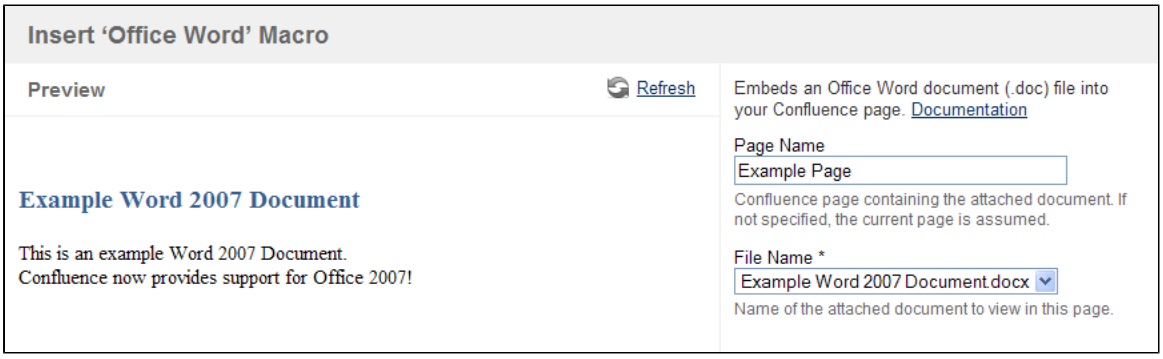
WebDAV Launcher options) to handle the new Office 2007 file extensions. Otherwise, you will not be able to edit these new Office 2007 file formats from Confluence.

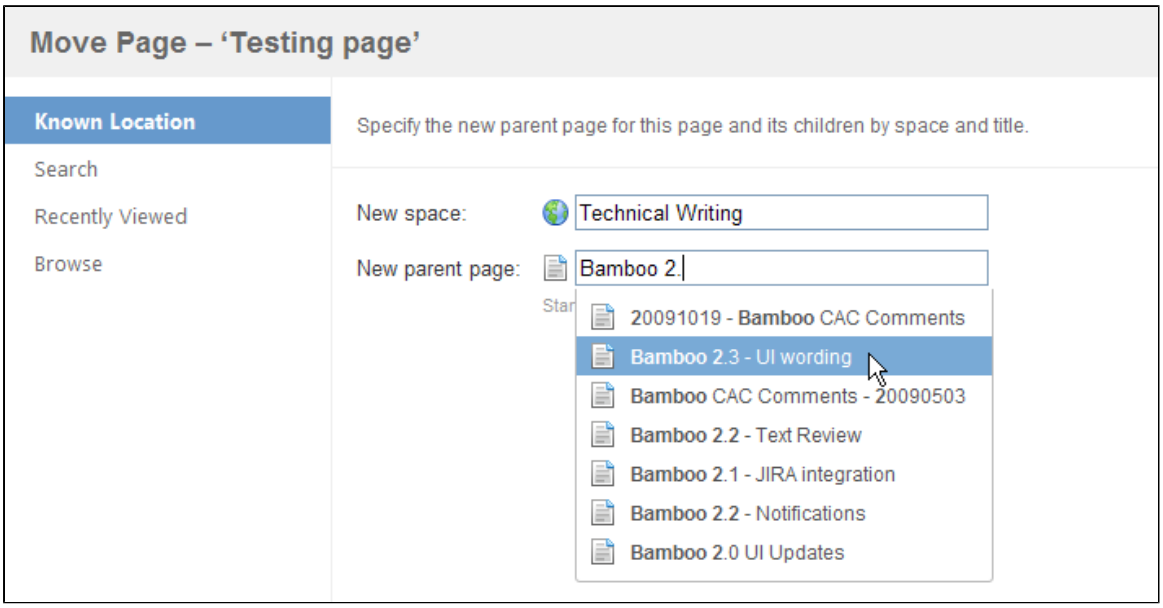


4

New 'Move Page' Feature

Confluence introduces a new page moving feature, that easily allows you to move the page you are currently viewing, adding or editing to another page elsewhere in the same or another space of your Confluence site. This feature is available through a new 'Move Page' dialog box, which provides the following flexible methods for moving pages:

- **Known Location** – Allows you to type the name of a space and within that space, the 'parent' page under which to move your page.
- **Search** – Allows you to search for a 'parent' page (within a selected space or set of spaces) under which to move your page.
- **Recently Viewed** – Allows you to select one of your recently viewed pages to be the 'parent' of your page to be moved.
- **Browse** – Allows you to select a space and page (within the tree of pages in the space) that will be the 'parent' of your page to be moved.
  For more information, refer to Moving a Page.



5

Enhanced Image Browser

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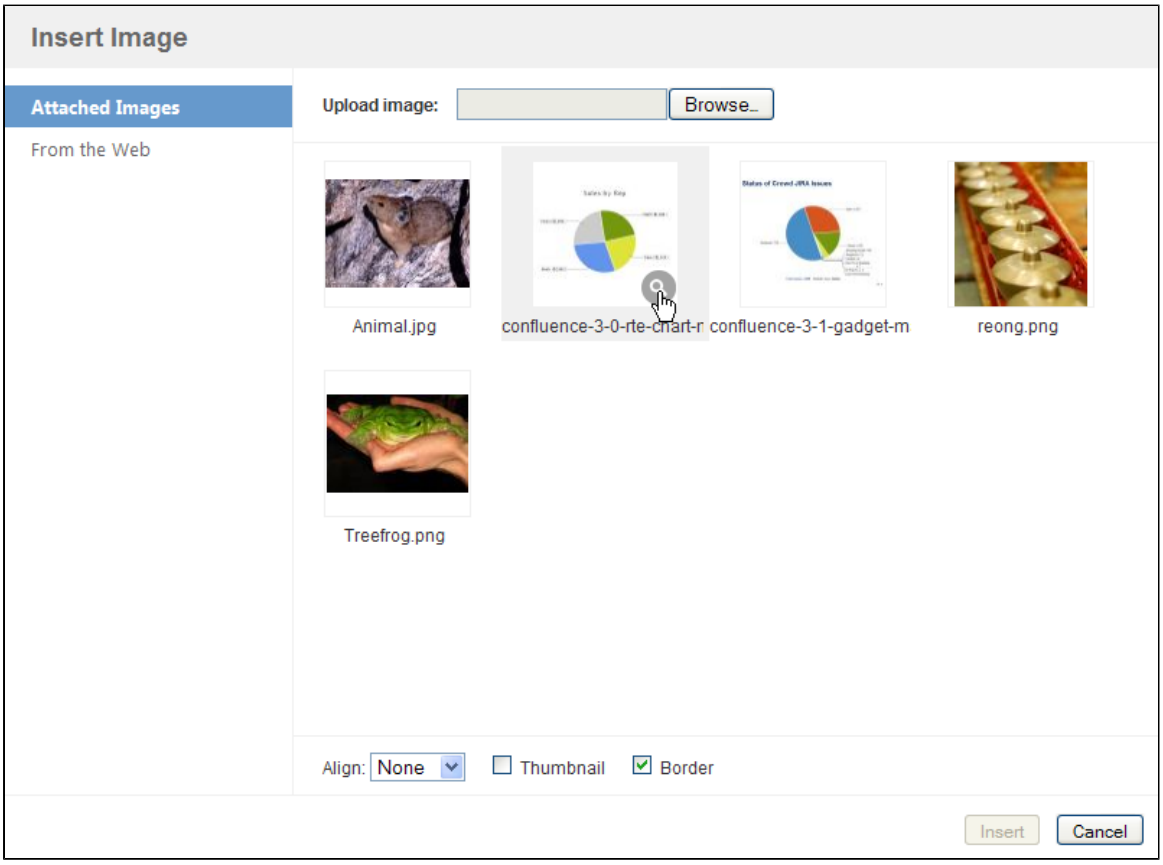
A new 'Image Browser' has been introduced to replace the old 'Insert Image' window. The image browser provides a less-cluttered and enhanced interface that allows you to:

- Preview an image in detail before inserting it into a page. This is done by hovering over any image in the browser and clicking the 'magnifying glass' icon in the lower-right corner.
- Preview an image elsewhere on the web via its URL before inserting it into a page.



6

Draft Comparisons

Confluence's drafts features have been enhanced, such that you can now view any of your unsaved draft changes before deciding to resume editing them. This nifty feature comes in handy, particularly when other people have made subsequent changes to a page or blog post in your drafts list and you need to merge changes or resolve a conflict.

Title	Last Saved Date	Operations
Page with Partial Content	less than a minute ago	Resume Editing | Discard
Page with Content to Merge	2 minutes ago	View Changes | Merge and Resume Editing | Discard
Page with a Conflict	12 minutes ago	View Changes | View Conflict | Discard

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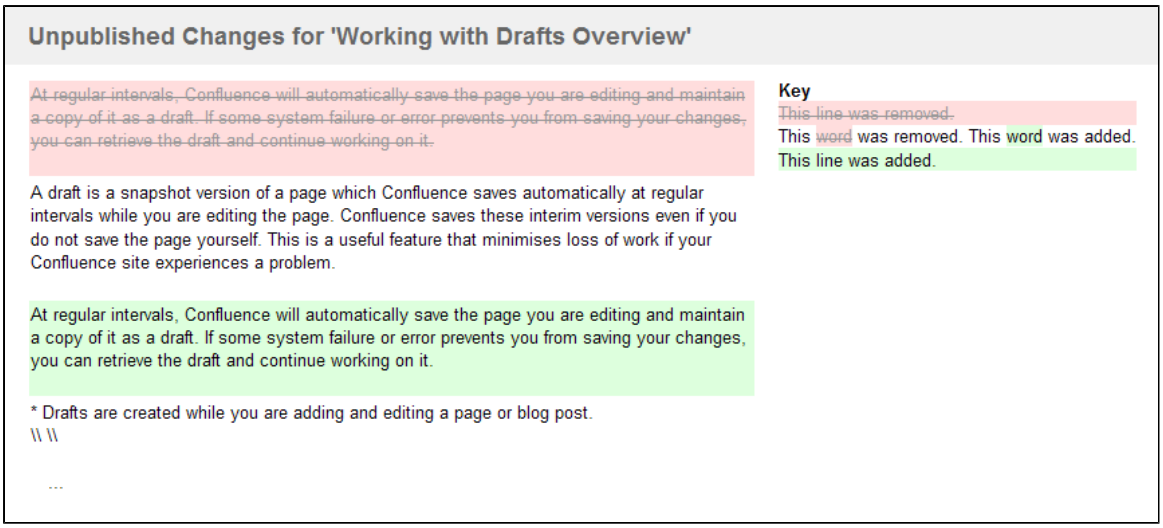
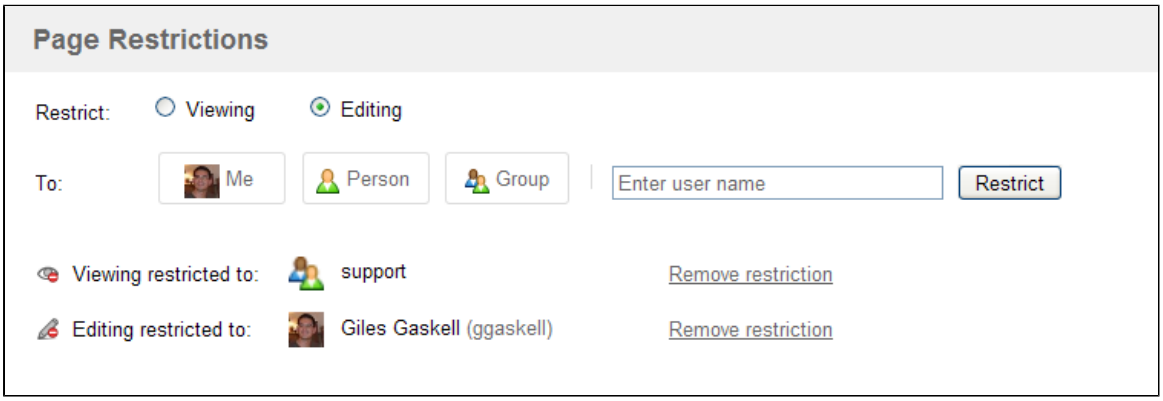


7

Page Restrictions Dialog Box

Confluence's page restrictions feature has been incorporated into a convenient and accessible dialog box that is now easier to use than before.

- The page restrictions dialog box can be accessed from the padlock icon or the '**Tools**' -> '**Restrictions**' menu item whilst viewing any Confluence page. From this dialog box, you can see all viewing and editing restrictions associated with the current page. You no longer need to view the page's associated 'Info' page to see the page's restrictions.
- You no longer have to edit a page to modify its page restrictions. You can edit all page restrictions from this easily accessible dialog box.
  The page restrictions dialog box is still accessible when when a page is in edit mode.
- In addition to user and group names, the name field also accepts a user's full name. Full names are 'auto-completed' to help you find the relevant person more rapidly.



8

Web Browser Version Support

Confluence 3.1 now fully supports the following recent web browser versions:

- Internet Explorer 8
- Safari 4
- Firefox 3.5

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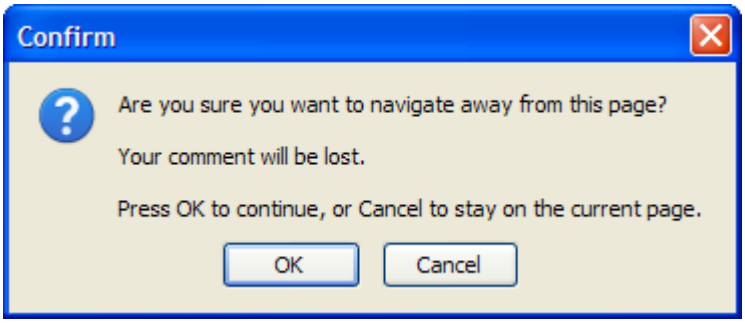
9

Other Editor Enhancements

Edit Mode Exit Notification

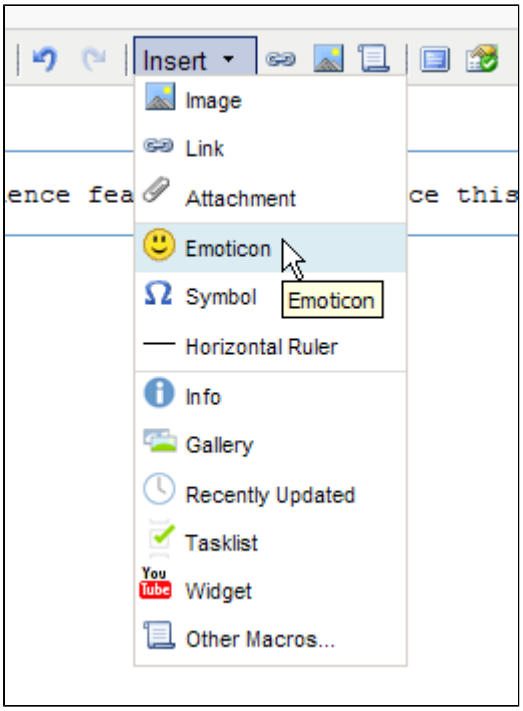
Whenever you add or edit a page, comment or blog post and then click onto another Confluence feature that navigates away from your unsaved content, a message box appears, warning that your content will be saved as a draft (if it is a page) or lost (if a comment). This allows you to cancel out of this action if it was accidental.



New Rich Text Editor Insert Menu

Confluence's rich text editor now combines a number of its commonly used editing features into a new convenient '**Insert**' menu.

- The Horizontal line, Insert Symbol and Insert Emoticon Toolbar icons have been moved into the new insert menu.
- The functionality to insert images, links or attachments into a page can now also be accessed from this menu.
- The macro browser, as well as a number of commonly-used macros are conveniently accessible from this menu too.



Macro Browser Smart Fields

When using the macro browser, an 'auto-complete' feature is now provided on any parameters that require the

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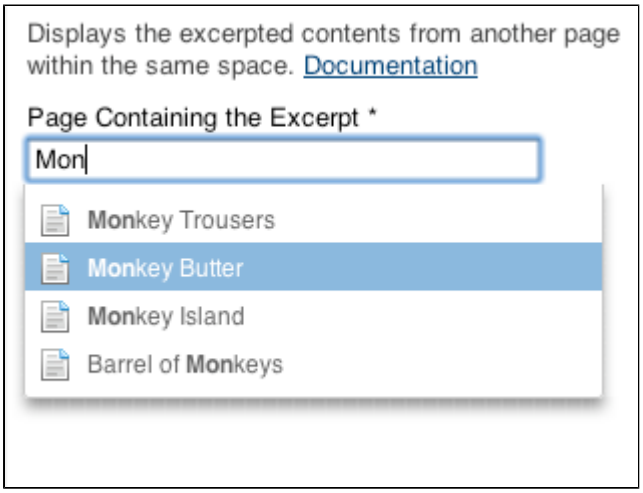
entry of a single item, such as a page title, username or space key. This greatly facilitates the customisation of macros and minimises the need to know the exact item names in advance.



Editor speed

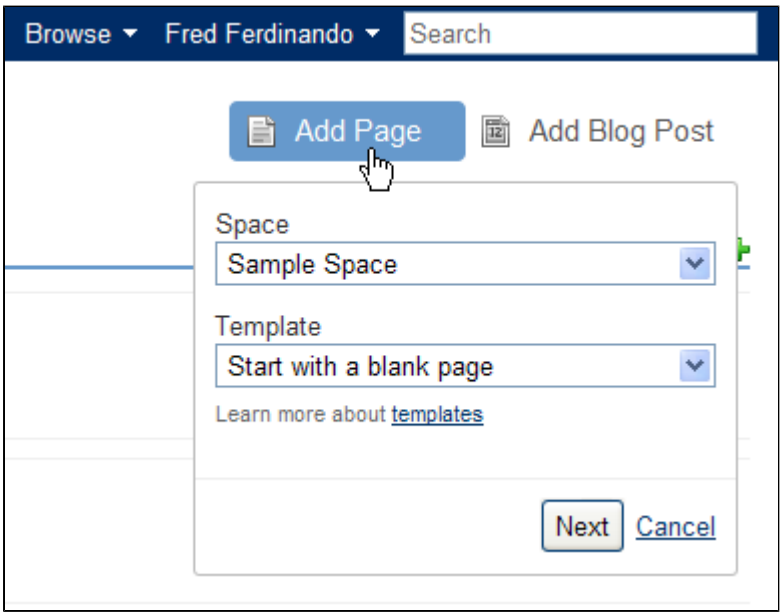
Thanks to many individual technical improvements, the Rich Text Editor opens up a lot faster than in previous Confluence releases. On a local network it appears almost instantly, and even when accessing a Confluence server on a different continent (in our case, accessing a Confluence server in the US from Australia) it takes less than 3 seconds to start editing a page.

10

Other Improvements

Add Pages or Blog Posts from the Dashboard

You can now add pages or blog posts directly from the Dashboard without having to browse to a specific space first. To do this, click on either the '**Add Page**' or '**Add Blog Post**' buttons to open the pop-up balloon, which allows you to choose the space in which to add the new page or blog post and in the case of pages, a template on which to base the page content.



New 'Link to this page' feature

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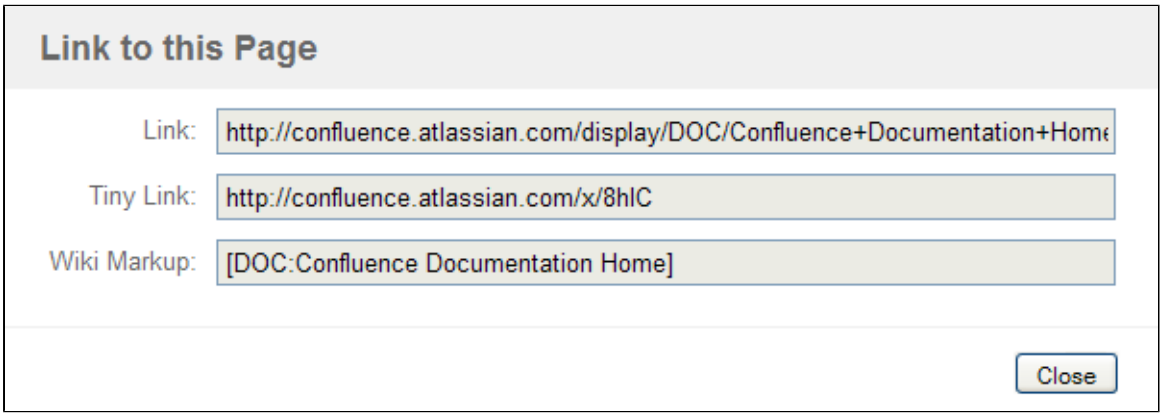
If you wish to link to a Confluence page from any other location on the web, use the convenient '**Link to this Page**' feature (available from any page's or blog post's '**Tools**' menu). Upon selecting this feature, the 'Link to this Page' dialog box opens, from which you can copy three versions of the link to embed elsewhere:

- **Link** – Standard URL which should work from any other accessible location on the web.
- **Tiny Link** – A reduced-length version of the 'Link', which can be used in text fields of limited length, such as tweets or Confluence Status Updates.
- **Wiki Markup** – A wiki markup version of the link, which can be used in any other location within your Confluence site.



'More' option on Activity Streams

A 'More' option has been added to various activity streams throughout the Confluence interface, including the profile sidebar, a user's profile page and via the recently updated macro. Clicking 'More' expands the list of results, providing a convenient means of accessing progressively more distant user activities.

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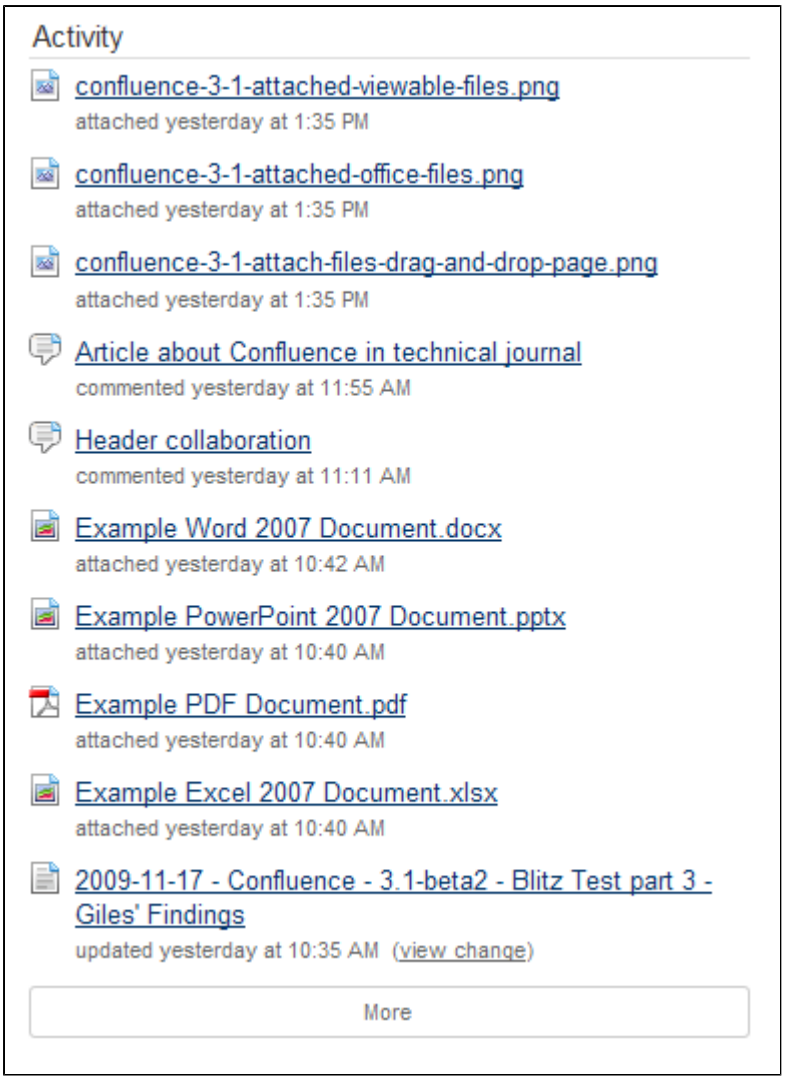

User Interface Performance Improvements

Most JavaScript and Cascading Style Sheet (CSS) files are now downloaded in one batch, greatly improving the performance of Confluence's editing features and general page rendering.

Other Small Enhancements and Improvements to Confluence

- Support for OAuth — With the introduction of gadgets (above) in this release, Confluence 3.1 now allows you to establish OAuth relationships with other web applications such as JIRA 4.0+, iGoogle, Gmail etc., thereby allowing them to share resources via gadgets.
- New Log In and Log Out screens.
- In an aim to minimise confusion, 'News Items' are now consistently called 'Blog Posts' throughout the Confluence interface and a list of blog posts is collectively referred to as a 'Blog'.
- Macro developers are now able to specify whether the macro body should or should not be displayed in Rich Text editor. For more information, please refer to CONF-12149.
- Other minor interface improvements.

Confluence 3.1 Beta 1 Release Notes

> **Confluence 3.1 Beta 2 has been released!**
>
> Please refer to the Confluence 3.1 Beta 2 Release Notes for updated information on the enhancements available in this version.

Confluence 3.1 Beta 1 is a public **development release** ("Beta") leading up to the official release of Confluence

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3.1, which we aim to ship in Q4/2009.

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Be aware that our development releases are still undergoing final performance and compatibility testing for databases and application servers. Hence, we recommend that you use development releases on installations with small (as opposed to full production-level) user bases.

Upgrade Procedure

If you wish to upgrade your existing Confluence installation with this version, ensure you have created a separate copy of your current Confluence production installation *first* and using that copy, follow the normal

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upgrade instructions to upgrade it to this development release. If you have also implemented customised site- or space-specific layouts, you will need to re-implement them after the upgrade. Otherwise, some of the new features in Confluence (or possibly existing features) may not function correctly.

Downloads

All development releases are available from Development Releases on the Atlassian website.

Known Issues

There are several bugs outstanding which will be resolved before the official release. Some bugs you are most likely to come across are:

- **Page Preview** — When editing a page or blog post and you click the '**Preview**' tab, only the first section of content is shown. You will not be able to scroll down to view the remaining content on a page.
- **Widget Connector Icon** — The current icon has not yet been finalised and will change before the official release of Confluence 3.1.
- **Quick Navigation Aid** — The Quick Navigation Aid does not work in Internet Explorer 6.0.

Refer to our JIRA site for a list of Confluence 3.1-specific bugs.

Highlights of Confluence 3.1

Highlights of this Release:

- Introducing Gadgets
- Office 2007 Support
- New 'Move Page' Feature
- New Image Browser
- Draft Comparisons
- New Page Restrictions Dialog Box
- New Rich Text Editor Insert Menu
- Other Editor Enhancements
  - Macro Browser Smart Fields
  - Edit Mode Exit Notification
- Other Improvements

1

Introducing Gadgets

Gadgets are small objects that offer dynamic content and functionality which may be served by any OpenSocial-compliant web application, such as JIRA 4.0+, the same or another Confluence installation, or non-Atlassian applications such as iGoogle and Gmail.

- Confluence supports the use of gadgets in pages and blog posts, which are accessible through the macro browser.
- Confluence can also serve its own gadgets, for use in any other OpenSocial-compliant web application including the same or another Confluence installation. Two such gadgets are bundled with Confluence:
  - **Activity Stream** — This gadget shows a list of recent activities that have occurred on the Confluence server, such as the addition of new pages, blog posts or comments, content edits, status updates and so on.
  - **Quick Navigation Aid** — This gadget provides heading and content search capabilities on a Confluence server.

Inserting a JIRA Gadget onto a Confluence Page

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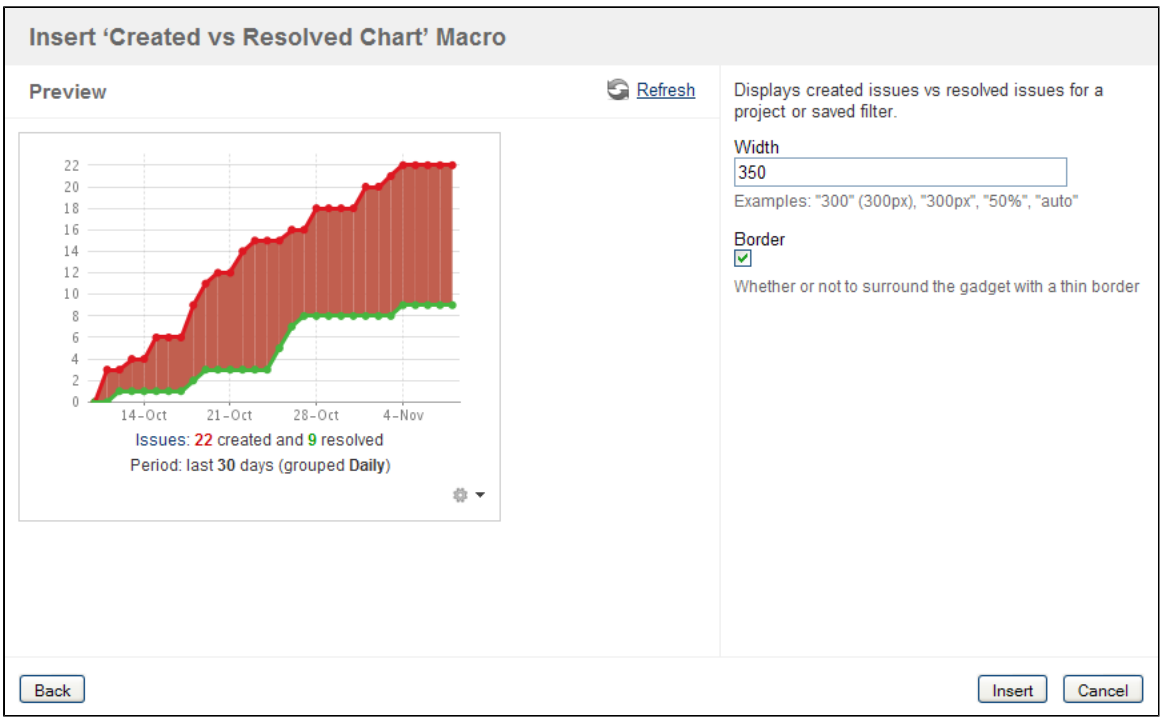
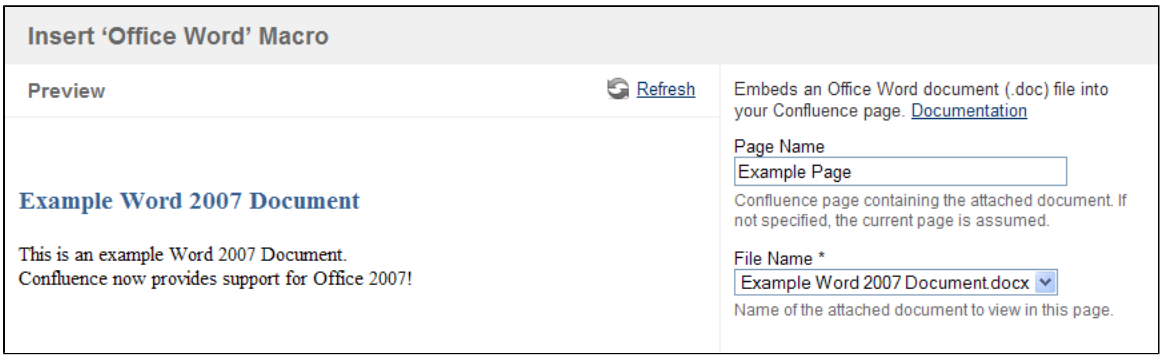


2

Office 2007 Support

Confluence now provides full support for Office 2007 files, allowing you to view and edit content from Microsoft Word 2007 (`.docx` and `.dotx`), PowerPoint 2007 (`.pptx` and `.potx`) and Excel 2007 (`.xlsx`) files.

- Along with existing Microsoft Office versions, Confluence now fully indexes Microsoft Office 2007 files and their content can be searched by Confluence.
- Office files can be edited directly from any page's or blog post's list of attachments.
- Using Confluence's Office connector macros, you can insert Word, PowerPoint or Excel 2007 files directly into your Confluence page.



3

New 'Move Page' Feature

Confluence introduces a new page moving feature, that easily allows you to move the page you are currently viewing, adding or editing to another page elsewhere in the same or another space of your Confluence site. This feature is available through a new 'page move' dialog box, which provides the following flexible methods for moving pages:

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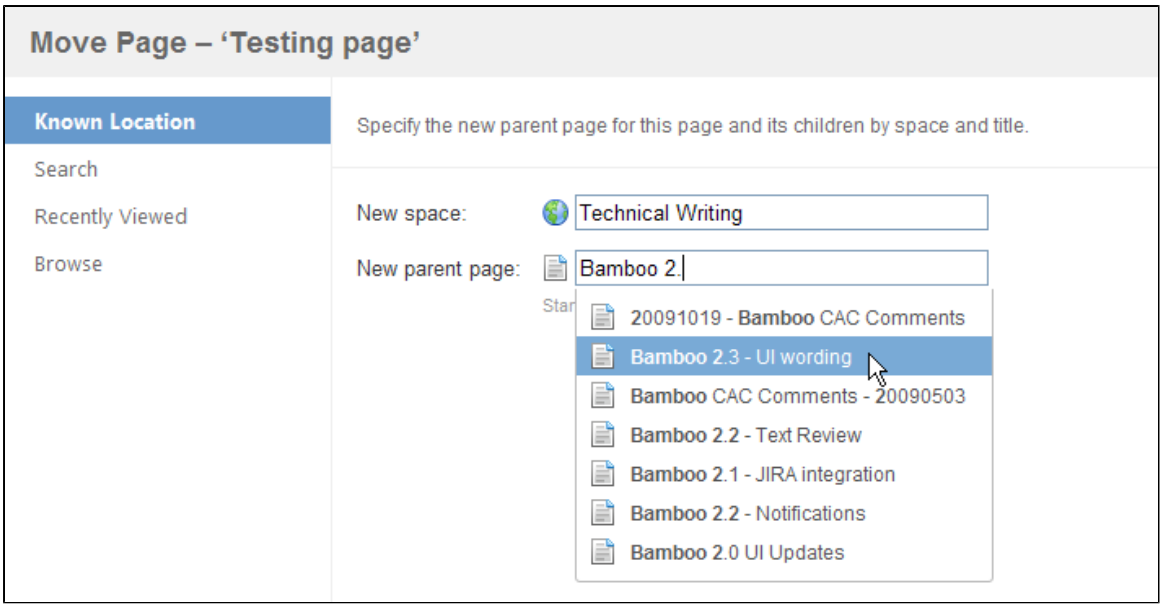
- **Known Location** – Allows you to type the name of a space and within that space, the 'parent' page under which to move your page.
- **Search** – Allows you to search for a 'parent' page (within a selected space or set of spaces) under which to move your page.
- **Recently Viewed** – Allows you to select one of your recently viewed pages to be the 'parent' of your page to be moved.
- **Browse** – Allows you to select a space and page (within the tree of pages in the space) that will be the 'parent' of your page to be moved.
  For more information, refer to Moving a Page.



4

New Image Browser

A new 'Image Browser' has been introduced to replace the old 'Insert Image' dialog box. The image browser provides a less-cluttered and enhanced interface that allows you to:

- Hover over any image in the browser and expand the image (to preview it in detail) by clicking its 'magnifying glass' icon in the lower-right corner, before inserting it onto a page.
- Add a link to an image elsewhere on the web via the image's URL.

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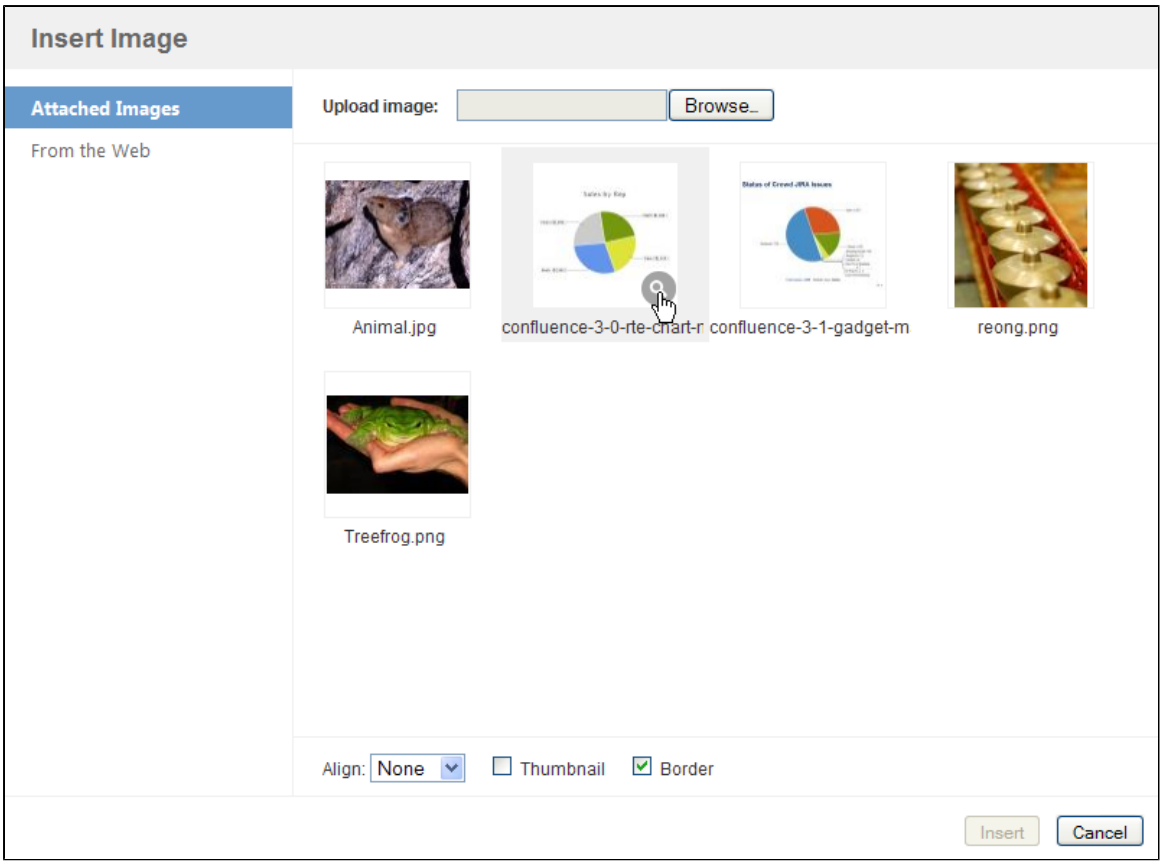
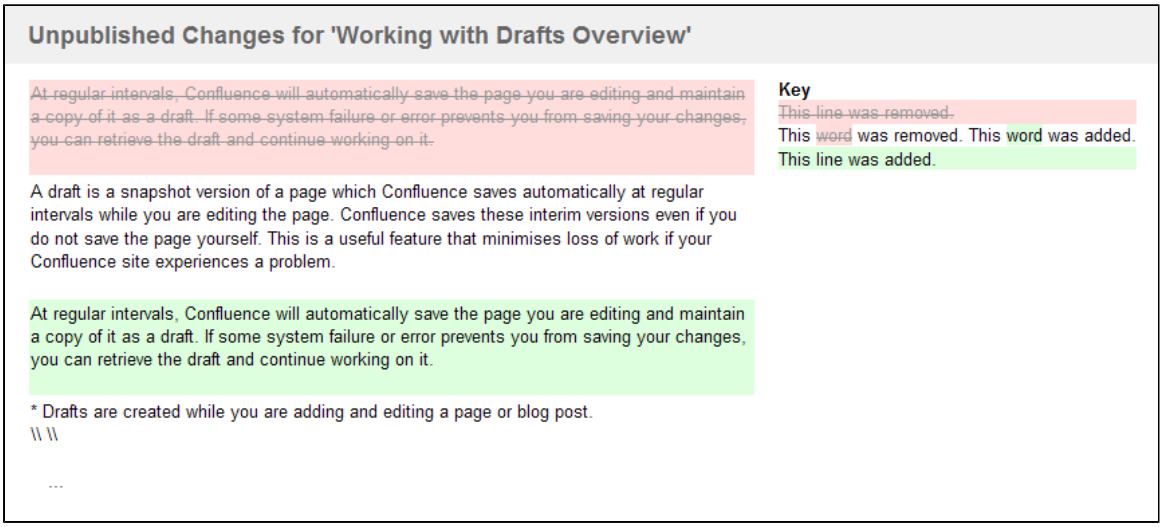


Draft Comparisons

Confluence's drafts features have been improved, such that you can now view any of your unsaved draft changes before deciding to resume editing them. This nifty feature comes in handy, particularly when other people have made subsequent changes to a page or blog post in your drafts list and you need to merge changes or resolve a conflict.

Title	Last Saved Date	Operations
Page with Partial Content	less than a minute ago	Resume Editing | Discard
Page with Content to Merge	2 minutes ago	View Changes | Merge and Resume Editing | Discard
Page with a Conflict	12 minutes ago	View Changes | View Conflict | Discard



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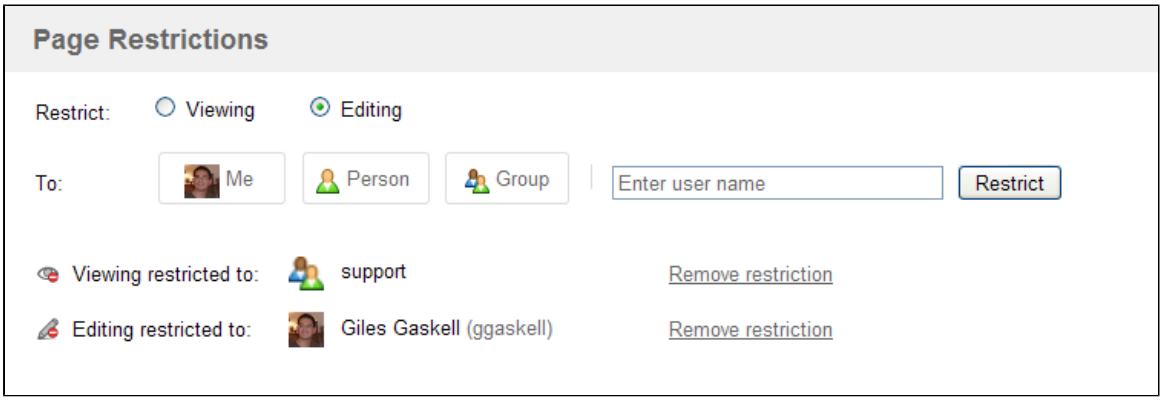
6

New Page Restrictions Dialog Box

Confluence's page restrictions feature has been incorporated into a convenient and accessible dialog box that is now easier to use than before.

- The page restrictions dialog box can be accessed from the padlock icon or the '**Tools**' -> '**Restrictions**' menu item on any Confluence page. From this dialog box, you can view all viewing and editing restrictions associated with the page you are viewing. You no longer need to view the page's associated 'Info' page in order to view these restrictions.
- It is no longer necessary for a page to be in edit mode in order to modify its page restrictions. You can edit all page restrictions from this dialog box.
- The page restrictions dialog box is still accessible when when a page is in edit mode.



7

New Rich Text Editor Insert Menu

Confluence's rich text editor now combines a number of its commonly used editing features into a new convenient '**Insert**' menu.

- The Horizontal line, Insert Symbol and Insert Emoticon Toolbar icons have been moved into the new insert menu.
- The functionality to insert images, links or attachments into a page can now also be accessed from this menu.
- The macro browser, as well as a number of commonly-used macros are conveniently accessible from this menu too.

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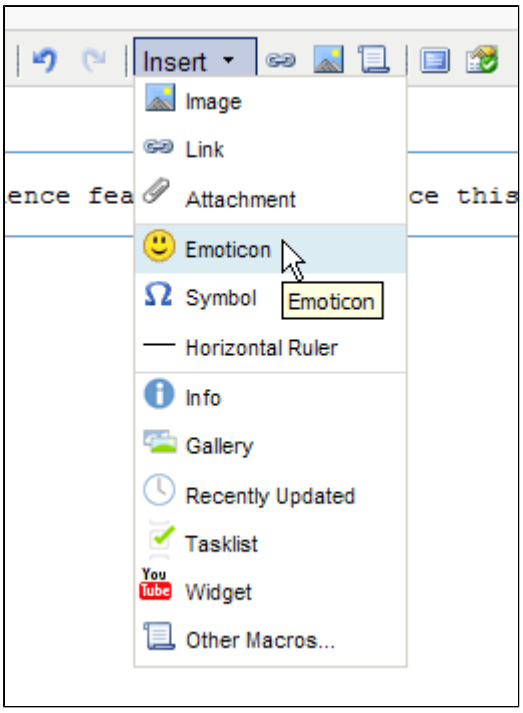
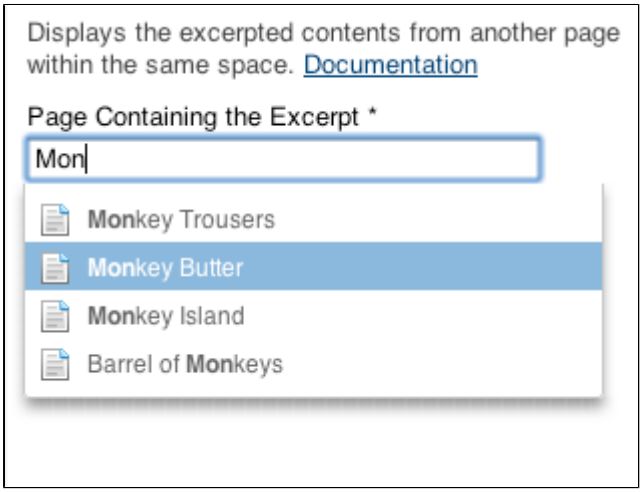


8

Other Editor Enhancements

Macro Browser Smart Fields

When using the Macro Browser, an 'auto-complete' feature is now provided on any parameters that require the entry of a single item, such as a page title, username or space key. This greatly facilitates the customisation of macros and minimises the need to know the exact item names in advance.



Edit Mode Exit Notification

Whenever you add or edit a page, comment or blog post and then click onto another Confluence feature that navigates away from your unsaved content, a message box appears, warning that your content will be saved as a draft (if it is a page) or lost (if a comment). This allows you to cancel out of this action if it was accidental.

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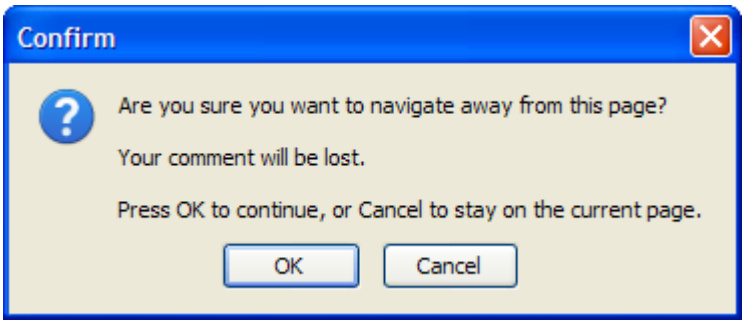

9

Other Improvements

Other small enhancements and improvements to Confluence include:

- Support for Internet Explorer 8 — Confluence 3.1 now fully supports Internet Explorer 8, released around mid-2009.
- Support for OAuth — With the introduction of gadgets (above) in this release, Confluence 3.1 now allows you to establish OAuth relationships with other web applications such as JIRA 4.0+, iGoogle, Gmail etc., thereby allowing them to share resources via gadgets.
- New 'Link to this page' feature — If you wish to link to a Confluence page from any other location on the web, use the convenient '**Link to this Page**' feature (available from any page's or blog post's '**Tools**' menu). Upon selecting this feature, the 'Link to this Page' dialog box opens, from which you can copy three versions of the link to embed elsewhere:
    - **Link** – Standard URL which should work from any other accessible location on the web.
    - **Tiny Link** – A reduced-length version of the 'Link', which can be used in text fields of limited length, such as tweets or Confluence Status Updates
    - **Wiki Markup** – A wiki markup version of the link, which can be used in any other location within your Confluence site.
- 'More' links on activity streams — 'More' links have been added to various activity streams throughout the Confluence interface, including the profile sidebar, a user's profile page and via the recently updated macro. Clicking on a 'More' link expands the list of results, providing a convenient means of accessing progressively more distant user activities.
- New Log In and Log Out screens.
- In an aim to minimise confusion, 'News Items' are now consistently called 'Blog Posts' throughout the Confluence interface and a list of blog posts is collectively referred to as a 'Blog'.
- Other minor interface improvements.

Confluence 3.1 Newly Deprecated Code

This page should show all the code that was deprecated (not deleted!) during the Confluence 3.1 release cycle.

This is work in progress, and may not be a complete summary. As always, the truth is in the code. This page is more for explaining and discussing our decisions.

Release Notes 3.1-m7 ("Milestone 7")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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Not quite a beta yet!

While this release is almost feature complete there are still one major technical improvement (superbatching) and one feature (the dashboard-widget) outstanding, so we can't call it beta just yet. Apart from that though, M7 is feature complete. Anything that you don't see here, you won't see in the final product. We will keep fixing bugs (yes, there are still quite a few unfortunately), but if something else in the functionality really annoys you, please raise it with us now! You can add a comment, or you can send us a mail, or of course raise JIRA issues.

> The files are not available for download at the moment, they will be added on Thursday. This page is a teaser, and for use by our translators.

Gadgets & Office Team

Indexing and Searching of Office 2007 files

The contents of Confluence attachments created by PowerPoint 2007, Excel 2007, and Word 2007 are now fully searchable inside Confluence. This includes files with pptx, xlsx, and docx extensions as well as other extensions like potx (PowerPoint template) and dotx (Word template).

PowerPoint 2007 previews

You can now preview PowerPoint 2007 files directly in Confluence. We're proud to say that this completes the goal of supporting the new 2007 file formats for the three main Microsoft Office products (Word, Excel, and PowerPoint) in Confluence 3.1. This is in addition to already supporting the legacy binary format.

Keyboard navigation of full-screen PowerPoint and PDF slideshows

If you are using Flash player 10 or higher, you will no longer see any controls when previewing Powerpoint or PDF files in full screen mode. Instead, you must use the spacebar or the arrow keys to move between the slides. Press escape to exit full screen mode.

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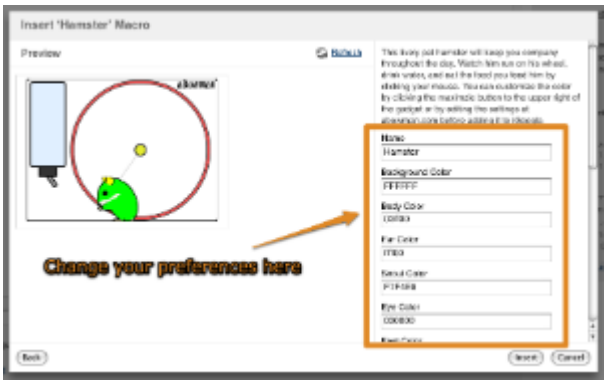
Launch Microsoft Office from the Attachments screen.

Previously, you had to preview a file to get the option to edit it. We've added a new 'Edit' option to each attachment that will launch the appropriate desktop editor for that attachment. The old 'Edit' option has been renamed to 'Properties'.

Editing user preferences of OpenSocial gadgets in the Macro Browser

As promised in the last release notes we moved the editing of non hidden user preferences to the usual location for macro parameters on the right hand side:



Activity Stream Gadget

We've added an activity stream gadget for Confluence. This means you can now have your Confluence Activity on your JIRA dashboard or on a Confluence page! You can also directly comment from the activity stream.

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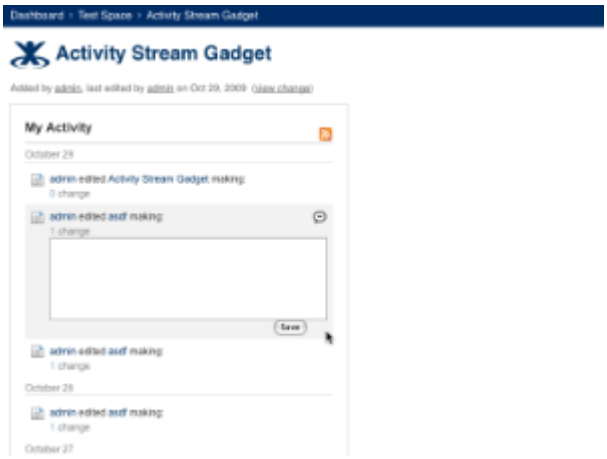
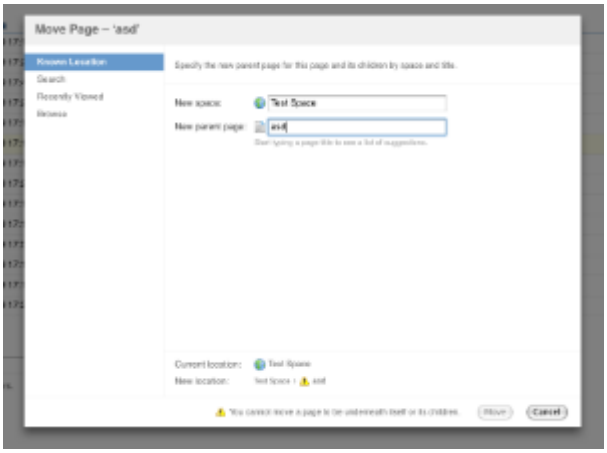


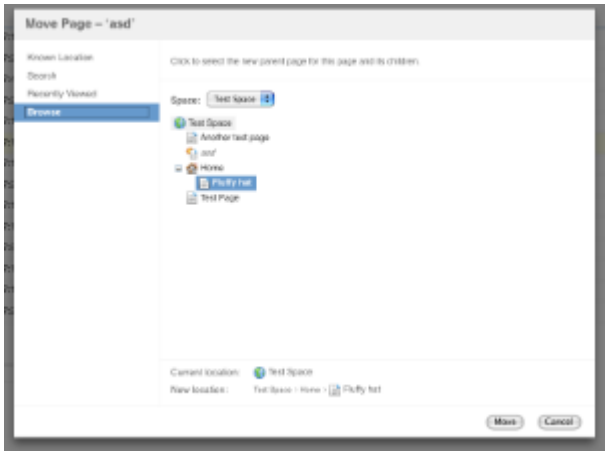
Dialogs Team

Page move dialog

We've added new tabs and improved the design of the new Move Page dialog based on feedback from earlier iterations. Some key improvements:

- A quick way of specifying a known location in the wiki using space and page title autocomplete (quick-nav style)
- Search and Recently Viewed tabs for locating a parent page in different ways
- An improved tree component which gives better loading feedback
- Fixed description panels so helpful text doesn't disappear when you scroll the tree
- A new location panel in the dialog so you know where you're moving a page from and to
- Immediately highlight problems with the new location, such as attempting to move a page beneath itself or its children.





The move dialog is feature-complete for this release, but we still have a few remaining improvements to make. In particular, scrolling the tree to the correct location when it opens and making the tree completely undraggable wil l be fixed for the next release.

Image browser

The new image browser dialog now supports uploading files. The upload proceeds faster than before (because the entire window doesn't need reloading), and you'll get a thumbnail of your image preselected, ready to insert.

We've fixed the bugs with image borders that prevented them working properly in the rich text editor, and enabled borders by default for newly inserted images. The dialog also includes some simple keyboard navigation that should make it more intuitive to interact with. All features of the image dialog have been tested with all our supported browsers.

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We also spent some time on improved validation of uploaded attachments and thumbnail generation. The old insert image window is now disabled, so please let us know if you have any problems with the new functionality.

The image dialog is feature-complete for this release, but also has a few issues which will be fixed before the final release. Better handling of server outages and not being able to attach due to permissions is coming in the next release.

Page "Permissions" dialog

We have reverted to the two row layout to avoid permission-restriction-inconsistencies, and fixed a few bugs along the way. Most notably, inherited restrictions are now displayed separately from the current level's restrictions, and hidden by default. This avoids cluttering the page with stuff you usually know about already (when working in restricted page hierarchies).

Engine Room

Nothing big went into M7, the super-batching work is ongoing and will mean faster page loads from 3.0-beta1 onwards.

Small Improvements

The footer is now always at the bottom at the viewport, rather than the bottom of the content. This makes the layout a lot cleaner on short pages:

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Open bugs

Plenty.

What's next?

Beta 1 is due next week

Release Notes 3.1-m6 ("Milestone 6")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
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  - Features in development releases may be incomplete, or may change or be removed before the next full release.
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However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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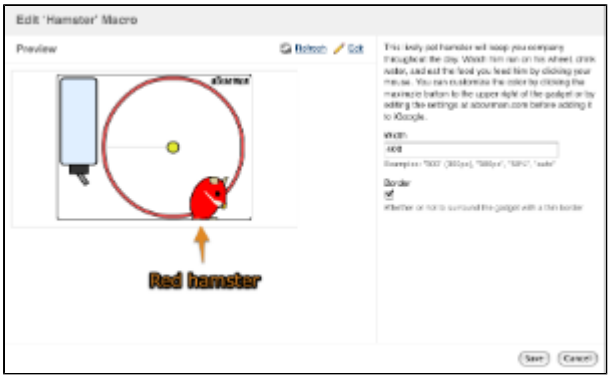
Overview

We are pretty close to Beta now, so if you are a plugin author and haven't checked out the latest milestones of 3.1, you should do it now. The API won't change much anymore, from now on it's mainly bugfixing.

Gadgets & Office Team

Editing user preferences of OpenSocial gadgets in the Macro Browser

You can now edit user preferences of OpenSocial gadgets directly in the Macro Browser. Let's take our all time favourite Hamster gadget as an example:



> The UI will be slightly different in the next milestone, as we are going to move the form fields in the center of to the right hand side and make them part of the normal macro parameters.

Gadget Directory

You can now discover which gadgets are exposed by Confluence and can be used in other OpenSocial containers like JIRA 4 or iGoogle. There is a new "Gadget Directory" menu item in the browse menu which allows you to browse through the list of available gadgets.

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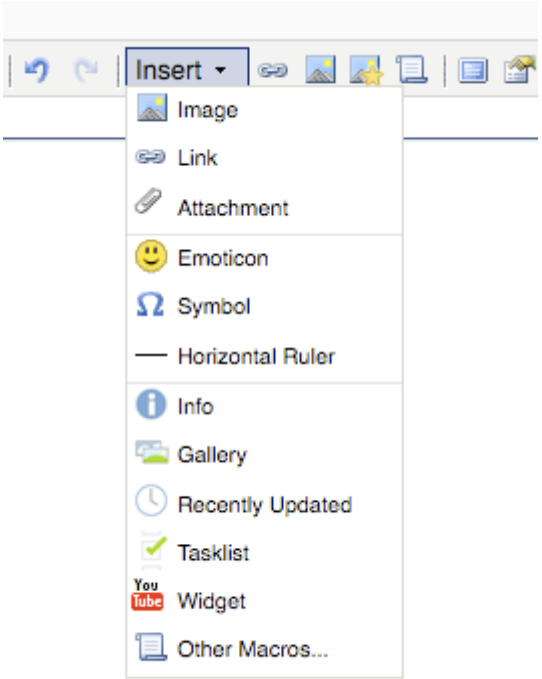
Dialogs Team

There's a new "Insert" menu in the editor that helps you insert links, attachments, images and some default macros without having to already know which little button you're meant to press. (On IE the macro icons look odd, that's a bug and will be adressed soon)



Help us choose the right macros!

We picked a few macros that we thought users should know about, which are simple enough to use right away, and which represent a decent spread across a range of macros to stimulate your interest in the "add more" buttton. Our constraint is 5 macros max, since the menus gets too long on ~~stupid~~ ~~goddamn~~ good old IE6 on a 1024x768 screen.

Apart from the edit menu, some bug fixes of note: Problems with links in the RTE have been fixed; pressing escape in the new image dialog doesn't prevent it working next time; and move page works in IE8.

A lot of work has gone into the new page move dialog but it's not quite ready, so we didn't put it into M6.

Engine Room

A setting (under General Config) to serve the Javascripts back in the header has been introduced. This has been disabled by default for this milestone but will eventually be turned on as the default for 3.1. Reasoning behind this is that quite a few plugins have been broken and unusable by moving the scripts to the bottom of the page.

Work has been continued on the REST API however these were purely back end changes and the API itself has not changed since m5.

Bugfix Team

CONF-17171 - made selecting a page version on a page history view easier
General bug fixing.

Small Improvements

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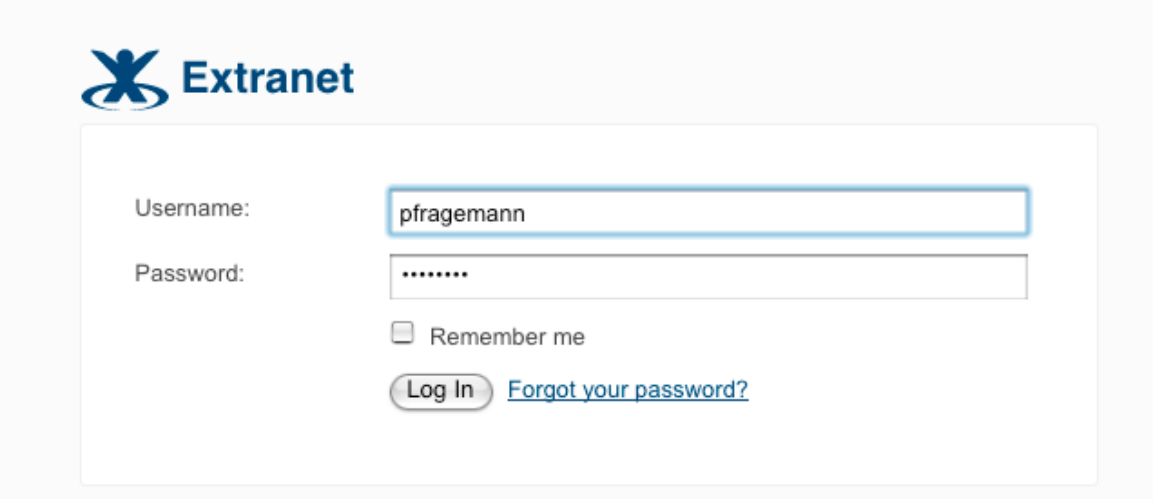
New Login Screen design, which looks more consistent with other products like JIRA. Another step forward in terms of making Confluence look better



Known Issues

Errors were reported by the JIRA trusted connection.

- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (5 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due
	CONF-17444	The move-page dialog can be cancelled with ESC but the move operation is still executed	Unassigned	Per Fragemann [Atlassian]		Open	Unresolved	Nov 02, 2009	Dec 08, 2009	
	CONF-17332	Can click Preview multiple times on "From the web" tab in image dialog, produces many spinners	Unassigned	Per Fragemann [Atlassian]		Open	Unresolved	Oct 26, 2009	Dec 08, 2009	
	CONF-1	Error is	Dave	Mark		Ope	Unresol	Oct 14,	Mar 08,	

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	7235	given on IE7 and 8 when clicking on an uploaded image	Loeng [Atlassian]	Hryncza k [Atlassian]		n	ved	2009	2010	
	CONF-17229	Drag and drop should do permission check before it uploads files	Unassigned	Mark Hryncza k [Atlassian]		Open	Unresolved	Oct 14, 2009	May 17, 2012	
	CONF-17226	Drag & Drop plugin shows incorrect file name during upload for files containing '<'	Unassigned	Mark Hryncza k [Atlassian]		Open	Unresolved	Oct 14, 2009	Dec 08, 2009	

Release Notes 3.1-m5 ("Milestone 5")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

All development releases are available from the development releases page on the Atlassian website.

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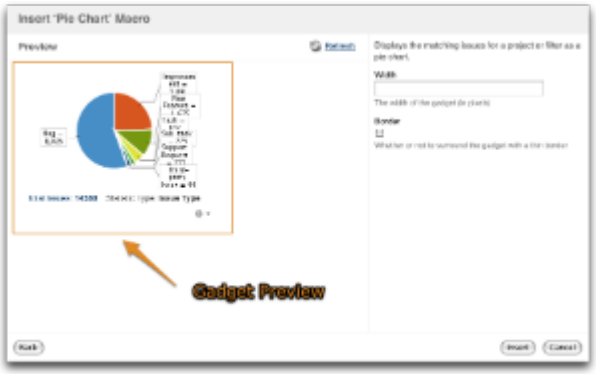
Gadgets & Office Team

Gadgets in the Macro Browser

Want to embed one of those fancy new JIRA gadgets into your page? This has become really easy with the new Macro Browser integration. Just have a look in the "External Content" category to find available gadgets. Confluence comes with the Confluence QuickNav gadget by default, but the administrator can add as many gadgets as you like.

Configure your JIRA gadgets in the Macro Browser

You can now configure your JIRA gadgets using the macro browser. Just pick a JIRA gadget from the Macro Browser, configure it and add it to your Confluence page or blog post.



Office 2007 support

We've fixed a couple of minor issues with the Word 2007 integration. But the really good news is that we've started working on PowerPoint 2007 support! Nothing to see yet, but stay tuned.

Dialogs Team

The new image browsing dialog has been restyled and as a bonus now works in new pages and blogs.

Engine Room

The Confluence REST plugin (prototype API) has now been enabled for this milestone. In addition to spaces (in previous milestone) we now have an API for viewing Confluence content (pages, blogs, comments) with page children expansion supported.

Some very basic documentation can be found here: Prototype REST API

Bugfix Team

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Fixed multiple bugs .

Misc

Faster editor load

With a few improvements we have made to the way we load TinyMCE, it should appear faster across all the browsers.

This is an Agnes Ro 20% production

Prototype REST API

This page is obsolete

Please refer to the REST API documentation in the Confluence developer documentation.

This page documents the Prototype REST API supported for Confluence 3.1.

Space

Getting a List of Spaces

Resource: `/space`
Description: List all spaces (maximum page size of 50) visible to the current user
Parameters:

`start-index`	start offset of the list
`max-results`	maximum number of results to return
`type`	space type e.g. personal, all
`expand`	use 'space' to expand the spaces details of each space listed

Result:

```
<spaceEntityList expand="space">
<space name="FOO" key="FOO">
<link rel="self"
href="http://localhost:8080/confluence/rest/prototype/1/space/FOO"/>
<rootpages size="1"/>
</space>
<space name="Test Space" key="TST">
<link rel="self"
href="http://localhost:8080/confluence/rest/prototype/1/space/TST"/>
<rootpages size="2"/>
</space>
</spaceEntityList>
```

Looking up Details of a space

Resource: `/space/{key}`
Description: Displays the details of the space identified by {key}

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Parameters:

expand	use 'rootpages' to list all the root level pages of the space

Result:

```
<space name="Demonstration Space" key="ds" expand="rootpages">
<link rel="self" href="http://localhost:8080/rest/prototype/1/space/ds"/>
<rootpages size="2"/>
<home>
<id>32799</id>
<link rel="self" href="http://localhost:8080/rest/prototype/1/content/32799"/>
<type>page</type>
<title>Home</title>
<url>/display/ds/Home</url>
<children size="6"/>
</home>
</space>
```

Content

Getting Content

Resource: `/content/{id}`
Description: Gets confluence content by id
Parameters:

expand	use 'children' to list all the child pages of the page

Result:

```
<content type="page" id="1180211" expand="children">
<link rel="self"
href="http://localhost:8080/confluence/rest/prototype/1/content/1180211"/>
<title>Home</title>
<url>/display/FOO/Home</url>
<spaceKey>FOO</spaceKey>
<children size="1"/>
<body>This is the home of the FOO space.</body>
</content>
```

Release Notes 3.1-m4 ("Milestone 4")

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Milestone release advisory

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Who should upgrade?

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However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

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Upgrade Procedure

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Features!

As you may know, we have started a major hiring campaign, and this has slowed us down a little in the past few weeks. M4 however is back with a vengeance, boasting quite a few improvements. See for yourself

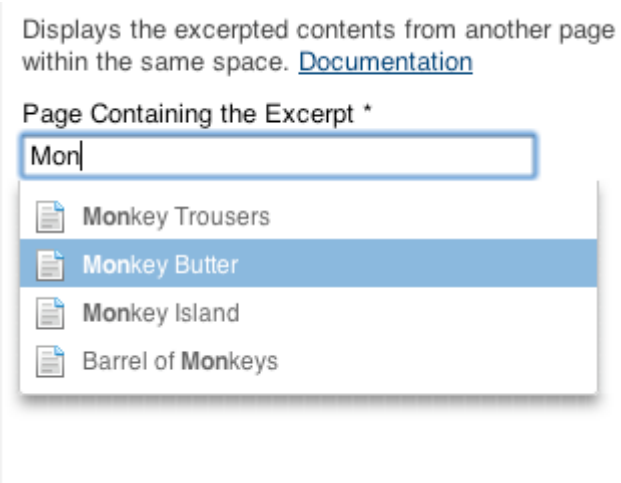
Editor Team

Move Page

We are reworking the way you can move pages around. It is now possible to move pages without editing the page, and you don't drag&drop anymore, you simply pick your parent in the tree. The next Milestones will allow you to search for a parent, and to use your recently viewed pages to move. At the moment, you can not re-order while moving the page (is this a problem though? What do you think?

Macro Browser

David Taylor's "Smart Fields" 20% project has been included in the Macro Browser although only for macro parameters that take single entries. i.e. if a macro takes a single username, space, or page then a suggestion drop down will be presented (See the screenshot). If a macro takes multiple usernames or spaces or pages then there will be no assistance.



David's "Smart Fields" work also included some custom fields for the Office Connector viewfile macros to provide assistance with referencing the MS Office document you are trying to view. Instead of separate fields for

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space and page name these have been combined into a singe field with a suggest drop down. The file name field has been converted to a select box showing the appropriate attachments for the selected page.

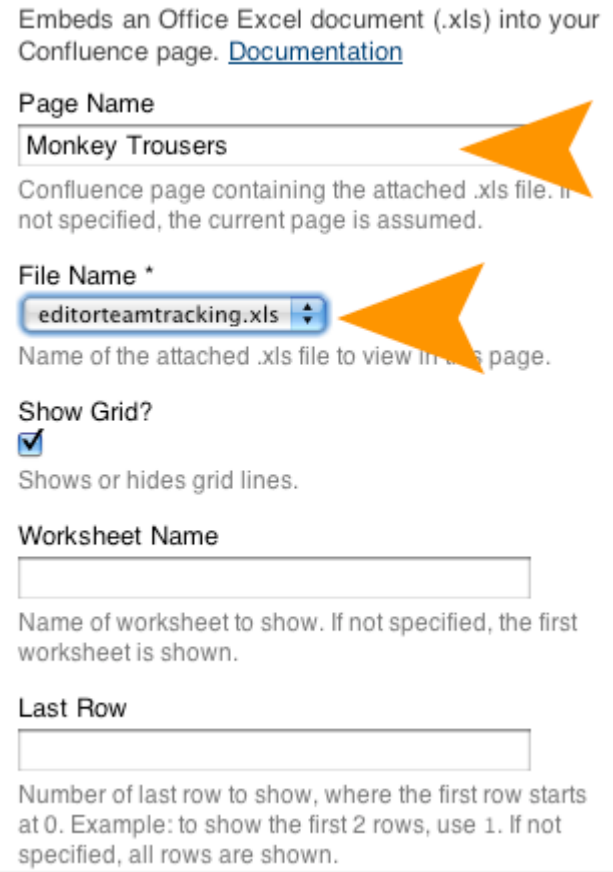

Image Browser

Some further progress has been made on the second "insert image" button on the RTE and wiki editor toolbars. You can now view and insert images that are already attached to the page.

This dialog is still missing some obvious functionality such as image configuration options and image upload hence the reason the original dialog is still present for now.

Known Issue: You should also note that in the current milestone this new dialog is only working correctly when editing pages, not when creating new pages.

Engine Room

JS/CSS rearrangements

As you saw on our previous milestone notes, we have rearranged CSS to the top and JS to the bottom of the page, making the rendering experience better. This might have consequences for your macros/plugins, so DO have a look, and tell us what you think.

REST

The Confluence REST plugin (prototype API) has been added, however it will be disabled for this release. Hopefully we will be able to enable this in next milestone when the plugin is a bit more stable.

Some space level resources have been implemented.

Getting a List of Spaces
Resource: `/space`

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Description: List all spaces (maximum page size of 50) visible to the current user
Parameters:

`start-index`	start offset of the list
`max-results`	maximum number of results to return
`type`	space type

Result:

```
<spaces>
<space name="Demonstration Space" key="ds">
<link rel="self" href="http://localhost:8080/rest/prototype/1/space/ds"/>
</space>
</spaces>
```

Looking up Details of a space
Resource: `/space/{key}`
Description: Displays the details of the space identified by {key}
Parameters:

`expand`	set expansion options for children elements

Result:

```
<space name="Demonstration Space" key="ds" expand="children">
<link rel="self" href="http://localhost:8080/rest/prototype/1/space/ds"/>
<children size="2"/>
<home>
<id>32799</id>
<link rel="self" href="http://localhost:8080/rest/prototype/1/content/32799"/>
<type>page</type>
<title>Home</title>
<url>/display/ds/Home</url>
<children size="6"/>
</home>
</space>
```

> Some of the names of the elements in the space details example are subject to change. The `children` element for example will likely be changed to something more appropriate (it refers to the top level pages of a space).

Small Improvements Team

Driving on the left shouldn't be so hard, so we've updated the left hand navigation panel.

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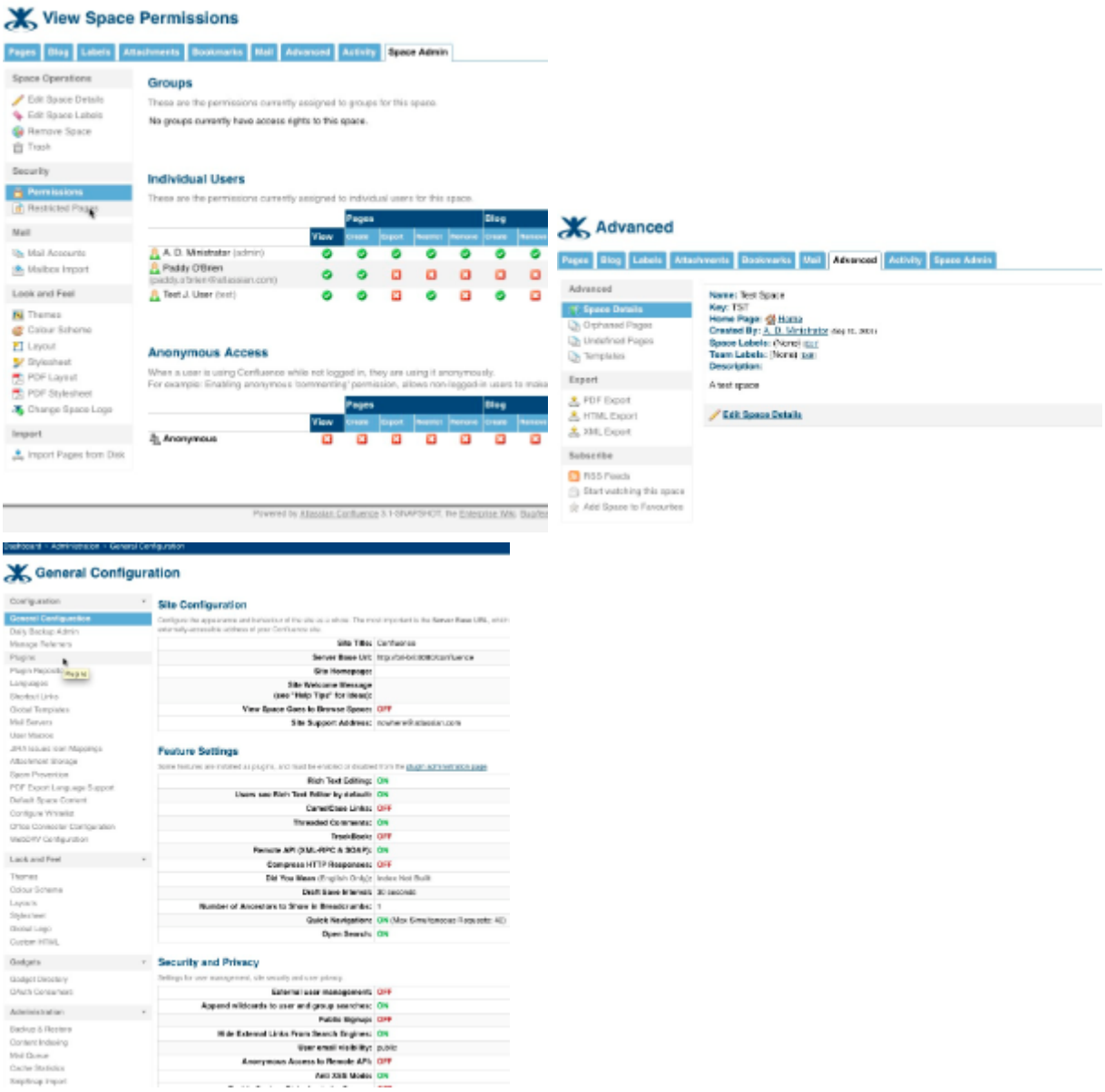

Bugfix Team

Fixed multiple bugs. Most notably:
CONF-12864 - improved performance of PageNotFound action
CONF-9575 - fixed concurrency issue that was breaking reindexing job

Gadgets & Office 2007 Team

Word 2007 & Excel 2007

We added Word 2007 support for document import and the view-file macro, as well as Excel 2007 support for the view-file macro. We don't support PowerPoint 2007 for the view-file macro yet and can't index any Office 2007 documents yet. Work in progress.

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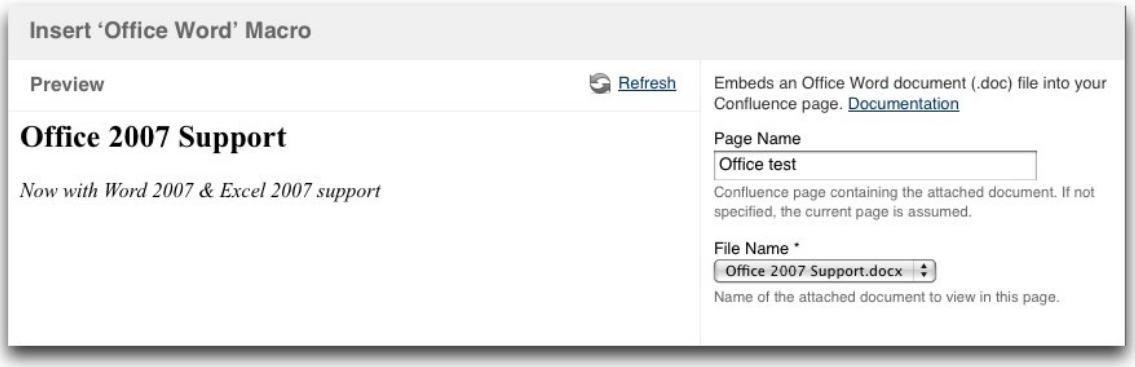


Support for importing other document formats

You can now import RTF and ODT files in addition to DOC and DOCX.

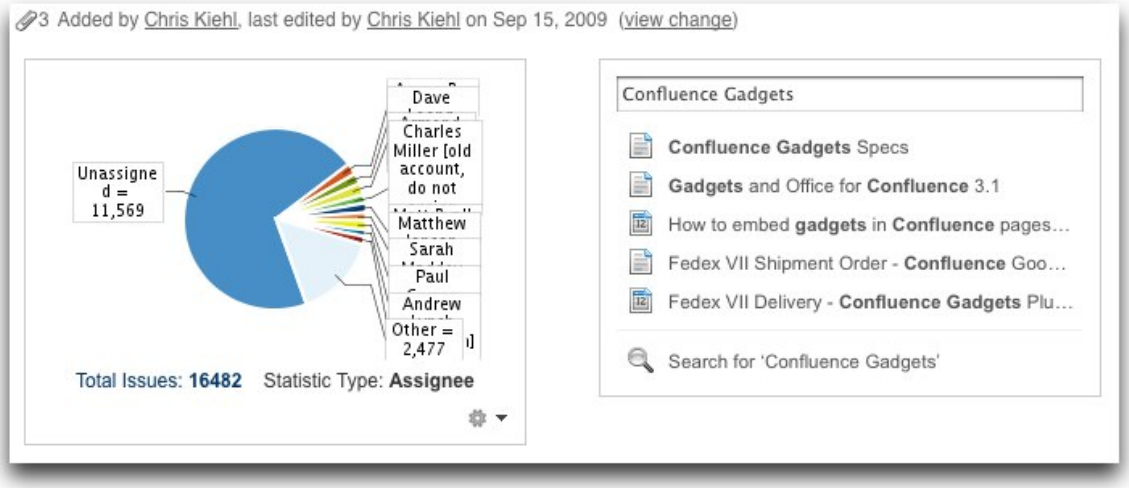
Gadget Macro

We are happy to introduce the new gadget macro! It's currently not very usable as we don't have any UI yet to change the user preferences for a gadget, which means you have to enter them manually.

Example Markup:

```
{gadget:url=[baseurl]/rest/gadgets/1.0/g/com.atlassian.confluence.plugin
s.gadgets:gadget-search/gadgets/gadget-search.xml}{gadget}
```

Jira chart gadget and Confluence QuickNav gadget on a Confluence page:



QuickNav gadget

We are also stoked to show off our first Confluence gadget which can be embedded in other gadget containers. The gadget URL is:

```
[baseurl]/rest/gadgets/1.0/g/com.atlassian.confluence.plugins.gadgets:ga
dget-search/gadgets/gadget-search.xml
```

Unfortunately you can't embed that gadget into iGoogle or GMail yet, because we have to upgrade to a newer version of the OAuth plugin first. This will work starting in 3.1-m5.

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Gadget Directory

For every gadget you want to embed on a page, it needs to be added to the gadget directory first. This is to make sure you can't just embed any third party gadgets because those might contain malicious JavaScript which will then be executed as coming from the same security domain as Confluence.

OAuth Integration

We have also integrated the OAuth admin plugin which allows you to configure your consumer information as well as adding OAuth consumers and service providers. Detailed documentation will be available on CAC in the future.

20% and miscellaneous

Thumbnail Dialogs

Thumbnail images previously opened the full image in a new popup window, when clicked. Now clicking on a thumbnail opens the image in a fancy dialog (same as the image gallery).

Sprite Image for Macro Browser

On the edit page, the macro browser is built up in the background with its pretty macro icons. Although the macro icons are cached, there are quite a number of requests made on a cold browser cache (we have 52 macro icons, so 52 requests are made just for the macro browser). This has been reduced to one request by generating a sprite image for all the icons and using it with css and background-image positioning.

hod has been added for macros to more clearly define their desire to be kicked out of paragraphs, and code macros do that. This change is still awaiting review, so it may be temporary.

AUI upgraded to 1.2.1!

Release Notes 3.1-m3 ("Milestone 3")

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Milestone release advisory

For testing use only

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This release is a public **development release** ('milestone') leading up to the next Confluence major release. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin developers to see what we're up to.

Who should upgrade?

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Upgrade Procedure

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Downloads

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Maintenance mainly

Milestones 2 and 3 don't have many feature-changes, because a lot of the development happens on branches and under the hood. We have been doing some UI polish, but nothing large is to be seen yet.

We did however split up resource-loading, so CSS is now at the top of the page, and JS is at the bottom, resulting in faster page views. If you are a plugin author using resource bundles and JS/CSS (which you should, obviouslu), then definitely check out this milestone to see if your plugin works as expected.

Stay tuned for M4 in about two weeks, which will show off some nice new feature improvements.

Cheers,
Per and the Confluence development team

Confluence 3.1 Deprecated Code Cleanup

> This document contains information for Confluence plugin developers regarding changes to the Confluence codebase in the upcoming 3.1 release.

Confluence 3.1 Deprecation Cleanup

Every major Confluence release, we clean up the codebase by removing classes and methods that have been deprecated in previous releases. These changes were included in the Milestone 2 release of Confluence 3.1. We strongly encourage plugin developers to test their plugins against our milestone releases.

If the removal of these classes or methods causes you significant problems maintaining your plugins, please let us know. We will work with you to find a workaround, or possibly reinstate the code before the final release. (Note that the longer the code in question has been deprecated, the less inclined we will be to replace it. Some of the stuff we've removed here will have been giving you compiler warnings for *years*.)

More information on our guidelines for removing deprecated code: Deprecation Guidelines

Changes in Confluence 3.1 Milestone 2

> For the sake of brevity, the `com.atlassian.confluence` part of package names has been omitted.

Removed Classes

Class	Deprecated Since
.pages.BreadcrumbsManager .pages.DefaultBreadcrumbsManager	2.7
.plugin.descriptor.web.conditions.user.UserHasHistoryCondition	2.8
.util.VelocityUtils	2.0
.util.PageComparator	2.3
.util.ResourceManager com.atlassian.confluence.util.DefaultResourceManager	2.8

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.event.EventListener com.atlassian.confluence.event.DeprecatedEventListenerWrapper	2.3
.servlet.download.ResourceDownload	2.10[1]
.renderer.radeox.macros.include.AbstractHttpRetrievalMacro	2.7[2]
.macro.macros.AbstractHtmlGeneratingMacro	2.7[2]
bucket.search.EntityObjectDateExtractor	1.4
bucket.container.ContainerManager bucket.container.ContainerContext	2.3

[1] While the ResourceDownload class was only deprecated in 2.10, it could only ever be used in the context of the ResourceManager which was deprecated earlier. It is very unlikely that code exists that relies on one but not the other.
[2] These Radeox macros were superseded by the equivalent V2Renderer macros in Confluence 1.4, but only marked as deprecated in the 2.7 release

Removed Constants

> Since Java inlines constant references during compilation, the removal of constants should not break binary compatibility with any plugin that references them.

Class	Constant	Deprecated Since
.search.lucene.extractor.PageContentEntityObjectExtractor	PAGE_REAL_TITLE	2.8
.security.SpacePermission	ADMINISTER_CONFLUENCE_PERMISSION	2.7
.setup.Bandana.ConfluenceDaoBandanaPersister	GLOBAL_BANDANA_CONTEXT	2.8

Removed Methods

Class	Method	Deprecated Since	Notes
.core.ConfluenceActionSupport	ThemeHelper getGlobalHelper()	2.0	Support for pre-2.0 themes
	ThemeHelper getSpaceHelper()	2.0	Support for pre-2.0 themes
.core.ContentEntityManager	Iterator getRecentlyModifiedEntities(int maxResults)	2.0	use the SearchManager for this kind of query

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.core.ContentEntityObject	String getRealTitle()	2.8	use `getDisplayTitle()` instead
.core.ContentPermissionManager	List getInheritedViewContentPermissions(Page page)	2.5	
.core.persistence.ContentEntityObjectDao	Iterator getRecently ModifiedEntitiesByType(ListQuery query, int firstResult)	2.8	use the SearchManager for this kind of query
.importexport.ExportContext	DateFormatter getDateFormatter()	2.8.2	
.pages.AttachmentUtils	static File getOldContainingFolder(Attachment attachment)	2.2	
.pages.actions.ViewPageAttachmentsAction	AttachmentHelper getTargetHelper(Attachment attachment)	2.8	use getWebInterfaceContext()
.plugin.editor.Editor	String getEditorSpecificCss()	2.8	
.security.ContentPermission	String getGroup()	2.4	use getGroupName()
.security.PermissionManager	boolean isGlobalAdministrator(User user)	2.7	use isConfluenceAdministrator()
.setup.BootstrapManager	boolean isConfluenceHomeValid() boolean isWebdavEnabled() void setBaseUrl(String baseUrl)	2.8	use SettingsManager
.spaces.SpaceManager	boolean isValidSpaceKey(String key)	2.3	use Space.isValidGlobalSpaceKey()
	boolean.isValidPersonalSpaceKey(String key)	2.3	use Space.isValidPersonalSpaceKey()

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	List getPages(Space space, boolean currentOnly) List getPagesStartingWith(Space space, String prefix) List getBlogPosts(Space space, boolean currentOnly) List getMail(Space space, boolean currentOnly) List getSpaces() list getSpacesCreatedOrUpdatedSinceDate(Date date)	2.3	
.spaces.Space	List getPages() List getCurrentPages() List getBlogPosts() List getCurrentBlogPosts() List getMail() List getCurrentMail()	2.3	use PageManager
.user.PersonalInformationManager	PersonalInformation getPersonalInformation(String username)	2.3	use getPersonalInformation(User user)
.user.SearchEntitiesManager	SearchResult findGroups(TermQuery query)	2.8	use findGroupsAsList()
	SearchResult findGroups(TermQuery query, boolean filter)	2.8	use findGroupsAsList()
	SearchResult findUsers(Query query)	2.8	use findUsersAsList()
.util.GeneralUtil	String format(Date date) formatTime(Date date) formatBlogDate(Date date) formatDateTime(Date date)	2.3	use $dateFormatter
	isGlobalAdministrator(Object notUsedAnyMore, User user)	2.0	use PermissionManager or $permissionHelper

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	getProperties(String resource, Class caller) getPropertiesFromFile(File file) getPropertiesFromStream(InputStream is)	2.3	use PropertyUtils
.upgrade.AbstractUpgradeTask	addError(String message) addError(Throwable throwable)	1.2	use addError(UpgradeError error)

Release Notes 3.1-m1 ("Milestone 1")

Outdated page

These are not the release notes you are looking for

This page is outdated, but has high Google ranking 🙂

Please refer to the official Confluence 3.1 release notes over here.

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Downloads

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Yay, we are back!

After 3.0 came out, we spent some time in bugfix-mode, then we had a 20% week, 2 devspeed weeks, and the last week was mainly spent planning the next release. So that's why there has not been much visible progress recently lately. Development on core 3.1 features has started, but in this milestone we mainly ship all the bugfixes we did for 3.0.1, some small improvements, and three 20% projects.

New Webstart Installer

We are trying something new. While we will provide the downloadable files too, we encourage you to try our webstart based evaluation installer. Visit http://webstart.atlassian.com/confluence-3.1-m1-r2/confluence.jnlp for a snappy installation experience.

New Native Mac Installer

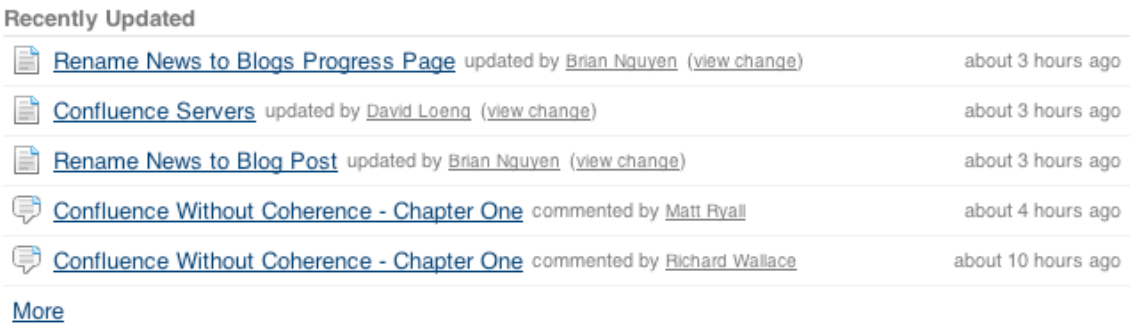
When you go to the download section, you will notice a new DMG file. This contains our new native experimental Mac installer. Give it a try and tell us what you think. Instructions coming soon!

And here are all the cool features in M1 you will get.

1

Interactive "Get more"

Recently updated macros are now interactive. You will get a little "More" link to load new updates dynamically within the page. This small but awesome feature can also be found on your network page, and in the space's recent update tab. It doesn't screenshot too well, so try it out for yourself. Anyway here is what the macro looks like:



And here is what the network tab looks like:

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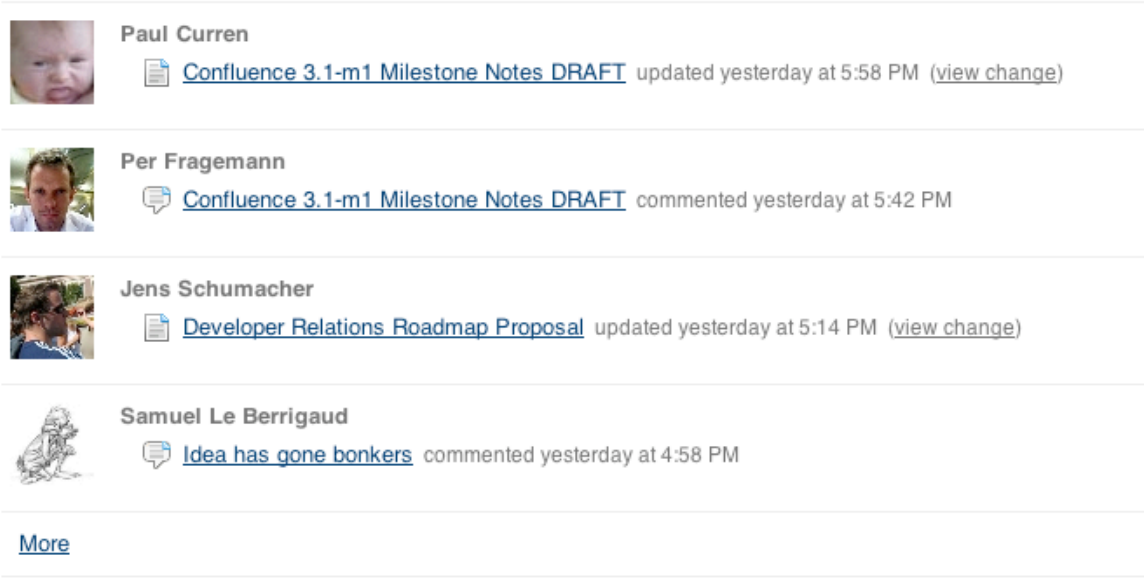

Caveats:

- We feel that the link is a bit small and can be mistaken for a normal link. Especially on the static pages (network, updates in space) it makes sense to make the button much larger and more prominent. We will work with Design to find a solution
- The link also needs to go into the profile page (so you can see more updates on everyone's stream), and into the status tab. Dave will add that soon

This is a Dave Loeng 20% production

2

Draft diffs and visibility

Always wondered what your old drafts were about? Or when a draft is being saved, what part of that huge document you're editing has actually changed? Well, now you can, thanks to DraftDiffs.

View the diff right from the edit page:

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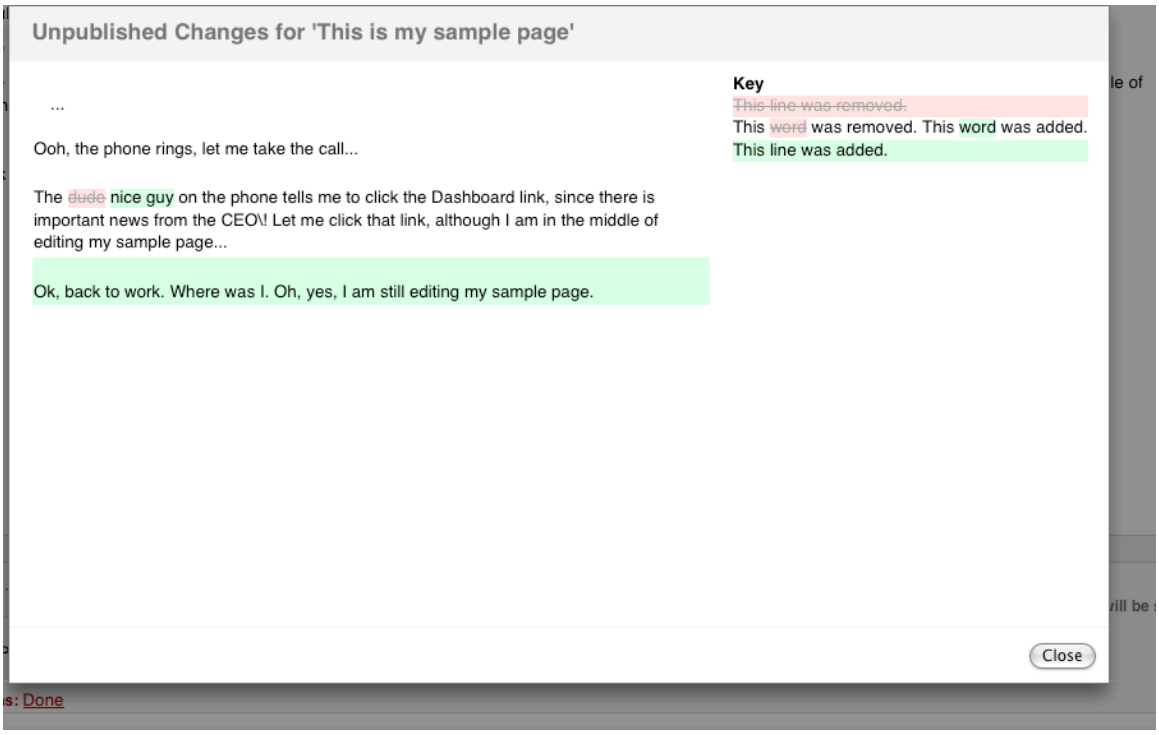
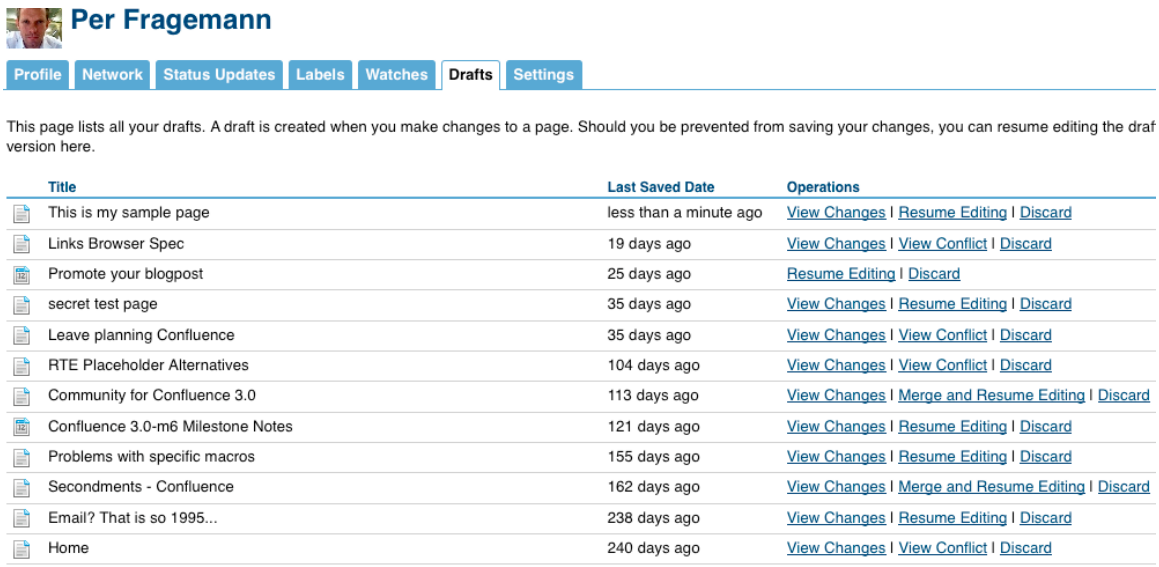


View what your old drafts are about from the drafts overview page:



Which takes you to this screen:

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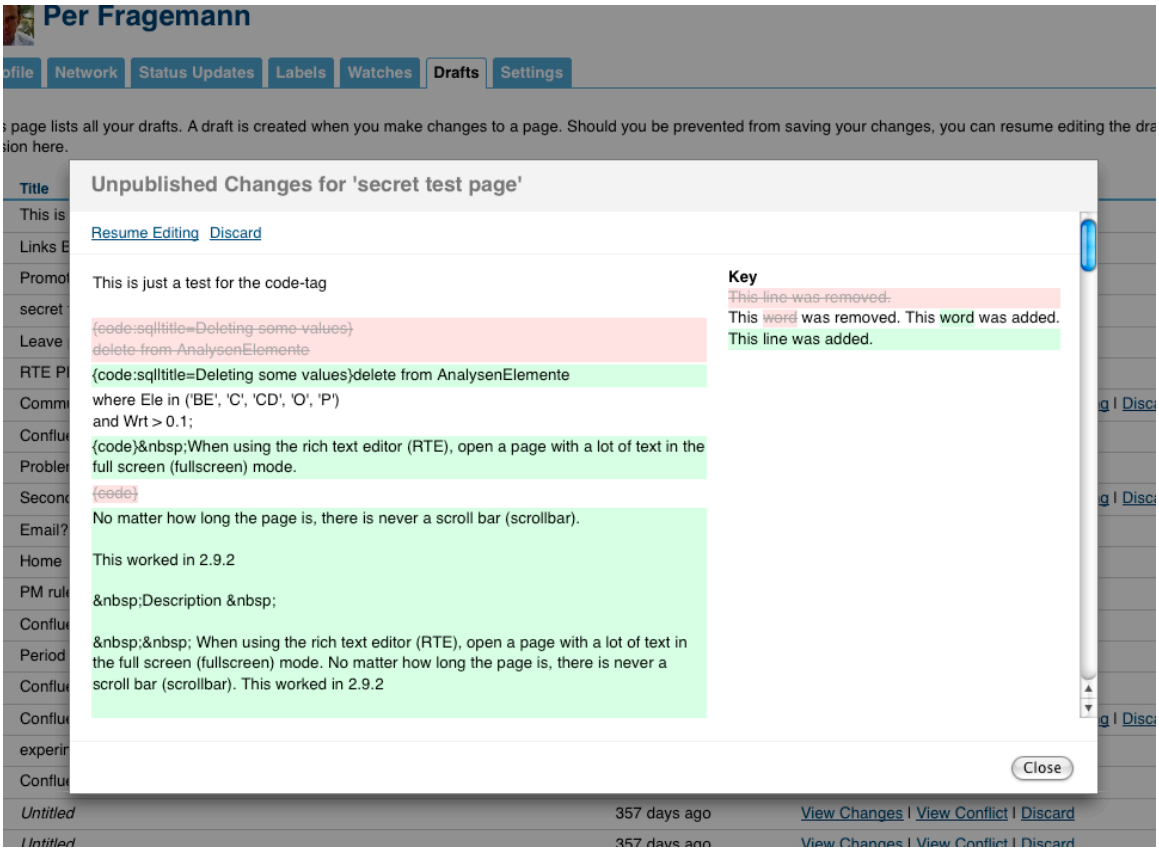

Known issues: Annoying Javascript alert when there are no changes at all.This feature unfortunately also highlights our roundtripping bugs... ahem...

This is a Brian Nguyen 20% production

3

Small Improvements

Edit loss warning

Whenever you are in edit mode and decide to leave the page or close it, you will now get a warning popup. This is especially useful when writing comments (no drafts...) and for technically challenged people who don't understand drafts in the first place. As raised in the JIRA issue, we may have to provide a setting to disable these warnings (it can be a bit annoying if you like to change your mind often), so watch CONF-16075 for updates. The idea has been raised that we may only want this feature for comments when no drafts are being saved. We will dogfood this over the next few weeks, and see how we like it or not.

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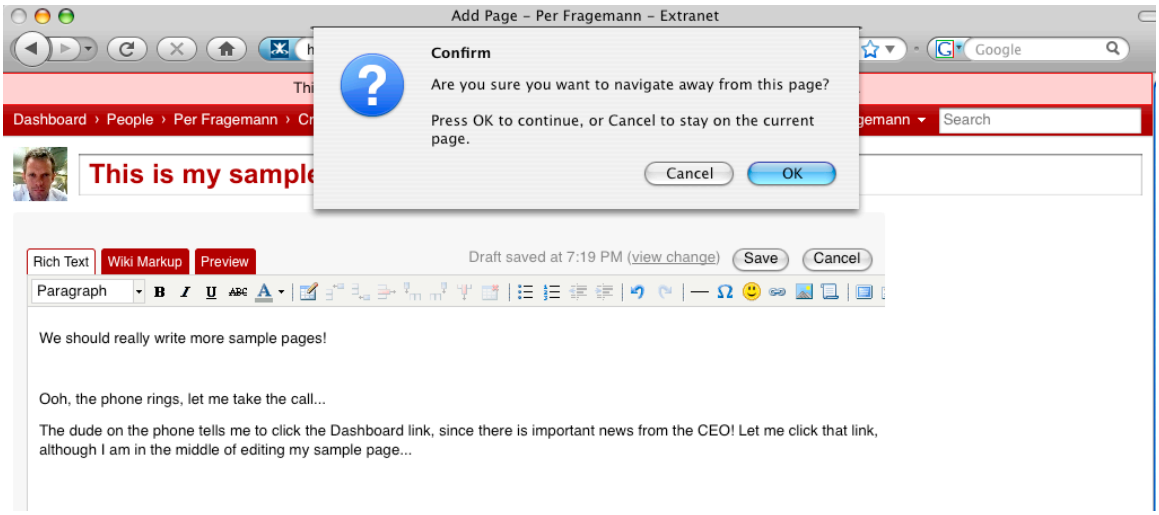
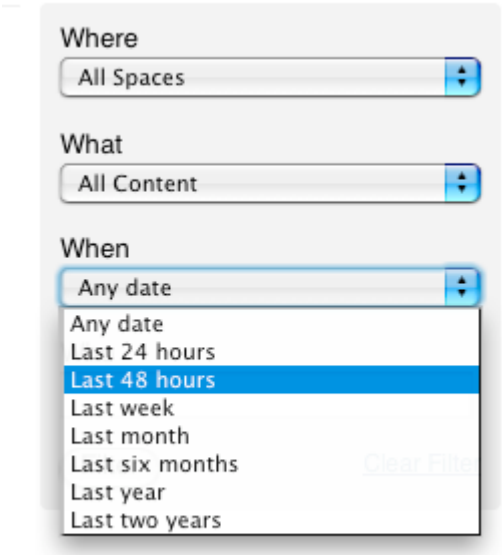


Gradient

This is just an experiment, probably not shipping as a default for 3.1, but worth a look. Do you like it?

More options to search for by time

We added two more options to filter by time: Last 6 months, Last year, Last 2 years, and fixed the calculation for today/yesterday by making it work by 24h instead of what the server thinks is midnight. 48h obviously encompasses the last 24 hours two, which was akward in the old system, where yesterday would really just mean yesterday, but not today.



Plugin points in the editor

We were approached by a developer who wants to write a spellchecker plugin for Confluence, so Agnes volunteered to pluginpointinize the editor. You won't see anything right now, but it will make many plugin authors

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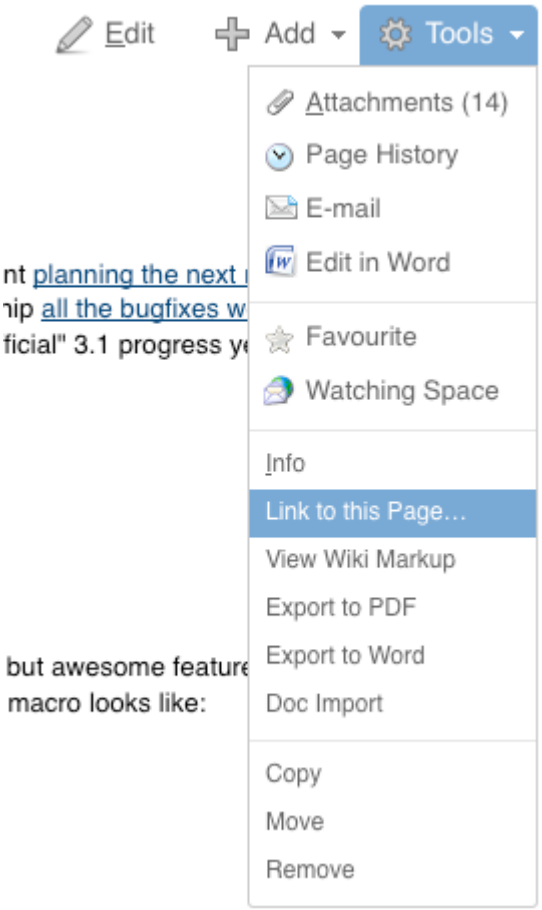
happy. Read the documentation for how to write plugins for the editor.

This is an Agnes Ro 20% production

4

"Link to this page" Dialog

In order to make Tiny Links more accessible, we added a new Menu option which opens a new dialog, which shows the three ways to link to a page. Full URL, TinyURL, and Wiki Link. Probably the Full URL is not as important, but the dialog looked a bit unbalanced, and it makes it clearer that both URL's are equivalent.



Selecting the menu opens up this dialog, with the Tiny Link conveniently selected.

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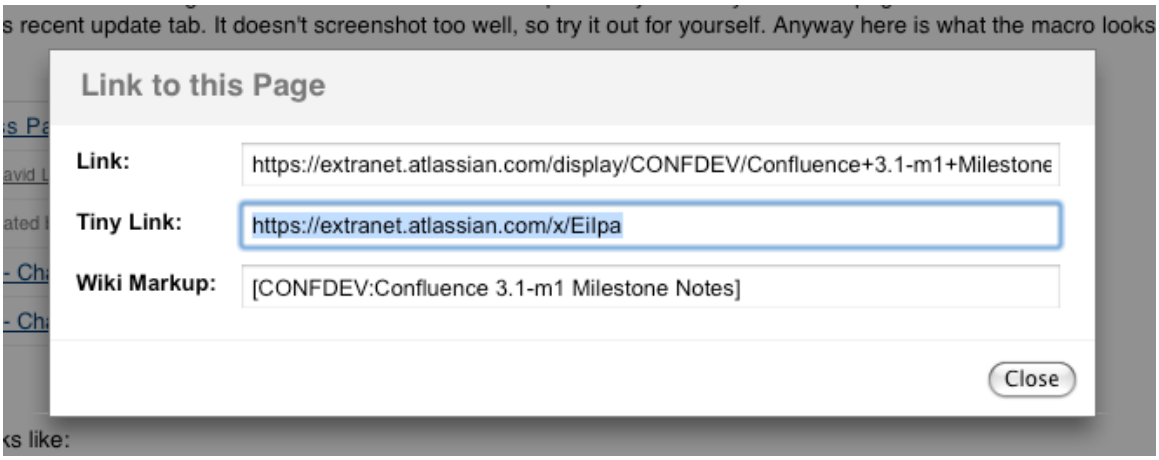

We didn't rename Tiny Links to Permalinks, as has been suggested. What do you think, should we?

This is the final Chris Broadfoot 20% production.

Release Notes 3.0-rc1 ("Release Candidate 1")

Hi everyone,

we are approaching the 3.0 release date. We have built our first release candidate, and we hope to turn this into the final release unchanged soon.

There have been a few changes since the last two betas: The translations are now up to date, more icons have been added to the macro browser, and we have tweaked a few screens, like the profile page. And of course we have fixed dozens of bugs (see JIRA URLs below). We are very pleased with the quality of the release and we are currently not aware of any showstoppers or critical issues. Chances are that the final release will be just a rebranded RC, however you should still not use the RC on production systems, since we still have some final testing planned. We encourage you to use it for staff training purposes and for your upgrade testing though, since no more UI changes or changes to the upgrade process are scheduled.

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Milestone release advisory

For testing use only

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Who should upgrade?

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  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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Issues resolved between Beta2 and Beta3: http://jira.atlassian.com/secure/IssueNavigator.jspa?reset=true&pid=10470&fixfor=14602
Issues resolved between Beta3 and RC1: http://jira.atlassian.com/secure/IssueNavigator.jspa?reset=true&pid=10470&fixfor=14625

Thanks for your feedback so far, it has helped us track down a few bugs, which will result in a smoother upgrade for everyone!

Cheers,
The Confluence Team

Release Notes 3.0-beta2 ("Beta 2")

Welcome to our Beta Phase

The Confluence team is proud to present the first public beta release of our upcoming Confluence 3 release. It contains all the features we intend to ship. We will be publishing Beta 3 next week, and then a rapid succession of Release Candidates in two weeks. We aim at shipping Confluence 3.0 in (very) early June.

So, calling all plugin developers: If you want to make sure your plugin plays nicely with 3.0 on the launch date, and if you maybe even want to use our new features from within your plugin, this is really the last chance to get started. Download the Beta right now

Note: This is still not a stable release, it is not meant for production use. So our normal Milestone disclaimer still applies:

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Milestone release advisory

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What is in it?

All the features we intend to ship are available in this beta. Unfortunately. the official documentation is not ready yet, so until we get a more official summary of the new features, please refer to our recent Milestone release notes, and try the beta out yourself.

Improvements

Since publishing Milestone 9, we have focussed on polishing our existing features. Here is a rundown on the changes since then:

Community features

Some important bug fixes:

Some IE issues: CONF-15497, CONF-15137, CONF-15474, CONF-15421, CONF-14593
Improvements to User Follow: CONF-15335, CONF-15279, CONF-15427, CONF-15286, CONF-15016
Removed the annoying page reload when following a user, CONF-15290

Macro Browser

Preview button removed and replaced by a refresh icon:

Some important bug fixes:

CONF-14720Inserting a macro via the macro browser would always scroll to the top, which is very annoying if you are editing the end of the page.

CONF-15487 It is now possible to insert more than one macro in Safari via the macro browser!

Office Connector

CONF-14798 Performance improvements on the backend for the viewfile macro.

Also, the initial loading of the Flash front end should be a little snappier. There was a default "pre-load" screen that added 1-2 seconds to the load time. We also changed the background color to white so it also adds the impression of not appearing until it's loaded.

old	new

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JIRA Video.ppt

JIRA Video.ppt

Engine Room

Confluence has been upgraded to the latest releases of Plugins 2 and SAL.

We did a small performance improvement by caching PersonalInformation objects by user name (CONF-15484), which will in particular speed up the rendering of profile pictures.

As part of this release cycle we fixed a lot of smaller bugs, but the most notable ones were related to content indexing:

CONF-15352 Fixed a race condition during content indexing which would result in leaked file handles, which had been introduced in M9
CONF-15483 Fixed a problem with a reindex being started before the plugin system was loaded. This would result in empty documents in the index.

Random

CONF-14322 was fixed, so change comments containing ampersands and angle brackets will no longer affect the system.

Known Issues

The Flash preview is broken in Office Connector that is bundled with beta 2. See CONF-15612. It's already fixed and it will be bundled in Beta 3 next week.

Release Notes 3.0-m9 ("Milestone 9")

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Milestone release advisory

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Summary

We are one week away from feature freeze, so this is the last major milestone before we enter beta next week. We are still working on some wording, on some plugin upgrades, and a few UI tweaks, but M9 is pretty much how Confluence 3 will look like. From now on, it's mainly about fixing up non-critical bugs and doing code reviews. Many Code reviews! 🙂

Enjoy:

Community

Followed Users and Favourite Spaces

The terminology has been cleaned up and made consistent across the application. If you want to see what a user is doing you *follow* them, if you want to see what happens in a space, you mark that space as *favourite*. You can mark a personal space as *favourite*, and this is independent of *following* the user who owns the space.

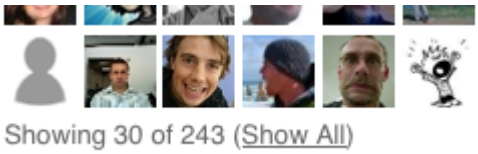
One area we still want to improve is the 'User Follow' menu item and profile tab, which needs a better name.

Follow Tab RSS and Design Improvements

You can now get an RSS feed on any user's 'User Follow' tab. This feed will include all activity of the users followed by that person. This is a great new way of monitoring content on the Extranet.

We've redesigned the follow tab to highlight the activity information more and handle large lists of followers. We also added some clarifying text to this tab to better describe the different sections of this page.

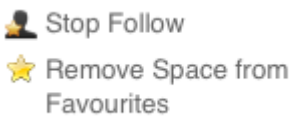
There is now a maximum number of followers shown on this page, and separate pages to show the complete list. This addresses the performance and usability problems discovered in the previous milestone when you had a large number of followers or people following you.



Profile Page Updates

The layout of the profile page has been changed to try to improve the visiblity of the activity. This puts the user's personal information over on the right hand side of the page.

On the left hand side, we now have new links to follow a user and favourite their space.



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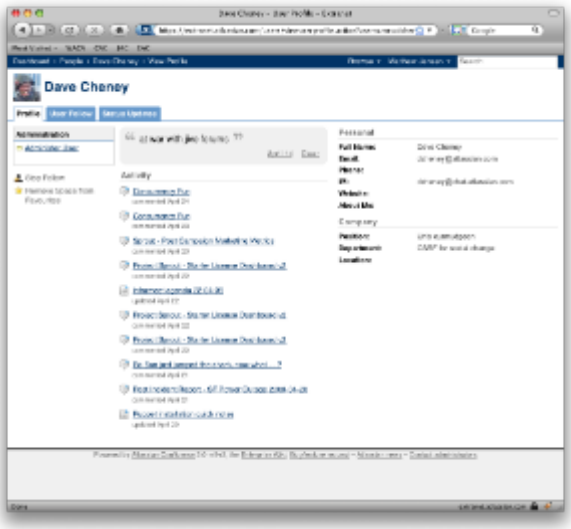

Update User Status Permission

A new global permission was introduced to give system administrators control over who can use the user status feature.

If the permission is turned off for a user (or their group) then they will not have the ability to set their user status, nor will they have an 'Status Updates' tab in their profile.

Macro Browser

Macro Browser in the RTE

The Macro Browser is now finally available in the Confluence rich text editor (RTE)! It will assist you in inserting and editing macros, without having to understand the wiki markup.

Editing a macro can be done by placing the cursor in the start or end tags of the macro wiki markup. If you have context menus enabled, you will also see a new option for insert/editing macros.

Upgraded Macro Icons

Thanks to Stephen, we have even better icons for the macros in the macro browser. Check 'em out!

AUI 1.0

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Confluence is now using the first release of AUI, 1.0.

PDF Export

Many bug fixes have been done for the new PDF export:

CONF-15220 - PDF Export converts a bulleted sublist into a numbered sublist
CONF-15148 - Follow macro should not include the 'Add' action when exported to PDF
CONF-15042 - PDF Space Export text uses US spelling instead of Australian
CONF-15038 - PDF Export from a page with non-default theme is trying to use the old method, and so it fails with an error
CONF-14909 - column and section macros render differently in PDF export when they have borders
CONF-14904 - IM presence macro shows a roque nbsp when exporting to PDF
CONF-14901 - The PDF export doesn't recognize all literal colors when used in the color macro
CONF-14889 - PDF Export from the Info pages is trying to use the old method, and so it fails with an error

Engine Room

Confluence has been upgraded to the latest releases of Plugins 2 and SAL.

Release Notes 3.0-m8 ("Milestone 8")

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Downloads

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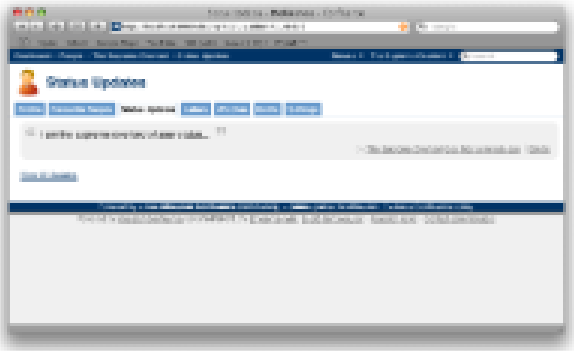
Summary

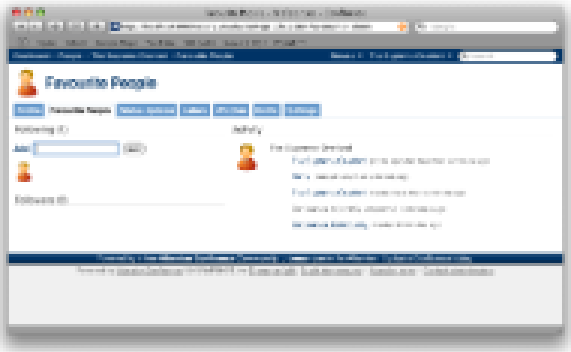
The Confluence team is excited to bring you our latest milestone release: Confluence 3.0-m8, "Milestone 8". This release includes a huge amount of improvements to the community features, additional performance improvements and many bug fixes.

Community

Be sure to check out the great improvements in Confluence's new community features:

- Improved Activity list on Profile Page - The user status list has been moved to its own tab and the new Recently Updated Macro has been put in its place. It's also been given a face lift and fits nicely into the profile page. Facebook eat your heart out.
- Status list moved to seperate tab with pagination - The user status list now has a proper location, it's own tab. This tab is the central place where you manage and view your historical status updates. Links to delete old status updates will be found on this tab.
- Each status item has its own page so you can link to a status - You can now create links to old status objects allowing for historical references as each status can be displayed on its own page.
- Personal space sidebar has been updated to include an activity list and your follower information - The personal space sidebar is coming along nicely and looks great with the new recently updated macro and the follow information.
- Adding a follower on your Favourite People tab (or using the hover) will refresh the page and update the list immediately - We changed how the follower information was looked up as to not use the lucene index and hooked into the hover so most changes on this page will trigger a refresh and the updates will be seen immediately! No more wondering if your new follower actually worked
- Those extra fields on your User Profile page are now run through the wiki renderer allowing links and simple formating





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Macro Browser

The macro browser team spent the past two weeks working behind the scenes on placeholders for the rich text editor. Unfortunately, this change is too complex and risky to get into 3.0, so we have just a few small improvements in the macro browser this milestone:

- More parameters and documentation are available for macros in the macro browser. We now have 100% of the bundled macros with documented parameters, and will be just fine-tuning the documentation for the remainder of the release.
- The Office Connector {viewfile} macro shows up in the macro browser as separate macros for Word, Excel, PDF and Powerpoint documents.

PDF Export

Balsamiq Mockups and several other complex macros now export to PDF correctly (CONF-14792).

⭐ Why don't you try out the new PDF export right now? On any page, go to *Tools*, *Export as PDF*.

Engine Room

The Engine Room team implemented several important performance improvements for this milestone. Specifically:

- Searching should be faster and not blocked by index updates every minute. This should also make the dashboard and macros that use the search index slightly faster. CONF-7749, CONF-14803
- Image attachments embedded in a page are now cached by your web browser. This should make pages with lots of images faster to load and reduce the load on the server. CONF-8034
- Upgraded the WebDAV plugin to 2.0-beta2. This plugin has been released to the community for a while now, to very positive response. It should be more compatible with more clients now, though there is still some special configuration needed for Windows Clients. Read the documentation about client-configuration in order to test it.

20% Projects

Administrators can now customise the size of Confluence's caches from the web interface. Previously, you needed to edit an XML file and restart Confluence whenever you wanted to adjust the caches. This addresses one of the most popular supportability feature requests in the Confluence JIRA project, with 34 votes: CONF-12836.

Bugs Fixed

Several macros which were broken in M7 are now fixed: {flowchart}, {rsvp} and {pagetree}. CONF-14615, CONF-14829, CONF-14581

The Gliffy plugin and Beanshell macros now work with Confluence 3.0; previously customisation was required to get them to work properly with our latest development versions.

Below is a complete list of issues resolved in Confluence 3.0-m8.

Errors were reported by the JIRA trusted connection.

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- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (1 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due
	CONF-15102	Allow macro Body Text label to be overridden and add a description	David Taylor [Atlassian]	David Taylor [Atlassian]		Resolved	Fixed	Apr 05, 2009	May 16, 2009	

Release Notes 3.0-m7 ("Milestone 7")

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Milestone release advisory

For testing use only

Do not use this release to upgrade your production systems.

For all production use and evaluation of Confluence, please use the latest official release.

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Who should upgrade?

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- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

In supplying milestone releases, our aim is to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too, and all of our milestone releases even have been performance tested for a while.

However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

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Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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Summary

The Confluence team is proud to present another incremental milestone, called M7. We are currently aiming at shipping M8 in two weeks and M9 in four weeks. M9 will be almost feature-complete and therefore similar to a beta release. After a couple of betas and release candidates we intend to ship Confluence 3 in late May. As always, things can still change a little, so there is no fixed date. But if you are a plugin developer, you want to have your plugin tested well before the big marketing buzz kicks in. We try to remain as backward-compatible as we can for Confluence 3, but if something slipped through the cracks we need your feedback, and we need it now. So do have a look at this milestone release and tell us what you think.

Macro Browser and Rich Text Editor

You can now choose the kind of right-click context menu you want in the Rich Text Editor. A new button on the toolbar, handily called "Toggle context menu", toggles between the browser's default context menu and our TinyMCE one.

You can also tell the TinyMCE context menu that it isn't wanted via the "Disable context menu" option.

Macro Browser search has been improved and now accepts multiple words (order not important) and camel-casing (matches either case in consecutive words). The filtering logic has been added to AUI as a new *commented* method of AJS, "filterBySearch" - feel free to use it.

Community Improvements

This milestone shows a number of improvements from the Community Team.

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Profile Layout

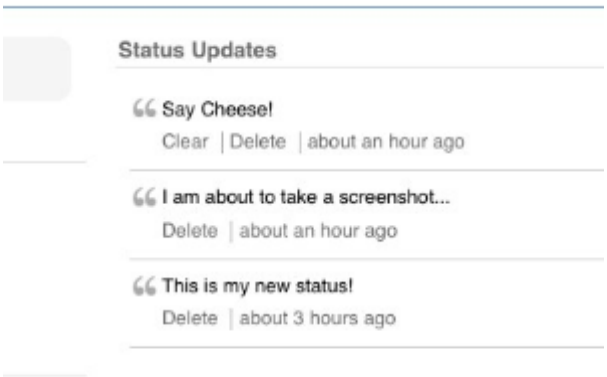
In the spirit of making the profile page actually page you want to visit, it's been given a facelift and has now come closer in line with out stardard UI.

It also includes your current status is clearly visible at the top of the profile page.

For now you have a Status Updates section on the right hand side of the profile page, the next milestone will see this will be replaced with the new Recently Updated Macro (see below) so it will include other kinds of activity as well. It's here now because otherwise you wouldn't have anywhere to delete or clear your status, eventually will be moved to another tab and/or page.

User Status Updates

- Delete And Clear Status
  You can delete status entries from the list on the right. Someone hacks in your status, you can now always delete it. You can also clear your current status, so any location showing your current status will show nothing. This won't remove it from your history but your current status will now be considered cleared.



- Status Icon
  A new status Icon was introduced by the Design team. The lightbulb has been replaced with some sexy quotes (“).
- Immediate Updates
  Updating your status will use Javascript-Magic to update your status on the current page, giving you immediate feedback, with no need to refresh the page.

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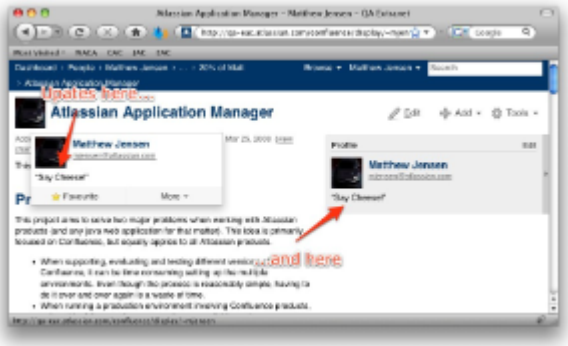

Recently Updated Macro

This is the first milestone that shows the hard work that David Loeng and Chris Broadfoot have been doing with our Recently Updated Macro.

To build up activity in the old recently updated macro the process would simply query the lastModified date of all the relevant content, then sort it accordingly. The side effect of this was, if two people edited the same page, you would only see the one edit in your list. Not only that, if you wanted to follow a certain user's activity and someone edited a page after them, you wouldn't see any update!

We've worked very hard on this and changed the way Confluence stores changes to documents and now tracks **all changes** every time a document, page, profile, status, anything, is updated.

This screen shot shows two edits from two different people on the same document, something that wasn't previously possible. These changes were critical for implementing a proper follow feature for 3.0.

Bug Fixes

A number of bugs have been fixed by the community team, here are a list of some of the main ones:

- CONF-14773 Expanding and collapsing the personal sidebar will no longer affect the comments on that page/blogpost.
- CONF-14870 Delete links for user status items are now properly integrated with the new XSRF protection and actually work.
- CONF-14778 Printing pages from a personal space no longer includes the sidebar
  Other bug fixes:
- CONF-14689 Comment edits now send notifications

Plus a number of other fixes.

PDF export team

Removed the PDF Export++ option. The new PDF export is what you get when you select just **PDF Export**. The old PDF export was removed.

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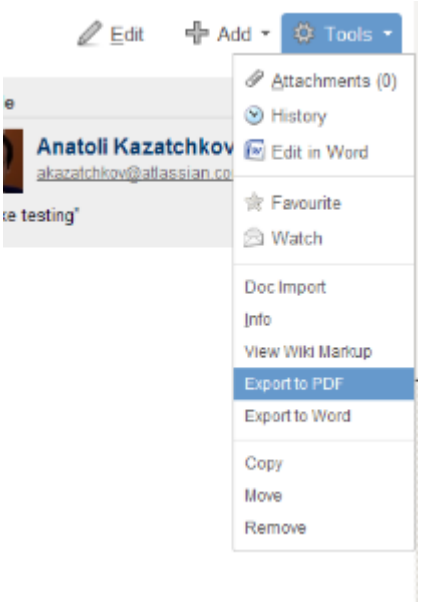
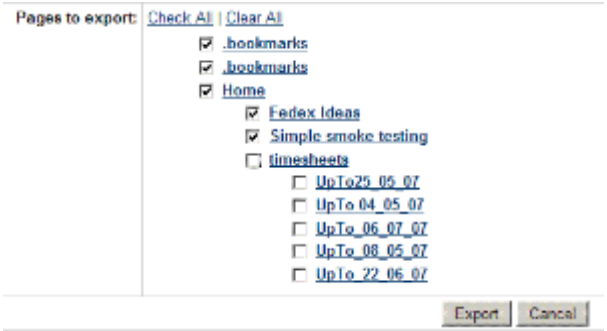
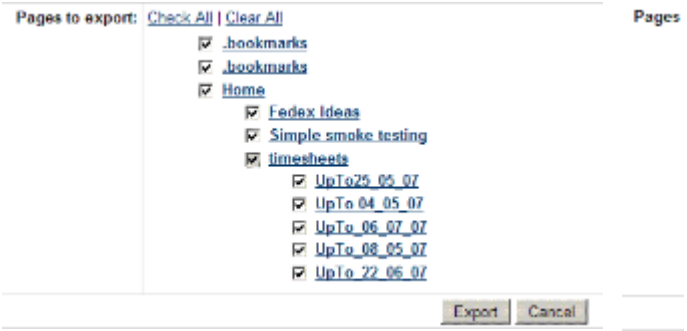


Added javascript to the space export tree that will select/deselect all descendants of the clicked node. This change applies to all export formats not just PDF. This should save hours for the Atlassian Techwriting team.





Bugs fixed

CONF-14906 - Fonts are too large in the page index macro when exported to PDF
CONF-14905 - Note macro missing colored background in PDF export
CONF-14902 - content by label macro looks ugly when exported to PDF
CONF-14900 - Bookmarks macro is producing really large font when exported to PDF
CONF-14899 - Attachments macro is showing velocity junk when exported to PDF
CONF-14898 - Panel macros (warning, note, info) could use some extra padding in PDF export
CONF-14897 - Spaces macro renders as a single bullet item list when exported to PDF
CONF-14895 - Recently-used-labels macro with a table style doesn't look like a table at all
CONF-14894 - Blockquote text too large in pdf export

Release Notes 3.0-m6 ("Milestone 6")

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Milestone release advisory

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Upgrade Procedure

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Downloads

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Summary

This milestone is mainly about polishing features that were introduced previously, and a bit of back-end work for security and performance. We have fixed plenty of bugs of M5 too, and will keep fixing for M7.

Known issues

Given the recent work that has been done to improve "recent updates" (CONF-14434), updates shown on the dashboard will be affected shortly after the upgrade. You may notice that only changes made _after_ the upgrade will show. This will be rectified as soon as the index is rebuilt.

Improvements and new Features

New PDF Export

- This milestone contains the first cut of the Improved PDF export, which also give you more control over the conversion process by allowing you to use CSS. Please find the detailed documentaton on CAC. CONF-2079

There are still plenty of known bugs with the new PDF, we included it a bit early to be able to get feedback on the CSS-styling process, not for beta-testing purposes...

Engine Room

The ER team has implemented several more important fixes and improvements in this milestone:

- *supportability* - integrated thread-dump tool in the administration screen (CONF-12395)
- *security* - editing comments in wiki markup is no longer double-HTML-escaped in anti-XSS mode (CONF-14601)
- *cluster performance* - avoid unnecessary updates to distributed cache to improve cluster performance (CONF-14657)
- *general performance* - improve performance of retrieving many attachments, like on the attachments page (CONF-14422)
- *front-end performance* - add caching headers to attachments rendered with a "?version=x" parameter (CONF-8034).

Office Connector

- When launching an external editor from Confluence, you don't have to login again. CONF-14705
- You can now monitor what is in the conversion queue and what is actually being converted CONF-14707

Macro Browser

The following bugs have been fixed:

Errors were reported by the JIRA trusted connection.

- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (0 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due

Status and Follow

The following bugs have been fixed:

Errors were reported by the JIRA trusted connection.

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- APP_UNKNOWN; Unknown Application: {0}; ["confluence:4557196"]

JIRA Issues (0 issues)										
Type	Key	Summary	Assignee	Reporter	Priority	Status	Resolution	Created	Updated	Due

Bugfix-team

- It's safe to use Sections and Columns in the RTE again. (CONF-13823, CONF-14282)

Release Notes 3.0-m5 ("Milestone 5")

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Milestone release advisory

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Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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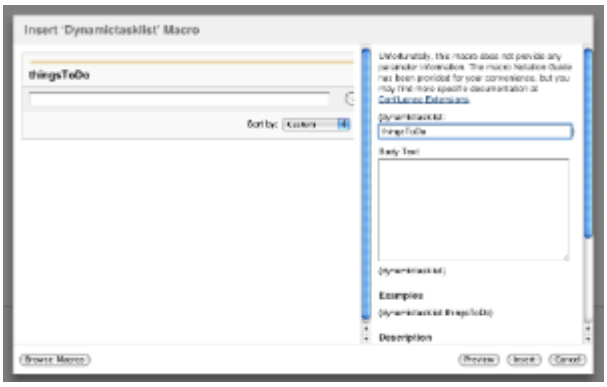
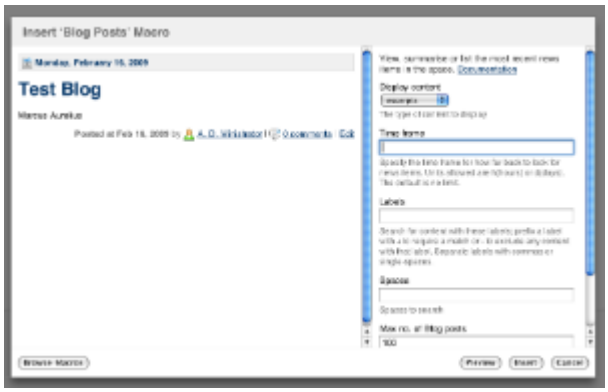
Issues resolved or improved in this milestone since Milestone 3

Macro Browser (in Markup Editor)

The Macro Browser is now available in the wiki markup editor! Features are listed below.





Browse Macros

You can now browse through a list of categorised macros and select a macro to insert. Macros that do not have categories define can be found in the 'All' categories tab. To insert a macro, you can either double click on the macro or click it once and then click the 'Next' button.

Insert Macro

For macros that have parameter metadata defined, you will see parameter labels and descriptions with the appropriate input fields. So far we are handling boolean and select-one-from-list type parameters. Everything else is considered a string. Please note that there is no field validation.

For macros that don't have the parameter metadata defined, you will see a single input field for the macro parameters and its notation guide help (if any) below.

Preview Macro

A default preview will be loaded only if the macro doesn't have required parameters. The preview can be updated by clicking on the 'Preview' button. This button location will change in the future.

Edit Macro

You can also edit a macro by placing your cursor in the **start tag** of a macro and then clicking the Macro Browser icon. It should display the 'Insert X Macro' page with it's parameters populated.

Known Issues

- Macro summary and parameter descriptions are currently under review by the tech writing team, so please ignore grammar/spelling/crappy English for this milestone.
- The macro icons (displayed in browse macros) are temporary. Hopefully we will be able to get much sexier icons.
- Some macros falsely declare they have bodies (e.g. gallery) so you may see some unnecessary body text areas

Community

Several major community features have their debut in this milestone.

Status

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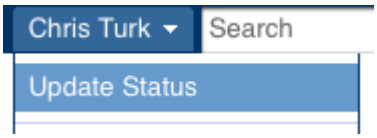
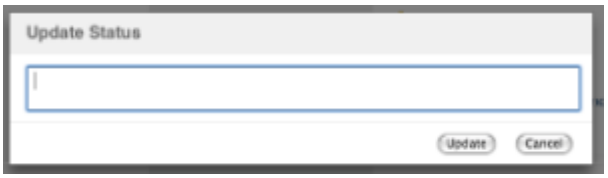
This milestone, we are releasing the first version of the Status feature. There is still a lot of work to be done, it's not particularly polished but we want your feedback.



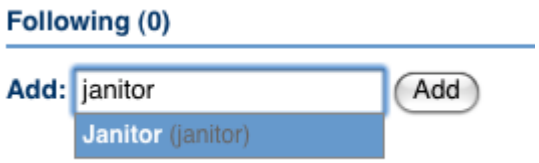


First of all, set your status from the user menu, where you'll get a dialog box allowing you to enter your new status.

You can see your status and others' statuses from user hover, under the "Status List" option in user profiles, the "Favourite People" tab (see below), personal space sidebar (see below).

Follow

Marking another user as "favourite" is now meaningful. In milestone 5, you'll be able to get a list of statuses from the people you follow.



Check out the "Favourite People" tab in your user profile – you can get there via your user menu.

It will show you who you're following, and who's following you. You can also quickly follow someone with the user search, and see a list of status updates from the people you follow.

Personal Space Sidebar

With this release, we now have some structured form of a user profile for every user. On the right of any personal space*, there'll be a sidebar with various details of the person's space you're viewing. Don't worry, you can easily collapse the sidebar and it'll shift out of sight. Once you collapse the sidebar, it will stay collapsed for all personal spaces for the duration of your login session.

Here's what it looks like:

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We plan to put more information on the sidebar, at the moment it looks a little silly if the user doesn't have a status set and hasn't filled out any of the extra profile fields we added last milestone.

This only works in the Default Theme.

Known Issues

- There are a few known issues with the Community work, the biggest thing is what you see at the moment is a first cut of the functionality, we plan to "sexy" it up a bit and make the status and profile pages look a lot nicer.
- You will also notice that when you favourite another user you will need to wait for the index to be flushed for your changes to be applied. This will be improved in a future milestone.

Bugfixes

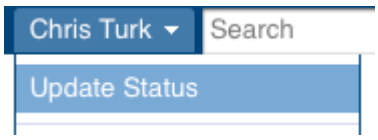
There are two relevant bug fixes in this milestone:

- Configuration to prevent anonymous users accessing user profile information (CONF-13276)
- Cannot insert links with Unicode characters in the URL (CONF-12707).

Engine Room

The Engine Room team has delivered one more performance improvement and a significant security improvement this milestone:

- Attachment retrieval should cache attachment IDs (CONF-14422)
- Anti-XSS mode is now enabled by default (CONF-12573).

We also fixed the regression in the previous milestone (M4) 

where pages with thousands of attachment versions brought all attachment retrievals to a grinding halt.

Release Notes 3.0-m4 ("Milestone 4")

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Milestone release advisory

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Issues resolved or improved in this milestone since Confluence 3.0 Milestone 3

Experimental Macro Browser

The Macro Browser is now available in the wiki markup editor, however it is currently **not in a state for proper use**. It is quite buggy and has been included for QA and the dev team, so please do not raise any issues against it yet.

Community

User Hover Fixes

A lot of outstanding issues with User Hover were fixed for m4.

First Cut of User Profiles

The profile tabs have been rearranged into a more intuitive order, with general and email preferences moved to a separate "Settings" tab:

Additional fields have now been added to your user profile.

Performance Improvements

We did the following small performance improvements:

- Caching/Queries optimized for page lookups (CONF-14273)
- Adjusted cache sizes (CONF-14294)
- Optimized access to attachments (CONF-14342)
- Less cache replication in a cluster (CONF-14339)

Although the performance improvement hasn't been as dramatically as in M2, but we still see a solid trend towards shorter and less varying response times. The overall performance improvement is around 10%-15% with more to come in the next milestones.

Known issues

- Performance issues with frequently updated attachments. One of the performance tweaks in M4 can cause issues if you have attachments with thousands of versions. (CONF-14422)
- The Macro Browser is very fresh and contains many bugs.

Check out JIRA for the full list of known bugs

Release Notes 3.0-m3 ("Milestone 3")

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Milestone release advisory

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However, since our milestones releases are timeboxed (that is, they are released every two weeks, no matter how far we have come implementing features and bugfixes) there is always a chance that we have new known bugs that are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Additionally, we have not completed our performance testing and compatibility testing for all supported databases and user management systems. So, for example, a milestone release may behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade your test instance to this release. *We strongly recommend that you backup your Confluence home directory and database before upgrading!*

Downloads

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Issues resolved or improved in this milestone since Confluence 2.10

User Hover

The first cut of User Hover has made it into m3. This mainly provides Confluence with the stepping block for features like Status. At present, it's only really useful to e-mail someone, or visit their user profile (both are notoriously difficult pre-m3).

Just hover over any user's name or profile picture, you should see the following information:

Performance

The Engine Room Team has started attacking general performance and also cluster performance. Our loadtests already show a significant improvement for high loads, and we hope it will show on EAC too.

In particular we made the following changes:

- Remove blocking in OGNL (CONF-14121)
- Rely on Coherence to do locking instead of using sychronized methods (CONF-14093)
- Remove unncessary sychronization on Hibernates UpdateTimestampsCache (CONF-14098)

More backend improvements related to caching and retrieval of macros have been done, which should make rendering long pages faster.

Overall we have seen a significant performance improvement under light to mid-level load, even more so on the clustered version of Confluence. This is mostly due to CONF-14093.

Rich Text Editor

Context menus are now available in the RTE (Agnes' Fedex 9 project). Just right click in the editor! They are especially useful for table editing.

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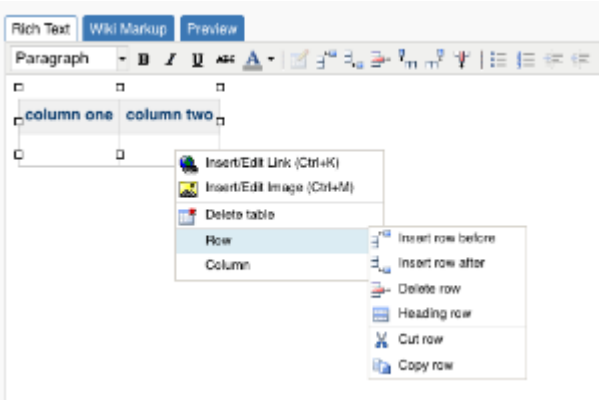
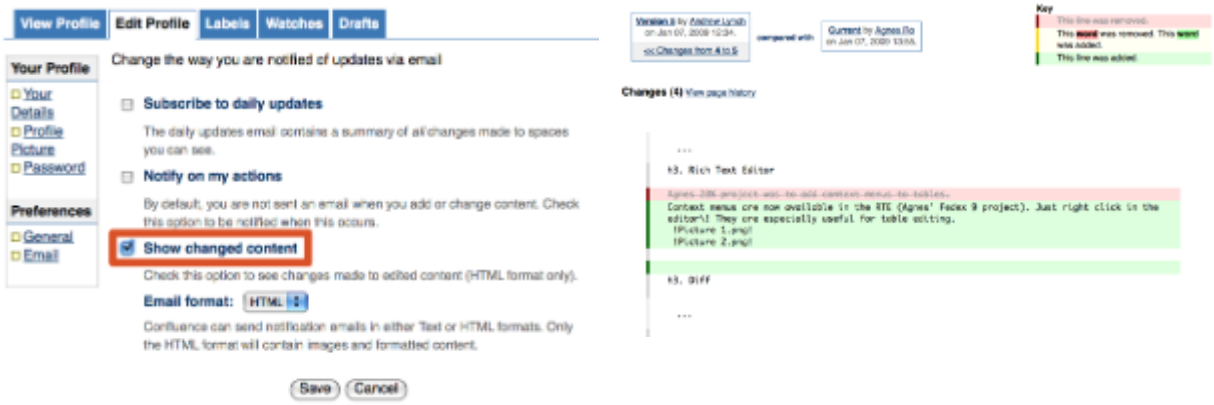


Notifications which show just relevant changes

When watching a page in Confluence, you normally get all the content whenever something changes. This isn't so useful, so we've added the option to get just the changes to the content emailed to you.

Just check the "Show changed content" box in Email Preferences. If enough people find this useful we are considering enabling it by default.



Viewing changes for content has also been similarly improved. By default, unchanged content is hidden and you can click the ellipsis to expand it.

Both improvements rely on 20% work done by David Taylor to dramatically improve the diffing algorithm used for Confluence content.

20% projects

Batching web resources

Confluence is now using Atlassian Plugins 2.2. beta4, which supports batching of web resources. This should result in a performance improvement, with fewer requests to the server for jss/css files.

See here for more details.

Roundtrip bugs

~~Yes, it's lame, but~~ DonW fixed a couple of particularly annoying round-trip RTE bugs in his 20% time:

- Images no longer get attached to the previous paragraph
- Emoticons can all be escaped in wiki markup, and will automatically be escaped when going from Rich Text to wiki markup.

Known issues

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Plenty of known bugs. Check out JIRA.

Release Notes 2.10-rc1 ("Release Candidate 1")

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Issues resolved or improved in this release

We are now reaching the end of the 2.10 release cycle.

We have released our first release candidate RC1 today, you can see it on our public Confluence installation at http://confluence.atlassian.com. There should be no more code changes made to Confluence from this point on unless any important issues are found in this release candidate.

While this is not the final release, and the official release notes will be unveiled next week, you should definitely have a look now to confirm everything still works fine with your plugins.

The RC1 is functionally almost equivalent to M8 which was announced in early November, but has a number of additional bugfixes. Check out our roadmap in the JIRA project

Known problems

The Edit Grid plugin doesn't work with this version of Confluence. See the Jira issue for more details.

Release Notes 2.10-m8 ("Milestone 8")

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Downloads

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Issues resolved or improved in this release

Writer

Bug fixes:

- CONF-13670 : fixed bug when Html Export used to fail on recently updated macro displaying an attachment.

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Office Connector

- CONF-13613 : fixed several bugs in the pdf preview
- CONF-13643 : fixed previewing viewfile macro gives error on a new page with attachments
- Numerous other bugs. See the Office Connector release notes

Discovery

- Added recentness boosting to QuickNav.
- Added the space name to the tooltips for QuickNav results.
- Fixed bug preventing Did-You-Mean feature being enabled via the admin console.

Plugins

- Upgraded to Jira Macros Plugin v2.8.7, which contains several bugfixes (m7 contained v2.8.6)

Bug Fixing

Significant bug fixes since M7 include:

- CONF-13580: a blocker bug when editing pages with certain types of macros.
- CONF-13543: a blocker bug causing drafts to not be saved in certain situations
- CONF-13521: a serious issue with the RTE forcing the use of the base url.
- Several bugs (CONF-13338) fixed relating to the escaping of attachment filenames.
- Fixed the HTML around the quick search box that was causing a large right hand margin on some browsers.

Release Notes 2.10-m7 ("Milestone 7")

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Upgrade Procedure

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Downloads

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Issues resolved or improved in this release

Office Connector

- Changed the preview link to just "View". Previously it was "View Online" or "View as HTML". It will always be on the right of the actions links. This makes the alignment of the other links nicer.
- The slide viewer will always be downloading a few slides ahead of the current slide. This should make it appear to be loading slides faster when you advance the slides.
- Other minor refinements of the slide viewer UI.

RTE

- Keyboard shortcuts added for insert link/image (ctrl+k and ctrl+m)
- Keyboard shortcuts fixed for headings (ctrl+1 for heading one and so on)
- Links pasted into the rich text editor will work (for most browsers and to some extent for all browsers)
- Initial indent within a code macro is now displayed properly.
- Extra newlines are no longer added to bodies of most macros Eg {note}inline body{note} will be left alone by round-trip.
- Less extra whitespace will be added to wiki markup by going to rich text.
- Draft saving should now work in all browsers again.
- Editor tabs are now rounded in safari and firefox.

QuickNav

- A faulty optimisation that was causing problems with multi-word searches has been fixed.

Search

- Increased range of data boosting to cover a full year (instead of one month)

Did-you-mean

The administration screens for the did-you-mean configuration have been substantially improved.

Default Space Content

The default content used for the home page in a newly created space or personal space has been improved to show recently updated content, and a pagetree of the space.

Plugins

Included most recent bug-fix versions of:

- LeftNav Theme

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- Userlister plugin
- ToC Plugin
- Social Bookmarking Plugin
- Email Page Plugin
- Live Search Plugin
- IM Presence Plugin
- Dashboard Macros Plugin
- Contributors Plugin
- Attachments Plugin
- JIRA Plugin
- Advanced Macros

Engine Room

Multiple bug fixes.

Release Notes 2.10-m5 ("Milestone 5")

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Upgrade Procedure

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Downloads

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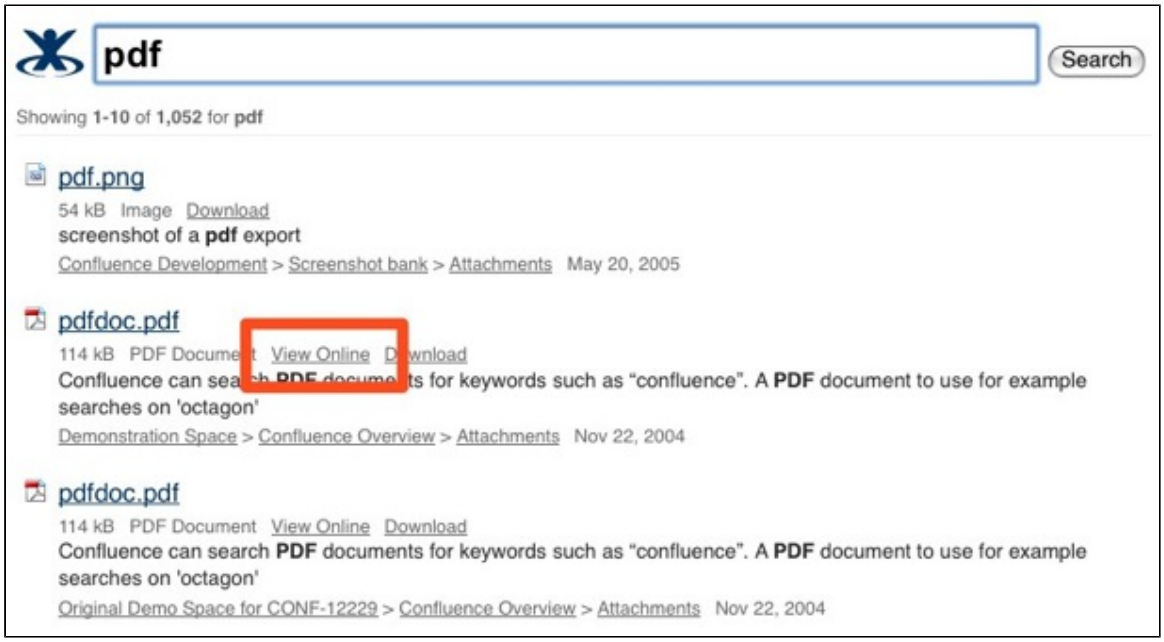
Issues resolved or improved in this release

Office Connector

- View Online" or "View as HTML" link for supported file types on the Attachments screen, Attachments macro, and Search Results. This makes it easy to quickly preview Office files without having to leave Confluence



- New look for the PPT and PDF flash viewer with a download button, and an improved fullscreen.

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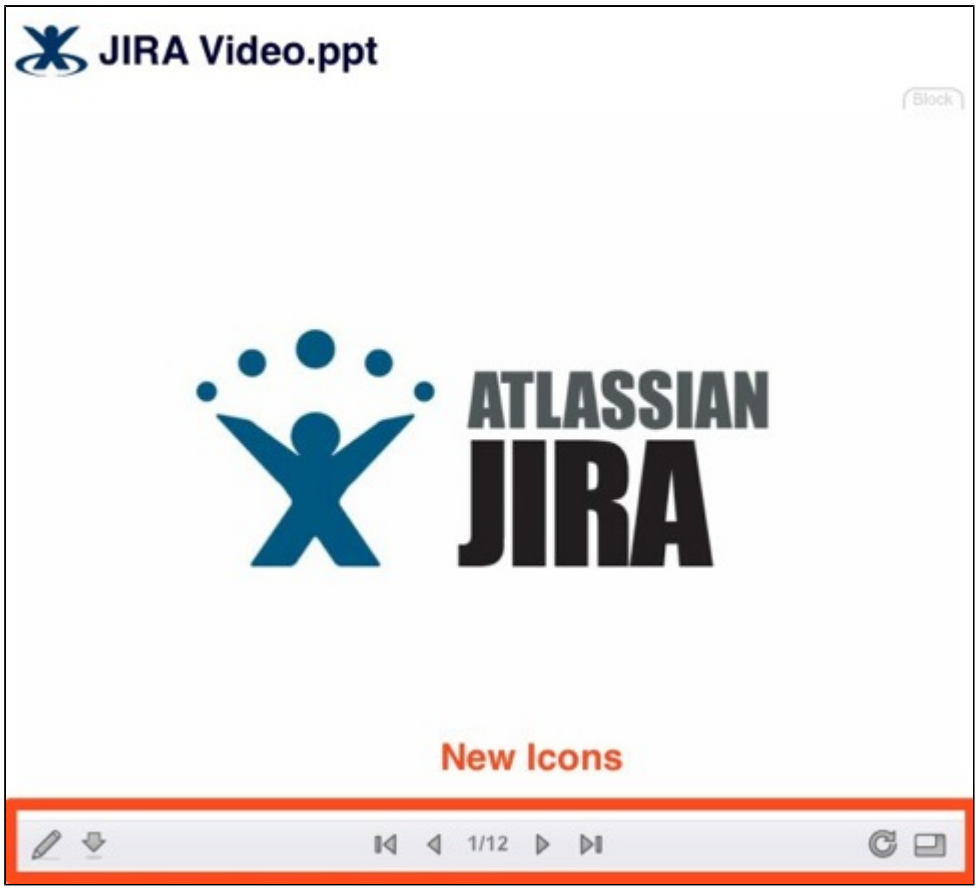

- Conversion Queue for managing performance when you may have a lot of users using the Office Connector.

Rich Text Editor

- Tab & Shift+Tab in lists are now shortcuts for indent/outdent
- Lots of bug fixes (especially around table editing)
- Round tripping bugs around links were fixed (shortcut links, using colors & images in links)
- The format dropdown is now styled properly

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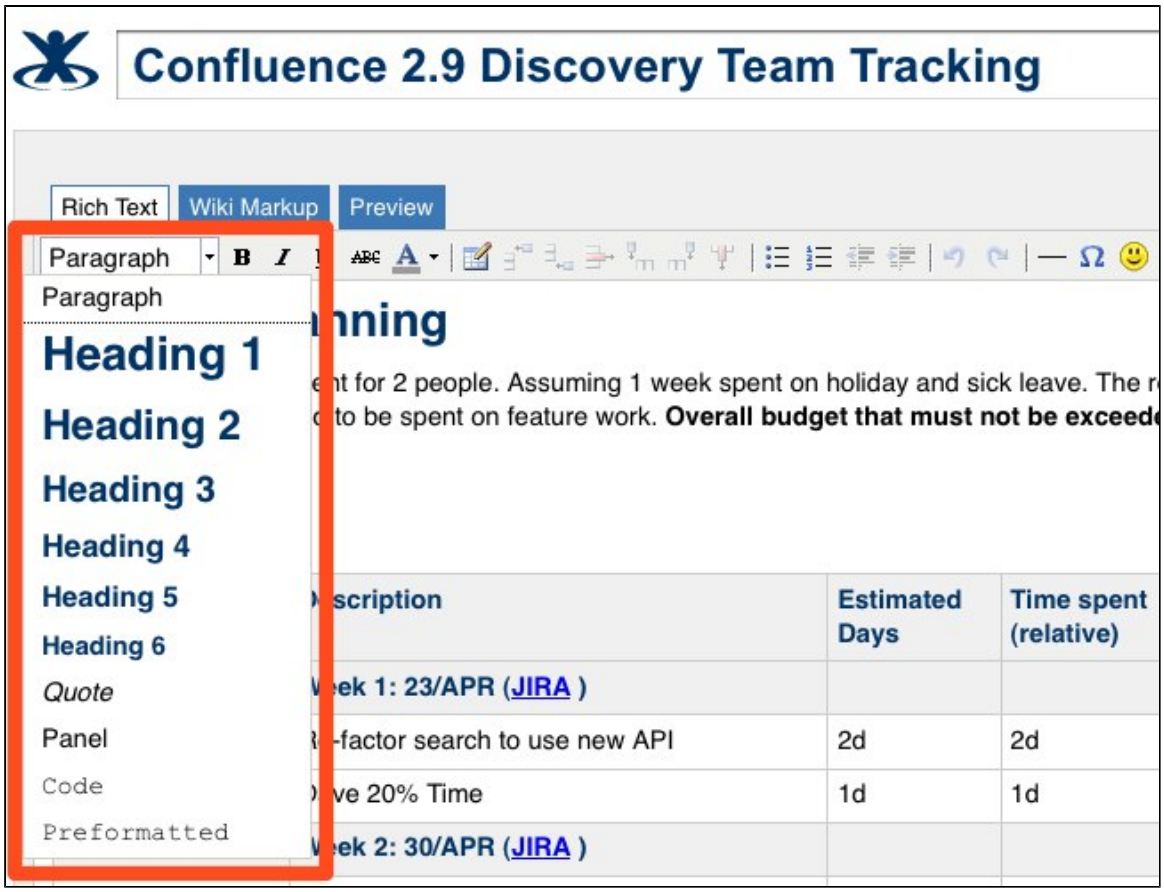
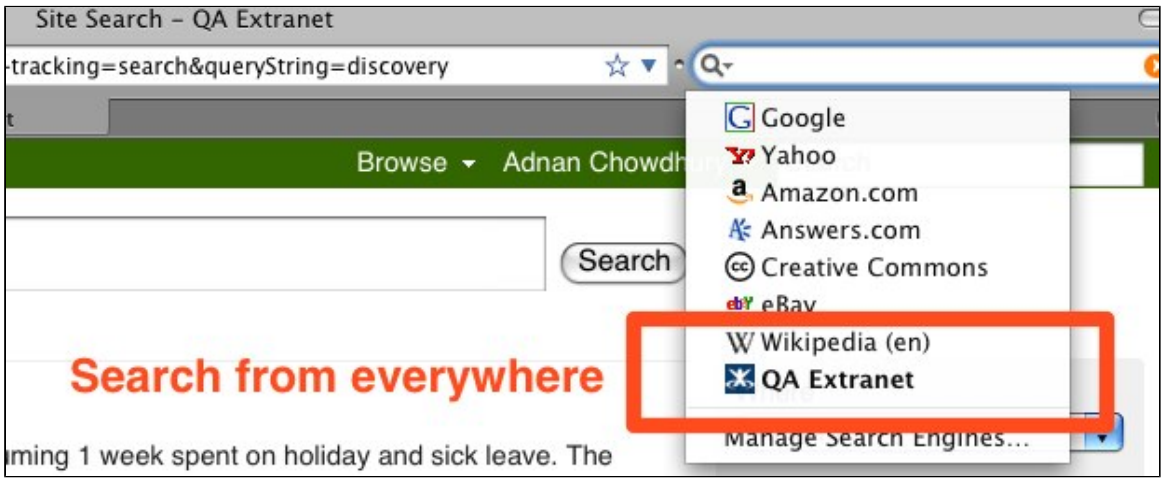


Quick nav improvements

- Is now at least twice as fast since we have reduced the pause by half.
- More page results! 6 in fact.
- See more of each search result. You can see the whole title (just hover!), and more letters with better truncation.
- People should not be getting weird timeout messages anymore
- New administrative feature to limit the number of simultaneous quick nav searches, or to turn it off.

Open Search

- You can now search Confluence from the convenience of the search box in your browser (for FF and IE7). Just add the search provider from the search provider menu dropdown on the top right of your browser.



Site Search improvements

- Normal search is at least 5 times faster than it use to be.

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- Better relevancy algorithm relevant

Miscellaneous Small Improvements

- Cleaner, sweeter breadcrumbs and 10 more rounded corners.

Dashboard › Confluence Development › Home › Confluence 2.9 Discovery Team Tracking › Edit Page

Plugins

- New version of Dynamic Task List (3.1.1)
  - Fixes TASK-108
- New version of Chart Plugin (1.12)
  - Fixes CONF-12792
- SNAPSHOT version of JIRA Issues Macro
  - Fixes lots of stuff
- 1.5-SNAPSHOT version of Advanced Macros
  - removed RSS macro
  - upgrade content-by-label
  - upgraded blogposts
  - upgraded recently-updated
  - Fixed Gallery Macro: ADVMACROS-39, ADVMACROS-48, ADVMACROS-49
- 1.5-SNAPSHOT version of Dashboard Macros
  - renamed recently-updated to recently-updated-dashboard to make way for new code in Advanced Macros
- New version of HTML Macros (1.5)
  - Includes RSS Macros now to take advantage of shared whitelist

atlassian-plugins upgrade to v 2.1.0.rc1

- added filter plugin type
- added standard decorators that are available to plugins
- added support for xml plugin artifacts

Release Notes 2.10-m4 ("Milestone 4")

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Who should upgrade?

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Issues resolved or improved in this release

TinyMCE upgrade complete

- Colour Text, Insert Emoticons and Custom Character are now back in the editor!
- Fullscreen mode is also back and even better. It no longer pops up in a new window, but enlargens the editor in the current page you are editing.

Quick Navigation polish and performance improvements

- performance significantly better than m3
- can handle concurrent requests up to 30 users without breaking a sweat (on medium datasets) - this should address the timeout issues people have been having

Plugins

- New build of JIRA Issues macros. Bug-fixes, but new feature: all RSS and Email version of the macro will be static, and not require javascript or Ajax.
- Content Filtering Macros: contentbylabel and blogposts have a new, SearchAPI v2 backend.

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    - All existing parameters should continue to work
    - New, standard set of parameters for various kinds of filtering
- Content Filtering macros: new {recently-changed} macro, which is a reimplementation of {recently-updated}. All existing recently-updated params should work, with the addition of the new standard params listed above. Will eventually replace {recently-updted}.
- Added an optional whitelist for the RSS macro and the HTML-include macro.

Release Notes 2.10-m3 ("Milestone 3")

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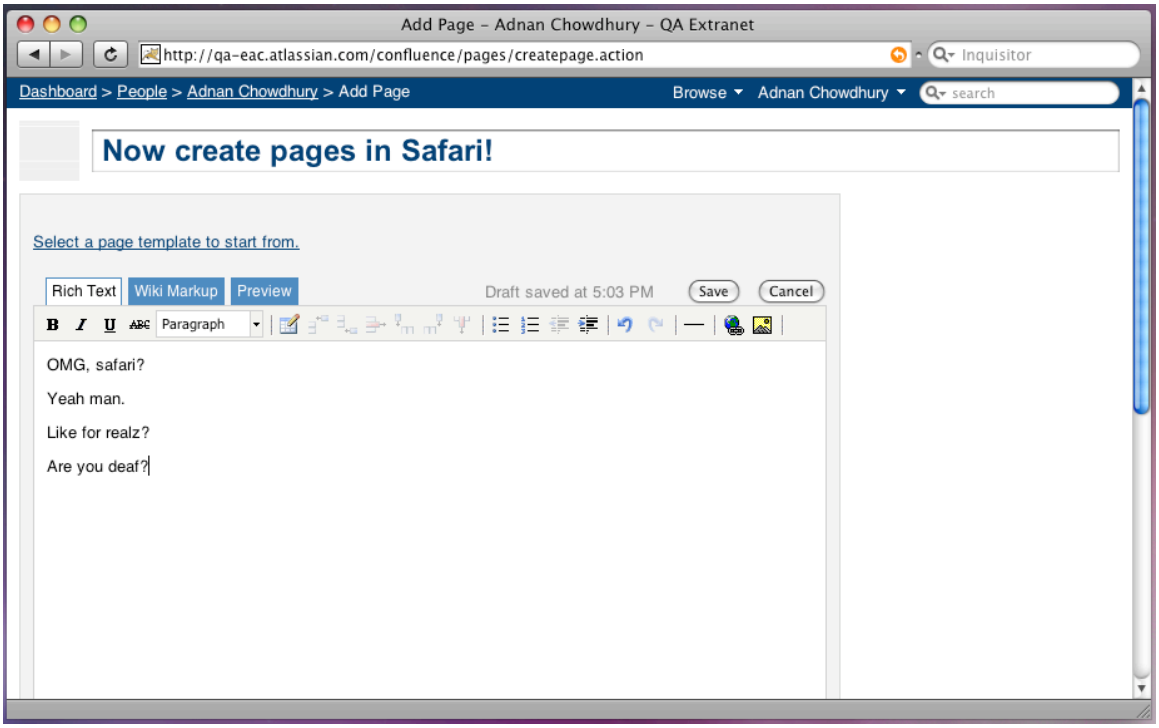
Issues resolved or improved in this release

TinyMCE 3 is in

This milestone contains the long-awaited TinyMCE 3 upgrade. It comes at a cost (we had to disable the emoticons, special characters, colour-pickers and fullscreen mode) to make it into M3, but they will be back in M4, and this gives us a much more stable Rich Text Editor two weeks earlier than expected. Please note: we have **not** yet started working on roundtripping bugs (e.g. stuff that breaks when switching from RTE to WikiMarkup and back). We will start attacking bugs those towards the end of the release cycle and during the 3.0 cycle. But the improvements in the RTE itself are extremely valuable already, including **support for safari**. If you encounter problems please don't hesitate to ask or raise issues. We want to make this a really solid experience.



Oh, and the new RTE starts up much faster too! Kudos to the relentless work of the Writer-Team (especially David T and Agnes), who have been working for many hours over the past months to get us here.

Quick Navigation

- Matches titles as you type
- Shows 3 pages, 3 news items, 2 attachments, 3 people, 2 spaces. If no titles are matched the category isn't shown.
- People's profile photos are shown
- Use your keyboard to navigate
- Now with % more rounded corners

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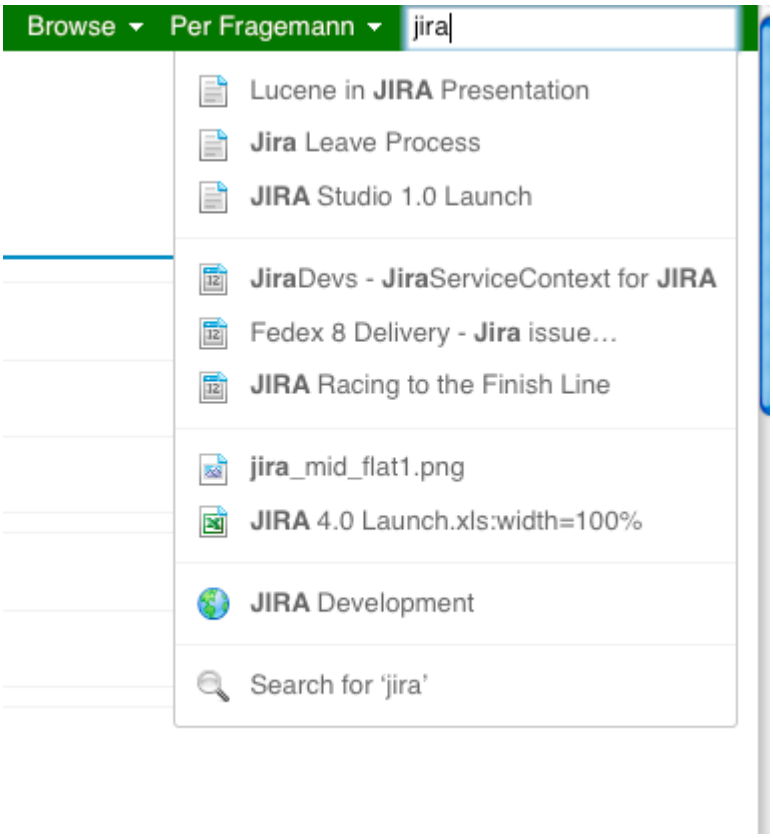

Clear Search

- Improved search result page and results
  - Lighter 'Showing ...' line
  - Better fit with a grid, softening of filter panel corners and better spacing
  - Emphasis of the titles
  - Clearer, simpler result format
  - Real profile pictures of real people
- Clear filter instead of clear search
- Search field at the bottom of the page

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Small improvements

Per's first 20% project displays a lock-icon next to documents that have restricted access.

Enjoy!

Notes on deploying to your test-instance

With the TinyMCE upgrade, we have renamed the TinyMCE plugin key to match the Confluence version. Hence, you may find that there are two TinyMCE plugins installed which can cause errors when editing (e.g. the pop-ups not working). If so, you will need to disable both and then re-enable the 2.10-m3 version of TinyMCE. This will be fixed for the final 2.10 release with an upgrade task to uninstall the old plugin.

Release Notes 2.10-m2 ("Milestone 2")

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Upgrade Procedure

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Downloads

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Issues resolved or improved in this release

"Did you mean?"

Dave Loeng's auto-suggest feature is the first major 20%-project to make it into Confluence. Try it out by mistyping a search, and you will find a link suggesting more relevant searches. **This is an actual example of me typing way too fast:** 🙂

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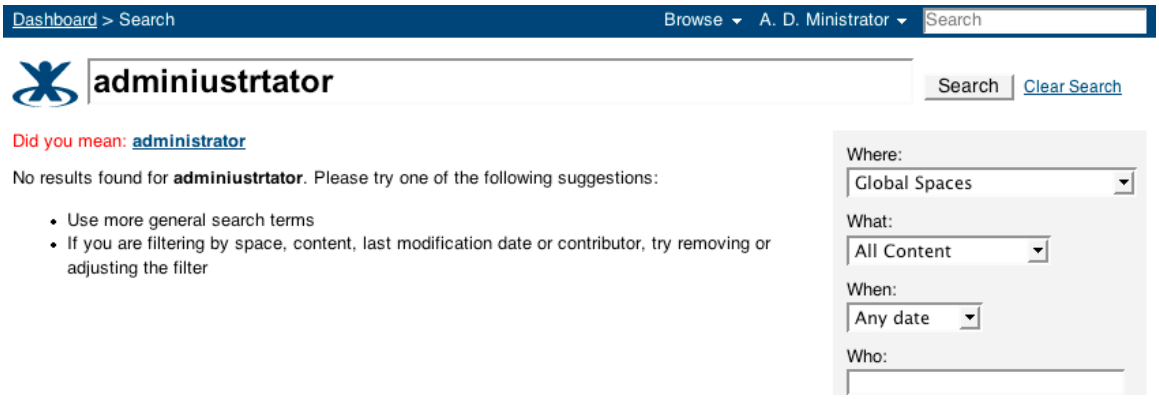
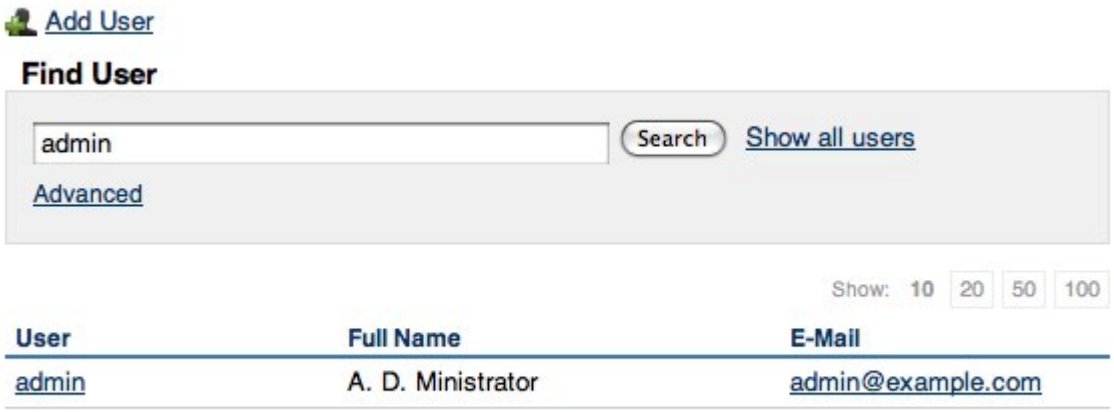


Try misspelling someone's difficult surname, like say, 'fraggemnan'.

User management

Confluence Hosted developer Jens Schumacher has been very busy hacking on Confluence again, this time he improved the user-management a lot - so much more convenient than before.

- Improved Search
- Adding and removing users when viewing a group
- New table styles
- Improved User Picker



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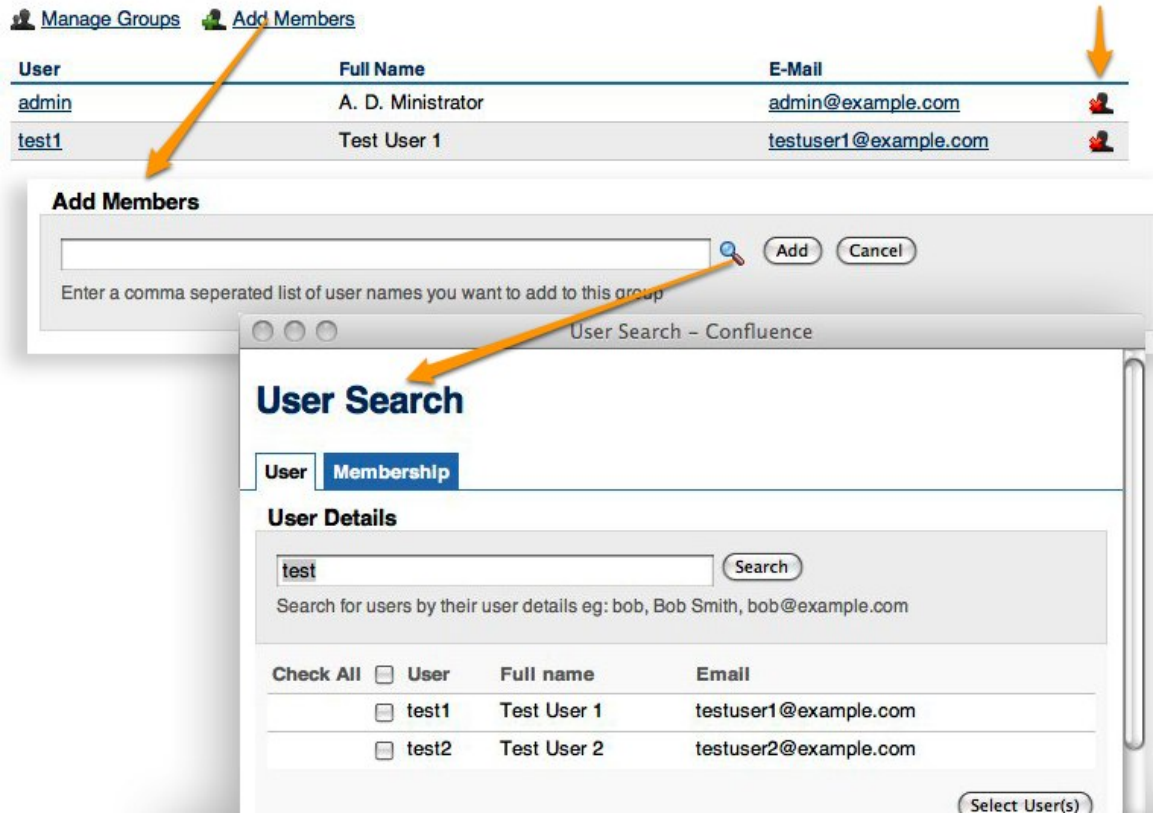

Avatar cropping and deletion

Another, smaller 20%-project also made it into this release: Charles Miller and Dmitry baranovskiy enabled Confluence to allow cropping of uploaded avatar-images, and while they were at it the highly desired "delete images you never intended to upload in the first place" issue got solved too in order to make another 23 voters happy.

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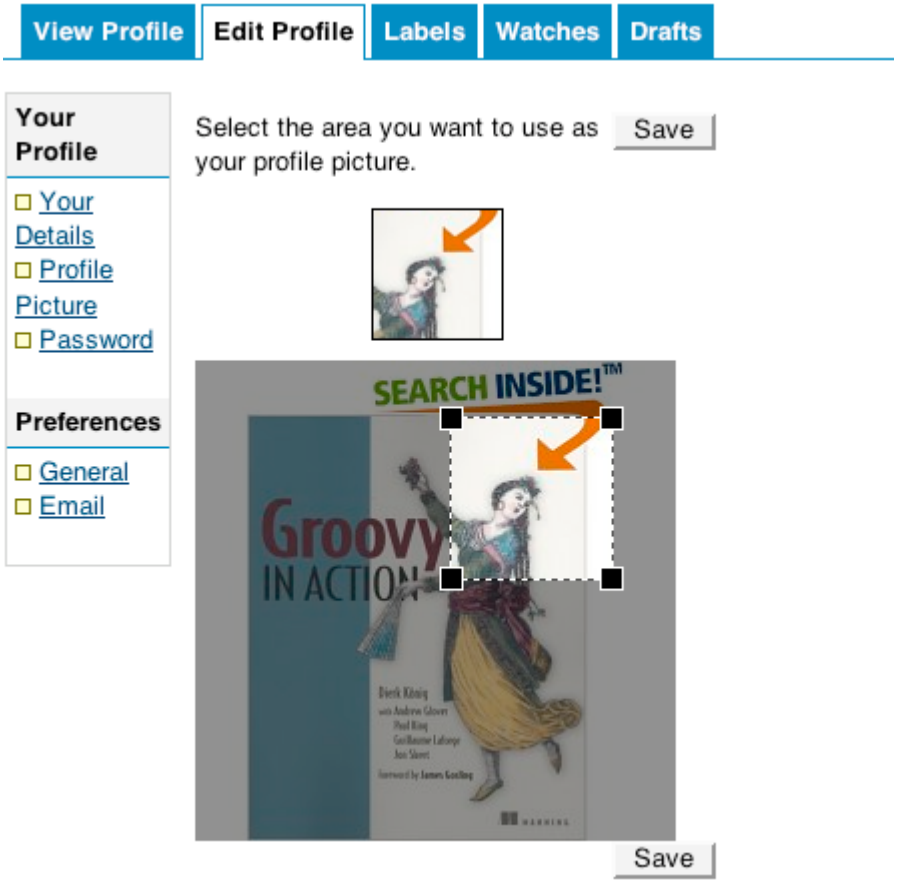

Backend changes

The Engine Room team has implemented several important backend changes in this milestone:

- Integrated the first version of Plugins 2.0, including an initial migration the Confluence plugin repository to Plugins 2. An updated version of this plugin and a converted dynamictasklist are planned for the next milestone.
- Trusted authentication and other Seraph-based authentication methods are now available for calls to the Confluence RPC methods (CONF-8680). This makes it practical to write Confluence gadgets which use the remote API to retrieve data. Tom Davies is using this to implement his Crucible Confluence review plugin.

Release Notes 2.10-m1 ("Milestone 1")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.
This release is a milestone development release for 2.10 ("Two Ten"). This is a public **development release** (DR) leading up to Confluence 2.10. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin-developers to see what we're up to.

Who should upgrade?

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Upgrade Procedure

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Downloads

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Issues resolved or improved in this release

It's all about small improvements this time.

During thhe last weeks we have fixed a whole bunch of bugs, worked on major functionality, and done a lot of planning. Therefore the M1 is a rather small release - it contains the bugfixes, but no major work yet. We have developed a new feature and two great smaller improvements which are almost done, but didn't make it into this Milestone, so expect a lot more in M2 in two weeks.

But wait, there is one small new feature that might have a big impact on EAC. Jens Schumacher, developer on Confluence Hosted, has been working on a top secret mission, and his new feature means you now can store CSS per space and for the whole installation.

Inside Atlassian we now have a small competition going with developers competing for the nicest/coolest/weirdest CSS-based design to be delivered within the next two weeks.

The competition only started yesterday, but there are some funky screenshots available already Obviously Confluence still has areas that are completely hardwired and not stylable yet, but we are working on this as we

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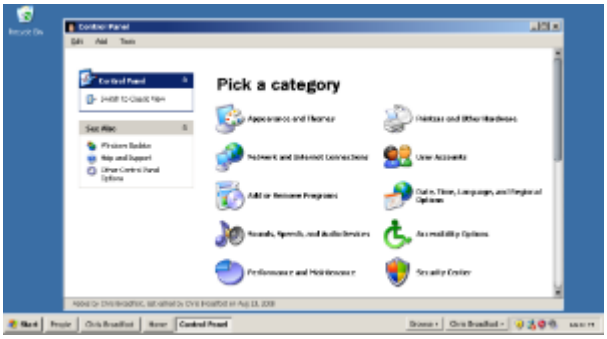
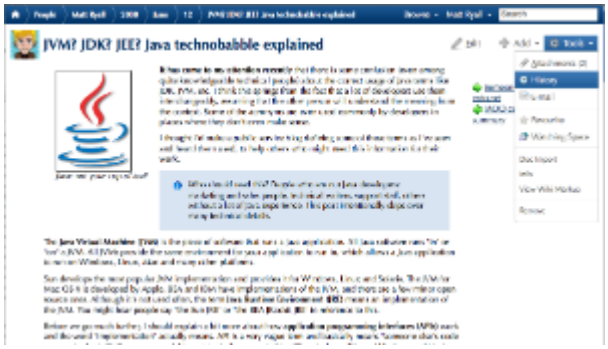
go.





Release Notes 2.9-rc1 ("Release Candidate 1")

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Upgrade Procedure

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Issues resolved or improved in this release

We are now at the end of the 2.9 release cycle.

We have released our first release candidate RC1 today, you can see it on our public Confluence installation at http://confluence.atlassian.com. We are aware of one remaining major bug that we want to fix (JIRA-issues macro not working in preview mode), but apart from that and some minor fixes we will not change the code anymore.

While this is not the final release, and the official release notes will be unveiled next week, you should definitly have a look now if everything still works fine with your plugins, if you haven't done so yet. We made some changes to the plugin subsystem and to the action class hierarchy (please refer to the other milestone release notes), and we are aware of some plugins (such as the Gliffy plugin) which had to get changed a bit to be compatible with 2.9.

The RC1 is functionally almost equivalent to M5/M6 which was announced in early July, but has a big amount of additional bugfixes, check out our roadmap in the JIRA project at http://jira.atlassian.com/browse/CONF?report=com.atlassian.jira.plugin.system.project:roadmap-panel for more details.

Known problems

Jira-issues macro does not work in preview mode.

Release Notes 2.9-m5 ("Milestone 5")

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Upgrade Procedure

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Downloads

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Issues resolved or improved in this release

We are rapidly approaching the end of the 2.9 release cycle. There will be a really small M6 later this week, and then that's it, we are going into bugfix and compatibility-testing mode, so we can release on the 29th of July.

Plugins

We have done a significant amount of work in the area of plugin loading (and the plugin classloaders) to improve performance. There are no API changes, but it is very possible that these changes may expose bugs. While we tried to remain backwards compatible, it is **crucial** that you test for compatibility of your plugins.

Editor

The **preview** in the editor is now capable of rendering content exactly as it appears on the page. However, to do this, we have had to disable interaction with the preview. You will no longer be able to follow links or interact with the preview in any other way.

When **drafts are saved** automatically to the server, this will be shown to you at the top of the editor.

Engine room

Whisper the words "Action class hierarchy" anywhere close to a Confluence developer and he or she will cringe. Not anymore as of this Milestone. Plenty of inheritance trees have been cut, and miraculously Confluence still works. This will enable us to work faster and more efficiently in the future.

Page tree and UI

We had a few nasty UI bugs recently where plugin JavaScript code would interfere with our menus and other JavaScript code, and we had a few Pagetree bugs. The most important ones have been fixed in this release.

Discovery Team

Author auto-complete field added to the search result screen to allow filtering searches by contributor (author or editor).

The 'new search' (or reset search) link on the search screen filter left the building somewhere around milestone 3. This has now been re-instated.

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A couple of 2.9 specific bug fixes are also included.

Known problems

Several small bugs, specifically around the new author-search.

Release Notes 2.9-m3 ("Milestone 3")

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Issues resolved or improved in this release

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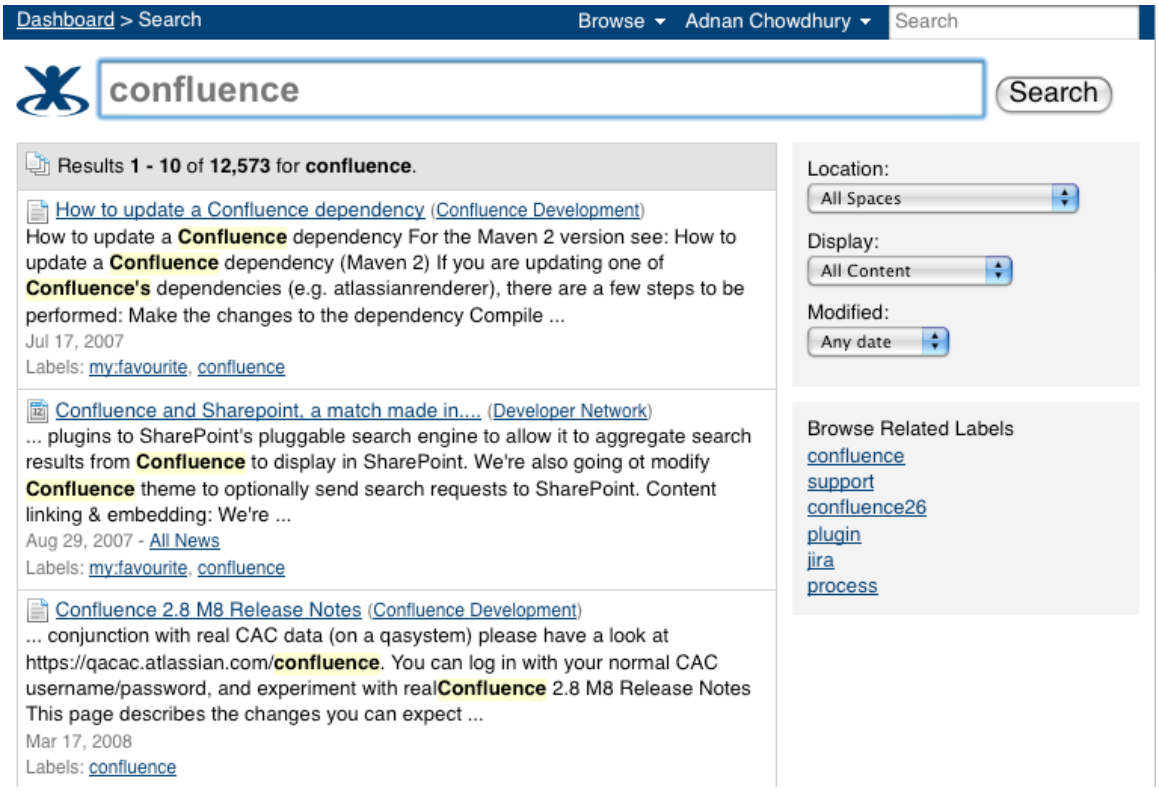
Milestone 3 is all about the UI: It features major parts of the new search UI, and we have added two more menu items to the "Browse" menu.



Some effort was spent on making the page tree more stable, and we have spent more time on internal code improvements (which did however not ship in this milestone)

Known problems

Several small bugs. And a slowdown of search performance by 50%, which will be addressed in a later milestone release.

Release Notes 2.9-m2 ("Milestone 2")

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Issues resolved or improved in this release

Page Ordering: We have been improving the page-tree a bit, fitting in some work that was intended for Confluence 2.8 but didn't make it. The tree now has a "revert to alphabetical mode" button which will revert manually ordered nodes back to the original alphanumeric ordering. Additionally we added one small improvement which will help to battle spam: administrators will see two additional buttons on the page tree that enable easy deletion and preview of pages. We are not entirely sure yet whether (and how) these two buttons will ship, so don't raise improvement issues for those two buttons yet. (IF they ship with 2.9, then we will put in some more polish of course)

Unfortunately there are a few known (uncritical) bugs related to the revert-to-alphabetic-mode in edge-cases, which will be addressed by M3.

Search: The Search has improved internally (the ranking should be a bit more relevant than before), and also what is being searched has changed: mail and personal spaces are searched by default, and using the space key in the search boosts hits within that space.

Known problems

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Some small issues, mainly with the UI, but nothing serious.

Release Notes 2.8-m9 ("Milestone 9")

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Upgrade Procedure

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Issues resolved or improved in this release

All functional changes are now complete. We are only fixing some remaining bugs now.

Known problems

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- We found a major performance problem during our loadtests. Confluence works exactly like before under low load, but once you go above a request per second you will notice a much load than acceptable. We will fix that for the final release.
- a few glitches when viewing with IE6&7, and when using the new page tree. Will be fixed for the final version

Outlook

We are in bugfix-mode now. While a few icons and CSS-styles will still change, the main priority is now to iron out all our bugs during the next one or two weeks.

Release Notes 2.8-m7 ("Milestone 7")

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For all production use and testing of Confluence, please use the latest official release.

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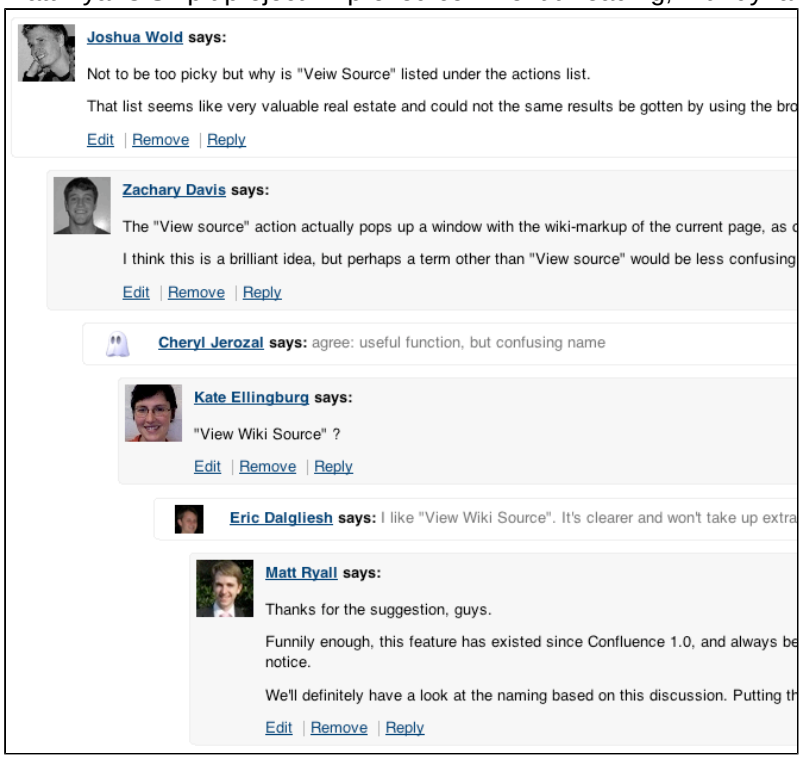
Issues resolved or improved in this release

This page describes the changes you can expect from Confluence 2.8 Milestone 7. M7 is a "small" milestone that delivers some features that just didn't make it into M6, but which can't wait for M8 nor RCs either because we need **your** feedback as soon as possible!

End-user improvements

User Interface improvements:

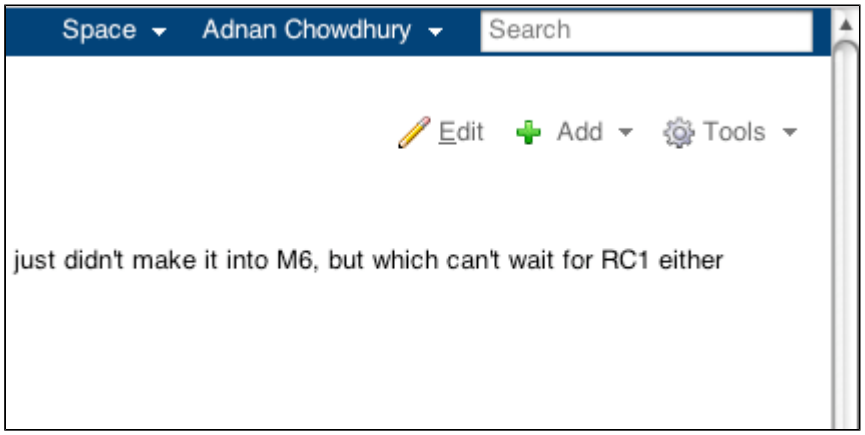
- Matt Ryall's ShipIt project: improved comment threading, with dynamic collapsing



- Edit page title change

The title is not duplicated anymore, you simply edit the title directly

- Put PDF, Watch and Favourite icons on Tools menu



- Replace printable view with an improved print stylesheet for better printing directly from the page
- Improved editor caching
- Fixed editor layout bug in Safari

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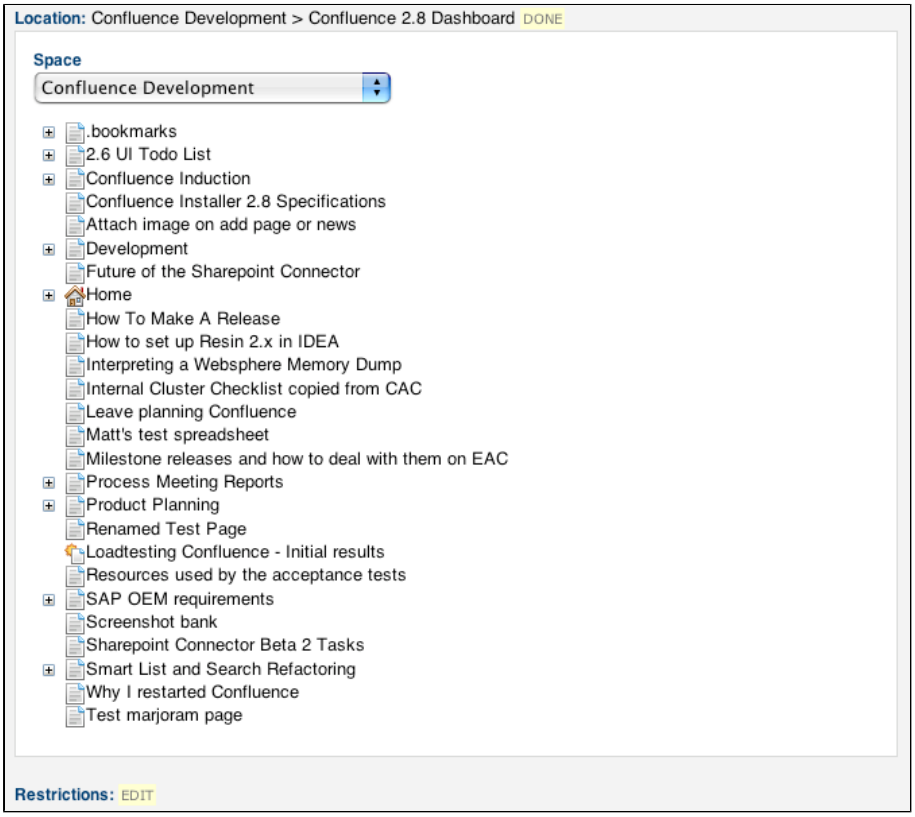
- Menus appear on hover
- Move command in Tools menu

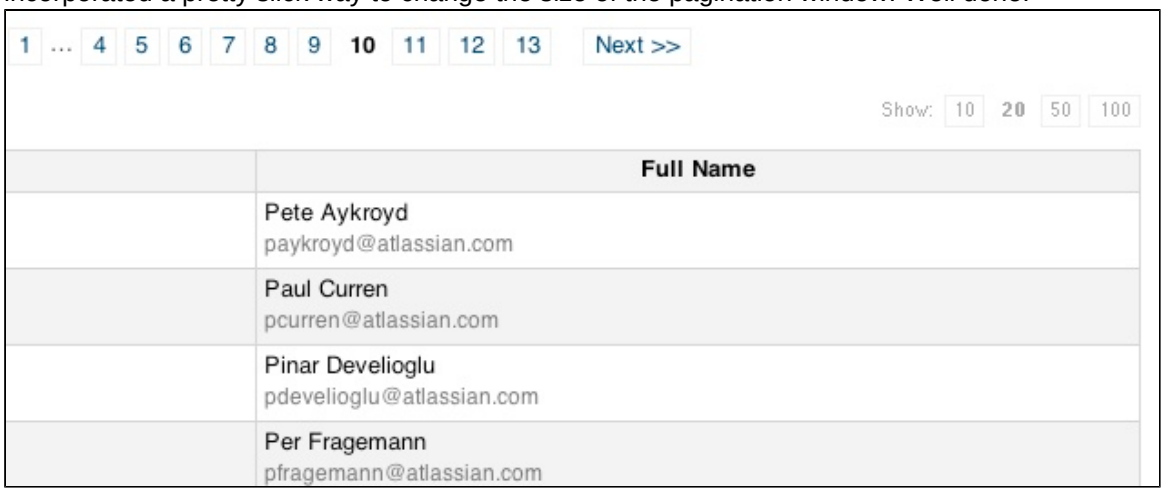
Page Ordering:

- Included the page ordering tree into the edit-page, ironed out some bugs



Misc:

- Our student developer Chris Broadfoot added a few missing links into our user-management section, and incorporated a pretty slick way to change the size of the pagination window. Well done!



API changes

For plugins which configure Confluence's web interface, Condition implementations which depend on GlobalHelper are now deprecated, and should be converted to use the new WebInterfaceContext interface. The easiest way for most plugins to do this is to extend BaseConfluenceCondition rather than the now-deprecated AbstractConfluenceCondition. (Javadoc links to come once this is published.)

Known problems

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- We found a severe performance problem during our loadtests. Confluence works exactly like before under low load, but once you go above a request per second you will notice a much higher load than acceptable. We will fix that for the final release.
- Upgrade issue for clustered deployments. Don't use this Milestone on a Cluster.
- a few glitches when viewing with IE6&7, and when using the new page tree in a browser without FireBug installed.

Outlook

We are in bugfix-mode now. While a few icons and CSS-styles will still change, the main priority is now to iron out all our bugs during the next two weeks.

Release Notes 2.8-m6 ("Milestone 6")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.8-m6 is a milestone development release for 2.8. This is a public **development release** (DR) leading up to Confluence 2.8. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin-developers to see what we're up to.

Who should upgrade?

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
>
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.7.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

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Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved or improved in this release

Milestone 6 incorporates Milestone 5 changes (which were released but never publicly documented, sorry)

Milestone 5 (the missed one)

The user interface improvements include the most drastic changes to be done for Confluence 2.8. After adding a new Actions menu to the page, we have removed the unnecessary tab navigation. This completes our migration to a menu-based user interface. The content of the page is now the most important aspect of the page, as all the editing and modification features are now out of the way when reading a page. The UI has also been improved in other small ways in this milestone, and we have fixed many bugs with the printable view and the default themes.

Plugin components that expect to be injected with the old, deprecated CacheManager interface will now work again. This means plugins such as the JIRA issues macro will be useable once more. Plugins that use the ContainerManager.getComponent method of obtaining the cache manager will continue to malfunction; there is no plan to support this usage. More commentary about this at CONF-10602.

The Page Ordering feature mostly contains bug fixes. The majority of changes are done in the back end as we prepare to remove extJS library and substitute the page tree widget with a custom component.

Milestone 6 (the current one)

User Interface improvements:

- performance improvements through better clientside-caching on the edit-page
- user menu has been included. The only thing missing to wrap up the UI changes is to move the remaining icon-buttons (PDF, watch pages, etc) to menu items as well. This will be delivered in two weeks.
- New and improved Tree component, that lets you drag more comfortably than before
- Added the ability to cancel a page move by pressing 'esc' after the user starts dragging a page
- Added automatic scrolling functionality. If a user drags a page to the top/bottom of the screen in an attempt to reach a
  page that is currently outside of the screen, it will automatically scroll up/down.
- Known problem: No indication of subnodes being loaded
- bugfixes

Technical improvements and API changes

- JMX has been added to the list of Confluence capabilities for improved monitoring
- Raising a support case is now possible directly from the admin console. This will attach logs and other relevent system information automatically.
- JQuery now default JS library. We have removed ExtJS as a Javascript-dependency, and will standardize on JQuery in all of Confluence
- Coherence cache lease duration has been set at 10 minutes to support system recovery when threads do not release their leases properly. A warning message will be logged detailing that a lease has timed out to help with tracking down errant lease management.

Known problems

- We found a severe performance problem during our loadtests. Confluence works exactly like before under low load, but once you go above a request per second you will notice a much higher load than acceptable. We will fix that for the final release.
- Upgrade issue for clustered deployments. Don't use this Milestone on a Cluster.
- a few glitches when viewing with IE6&7

Release Notes 2.8-m4 ("Milestone 4")

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> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.8-m4 is a milestone development release for 2.8. This is a public **development release** (DR) leading up to Confluence 2.8. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin-developers to see what we're up to.

Who should upgrade?

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.7.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved or improved in this release

This release mainly fixes bugs and glitches of the previous milestone, and extends the functionality slightly. You will notice that a new dropdown-menu has been added which allows you to access the browse-space actions easier, and that most macros now honor the new page ordering that can be set in recently added page-reorder-component.

We had forgotten to release the source code of the previous milestones, this has been taken care of now, thanks Alain from Adaptavist for pointing this out! 🙂

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The coolest improvement however is that we are able to deliver the first ShipIt 7 project in this milestone - less than two weeks since the actual event! (see http://blogs.atlassian.com/developer/2007/09/atlassian_ShipIt_day_vi.html) for an overview of ShipIt 6 last year). Use the new drop-down menu to "Browse Labels", select one of the most popular ones, and you will now be able to filter by multiple labels - just increase or decrease the number of labels by using the plus- and minus-signs next to the related labels. Admittedly the UI still needs some finishing touches, but it works fine already and it will make 21 voters happy once released officially (http://jira.atlassian.com/browse/CONF-4577). More ShipIt-projects can be expected to make it into M5 and M6.

You can view the complete list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved during development of 2.8, not just the ones fixed since the previous milestone.

Known problems

There are still a few known bugs in this release, most noticeably the broken printable view (CONF-10583) which will be fixed soon. Please continue reporting problems through JIRA, your feedback has been very helpful and a lot of it has been incorporated already.

The CacheManager API has changed in milestone 4, and all plugins that use the old CacheManager interface will be broken (CONF-10602). In milestone 5, Confluence has a workaround for plugins that get the cacheManager injected. That is, the following code will work correctly in 2.8-m5 (but is currently broken in 2.8-m4):

```
import com.atlassian.user.impl.cache.CacheManager;

public class MyClass {
    private CacheManager cacheManager;

    public void setCacheManager(CacheManager cacheManager) {
        this.cacheManager = cacheManager;
    }
}
```

Plugins that access the CacheManager not via dependency injection, but statically through the ContainerManager will fail at runtime with a ClassCastException. These plugins should be rewritten to use dependency injection, or use the new `com.atlassian.cache.CacheManager` interface. The following code is broken in 2.8-m4, and will continue to be broken for the final release of 2.8:

```
CacheManager cacheManager = (CacheManager)
ContainerManager.getComponent("cacheManager");
```

Plugins that wish to avoid using the deprecated CacheManager interface should change to use `com.atlassian.cache.CacheManager`.

Release Notes 2.8-m3 ("Milestone 3")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.8-m3 is a milestone development release for 2.8. This is a public **development release** (DR) leading up to Confluence 2.8. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin-developers to see what we're up to.

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Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.7.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved or improved in this release

- First draft of UI improvements: We are working hard on moving the HTML and CSS delivered by Confluence towards standards-compliance and accessibility. We are at the same time reworking our UI structure. We feel that the UI has been growing a bit too organically over the past years, resulting in somewhat confusing navigation like the "remove page"-button only available when you are editing a page, for example. We have implemented an initial dropdown-menu for adding content, thus already cleaning up the UI a bit. All the navigation-changes we make are targetted at the default theme, however some HTML&CSS changes may also affect the other themes.
  In the future our changes will enable plugin-developers to hook into Confluence easier than before, and skinning Confluence will be considerably easier. However, plugin-developers should be aware of the changes we are making, and check (by examining this Milestone release) whether they have to schedule some maintenance work for their plugins. More changes will be made, so don't rush it - but plan for it.
- First draft of Page Reordering. We are working on implementing a highly anticipated feature that will dramatically improve the quality of content generated from a Confluence space. So far the PDF files you generate from Confluence have been alphabetically ordered - which for example makes even the Confluence User Manual quite awkward to read. With the new page ordering feature it will be able to structure your Wiki exactly as you like - or of course leave it in alphabetic mode if you prefer that. Our goal is to deliver a really useful solution, and this Milestone only shows you the first 50% of the feature.

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We are currently busy implementing all the feedback and bug-reports we get from Sarah (our documentation queen) and the next Milestone releases will deliver further improvements and bugfixes.

You can view the complete list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved during development of 2.8, not just the ones fixed since the previous milestone.

Known problems

No major known problems, but plenty of smaller to medium sized bugs, mainly related to page reordering. They will get tackled in M4.

Release Notes 2.8-m2 ("Milestone 2")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.8-m2 is a milestone development release for 2.8. This is a public **development release** (DR) leading up to Confluence 2.8. Development releases are a snapshot of our work in progress, allowing our customers and especially plugin-developers to see what we're up to.

Who should upgrade?

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
> - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.7.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

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All development releases are available from Development Releases on the Atlassian website.

Issues resolved in this release

- Velocity template engine upgrade

Confluence's velocity template engine has been upgrade from 1.3 to 1.5. This shouldn't mean too much to end users however there could be some compatibility problems with existing themes and plugins. Check this upgrade guide that we use internally as well: http://confluence.atlassian.com/display/DOC/Migrating+to+Velocity+1.5

- File upload component upgrade

Pell multipart has been replaced with the Jakarta Commons Fileupload component to handle web browser file uploads. Again this won't have much impact on the Confluence experience but could cause some odd problems when attaching files to Confluence.

- PDF space export

There has been some optimizations made the space PDF export which should result in less server memory usage during export

- New GZIP compression filter

Confluence team have integrated a new GZIP compression filter to achieve more efficient downloads and page views. This is not currently enabled by default, so to test this with your plugin you need to turn it on in the management console. We are using it internally at Atlassian, and the performance improvement while browsing pages is quite substantial.

You can view the complete list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved during development of 2.8, not just the ones fixed since the previous milestone.

Known problems

There are a few cosmetic UI problems related to space logos and to the login screen, none of them impact productivity. Notification mails are empty because of a Velocity macro bug.

Release Notes 2.7-rc1 ("Release Candidate 1")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.7-rc1 is a release candidate for 2.7. This is a public **development release** (DR) leading up to Confluence 2.7. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Who should upgrade?

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Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestones and release candidates aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone/release candidate has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones and release candidates re timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases and release candidates have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.6.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved in this release

View the list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved during development of this release, not just the ones fixed since the previous milestone.

Known problems

None.

You should really download this Release Candidate and check if your plugin works with it. If not, use the last few days before the official 2.7.0 release to fix it

Release Notes 2.7-m5 ("Milestone 5")

Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.7-m5 is a milestone development release for 2.7. This is a public **development release** (DR)

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leading up to Confluence 2.7. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.6.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved in this release

View the list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved during development of 2.7, not just the ones fixed since the previous milestone.

Known problems

For some reason, an outdated version of the new Dynamic Tasklist 2 was included in this milestone. Since Milestones are not real customer releases, we do ship them with bugs like this. If you want to see the latest and greatest Dynamic Tasklist 2 in action, please simply upgrade to the latest version using the plugin repository from the administration console.

Also, there is an annoying (2.7-specific) bug in this release that causes warnings for all colours used by the colour-macro: http://jira.atlassian.com/browse/CONF-10001/. It will be resolved by the time the next milestone gets released.

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Apart from that, M5 is a nice Milestone release and definitely worth a look for all plugin developers - especially now that we are getting closer and closer to the end of the release cycle, and fewer and fewer major architectural changes will be made.

Release Notes 2.7-m4 ("Milestone 4")

> Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.7-m4 is the second milestone development release for 2.7. (Milestone 3 has been skipped because of stability concerns.) This is a public **development release** (DR) leading up to Confluence 2.7. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Who should upgrade?

> **Please note the following**
>
> - **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
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> - Features in development releases may be incomplete, or may change or be removed before the next full release.
> - **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone, or completely new bugs unknown even to us.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.6.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Issues resolved in this release

View the list of fixes and newly implemented features in JIRA. They contain **all** the issues resolved since 2.6.x, not just the ones fixed since the previous milestone.

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Release Notes 2.7-m2 ("Milestone 2")

Do not use this release to upgrade your production systems.

For all production use and testing of Confluence, please use the latest official release.

Confluence 2.7-m2 is the first milestone development release for 2.7. This is a public **development release** leading up to Confluence 2.7. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Our milestone releases aim to provide plugin developers with an opportunity to see the latest changes in the code.

Each milestone release has passed all our automatic tests, and has been used for one week on our official internal Confluence server. Most of the issues solved have been reviewed too.

However, since our milestones releases are timeboxed (i.e. they get released every two weeks, no matter how far we have come implementing features and bugfixes), there is always a chance that we have new known bugs, which are scheduled to be fixed in the next milestone.

Milestone releases have not been load- or stress-tested. So, for example, they might behave well on a small installation but show severe problems when subjected to many users.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.6.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Bugs fixed in this release

View the list of fixes in JIRA.

Release Notes 2.6-dr1

Confluence 2.6-dr1 is a public development release leading up to Confluence 2.6. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

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Who should upgrade?

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **can not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

This development release is being made available specifically for Confluence plugin developers to test their existing plugins against the significant style changes that have been made.

For all production use and testing of Confluence, please use the latest official release.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.5.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

Downloads

All development releases are available from Development Releases on the Atlassian website.

Note about themes

Confluence 2.5.x themes are expected to be compatible with 2.6 without authors needing to make any change to their existing themes. This is possible because Confluence will, by default, include all Confluence 2.5.x specific styles automatically.

However, if you would like to upgrade your theme to use the latest style and typography changes in Confluence 2.6, you will need to update the way you include stylesheets in your theme. Full instructions on how to do so can be found here.

Including Cascading Stylesheets in Themes for Confluence 2.6

Firstly, you will need to disable the inclusion of Confluence 2.5.x styles. These were included by default to allow 2.5.x themes to remain compatible in Confluence version 2.6 and after.

To disable 2.5.x styles, add the following to your theme's `atlassian-plugin.xml`:

```
...
<theme key="aqua" i18n-name-key="com.atlassian.confluence.themes.aqua.name"
name="Aqua Theme" class="com.atlassian.confluence.themes.BasicTheme">
    <description key="com.atlassian.confluence.themes.aqua.desc"/>
    ...
    <param name="includeClassicStyles" value="false"/>
    ...
</theme>
...
```

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Note the flag `includeClassicStyles` is set to `false`. You will have to set this explicitly as the default is `true`.

Secondly, you will need to declare your custom theme style sheet in `atlassian-plugin.xml` like this:

```
...
<theme key="aqua" i18n-name-key="com.atlassian.confluence.themes.aqua.name"
name="Aqua Theme" class="com.atlassian.confluence.themes.BasicTheme">
    <description key="com.atlassian.confluence.themes.aqua.desc"/>
    ...
    <resource type="stylesheet" name="my.css" location="styles/my-css.vm"/>
    ...
</theme>
...
```

Differences from Confluence 2.5.x

- You no longer have to include your theme stylesheet in the main decorator using `#pluginStylesheet` anymore. Confluence will load your theme's stylesheet automatically provided that its the active theme
- The resource is declared in the `theme` module instead of the `layout` module
- You need to start your custom style sheet (say `my-css.vm`), by copying over the latest styles from http://yourhost/contextPath/styles/main-action.css. This step is necessary as Confluence now includes either your theme stylesheet or the default stylesheet, **not both**. This implies:
  - you can no longer rely on the default styles being there to style parts of the Confluence you are not directly theming
  - you are no longer overridding styles with your plugin style sheet. It is now the primary stylesheet
  - you will need to merge any new styles in later versions of Confluence into your theme's style sheet

Multiple style sheets

It is possible to configure your theme to use multiple style sheets. This feature may useful if you want to break up your main style sheet into a few smaller style sheets with more defined purposes. You can declare these like so:

```
...
<theme key="aqua" i18n-name-key="com.atlassian.confluence.themes.aqua.name"
name="Aqua Theme" class="com.atlassian.confluence.themes.BasicTheme">
    <description key="com.atlassian.confluence.themes.aqua.desc"/>
    ...
    <resource type="stylesheet" name="my1.css" location="styles/my-css1.vm"/>
    <resource type="stylesheet" name="my2.css" location="styles/my-css2.vm"/>
    <resource type="stylesheet" name="my3.css" location="styles/my-css3.vm"/>
    ...
</theme>
...
```

These style sheets will be included in the order in which they are declared.

Release Notes 2.3-DR2

Confluence 2.3-DR2 is the second public development release leading up to Confluence 2.3. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Who should upgrade?

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Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

This development release is being made available specifically for Confluence plugin developers. The changes to the Confluence API discussed below mean that many plugins will need to be updated to work with Confluence 2.3.

For all production use and testing of Confluence, please use the latest official release.

This release should not be used for testing a clustered deployment; the clustering user interface is not yet complete.

Upgrade Procedure

Follow the normal upgrade instructions to upgrade from Confluence 2.2.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

If you are upgrading from Confluence 2.1.x or earlier, be sure to read the upgrade instructions in the Confluence 2.2 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

Things to look out for

- The Tangosol Coherence jars included in this DR are now fully licensed.
- The API for retrieving historical versions of content has changed.

Architecture changes between Confluence 2.3-DR1 and 2.3-DR2

Content history API changed

The `getPreviousVersions` method of `ContentEntityObject` has been removed, because it was insanely inefficient as soon as a piece of content started having lots of versions. It has been replaced with the following methods on the `ContentEntityManager`:

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```
    ContentEntityObject getPreviousVersion(ContentEntityObject ceo);

    ContentEntityObject getNextVersion(ContentEntityObject ceo);

    ContentEntityObject getOtherVersion(ContentEntityObject ceo, int version);

    /**
     * Get a VersionHistorySummary for all previous versions of a
ContentEntityObject, starting with the current
     * content.
     *
     * @param ceo the entity object to return the version history of
     * @return the full version history of that object, as VersionHistorySummary
objects.
     */
    List getVersionHistorySummaries(ContentEntityObject ceo);
```

The `VersionHistorySummary` class defines a limited set of Content data that is relevant to viewing version histories.

Release Notes 2.3-DR1

Confluence 2.3-DR1 is the first public development release leading up to Confluence 2.3. Development releases are a snapshot of our work in progress, allowing our customers to see what we're up to.

Please note the following

- **Development releases are not safe**— Development releases are snapshots of the ongoing Confluence development process. For that reason:
  - While we try to keep these releases stable, they have not undergone the same degree of testing as a full release.
  - Features in development releases may be incomplete, or may change or be removed before the next full release.
- **No upgrade path** — Because development releases represent work in progress, we **c an not** provide a supported upgrade path between development releases, or from any development release to the eventual final release. Thus, it is possible that you will not be able to migrate any data you store in a Confluence development release to a future Confluence release.

Who should upgrade?

This development release is being made available specifically for Confluence plugin developers. The changes to the Confluence API discussed below mean that many plugins will need to be updated to work with Confluence 2.3.

For all production use and testing of Confluence, please use the latest official release.

The bundled Tangosol library with this development release has a license which expires on August 31, 2006. This release will not operate after that date.

This release should not be used for testing a clustered deployment; the clustering user interface is not yet complete.

Upgrade Procedure

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Follow the normal upgrade instructions to upgrade from Confluence 2.2.x to this release. *We strongly recommend that you backup your confluence-home directory and database before upgrading!*

If you are upgrading from Confluence 2.1.x or earlier, be sure to read the upgrade instructions in the Confluence 2.2 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New features in Confluence 2.3

In short, the new features of Confluence 2.3 are:

- Clustering support (not available in 2.3-DR1)
- People directory
- Bundled Plugin Repository Client

Architecture changes between Confluence 2.2 and 2.3-DR1

Summarised below are architectural changes that might be relevant to plugin developers. Please add a comment below if there is anything else that should be listed here.

We've kicked the Bucket!

Most of the functionality of Confluence's biggest internal library, bucket, has been split into three new components: atlassian-config, atlassian-spring and atlassian-event.

Where practical, the old interface is still available as deprecated classes and methods. **However, some plugins will not compile unless modified to use the new package names.**

Please refer to the source code or Javadoc for details on the new interface.

Tangosol Coherence replaces EhCache

Tangosol Coherence is now the caching library used by Confluence, both in clustered and non-clustered mode. To facilitate this, some of the caching APIs have been updated.

As mentioned above, the Tangosol license included with this release is specifically for testing purposes and will expire on August 31, 2006.

Bandana configuration stored in database

The Bandana Confluence configuration files previously stored in confluence-home are now stored in the database. An upgrade from a previous version will automatically move existing configuration settings to the database.

Release Notes 2.0-RC2

Confluence 2.0-RC2 is the second release candidate for Confluence 2.0 (previously known as Confluence 1.5). It resolves almost 80 issues since the 1.5-RC1 release.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features. Developer releases are not suitable for running on production systems.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the

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official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 or higher, you can find in structions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.x or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

> **Important Notice**
>
> If, after you have upgraded Confluence, the "Recent Changes" list on the dashboard is empty, this may be because you need to re-build your site's search index. You can do this under `Administration  Content Indexing  Rebuild Search Index`

> **Important Notice 2**
>
> If, after you have upgraded Confluence and you find the page breadcrumbs do not show the page's parents correctly, log into your site as administrator, then visit http://yoursite.example.com/admin/permissions/rebuild_ancestor_table.action (substituting your own site's URL, obviously) to rebuild the ancestor table (this will be fixed for the final release.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 2.0-RC2

The 2.0-RC2 has largely concentrated on fixing bugs and polishing existing features. If you are upgrading from Confluence 1.4 or earlier, you should read the 1.5-DR2 Release Notes for a description of the major new features in Confluence 2.0.

Consult JIRA for the full list of issues resolved for 2.0-RC2.

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Release Notes 2.0-RC1

Confluence 2.0-RC1 is the first release candidate for Confluence 2.0 (previously known as Confluence 1.5). It resolves almost 150 issues since the 1.5-RC2 release.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features. Developer releases are not suitable for running on production systems.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 or higher, you can find in

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structions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.x or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

> **Important Notice**
>
> If, after you have upgraded Confluence, the "Recent Changes" list on the dashboard is empty, this may be because you need to re-build your site's search index. You can do this under `Administration  Content Indexing  Rebuild Search Index`

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 2.0-RC1

The 2.0-RC1 has largely concentrated on fixing bugs and polishing existing features. If you are upgrading from Confluence 1.4 or earlier, you should read the 1.5-DR2 Release Notes for a description of the major new features in Confluence 2.0.

Consult JIRA for the full list of issues resolved for 2.0-RC1.

Notable Features and Improvements

- You can now place markup such as bold or italics within a word if you are using the WYSIWYG editor
- The following characters are now permitted in page titles: `!` `&` `(` `)` `*` `~` `$` `_` Pages can not, however, start with ~ or $.
- The most recent change comment for a page is now included in the page's searchable text
- `rel="nofollow"` added to links to printable versions of pages, to prevent them from being indexed by search engines
- The Recent Changes list on the dashboard now correctly reflects whether you are viewing all spaces, a team, or your favourite spaces
- Further improvements to the edit page UI including:
  - Improved label editing
  - Inline page previewing
  - Hiding of lesser-used functions such as moving a page or editing page permissions
- Attachment downloads now support HTTP conditional get
- Space exports now include that space's labels and page-level properties
- Support for labels in the SOAP and XML-RPC remote APIs has been completed
- Determining if a user exists via the remote API is now supported

Release Notes 1.5-DR2

Confluence 1.5-DR2 is the first public development release leading up to Confluence 1.5. (Confluence 1.5-DR1 was an internal release only). Developer releases are a snapshot of our work in progress, allowing our customers to see what we're up to, and provide feedback

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features. Developer releases are not suitable for running on production systems.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

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Macro Compatibility

Incompatibilities exist that may cause Confluence not to start if custom macros are deployed. When upgrading to Confluence 1.5-DR2, be sure to remove any custom Macro plugins from your `$confluencehome/plugins` and `WEB-INF/lib` directories. These incompatibilities should be resolved before the final, stable release.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.3.x or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.5-DR2

We've been pretty busy, but the four major new features you can find in 1.5-DR2 are:

- WYSIWYG Editing
- Labels for content
- A dynamic RSS Builder
- Change summaries

Consult JIRA for the full list of issues resolved for 1.5-DR2. 1.5-DR2 also incorporates all the bug-fixes that were made between TestTest.

WYSIWYG Editing

Browser Compatibility

The Confluence WYSIWYG editor is currently only compatible with Internet Explorer 6 on Windows, plus Mozilla and Firefox across platforms. Javascript must be enabled in the browser for the editor to function. Support for Safari under Mac OS X is currently not available. To track Safari compatibility, please follow this JIRA issue: CONF-3864

The WYSIWYG editor allows for Confluence pages to be edited directly through an editing GUI embedded in the web browser, without having to remember Confluence's wiki markup. It almost goes without saying that this has been our number one most requested features, and we're glad we can finally offer it!

Global administrators can enable WYSIWYG editing in the General Configuration screen of the site's preferences. They can also choose whether users are presented with the WYSIWYG editor by default, or whether users default to the old wiki markup text-field.

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If WYSIWYG markup is enabled, but an individual user does not like the default set by the administrator, they are free to override it via a "make this my default" link that will appear on whichever editor is currently not your default.
For the "feature mad" amongst us, here are some neat things you can do with the WYSIWYG editor:

- Full screen view - really useful for editing large pages. Click in the menu bar.
- Quickly switch between WYSIWYG and Wiki markup without a page refresh
- Change the size of your editing window to suit your browser. Your size preference is remembered across sessions. To change it, drag the handle in the bottom right hand corner of the editor.
- Undo and redo!

Labels for content

Another highly requested feature was the ability to categorise content within Confluence beyond the rigid heirarchy allowed by spaces and parent-child relationships between pages. To this end we have introduced labels.

Labels are simple one-word 'tags' that can be added to any page or blog-post the user has permission to edit. Labels can be used to categorise content, bookmark it, flag it for attention, or anything else you can think of.

> **A Tag By Any Other Name**
>
> Picking a name for labels wasn't easy. Google's GMail service calls them labels, while other collaborative categorisation systems such as del.icio.us and Flickr call them tags. We decided that 'label' was a more natural description. For more information about the philosophy behind labels and tags, check out the Folksonomy page on Wikipedia

Labels can be added to any page from the edit screen, as a space-separated list of words. If you are browsing the site with a modern, Javascript-enabled browser, you'll also be able to use the dynamic web UI to add labels while viewing the page through an interactive interface.

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Once a page is labeled, then clicking on the label's name allows you to browse other pages with the same label, or view related labels that commonly occur on the same pages.
You can also view the space's most popular labels from the space browser, to get an idea of the most popular topics within the space.

Many other Confluence features interact with labels: they can be searched for through the search interface, the new RSS builder can filter pages by their label, and we're looking forward to building label support into Confluence's packaged macros, and even the dashboard.

Personal Labels

If you prepend `my:` to a label (for example, `my:todo` or `my:favourite`, then the label is a personal label – only visible to you. Personal labels allow you to tag content for your own purposes. You can browse your personal labels from your user profile. Any user can add their personal labels to any page, even when they don't have editing permission.

> **Personal Label Privacy**
>
> It is possible in Confluence 1.5-DR2 to see other people's personal labels in various views through the system. This is a known issue and in the final release, personal labels will be private to the user. (sharing personal labels at the user's discretion is also planned for the future)

Favourites

Favourites are a special personal label: `my:favourite` or `my:favorite`. Whenever you see the icon, it means you can label this content as being your favourite, and whenever you see the icon, it means that the content is currently in your list of favourites. You can view your favourites from the Labels tab of your user profile, but they come in handy for...

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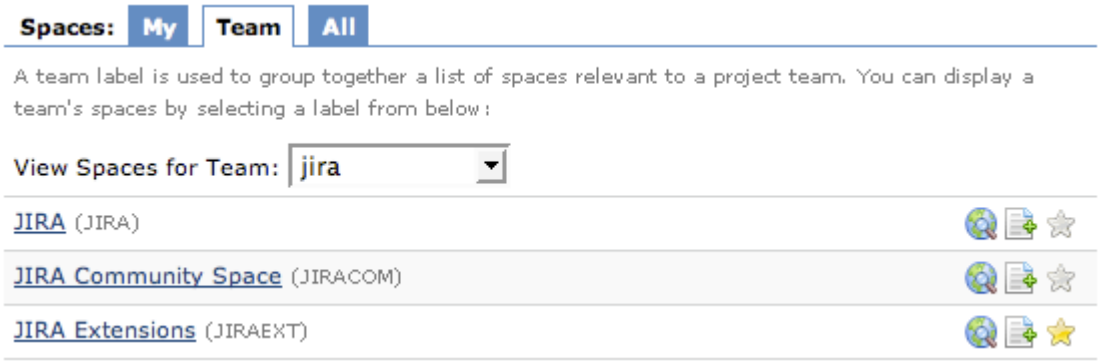
Labels and the Dashboard

Labels can be used on the Dashboard to create different views of the Confluence site. The list of spaces now offers the following tabs:

- **My** shows you spaces that you have labelled as a Favourite. You can label any space you see on the dashboard by clicking its icon.
- **Team** allows space admins to dynamically create lists of spaces on particular topics (see below. This tab only appears if there are teams that the user can see)
- **New** shows any spaces that have been created in the last week (This tab only appears if there are new spaces)
- **All** shows all the spaces in the Confluence site

A "team" is a group of spaces that share a common team label. Spaces can be labeled from the Advanced tab of Browse Space.



> As of Confluence 1.5-DR2, anyone can add space-level labels. This will be fixed in the final release.

The Recent Changes list on the dashboard will show only content that has been changed in the spaces that are currently listed in the space view. So if you are currently viewing the 'My' tab, only updates in your favourite spaces will be shown on the dashboard.

If you are logged in, Confluence will remember your most recently selected tab and team on the dashboard.

Dynamic RSS Builder

A third highly-requested feature. Confluence has always provided a brace of useful RSS feeds, but the problem is that for every feed we provided, users wanted half a dozen more. The obvious answer is to let users build RSS feeds based on their own chosen criteria. You can access the RSS builder from the Confluence dashboard

Once in the builder, you can choose

- Which spaces to include in the feed
- Which types of content should be tracked
- Which labels, if any, you are interested in
- How many items to include in the feed
- Whether you want a single RSS entry per page or one for each time the page is edited
- Whether you want an RSS 2.0 or Atom 0.3 feed
- Whether Confluence should require authentication to view the feed

Once you have decided what you want, Confluence will give you a URL to paste into your RSS reader. These URLs can be shared with other Confluence users, although they will only ever be allowed to see content that they have permission to view. If you have asked to authenticate, Confluence will require HTTP Basic Authentication, which is supported by most RSS readers.

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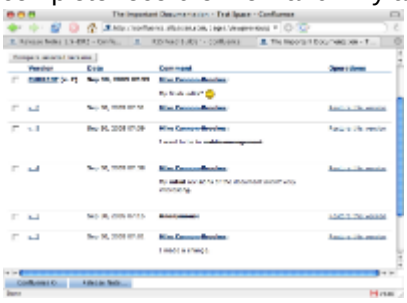
We've also taken the opportunity to improve the presentation of our RSS feeds - including a lot more information in each feed so you can follow your Confluence site entirely from your newsreader.

> The Atom 1.0 draft has just been accepted as an IETF standard. Future versions of Confluence will be phasing out use of Atom 0.3 in favour of Atom 1.0

Change summaries

In a very late addition (added during our recent Fedex Day 2), Confluence now has change summaries. These allow you to add a comment to each edit that will appear in change histories, allowing you to keep a more complete record of how and why a particular page has been modified.



There is also a {`change-history`} macro to enable you to display a page's history within its body if you so desire.

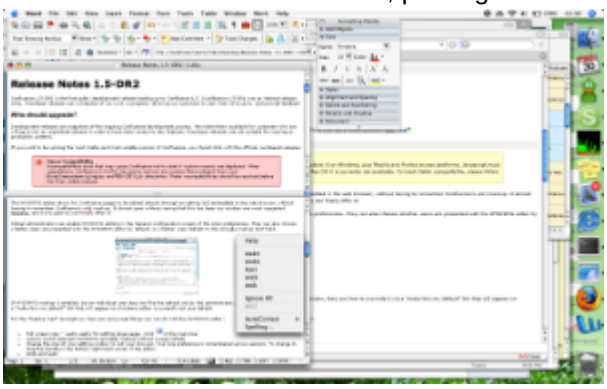
Other Things to Check Out

Embed Flash and Movies

You can now embed Flash content or movies (Quicktime or Windows Media) into a page as easily as you can an image: just attach the Flash or movie file to the page, then include it as you would include an image (!filename.mov!).

Export Pages as Word Documents

You can now export pages straight into Word from the Info tab. This is extremely useful for emailing around content to non-Confluence users, printing a document or just creating a backup in Word.



Improved Search Interface

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Results returned from Confluence's search engine now have:

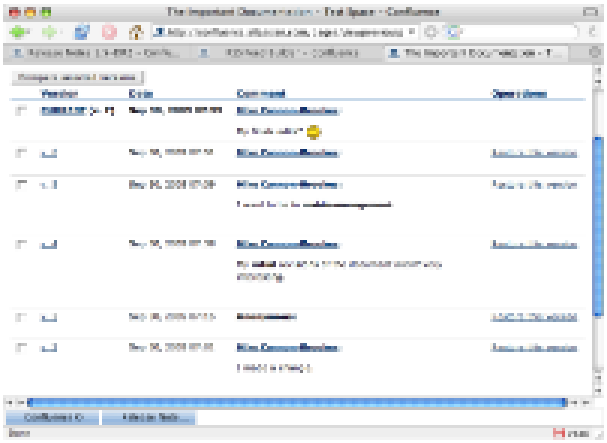
- Improved contextual results, showing the most important text around where your query was matched in the page
- Contextual results for any attachment: see where a search was matched even **inside** PDF, Word, PowerPoint or Excel documents!
- Search results for attachments give you more (and clearer) information about what the attachment is, and where it's from!search-result-fragments.png|thumbnail, align=center!
  Improved Gallery Macro

The gallery macro has been spruced up, and now has a slideshow view:

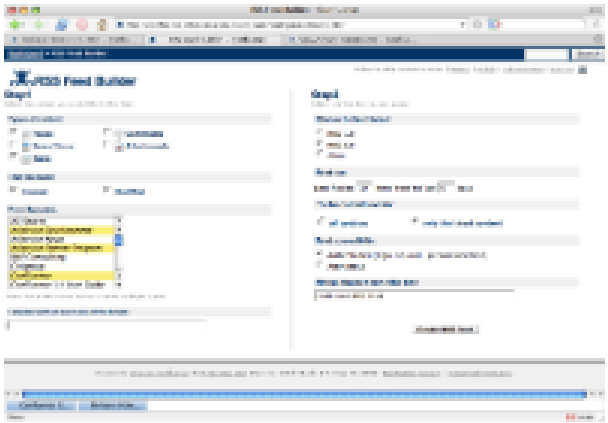
Confluence 1.5DR2 Screenshots

Alphabetically organised labels for a given space.

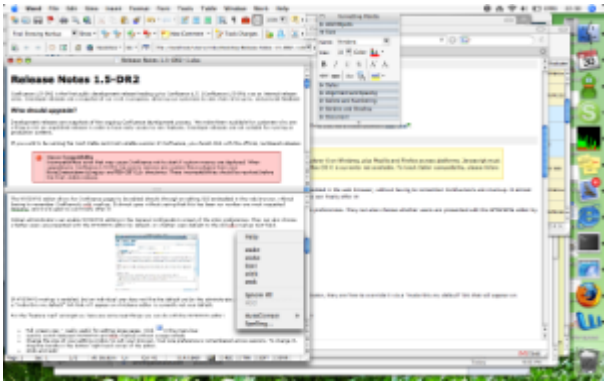
Popular labels for a given space.

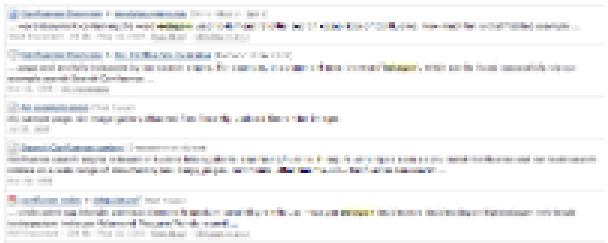


A very basic (quite boring - sorry, it's late) example of change summaries.



The new RSS builder lets you construct RSS feeds of exactly the content you want.





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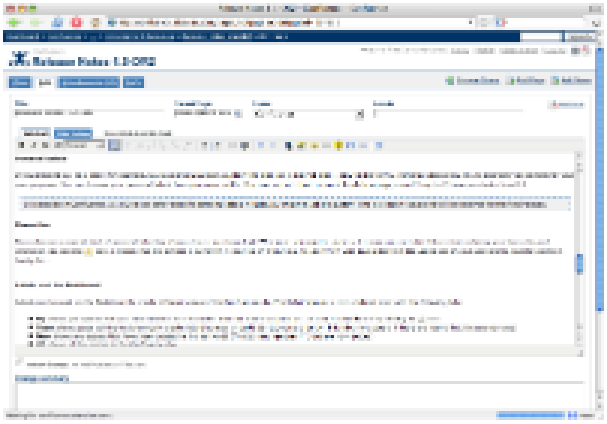
These release notes exported to Word (even on a Mac!) - great for printing too.

Improved search showing fragments from attachments, file sizes and types.

View



Screenshot of the new 1.5 WYSIWYG editor.

Also:

- Additions to the Confluence Remote API including:
  - Comment manipulation
  - Label manipulation
  - Attachment uploading and editing
  - Improved user- and permissions management
- Import and restore now have progress indicators
- Backup and restore use significantly less memory
- The embedded database has been upgraded to HSQL 1.8, which should be significantly more reliable
- Collapsed breadcrumbs now expand with a single mouse click

Known Bugs

Confluence 1.5-DR2 is a preview, not a full Confluence release, and as such there are a number of known bugs included in the release (at no extra cost!). Important bugs include:

- The left-navigation theme is currently broken
- The "make this my default editor" link does not always appear (try switching back and forth between views)
- The Info page may cause a Hibernate exception when its parent has page level permissions
- The space export may be unreliable, and does not properly back up labels.
- Incoming Trackback pings are not recognised
- Various WYSIWYG round-trip inconsistencies

Release Notes 1.5-DR1

Confluence 1.5-DR1 is the first development release leading up to Confluence 1.5. Developer releases are a snapshot of our work in progress, allowing our customers to see what we're up to, and provide feedback

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features. Developer releases are not suitable for running on production systems.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

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DB2 Compatibility

At the time of release, there were a number of issues performing database queries for labels or RSS feeds against DB2 databases. These issues will be fixed for the next release. For now, though, we do not recommend testing this release on DB2.

Macro Compatibility

Incompatibilities exist that may cause Confluence not to start if custom macros are deployed. When upgrading to Confluence 1.5-DR1, be sure to remove any custom Macro plugins from your `$confluencehome/plugins` and `WEB-INF/lib` directories. These incompatibilities will be resolved before the final, stable release.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.4 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.4.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.4 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.5-DR1

The three major features we've been working on are:

- WYSIWYG Editing
- Labels for content
- A dynamic RSS Builder

Consult JIRA for the full list of issues resolved for 1.5-DR1

1.5-DR1 also incorporates all the bug-fixes that were made between Confluence 1.4 and Confluence 1.4.3.

WYSIWYG Editing

Browser Compatibility

The Confluence WYSIWYG editor is currently only compatible with Internet Explorer 6 on Windows, plus Mozilla and Firefox across platforms. Javascript must be enabled in the browser for the editor to function. Support for Safari under Mac OS X is currently not available. To track Safari compatibility, please follow this JIRA issue: CONF-3864

The WYSIWYG editor allows for Confluence pages to be edited directly through an editing GUI embedded in the web browser, without having to remember Confluence's wiki markup. It almost goes without saying that this has been our number one most requested features, and we're glad we can finally offer it!

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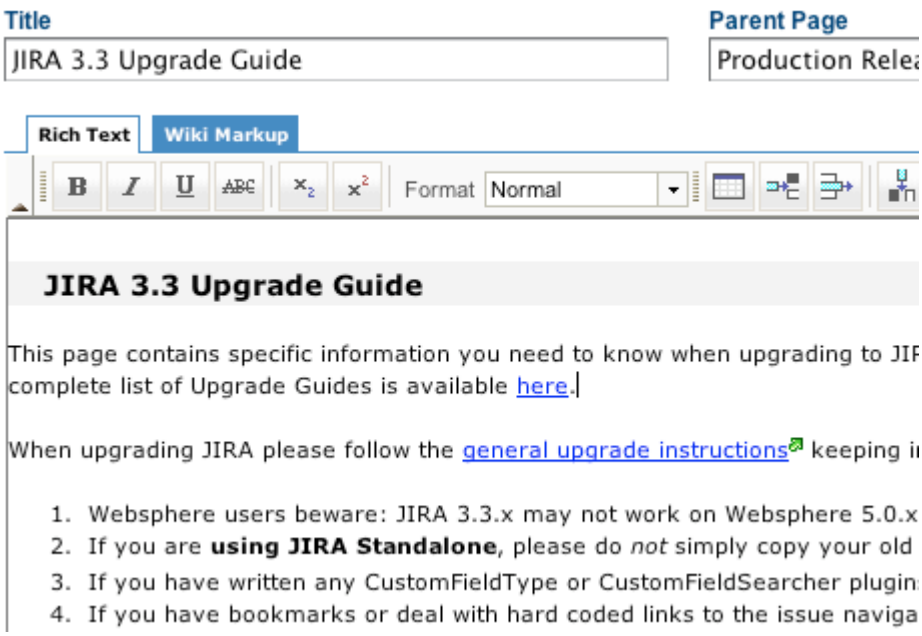

Global administrators can enable WYSIWYG editing in the General Configuration screen of the site's preferences. They can also choose whether users are presented with the WYSIWYG editor by default, or whether users default to the old wiki markup text-field. If WYSIWYG markup is enabled, but an individual user does not like the default set by the administrator, they are free to override it in their preferences.

Labels for content

Another highly requested feature was the ability to categorise content within Confluence, beyond the rigid heirarchy allowed by spaces and parent-child relationships between pages. To this end we have introduced labels. Labels are simple one-word 'tags' that can be added to any page or blog-post that the user has permission to edit. Labels can be used to categorise content, bookmark it, flag it for attention, or anything else you can think of.

> **A Tag By Any Other Name**
>
> Picking a name for labels wasn't easy. Google's GMail service calls them labels, while other collaborative categorisation systems such as del.icio.us and Flickr call them tags. We decided that 'label' was a more natural description. For more information about the philosophy behind labels and tags, check out the Folksonomy page on Wikipedia

Labels can be added to any page from the edit screen, as a space-separated list of words. If you are browsing the site with a modern, Javascript-enabled browser, you'll also be able to use the dynamic web UI to add labels directly from the page itself. Once a page is labeled, then clicking on the label will enable you to browse other pages that have been similarly tagged, or browse other labels that commonly occur on the same page. You can also view the space's 200 most popular labels from the space browser, to get an idea of the most popular concerns within the space. Many other Confluence features interact with labels: they can be searched for through the search interface, the new RSS builder can filter pages by their label, and we're looking forward to building label support into Confluence's packaged macros, and even the dashboard.

Personal Labels

If you prepend `my:` to a label (for example, `my:todo` or `my:favourite`, then the label is a personal label – only visible to you. Personal labels allow you to discreetly tag content for your own purposes. You can browse your personal labels from your user profile. Any user can add their personal labels to a page, even if they don't have permission to edit it.

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Dynamic RSS Builder

A third highly-requested feature. Confluence has always provided a brace of useful RSS feeds, but the problem is that for every feed we provided, users wanted half a dozen more. The obvious answer is to let users build RSS feeds based on their own chosen criteria. You can access the RSS builder from the Confluence dashboard

Once in the builder, you can choose

- Which spaces to include in the feed
- Which types of content should be tracked
- Which labels, if any, you are interested in
- How many items to include in the feed
- Whether you want a single RSS entry per page or one for each time the page is edited
- Whether you want an RSS 2.0 or Atom 0.3 feed
- Whether Confluence should require authentication to view the feed

Once you have decided what you want, Confluence will give you a URL to paste into your RSS reader. These URLs can be shared with other Confluence users, although they will only ever be allowed to see content that they have permission to view. If you have asked to authenticate, Confluence will require HTTP Basic Authentication, which is supported by most RSS readers.

We've also taken the opportunity to improve the presentation of our RSS feeds - including a lot more information in each feed so you can follow your Confluence site entirely from your newsreader.

> The Atom 1.0 draft has just been accepted as an IETF standard. Future versions of Confluence will be phasing out use of Atom 0.3 in favour of Atom 1.0

Known Bugs

Confluence 1.5-DR1 is a preview, not a full Confluence release, and as such there are a number of known bugs included in the release (at no extra cost!). Important bugs include:

- Label and RSS database queries do not work on DB2
- WYSIWYG editor adds extra information to browser history on Firefox
- Going to a page when not logged in will present you with a 404 error page, instead of giving you the chance to log in
- Various WYSIWYG round-trip bugs

Release Notes 1.4-RC2

Confluence 1.4 Release Candidate 2

> 1.4-RC2 is now available for download here.

Confluence 1.4-RC2 is (barring some absolute disaster) the final public developer build for Confluence 1.4. It incorporates all the changes that were deployed in the private DR7 build, as well as around 60 new bug fixes and improvements.

Confluence 1.4-RC2 is being released to give Confluence customers the opportunity to test the upgrade path for their existing Confluence installation. By testing your migration with this pre-release, you can ensure that any problems you may experience will be fixed before the final 1.4 release, rather than having to rely on ad-hoc patches or wait for 1.4.1.

Who should upgrade?

While 1.4-RC2 is still pre-release software, and we do not recommend upgrading production Confluence sites until the release of 1.4-final, we would recommend any existing Confluence customer install this release on a test server, and try to import their existing Confluence data into it.

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Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

> When you first start Confluence 1.4-RC2 after upgrading, the server may take a few minutes to become fully functional. This is because Confluence is rearranging information in the database so that it can be looked up more efficiently. This will only be done the first time Confluence is started after upgrading.

New Features in Confluence 1.4-RC2

The changes made between DR7 and RC2 are mostly correctness and polish issues - major feature development on Confluence 1.4 has been completed. A few notable changes however are:

- You can upload attachments while editing a page – from the "Insert Link" popup
- The dynamic content-tree degrades gracefully on unsupported browsers
- Many bugs related to PDF export (and images included in PDF exports) have been fixed
- Ü characters in page titles no longer confuse the database
- Text properties set via the contentPropertyManager can now be longer than 255 characters, fixing related bugs in the {tasklist} and {excerpt} macros
- The {attachments} macro can display the list of attachments inline within a page
- New XML-RPC and SOAP plugin types allow you to deploy web services dynamically into Confluence
- A potential connection leak that has been causing problems for Oracle users has been fixed.

And much much more.

Release Notes 1.4-DR7

Confluence 1.4-DR7

Confluence 1.4-DR7 is the first release-candidate build of Confluence 1.4. In 1.4-DR7 we have resolved over 120 issues: mostly related to fixing bugs and polishing up the application for a stable release. We anticipate that DR7 will be the last major build before the stable 1.4 release.

DR7 is not a public release. It has been built and deployed onto http://confluence.atlassian.com as part of our internal quality-control process, but we have decided that the developer time required to make this a public beta release would be better directed towards continuing the push towards a final, stable 1.4 build.

Who should upgrade?

Since Confluence 1.4-DR7 is not publicly available, nobody should upgrade. The upgrade note below is just for completeness, so when we come to gather all these release notes together into a single note for 1.4, we don't miss the warning.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

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> When you first start Confluence 1.4-DR7 after upgrading, the server may take a few minutes to become fully functional. This is because Confluence is rearranging information in the database so that it can be looked up more efficiently. This will only be done the first time Confluence is started after upgrading.

New Features in Confluence 1.4-DR7

The changes made between DR6 and DR7 are mostly correctness and polish issues - major feature development on Confluence 1.4 has been completed. A few notable changes however are:

- The space content tree is now updated dynamically, leading to much faster page-load times and much less load on the server (for large spaces, this page was turning into a reliable way to DOS Confluence). However, you must have a modern web browser with Javascript enabled for the tree to work. (A non-Javascript fallback will be included in 1.4-final - CONF-3098)
- You can now customise the site's name alongside the logo
- The display and navigation of page history diffs has been improved significantly
- Webdav configuration has been reinstated to the same functionality as 1.3.5
- An "insert image" popup has been added to the page editing screen, that can select images from the page's attachments. There is also an Attachments tab in the "insert link" popup. Allowing file upload from these popups has not yet been implemented (CONF-3099)
- Many improvements and fixes to email notifications
- Marking your change as a "minor edit" will prevent email notifications being sent
- The new Component plugin module adds new beans to the Spring context
- You can now uninstall plugins via the web interface
- The default theme has various keyboard shortcuts (see the tabs on this page)
- The Include Page Macro can now include pages from other spaces
- For developers, macros can now decide whether or not they have a body
- Report showing all attachments to pages in a space (check it out!)
- Generally improved notifications including a much more usable "File Attached" notification
- "View wiki source" link, for all those source junkies...

And much much more.

Release Notes 1.4-DR6

Confluence 1.4-DR6

Confluence 1.4-DR6 is the next development release in the cycle leading up to Confluence 1.4. In 1.4-DR6 we:

- introduce page-level view permissions,
- make Confluence radically more themeable,
- further improved the overall user interface and usability,
- add several interesting new plugin types,
- add file attachments to blog posts and user profile pages,
- let you customize Confluence logos at a space and global level, and
- help you keep track of all the email watches you might have set up in Confluence.

Phew! Got all that?

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

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> **Note for Oracle Users**
>
> Confluence 1.4-DR6 is currently not recommended for Oracle users, as it has not passed our test-suite against the Oracle database. This will (obviously) be fixed before we release Confluence 1.4.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

> If you upgrade to Confluence 1.4-DR6 you will need to rebuild your search indexes before search will function correctly. Look for "Rebuild Search Index" on the global Administration page.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.4-DR6

See also: Issues Resolved for 1.4-DR6

Page Level Permissioning

A highly-requested feature, and the reason this DR took so long to get out, you can now hide pages from other users. The option for hiding pages can be found at the bottom of the page's "Edit" screen.

- You can hide a page so it is only visible to yourself, or only visible to members of groups you belong to.
- Once a page is hidden, all its child pages (and their children, and so on) are also hidden.
- A new space-level permission has been introduced to determine which users are permitted to hide pages.

Please note that it may be possible for users to learn the names of hidden pages, even if they can't see their content. So don't make a page called "We Hate Bob Smith" if Bob Smith has access to your wiki. Just make a page called "We hate..." and put Bob's name in the body. 🙂

Improved Themes

While the overwhelming reaction to the User Interface changes we have made in the 1.4-DR series has been positive, it has sparked continuing discussions on the user mailing list about various aspects of the presentation of a Confluence site. From these discussions we have determined:

- Everyone wants something slightly different.
- Some people want something completely different.

In response, we've moved to vastly improve the level of themeability that Confluence offers. Almost all of the user interface elements have been pushed into customisable decorators, so if you don't like the tabs, you will be able to install a theme that removes them entirely! We're hoping to bring out some example themes with the 1.4 release that do just this, but for now you can read the documentation for the new decorators in the Theme Module documentation.

Plugin Improvements

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To make Confluence more flexible, we're introducing more ways for advanced users to extend the system:

Uploadable Plugins

Confluence administrators can now upload new plugins through the administrative interface, and have them installed without restarting the server.

Search Extractor Plugins

Extractor plugins allow you to add custom information to Confluence's full-text index when Confluence content is saved or updated. The most obvious application for this plugin type is to allow you to index attachment formats that Confluence does not yet support, but more creative plugin authors might make use of this as a sneaky way to store and retrieve metadata about any content in the Confluence system. Documentation for Extractor plugins is coming soon.

XWork Plugins

XWork plugins allow you to add new XWork (Webwork 2) actions to Confluence. Advanced programmers can add entirely new behaviours to the application: take a look at the examples in XWork-WebWork Module, in which we've implemented a rudimentary "Google Suggest"-like live search entry box for Confluence:

Servlet Plugins

Servlet plugins allow you to deploy servlets into Confluence dynamically – perfect for integrating Confluence with some legacy application that is only available as a servlet. See Servlet Module for an example.

Attachments for Blog Posts and User Profiles

You can now upload attachments to blog posts and user profiles, both frequently requested features. Users have the option to nominate one picture attached to their profile as their "profile picture", but we haven't quite decided what to do with this information yet. 🙂

There is a new global permission to determine if users can attach files to their profile. This permission is not assigned by default, so you will need to explicitly give it to users if you want to enable this feature.

Customizing Logos at a Space and Global Level

Space and global administrators may now easily configure the image displayed as the Confluence logo. This can be done for each space, or at a global level, without having to actually edit a single file.

Keeping track of your Email Watches

A Notifications link on your profile displays a list of all currently configured email watches you might have set up on various spaces or pages. You can now delete them in one, central, place or simply visit them.

Bug fixes

All bugs fixes made between Confluence 1.3.2 and Confluence 1.3.5 have been merged into the developer release branch, fixing many annoying bugs including the crash on selecting "Next" in search results. See also: Issues Resolved for 1.3.4, Issues Resolved for 1.3.5.

Issues Resolved for 1.4-DR6

Issues resolved for 1.4-DR5

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**

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	Authenticate to retrieve your issues			

Issues resolved for 1.4-DR6

JIRA Issues				
Type	**Key**	**Summary**	**Status**	**Resolution**
	Authenticate to retrieve your issues			

Release Notes 1.4-DR4

Confluence 1.4-DR4

Confluence 1.4-DR4 is the fourth development release in the cycle leading up to Confluence 1.4. In 1.4-DR4 the user interface continues to improve, and our new wiki->HTML renderer lands, fixing a large number of bugs (but probably introducing a few more)

> **1.4-DR4a**
>
> One of the bugs that was introduced in 1.4-DR4 caused the edit option to disappear completely from the Confluence interface for anyone who was not a global administrator. Because that issue rendered Confluence mostly unuseable, 1.4-DR4a has been released including a fix to that problem. 1.4-DR4a also includes the patch for Confluence Security Advisory 2005-02-09.
>
> We would like to remind everyonee who downloads the developer releases that they are *not* f ully stable.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

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If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence

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1.3 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.4-DR4

User Interface Enhancements

The user interface of Confluence continues to improve. A big thankyou to all the users who contributed feedback on DR3. While the changes between DR3 and DR4 aren't as radical as the last release, we've been able to polish up a lot of the edges, and make Confluence even easier and more pleasant to use.

We're still gathering feedback on the UI changes, add your input here: 1.4 UI Discussion

Mail Archives

- You can now bulk-delete all mail within a space (mail deleted this way does not go to the trash, and **can not** be recovered later!)
- Pagination on the mail archives is a bit more sane: it doesn't try to tell you about every single page of mail in the archives.
- The mbox importer detects if you're trying to import something that isn't an mbox file, making you much less likely to break anything if you upload the wrong file.

Nofollow Support

As part of the effort to combat spam on wikis and blogs (Confluence being both), Google came up with some markup that will cause search-engines not to follow links. By removing the main benefit of wiki-spamming (increased search-engine PageRank), it's hoped that the noxious practice will stop being cost-effective, and eventually die out.

By default, all URLs inserted in a page (or in comments) will be given the `nofollow` tag. Inter-page links or shortcut links (i.e. CONF-2622) will not be tagged. If your wiki doesn't support public editing or commenting, or you just disapprove of nofollow on principle, the site administrator can turn the feature off in General Configuration.

V2Renderer

Over the last few releases of Confluence, it has become apparent that the engine we were using to convert wiki text to HTML was starting to cause us problems. There were a growing number of bugs that we *simply couldn't fix*, because the nature of the engine meant that fixing one bug would cause ten worse bugs to spring up in its place. After a few false starts, we can now introduce 'v2Renderer', which fixes quite a few of these problems already, and promises to make fixing the rest of them much easier:

Error rendering macro 'jiraissues' : Unable to determine if sort should be enabled.

Because this is the first public release of v2Renderer, it's likely that there are some situations in which the markup of pages may change. We've been pretty careful, but users who have been making heavy use of undocumented (or accidental) features of the old markup may encounter situations in which the page displays differently to before. Please, *please* report these problems to us, so that we can fix the renderer for the final release, or perhaps provide you with a script to painlessly convert your pages to a markup that works.

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> **Renderer Bugs**
>
> If you file a bug about the v2Renderer, **PLEASE** make sure you put it in the Wiki/XHTML component: this makes finding all the relevant bugs so much easier for me. – Charles Miller

Macros

There is a new macro API that we will be rolling out for 1.4. However, there's a compatibility layer in place to make sure that most 1.3 macros will continue to function properly. Most macros written for Confluence 1.3 will continue to work in 1.4-DR4. Most of our macros are running without any changes at all, and many of the ones we did migrate were changed over in order to use the capabilities of the new engine to fix bugs.

We suggest that macro authors who are worried about compatibility test their macros with 1.4-DR4 and contact us as soon as possible to discuss how we can improve the compatibility layer before the final release, or help you migrate to the new API.

Known Bugs

The renaming of links when a page is moved or renamed is currently unreliable. This is a side-effect of the change in renderers, and will be fixed before the final version of 1.4 is released.

Release Notes 1.4-DR3

Confluence 1.4-DR3 is the third development release in the cycle leading up to Confluence 1.4. It is the first step in a process of making the Confluence User Interface simpler, and easier to navigate.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.4-DR3

User Interface Enhancements

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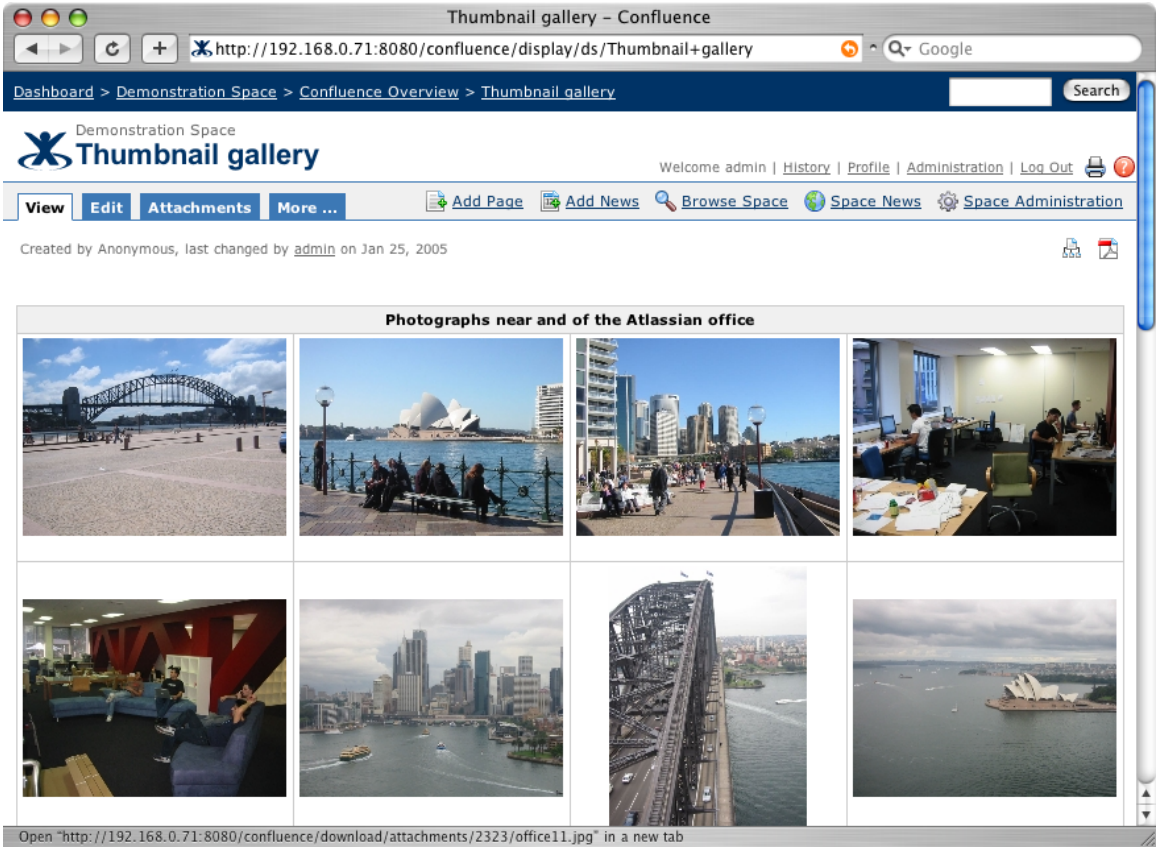
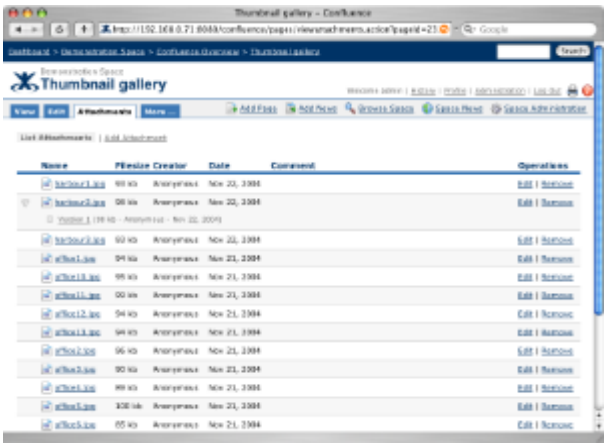


Some of the most frequent feedback we get about Confluence is that while users like the wealth of features on offer, the interface is often overwhelmed by too much information and too many options, making Confluence difficult to navigate, and difficult to introduce to non-technical users. Confluence 1.4-DR3 is the first step in an attempt to present a cleaner, more useable design for Confluence, while still providing a powerful interface for experienced users.

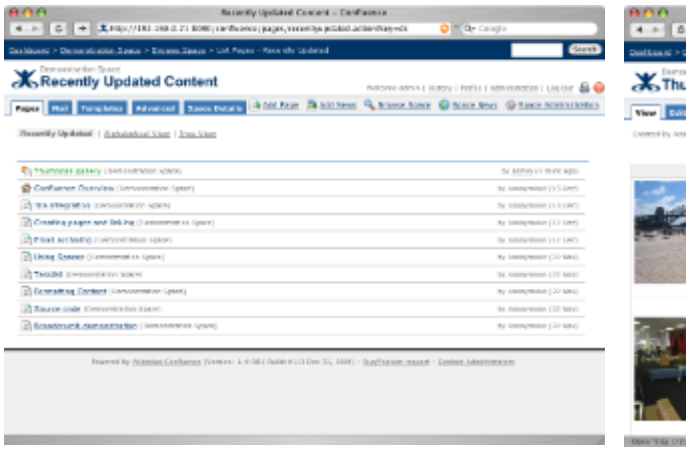
> 1.4-DR3 is a developer release. As such, some of the changes to the interface are incomplete, and some may not make it into the final version. Please offer your feedback on 1.4 UI Discussion.

While the obvious way to get a look at the new interface is just to explore this site, here are a few screenshots that might help:

Confluence 1.4 Interfac



New attachment management interface



New-look recently updated list for spaces

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More Functional Edit Page Interface

I'm also compiling a page to help people who are used to Confluence Classic, and might be a little lost in the new interface: 1.4 Interface - Where Did Everything Go?

Known Bugs

A page has been created in the Discussion space to gather comments, suggestions, compliments and complaints about the new interface: 1.4 UI Discussion

1.4 Interface - Where Did Everything Go?

If you're used to the Confluence Classic interface, the new 1.4 interface might be a little hard to navigate at first. We think that the new design is a vast improvement, but it's inevitable that people who have used the application since its release will be wondering where some of the buttons they were used to have gone...

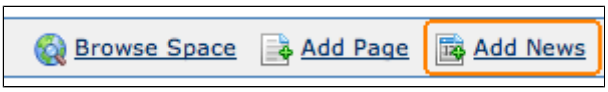
Where Did They Go...

- Blogs?
- Rename Page?
- Move Page?
- Create Child Page?
- Page Locks?
- Page History? Short URL? Watch Page? Remove Page?

Like it? Don't? Join the discussion.

Blogs?

By incredibly popular demand, blogs have been renamed to "News" across the site. While blogs are all the rage at the moment (or, as my brother would say, very *zeitgeisty*), it's still far easier to explain "News" to someone familiar with blogs, than it is to explain blogs to someone who is familiar with news.



Rename Page?

Rename page is no longer a separate function. Just edit the page and change the page title, and Confluence will rename all the links to the page for you.

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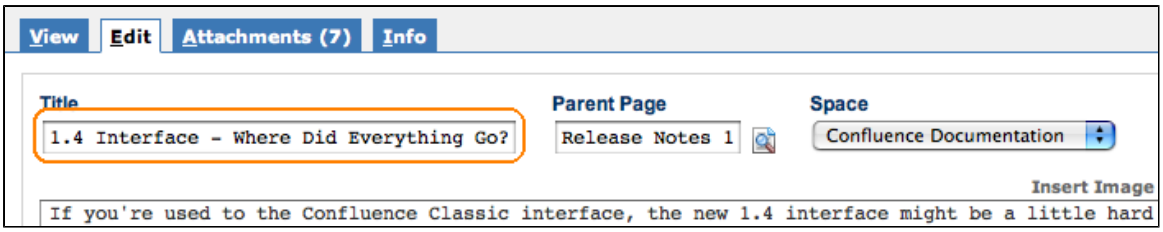
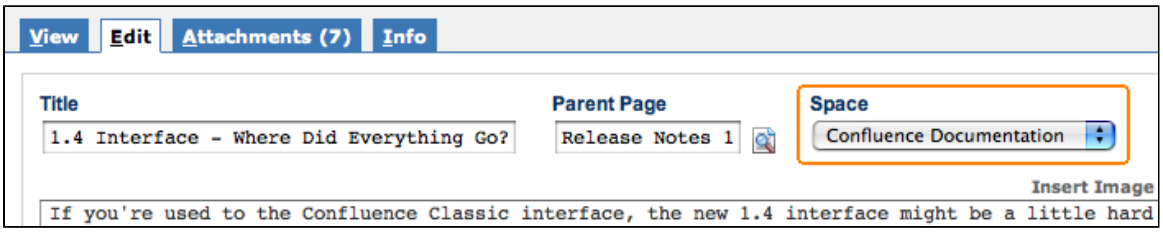


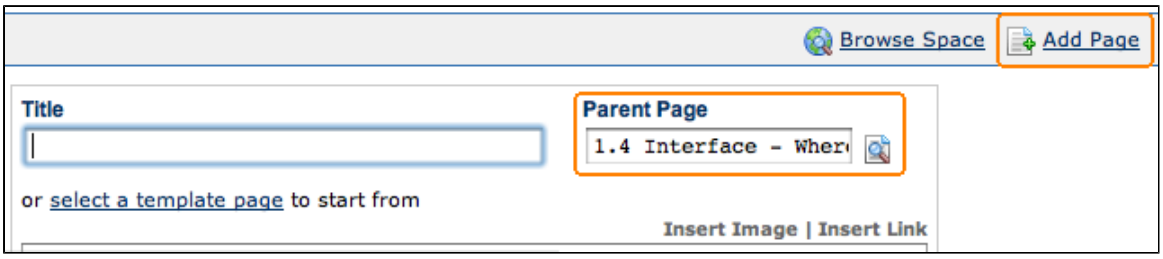
Move Page?

Move page is no longer a separate function. Just edit the page and change its space, and Confluence will move the page to the new space for you, renaming any links to the page. If the page has children, you will be given the option to move all the children as well.



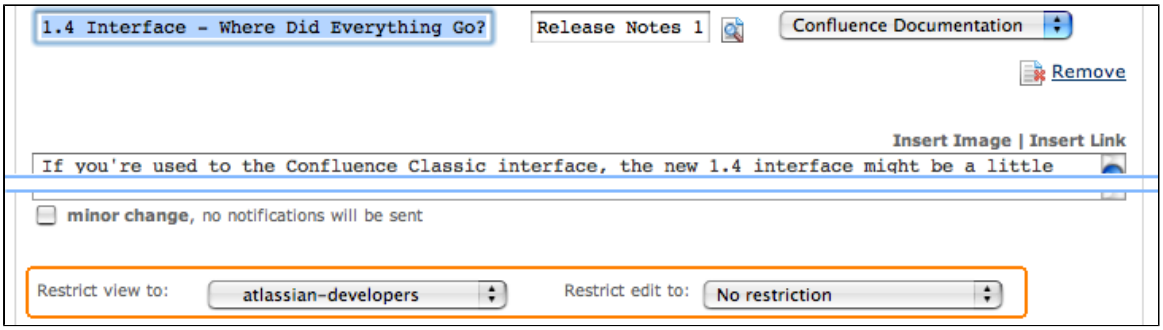
Create Child Page?

Whenever you select the "Add Page" link from the top of the page, your current page will be automatically inserted into the Parent Page box. We've found that this is the way most people use Confluence anyway.



Page Locks?

Page locks have been renamed "Permissions" and moved to the bottom of the edit page. We found that most people didn't understand (or couldn't find) locks, and thus didn't understand that Confluence has page-level edit security.



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Page History? Short URL? Incoming Links? Hot Referrers?

All this information has been moved under the "Info" tab when you view a page.

Release Notes 1.4-DR2

Confluence 1.4-DR2 is the second development release in the cycle leading up to Confluence 1.4. Seeing as the DR2 development fortnight straddled Christmas it's not quite as feature-laden as some previous releases, but we thought we'd give you a few new toys to play with for the New Year.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find in structions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

Downloads

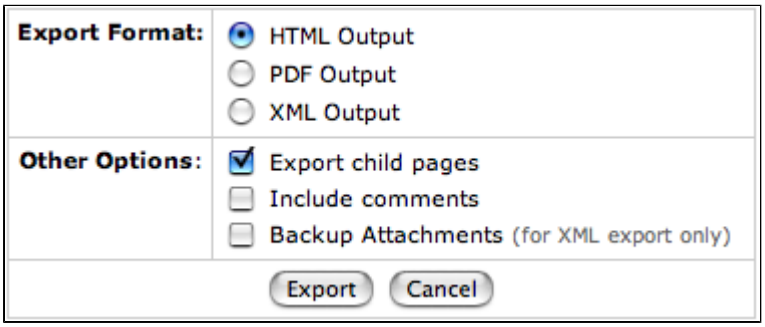
All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.4-DR2

Consult JIRA for the full list of issues resolved for 1.4-DR2

Export Page Hierarchy

When you export a page to PDF or HTML, you have the option to include its children in the export.



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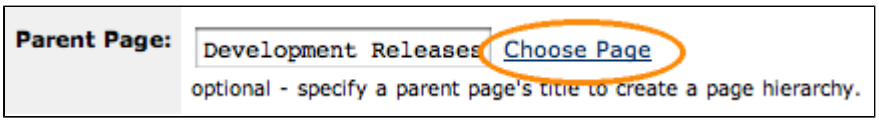
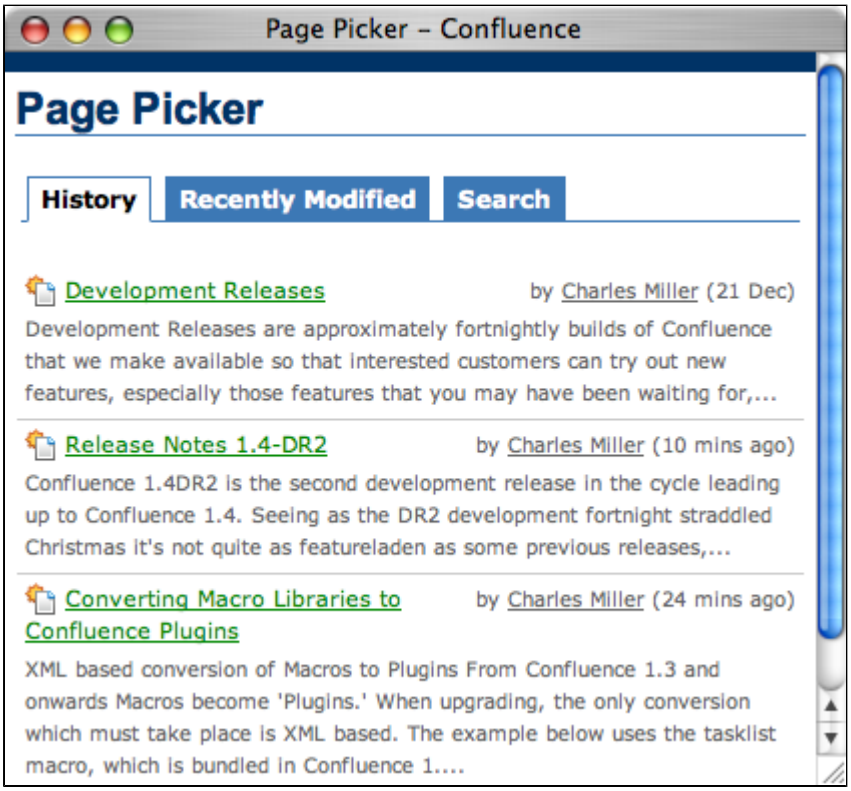
Popup Page Picker

We now have a popup that can be used to select pages for inserting links, or choosing a page's parent. The picker lets you choose from your recently visited pages, the list of pages that link to the current page, or you can perform a search within the picker itself.





New Macros

As part of the process of making Confluence more flexible, we have implemented the various functions of the Confluence dashboard and space summary pages as macros. These macros are currently disabled by default, but if you're interested in using them within regular pages, you can enable them from your global plugin configuration.

This currently has no effect on the dashboard itself - but will become useful in the future when the dashboard becomes customiseable. For example, the {spaces-list} macro will reproduce the list of spaces that appears on the dashboard:

Spaces: All | Favourite | Category | New (2)

Application Links 1.x
Documentation for AppLinks version 1.x

Application Links 2.0
Documentation for AppLinks 2.0

Application Links 2.1
Documentation for AppLinks 2.1

Application Links 3.0

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Documentation for AppLinks 3.0

Application Links 3.2
Documentation for AppLinks 3.2

Application Links 3.3
Documentation for AppLinks 3.3

Application Links 3.4
Documentation for AppLinks 3.4

Application Links 3.5
Documentation for the latest version of AppLinks.

Application Links 3.5 Archive
Documentation for AppLinks 3.5

AtlasCamp 2010

AtlasCamp 2012

Atlassian Bonfire
Documentation for the latest version of Bonfire

Atlassian Customer Resources

Atlassian Development
Atlassian Developers. Because they're just too good to be kept hidden in an office in Sydney.

Atlassian Documentation
Information about and links to the Atlassian product documentation, including downloadable documentation

Atlassian Events

Atlassian Guides
Guides to make your Atlassian applications work better and work together

Atlassian IDE Connectors
Documentation for the Atlassian Connectors for Eclipse and IntelliJ IDEA

Atlassian KnowledgeBase

Atlassian OnDemand
The current documentation for Atlassian OnDemand

Atlassian OnDemand Knowledge Base

Atlassian OnDemand Test Space
Documentation for the current version of JIRA Studio.

Atlassian Partner Wiki

Atlassian Presentations

Atlassian Training

Atlassian Translations

Atlassian t-shirt Competition

Atlassian University

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Atlassian User Group

Atlassian User Management 1.0
Documentation for version 1.0 of the Atlassian user management interface, as used in Confluence and JIRA.

Atlassian User Management 2.0
Documentation for version 2.0 of the Atlassian user management interface, as used in Confluence and JIRA.

Atlassian User Management 3.0
Documentation for the latest version of the Atlassian user management interface, as used in Confluence and JIRA.

Atlassian Webinars

Bamboo 1.0
Documentation for Bamboo 1.0

Bamboo 1.1
Documentation for Bamboo 1.1

Bamboo 1.2
Documentation for Bamboo 1.2

Bamboo 2.0
Documentation for Bamboo 2.0

Bamboo 2.1
Documentation for Bamboo 2.1

Bamboo 2.2
Documentation for Bamboo 2.2

Bamboo 2.3
Documentation for Bamboo 2.3

Bamboo 2.4
Documentation for Bamboo 2.4

Bamboo 2.5
Documentation for Bamboo 2.5

Bamboo 2.6
Documentation for Bamboo 2.6

Bamboo 2.7
Documentation for Bamboo 2.7

Bamboo 2.7 Archive Backup
Archived Documentation for Bamboo 2.7 (supersedes BAMBOO027 space)

Bamboo 3.0
Documentation for Bamboo 3.0

Bamboo 3.1
Documentation for Bamboo 3.1

Bamboo 3.2
Documentation for Bamboo 3.2

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Bamboo 3.3
Documentation for Bamboo 3.3

Bamboo 3.4
Documentation for Bamboo 3.4

Bamboo 4.0
Documentation for Bamboo 4.0

Bamboo 4.1
Documentation for Bamboo 4.1

Bamboo 4.2
Documentation for the latest version of Bamboo

Bamboo Extensions

Bamboo Knowledge Base
Troubleshooting and support tips for Bamboo

bitbucket
Documentation for Atlassian bitbucket

Bitbucket Knowledge Base
Troubleshooting and support tips for Bitbucket

Bonfire Knowledge Base

Clover 2.0
Documentation for Clover 2.0

Clover 2.1
Documentation for Clover 2.1

Clover 2.3
Documentation for Clover 2.3

Clover 2.4
Documentation for Clover 2.4

Clover 2.5
Documentation for Clover 2.5

Clover 2.6
Documentation for Clover 2.6

Clover 3.0
Documentation for Clover 3.0

Clover 3.1
Documentation for the latest version of Clover

Clover Knowledge Base
Troubleshooting and support tips for Clover

Confluence 1.4 User Guide
User Guide for Confluence 1.4

Confluence 2.0
User Guide for Confluence version 2

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Confluence 2.10
Complete documentation for Confluence version 2.10

Confluence 2.5
Complete documentation for Confluence versions 2.0 to 2.5.3.

Confluence 2.5.6
Complete documentation for Confluence versions 2.5.4 to 2.5.8.

Confluence 2.6
Complete documentation for Confluence version 2.6

Confluence 2.7
Complete documentation for Confluence version 2.7

Confluence 2.8
Complete documentation for Confluence version 2.8

Confluence 2.9
Complete documentation for Confluence version 2.9

Confluence 3.0
Complete documentation for Confluence version 3.0

Confluence 3.1
Complete documentation for Confluence version 3.1

Confluence 3.2
Complete documentation for Confluence version 3.2

Confluence 3.3
Complete documentation for Confluence version 3.3

Confluence 3.4
Complete documentation for Confluence version 3.4

Confluence 3.5
Complete documentation for Confluence version 3.5

Confluence 4.0
Complete documentation for Confluence version 4.0

Confluence 4.1
Complete documentation for Confluence version 4.1

Confluence 4.2
Complete documentation for Confluence version 4.2

Confluence 4.3
Complete documentation for Confluence version 4.3

Confluence Extensions

Confluence Homepage Image

Confluence Knowledge Base
Troubleshooting and support tips for Confluence

Confluence Latest
Documentation for the latest version of the Confluence wiki: Installation Guide, User Guide, Admin Guide and other techn…

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Confluence SharePoint Connector 1.0
Documentation for version 1.0.x of the Confluence SharePoint Connector.

Confluence SharePoint Connector 1.1
Documentation for version 1.1.x of the Confluence SharePoint Connector.

Confluence SharePoint Connector 1.2
Documentation for the Confluence SharePoint Connector 1.2. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.3
Documentation for the Confluence SharePoint Connector 1.3. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.4
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.5
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.5
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

Confluence User Community
This space is for discussing ideas, new features and suggestions for Confluence.

Crowd 1.0
Documentation for Crowd version 1.0.x

Crowd 1.1
Documentation for Crowd version 1.1.x

Crowd 1.2
Documentation for Crowd version 1.2.x

Crowd 1.3
Documentation for Crowd version 1.3.x

Crowd 1.4
Documentation for Crowd version 1.4.x

Crowd 1.5
Documentation for Crowd version 1.5.x

Crowd 1.6
Documentation for Crowd version 1.6.x

Crowd 2.0
Documentation for Crowd version 2.0.x

Crowd 2.1
Documentation for Crowd version 2.1.x

Crowd 2.2
Documentation for Crowd version 2.2.x

Crowd 2.3

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Documentation for Crowd version 2.3.x

Crowd 2.4
Documentation for Crowd version 2.4.x

Crowd 2.5
Documentation for the latest version of Crowd single signon and identity management

Crowd Extension

Crowd Knowledge Base
Troubleshooting and support tips for Crowd

Crucible 1.1
Documentation for Crucible 1.1

Crucible 1.2
Documentation for Crucible 1.2

Crucible 1.5
Documentation for Crucible 1.5

Crucible 1.6
Documentation for Crucible 1.6

Crucible 2.0
Documentation for Crucible 2.0

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Documentation for Crucible 2.1

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Documentation for Crucible 2.2

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Crucible 2.5
Documentation for Crucible 2.5

Crucible 2.6
Documentation for Crucible 2.6

Crucible 2.7
Documentation for Crucible 2.7

Crucible 2.8
Latest documentation for Crucible 2.8

Crucible Knowledge Base
Troubleshooting and support tips for Crucible

Demonstration Space
A space which demonstrates Confluence functionality.

Doc Sprint

Enterprise Hosting

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Documentation and resources for Enterprise Hosted versions of Confluence and JIRA

Evaluator Resources

FishEye & Crucible Knowledge Base
Troubleshooting and support tips for FishEye & Crucible

FishEye 1.3
Documentation for FishEye 1.3

FishEye 1.4
Documentation for FishEye 1.4

FishEye 1.5
Documentation for FishEye 1.5

FishEye 1.6
Documentation for FishEye 1.6

FishEye 2.0
Documentation for FishEye 2.0

FishEye 2.1
Documentation for FishEye 2.1

FishEye 2.2
Documentation for FishEye 2.2

FishEye 2.3
Documentation for FishEye 2.3

FishEye 2.4
Documentation for FishEye 2.4

FishEye 2.5
Documentation for FishEye 2.5

FishEye 2.6
Documentation for FishEye 2.6

FishEye 2.7
Documentation for FishEye 2.7

FishEye 2.8
Latest documentation for FishEye

Gadgets and Dashboards 1.0
Documentation for version 1.0.x of Atlassian Gadgets and Dashboards

Gadgets and Dashboards 2.0
Documentation for version 2.0.x of Atlassian Gadgets and Dashboards

Gadgets and Dashboards 3.0
Documentation for the latest version of Atlassian Gadgets and Dashboards

GreenHopper 3.8
Documentation archive for GreenHopper 3.8

GreenHopper 4.0
Documentation for GreenHopper 4.0

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GreenHopper 4.1
Documentation for GreenHopper 4.1

GreenHopper 4.2
Documentation for GreenHopper 4.2.

GreenHopper 4.3
Documentation for GreenHopper 4.3

GreenHopper 4.4
Documentation for GreenHopper 4.4

GreenHopper 5.0
Documentation for GreenHopper 5.0

GreenHopper 5.1
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GreenHopper 5.10
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GreenHopper 5.2
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GreenHopper 5.3
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GreenHopper 5.4
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GreenHopper 5.6
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GreenHopper 5.7
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GreenHopper 5.8
Documentation for GreenHopper 5.8.

GreenHopper 5.9
Documentation for GreenHopper 5.9

GreenHopper 6.0
Documentation for GreenHopper 6.0

GreenHopper Knowledge Base

Integrating with JIRA
Documentation for the latest version of the JIRA integration interface

JIRA 4.0
Documentation for JIRA 4.0

JIRA 4.1
Documentation for JIRA 4.1

JIRA 4.2
Documentation for JIRA 4.2

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JIRA 4.3
Documentation for JIRA 4.3

JIRA 4.4
Documentation for JIRA 4.4

JIRA 5.0
Documentation for JIRA 5.0

JIRA 5.1
Documentation for JIRA 5.1

JIRA Community Space

JIRA Download Evaluator Resources

JIRA Extensions

JIRA Hosted Evaluator Resources

JIRA Knowledge Base
Troubleshooting and support tips for Jira

JIRA Latest
Documentation for JIRA OnDemand and JIRA Early Access Program only

JIRA Studio
Documentation for the current version of JIRA Studio.

JIRA Studio Evaluator Resources

Security
Security documentation starting point

SMIG

SourceTree Knowledge Base

Stash 1.0
Documentation for Stash 1.0

Stash 1.1
Documentation for Stash 1.1

Stash 1.2
Documentation for the latest version of Stash

Stash Knowledge Base

Summit 2011 Speaker Guidelines

Summit 2012 Sponsorship
Learn about becoming a sponsor for Atlassian Summit 2012

Support
Atlassian's legendary support team's projects and policy.

Team Calendars
Documentation for Team Calendars for Confluence, where people, projects and content meet.

Test space

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The Confluence Test Space
This is a space dedicated to testing and playing around with Confluence features. Everyone is invited to experiment.

Universal Plugin Manager 1.0
Documentation for the Universal Plugin Manager 1.0

Universal Plugin Manager 1.2
Documentation for the Universal Plugin Manager 1.2

Universal Plugin Manager 1.3
Documentation for the Universal Plugin Manager 1.3

Universal Plugin Manager 1.4
Documentation for the Universal Plugin Manager 1.4

Universal Plugin Manager 1.5
Documentation for the Universal Plugin Manager 1.5

Universal Plugin Manager 1.6
Documentation for the latest version of the Universal Plugin Manager

Universal Plugin Manager 2.0 archive
Documentation for the Universal Plugin Manager 2.0

Universal Plugin Manager 2.X
Documentation for the latest version of the Universal Plugin Manager

Universities

User Group Sponsorship

Spaces: All Favourite Category New (2)

Application Links 1.x
Documentation for AppLinks version 1.x

Application Links 2.0
Documentation for AppLinks 2.0

Application Links 2.1
Documentation for AppLinks 2.1

Application Links 3.0
Documentation for AppLinks 3.0

Application Links 3.2
Documentation for AppLinks 3.2

Application Links 3.3
Documentation for AppLinks 3.3

Application Links 3.4
Documentation for AppLinks 3.4

Application Links 3.5
Documentation for the latest version of AppLinks.

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Application Links 3.5 Archive
Documentation for AppLinks 3.5

AtlasCamp 2010

AtlasCamp 2012

Atlassian Bonfire
Documentation for the latest version of Bonfire

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Atlassian OnDemand
The current documentation for Atlassian OnDemand

Atlassian OnDemand Knowledge Base

Atlassian OnDemand Test Space
Documentation for the current version of JIRA Studio.

Atlassian Partner Wiki

Atlassian Presentations

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Atlassian Translations

Atlassian t-shirt Competition

Atlassian University

Atlassian User Group

Atlassian User Management 1.0
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Atlassian User Management 2.0
Documentation for version 2.0 of the Atlassian user management interface, as used in Confluence and JIRA.

Atlassian User Management 3.0
Documentation for the latest version of the Atlassian user management interface, as used in Confluence and JIRA.

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Atlassian Webinars

Bamboo 1.0
Documentation for Bamboo 1.0

Bamboo 1.1
Documentation for Bamboo 1.1

Bamboo 1.2
Documentation for Bamboo 1.2

Bamboo 2.0
Documentation for Bamboo 2.0

Bamboo 2.1
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Bamboo 2.4
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Bamboo 2.5
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Bamboo 2.6
Documentation for Bamboo 2.6

Bamboo 2.7
Documentation for Bamboo 2.7

Bamboo 2.7 Archive Backup
Archived Documentation for Bamboo 2.7 (supersedes BAMBOO027 space)

Bamboo 3.0
Documentation for Bamboo 3.0

Bamboo 3.1
Documentation for Bamboo 3.1

Bamboo 3.2
Documentation for Bamboo 3.2

Bamboo 3.3
Documentation for Bamboo 3.3

Bamboo 3.4
Documentation for Bamboo 3.4

Bamboo 4.0
Documentation for Bamboo 4.0

Bamboo 4.1
Documentation for Bamboo 4.1

Bamboo 4.2

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Documentation for the latest version of Bamboo

Bamboo Extensions

Bamboo Knowledge Base
Troubleshooting and support tips for Bamboo

bitbucket
Documentation for Atlassian bitbucket

Bitbucket Knowledge Base
Troubleshooting and support tips for Bitbucket

Bonfire Knowledge Base

Clover 2.0
Documentation for Clover 2.0

Clover 2.1
Documentation for Clover 2.1

Clover 2.3
Documentation for Clover 2.3

Clover 2.4
Documentation for Clover 2.4

Clover 2.5
Documentation for Clover 2.5

Clover 2.6
Documentation for Clover 2.6

Clover 3.0
Documentation for Clover 3.0

Clover 3.1
Documentation for the latest version of Clover

Clover Knowledge Base
Troubleshooting and support tips for Clover

Confluence 1.4 User Guide
User Guide for Confluence 1.4

Confluence 2.0
User Guide for Confluence version 2

Confluence 2.10
Complete documentation for Confluence version 2.10

Confluence 2.5
Complete documentation for Confluence versions 2.0 to 2.5.3.

Confluence 2.5.6
Complete documentation for Confluence versions 2.5.4 to 2.5.8.

Confluence 2.6
Complete documentation for Confluence version 2.6

Confluence 2.7

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Confluence 2.8
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Confluence 2.9
Complete documentation for Confluence version 2.9

Confluence 3.0
Complete documentation for Confluence version 3.0

Confluence 3.1
Complete documentation for Confluence version 3.1

Confluence 3.2
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Complete documentation for Confluence version 3.4

Confluence 3.5
Complete documentation for Confluence version 3.5

Confluence 4.0
Complete documentation for Confluence version 4.0

Confluence 4.1
Complete documentation for Confluence version 4.1

Confluence 4.2
Complete documentation for Confluence version 4.2

Confluence 4.3
Complete documentation for Confluence version 4.3

Confluence Extensions

Confluence Homepage Image

Confluence Knowledge Base
Troubleshooting and support tips for Confluence

Confluence Latest
Documentation for the latest version of the Confluence wiki: Installation Guide, User Guide, Admin Guide and other techn…

Confluence SharePoint Connector 1.0
Documentation for version 1.0.x of the Confluence SharePoint Connector.

Confluence SharePoint Connector 1.1
Documentation for version 1.1.x of the Confluence SharePoint Connector.

Confluence SharePoint Connector 1.2
Documentation for the Confluence SharePoint Connector 1.2. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.3
Documentation for the Confluence SharePoint Connector 1.3. This product integrates

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Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.4
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.5
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

Confluence SharePoint Connector 1.5
Documentation for the Confluence SharePoint Connector 1.4. This product integrates Confluence with Microsoft SharePoint.

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Crowd 1.0
Documentation for Crowd version 1.0.x

Crowd 1.1
Documentation for Crowd version 1.1.x

Crowd 1.2
Documentation for Crowd version 1.2.x

Crowd 1.3
Documentation for Crowd version 1.3.x

Crowd 1.4
Documentation for Crowd version 1.4.x

Crowd 1.5
Documentation for Crowd version 1.5.x

Crowd 1.6
Documentation for Crowd version 1.6.x

Crowd 2.0
Documentation for Crowd version 2.0.x

Crowd 2.1
Documentation for Crowd version 2.1.x

Crowd 2.2
Documentation for Crowd version 2.2.x

Crowd 2.3
Documentation for Crowd version 2.3.x

Crowd 2.4
Documentation for Crowd version 2.4.x

Crowd 2.5
Documentation for the latest version of Crowd single signon and identity management

Crowd Extension

Crowd Knowledge Base
Troubleshooting and support tips for Crowd

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Crucible 1.1
Documentation for Crucible 1.1

Crucible 1.2
Documentation for Crucible 1.2

Crucible 1.5
Documentation for Crucible 1.5

Crucible 1.6
Documentation for Crucible 1.6

Crucible 2.0
Documentation for Crucible 2.0

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Crucible 2.5
Documentation for Crucible 2.5

Crucible 2.6
Documentation for Crucible 2.6

Crucible 2.7
Documentation for Crucible 2.7

Crucible 2.8
Latest documentation for Crucible 2.8

Crucible Knowledge Base
Troubleshooting and support tips for Crucible

Demonstration Space
A space which demonstrates Confluence functionality.

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Evaluator Resources

FishEye & Crucible Knowledge Base
Troubleshooting and support tips for FishEye & Crucible

FishEye 1.3
Documentation for FishEye 1.3

FishEye 1.4
Documentation for FishEye 1.4

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FishEye 1.5
Documentation for FishEye 1.5

FishEye 1.6
Documentation for FishEye 1.6

FishEye 2.0
Documentation for FishEye 2.0

FishEye 2.1
Documentation for FishEye 2.1

FishEye 2.2
Documentation for FishEye 2.2

FishEye 2.3
Documentation for FishEye 2.3

FishEye 2.4
Documentation for FishEye 2.4

FishEye 2.5
Documentation for FishEye 2.5

FishEye 2.6
Documentation for FishEye 2.6

FishEye 2.7
Documentation for FishEye 2.7

FishEye 2.8
Latest documentation for FishEye

Gadgets and Dashboards 1.0
Documentation for version 1.0.x of Atlassian Gadgets and Dashboards

Gadgets and Dashboards 2.0
Documentation for version 2.0.x of Atlassian Gadgets and Dashboards

Gadgets and Dashboards 3.0
Documentation for the latest version of Atlassian Gadgets and Dashboards

GreenHopper 3.8
Documentation archive for GreenHopper 3.8

GreenHopper 4.0
Documentation for GreenHopper 4.0

GreenHopper 4.1
Documentation for GreenHopper 4.1

GreenHopper 4.2
Documentation for GreenHopper 4.2.

GreenHopper 4.3
Documentation for GreenHopper 4.3

GreenHopper 4.4
Documentation for GreenHopper 4.4

GreenHopper 5.0

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Documentation for GreenHopper 5.0

GreenHopper 5.1
Documentation for GreenHopper 5.1

GreenHopper 5.10
Documentation for GreenHopper 5.10

GreenHopper 5.2
Documentation for GreenHopper 5.2

GreenHopper 5.3
Documentation for GreenHopper 5.3

GreenHopper 5.4
Documentation for GreenHopper 5.4

GreenHopper 5.5
Documentation for GreenHopper 5.5

GreenHopper 5.6
Documentation for GreenHopper 5.6.

GreenHopper 5.7
Documentation for GreenHopper 5.7.

GreenHopper 5.8
Documentation for GreenHopper 5.8.

GreenHopper 5.9
Documentation for GreenHopper 5.9

GreenHopper 6.0
Documentation for GreenHopper 6.0

GreenHopper Knowledge Base

Integrating with JIRA
Documentation for the latest version of the JIRA integration interface

JIRA 4.0
Documentation for JIRA 4.0

JIRA 4.1
Documentation for JIRA 4.1

JIRA 4.2
Documentation for JIRA 4.2

JIRA 4.3
Documentation for JIRA 4.3

JIRA 4.4
Documentation for JIRA 4.4

JIRA 5.0
Documentation for JIRA 5.0

JIRA 5.1
Documentation for JIRA 5.1

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JIRA Community Space

JIRA Download Evaluator Resources

JIRA Extensions

JIRA Hosted Evaluator Resources

JIRA Knowledge Base
Troubleshooting and support tips for Jira

JIRA Latest
Documentation for JIRA OnDemand and JIRA Early Access Program only

JIRA Studio
Documentation for the current version of JIRA Studio.

JIRA Studio Evaluator Resources

Security
Security documentation starting point

SMIG

SourceTree Knowledge Base

Stash 1.0
Documentation for Stash 1.0

Stash 1.1
Documentation for Stash 1.1

Stash 1.2
Documentation for the latest version of Stash

Stash Knowledge Base

Summit 2011 Speaker Guidelines

Summit 2012 Sponsorship
Learn about becoming a sponsor for Atlassian Summit 2012

Support
Atlassian's legendary support team's projects and policy.

Team Calendars
Documentation for Team Calendars for Confluence, where people, projects and content meet.

Test space

The Confluence Test Space
This is a space dedicated to testing and playing around with Confluence features. Everyone is invited to experiment.

Universal Plugin Manager 1.0
Documentation for the Universal Plugin Manager 1.0

Universal Plugin Manager 1.2
Documentation for the Universal Plugin Manager 1.2

Universal Plugin Manager 1.3

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Documentation for the Universal Plugin Manager 1.3

Universal Plugin Manager 1.4
Documentation for the Universal Plugin Manager 1.4

Universal Plugin Manager 1.5
Documentation for the Universal Plugin Manager 1.5

Universal Plugin Manager 1.6
Documentation for the latest version of the Universal Plugin Manager

Universal Plugin Manager 2.0 archive
Documentation for the Universal Plugin Manager 2.0

Universal Plugin Manager 2.X
Documentation for the latest version of the Universal Plugin Manager

Universities

User Group Sponsorship

Known Bugs

There is a known bug that occurs whenever you enable or disable a plugin in Confluence 1.4-DR2. The error will appear to be 'null', but the following will appear in the logfiles:

```
[ERROR]  Tue Jan 04 18:01:20 CST 2005
[com.atlassian.core.util.DateUtils]
java.util.MissingResourceException: Can't find resource for bundle
java.util.PropertyResourceBundle, key core.dateutils.minutes
```

This is issue CONF-2513 and will be fixed in the next DR.

Release Notes 1.4-DR1

Confluence 1.4-DR1 is the first development release in the cycle leading up to Confluence 1.4. On the surface, we have implemented one of Confluence's most requested features. Under the hood, there's a whole new event system to play with.

Who should upgrade?

Development releases are snapshots of the ongoing Confluence development process. We make them available for customers who are willing to risk an unpolished release in order to have early access to new features.

If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.3 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.2.3 or earlier, be sure to read the upgrade instructions in the Confluence 1.3 release notes.

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Downloads

All development releases are available from Development Releases on the Atlassian website.

New Features in Confluence 1.4-DR1

Consult JIRA for the full list of issues resolved for 1.4-DR1 (Note, this list doesn't include all the 1.3.1 fixes that were also merged into the development release)

Move Page Hierarchy

When you move a page between spaces, you now have the option to include all children of that page in the move. With 13 votes, this was one of Confluence's most requested features.

(Note, as of DR1, you can not both move a hierarchy of pages and rename the root page at the same time. This bug is filed as CONF-2452)

Attach Multiple Files

Another commonly requested feature, you can now attach multiple files to a page at once. By default, you can attach a maximum of five at a time, but this maximum is configurable.

GZip Content Encoding

Pages are served with GZip content encoding, which means less bandwidth consumption and faster page downloads.

Events and Listeners

We have implemented the beginnings of a pervasive system of events within Confluence.

By the final release of 1.4, all major actions within Confluence will trigger an event. These events can be listened for, and reacted to by a new plugin module type: "listener". This will allow Confluence to be further customised, as extensions can react to anything that happens within the system.

Creating an event listener plugin is insanely easy. Step one, implement this interface:

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```
package com.atlassian.confluence.event;

import com.atlassian.confluence.event.events.ConfluenceEvent;

/**
 * Defines a listener for Confluence events.
 */
public interface EventListener
{
    /**
     * Perform some action as a response to a Confluence event. The EventManager
will
     * ensure that this is only called if the class of the event matches one of
the
     * classes returned by getHandledEventClasses
     *
     * @param event some event triggered within Confluence
     */
    void handleEvent(ConfluenceEvent event);

    /**
     * Determine which event classes this listener is interested in.
     *
     * The EventManager performs rudimentary filtering of events by their class.
If
     * you want to receive only a subset of events passing through the system,
return
     * an array of the Classes you wish to listen for from this method.
     *
     * For the sake of efficiency, only exact class matches are performed.
Sub/superclassing
     * is not taken into account.
     *
     * Returning an empty array will allow you to receive every event.
     *
     * @return An array of the event classes that this event listener is
interested in,
     *         or an empty array if the listener should receive all events. Must
not
     *         return null.
     */
    Class[] getHandledEventClasses();
}
```

Step two: Package it as a plugin module with a descriptor like this:

```
<listener name="My Listener" key="mylistener"
         class="com.example.listeners.MyListener">
        <description>Listens for stuff.</description>
    </listener>
```

And that's about it. We'll be adding information about the events that are being produced in Confluence over the next couple of days (We would have had them documented today, but Nick, who wrote most of them, was sick).

Bugs Fixed

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All bugs that were fixed in Confluence 1.3.1 are also fixed in Confluence 1.4-DR1.

Release Notes 1.3-final

Confluence 1.3-final is the stable release of Confluence 1.3. Woohoo! We made it! The full release-notes for Confluence 1.3 are located here, this page documents only the changes made since the 1.3-DR4 development release.

1.3-final contains over 100 improvements over 1.3-DR4, mostly focused around fixing bugs, polishing the interface, and making Confluence ready for a stable release.

Who should upgrade?

Confluence 1.3 is the new stable release of Confluence. It contains a huge raft of enhancements and fixes made since 1.2.3. If you are running Confluence (and not using Oracle, see below), you should upgrade to Confluence 1.3. If you are not running Confluence, you should install 1.3 immediately, regardless of your database.

Current users of Confluence on **Oracle databases** users may wish to delay upgrading.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Note: You will need to rebuild the search index after you upgrade for certain features (including mail threading) to work properly.

New Features in Confluence 1.3-final

New Demonstration Content

As part of the DR4 setup improvements, users were given the option to install an example space, but the demonstration content that was loaded was pretty uninspiring. For the final release, the demonstration space now contains a suite of demonstration pages, examples of what Confluence can do, and a few pictures of the Sydney Opera House. This should make it much easier to get Confluence up and running quickly.

Referrer Performance Improvement

We discovered (from monitoring the http://confluence.atlassian.com site) that our recording of HTTP referrers was causing some serious performance problems for public Confluence sites. Upgrading to Confluence 1.3-final should make Confluence a lot more responsive, especially under heavy load.

Improved Notation Guide

The notation guide has been reorganised to be more user-focused, making it easier to find the markup or macro you are looking for.

It is also now possible for macro plugins to insert themselves into the notation guide. Just write your macro description as a two-column HTML table row, put it in a vm file, and include the following in your `atlassian-plugin.xml` file:

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```
<resource type="velocity" name="help" location="/path/to/your/helpfile.vm">
            <param name="help-section" value="tables"/>
        </resource>
```

The help section can be one of: texteffects, headings, breaks, links, lists, images, tables, advanced, confluence, external or miscellaneous. If you don't include a help section, it will be put in the 'macros' section.

Improved Search Indexing

We've updated the way we index content within Confluence. A lot of searches that came up empty before will now find something. In addition, you can now set your primary language for indexing under General Configuration, so that the indexer can better optimise itself for non-English content.

Also

- By popular demand (it was our most highly voted-for bug), pages are now exported in alphabetical order, not in order of creation.
- The Remote API can be accessed anonymously, if you wish (anonymous remote access must be turned on in the general configuration).
- When previewing a page, you can continue to edit on that screen, instead of having to go back to the edit page.
- The thread view on a mail page has been improved, and the full-thread view is no longer a pop-up.
- You no longer need to be in the `confluence-admin` group to access the administration pages, you just need global administrative privileges
- You can link to anything in Confluence if you know its ID in the database (currently this is how you must link to email): [$1234]
- You can link to anything relative to the root of the Confluence site (useful for pointing to parts of the site that can't otherwise be linked): [///pages/editpage.action?pageId=1234]
- New macros: {jiraportlet}, {note} {tip}, {information} and {warning}
- A lot more...

Issues Resolved for 1.3-final

In all, over 130 issues were resolved between DR4 and 1.3-final. Unfortunately, merging all the versions together in JIRA means the list of precisely what went into those 130 has been lost, but if you sort this list by last-modification date, you'll get some idea... Issues Resolved for 1.3

Release Notes 1.3-DR4

Confluence 1.3-DR4 is the fourth development release in the cycle leading up to Confluence 1.3. We're on the home stretch! The final, stable 1.3 isn't far away.

Confluence 1.3-DR4 includes a raft of improvements to mail archiving, a redesigned setup wizard, significant improvements to the way we back up and restore your system configuration, and a truck-load of bug fixes.

Who should upgrade?

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If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find in

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structions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Note: You will need to rebuild the search index after you upgrade for certain features (including mail threading) to work properly.

New Features in Confluence 1.3-DR4

Setup Improvements

Confluence's setup wizard was badly in need of an overhaul, so that's exactly what we've done. Among the improvements, we have:

- Improved the ordering of steps. For example, if you are importing straight from a backup, you no longer need a redundant administrative user.
- Added a quick, two-step setup process to get Confluence running straight away
- Made the database setup much more robust, and much better at reporting errors
- Removed those steps that weren't really necessary to get Confluence running

Hopefully this will make it a lot easier to get Confluence up and running, or show off Confluence to your friends and family.

Mail Archive Improvements

(CONF-2050)

We've been working hard to build on the basic mail-archiving features included in 1.3-DR3. Included in the new version are:

- Improved indexing of mail senders, message-ids and subjects
- Improved integration of mail with search
- The ability to delete mail (if you have been assigned the delete mail permission)
- Direct access to mail archives from the dashboard
- Display of mail attachments in the "view mail" page
- The ability to link to a single message by its internal Confluence ID ([\$1234] will link to message 1234)
- The ability to navigate forward and back through mails chronologically
- Email addresses are displayed or masked in accordance with your global preferences

We still have a few things to do (date based views, a calendar), but the mail archive is now very useable. Especially when you take into account...

Mail Threading

(CONF-2059)

Of course, it's important for your mail archive to be able to represent conversation threads. How you *present* thre ads, though, is just as important.

Here's how most mail-based web archives present your thread at the bottom of each message:

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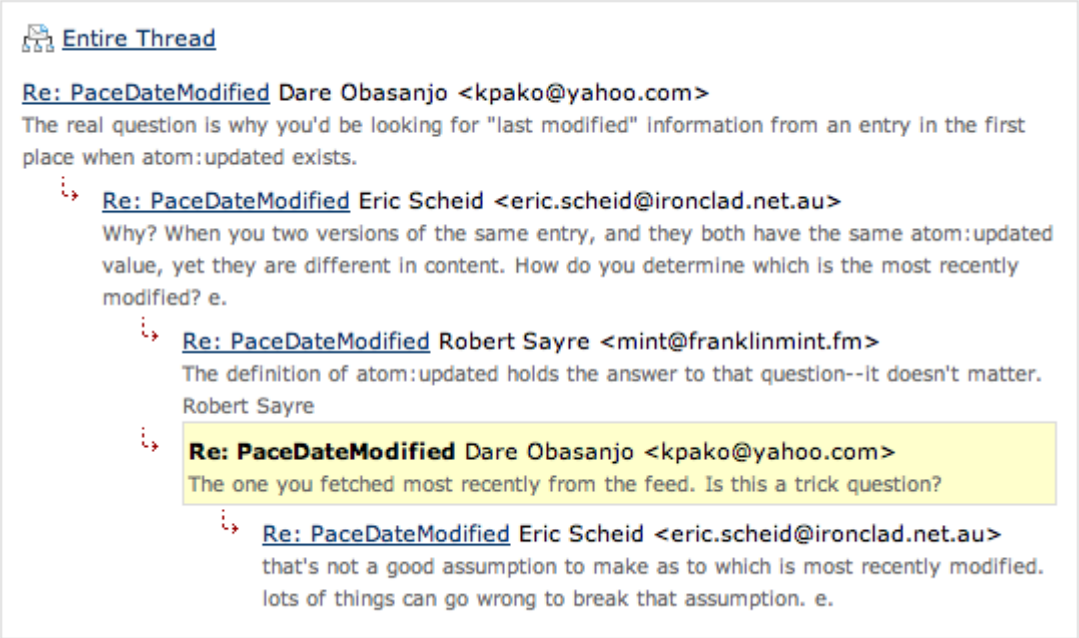
- **Follow-Ups:**
  - **RE: PaceDateModified**
    - *From:* Bob Wyman
- **References:**
  - **Re: PaceDateModified**
    - *From:* Tim Bray

Not very helpful, is it. Here's how that same bottom-of-the-message view looks in Confluence:



At a glance, you can see exactly where the message sits in a conversation.

Backup Improvements

(CONF-1090 and CONF-2046)

Confluence 1.3-DR4 contains two significant improvements to backing up and restoring the system.

- You can now **exclude attached files from your backups**. Of course, this means you have to back up your attachment directory separately, but if you already have a good backup regime for your filesystem (and can thus restore the attached files separately), it means that your Confluence data backups will take up far less room.
- We now **include important parts system configuration in your backups**. this means that colour-schemes and plugin preferences are now saved, and fixes a large number of issues that users have filed due to the restore process not bringing the system back up in the same state as when they saved it.

Library Upgrades

We have continued the process of upgrading to the most recent stable versions of those libraries Confluence is built on, which should result in improved stability and performance.

Bugs fixed for 1.3-DR4

We've also fixed a lot of bugs, as we ramp up for the stable 1.3 release. Take a look in JIRA for the full list.

Release Notes 1.3-DR3

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Confluence 1.3-DR3 is the third development release in the cycle leading up to Confluence 1.3 - and a momentous day in the history of Confluence.

We've finally made it to that special point in every applications life.

Confluence has evolved.

1.3-DR3 is best summed up by Jamie Zawinski's *Law of Software Envelopment*:

> *Every program attempts to expand until it can read mail. Those programs which cannot so expand are replaced by ones which can.*

That's right - Confluence now has *more content* than ever before. It reads, stores and indexes email. Oh, and as a nifty little bonus - it also indexes Word documents, PDF documents, RTF documents, Excel spreadsheets, PowerPoint files, text files, source files etc... *attached* to your mail!

Have we got your interest? How does all this magic happen you ask? Read on to pull back the curtain.

Who should upgrade?

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If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Note: Because we have made significant changes to permissions in 1.3-DR2, you should check that your user permissions have been correctly migrated. The upgrade manager should ensure permissions remain consistent between versions, but as with anything related to security, it's best to double-check.

New Features in Confluence 1.3-DR2

Mail Archiving

(CONF-1965)

Confluence is a collaboration tool. When communication happens through email instead of through Confluence, information will get lost in the depths of someone's mail folders, instead of shared with the team, archived, interlinked and indexed.

While we would love to see all collaboration within a group to happen through Confluence, it's often not possible to change the way people work. So instead of finding new ways to force people to use Confluence instead of email, why not route all the relevant email into Confluence?

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Location: Dashboard > BUGTRAQ > Mail Archive > MySQL Authentication Bypass

Subject: **MySQL Authentication Bypass**
From: NGSSoftware Insight Security Research
Date: Oct 22, 2004

```
NGSSoftware Insight Security Research Advisory

Name: MySQL Authentication Bypass / Buffer Overflow
Systems Affected: MySQL 4.1 prior to 4.1.3, and MySQL 5.0.
Severity: High
Vendor URL: http://www.mysql.com
Author: Chris Anley [ chris@ngssoftware.com ]
Date of Advisory: 1st July 2004
```

It is now possible to archive email within a Confluence space. The support for mail is only just getting started in DR3, but we believe this is an incredibly useful direction for Confluence to go, and will be expanding and improving the mail integration in future releases.

Confluence spaces can retrieve mail periodically from a POP mailbox (this will delete all mail from that POP account, so don't try it on an account you want to keep mail on), or space administrators can import mail directly from a standard mbox-format mail file.

Once mail is imported into Confluence, it can be browsed chronologically from the Content pane of the Space Summary page, and can be searched through Confluence's search interface.

In the future, we will be adding new ways to link to and between email (bringing the email closer to the other content of the wiki), proper representation of email threads, more flexible search, and much, much more.

Read the Mail Archiving FAQ for more information

Want to play with it now?

We love to play with features right now, so here's how you can:

- Testing mail search is a snap.
- Testing mailing content into Confluence is also easy. It will also be indexed.

Improved Indexing Performance

We now make much more efficient use of resources by batching updates to full-text search index. This should lead to improved performance for many tasks within Confluence, but will mean that it may take up to a minute for a change in the site to be reflected in the site's index. (CONF-2029

In addition, we have made a number of improvements to the indexing of large PDFs, including fixing some cases where a PDF might cause indexing to freeze indefinitely. (CONF-1953, CONF=1954)

Library Upgrades

Many of the librares Confluence is dependent on have been upgraded for this release, which should result in improved stability and performance.

Bugs fixed for 1.3-DR3

We've fixed a handful of issues specifically for 1.3-DR3, take a look in JIRA for the full list.

Release Notes 1.3-DR2

Confluence 1.3-DR2 is the second development release in the cycle leading up to Confluence 1.3. For DR2, we have made space-level permissions a lot more fine-grained, and added a new plugin manager which should

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open the way to making it easier for people to write extensions to Confluence:

Who should upgrade?

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If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

Note: Because we have made significant changes to permissions in 1.3-DR2, you should check that your user permissions have been correctly migrated. The upgrade manager should ensure permissions remain consistent between versions, but as with anything related to security, it's best to double-check.

New Features in Confluence 1.3-DR2

New Space-Level Permissions

(CONF-1375, CONF-1764 and their linked issues)

We've been getting a lot of requests for more fine-grained control over who can do what in a space, so as a result, we've added a whole raft of new permissions at the space level:

Object	Permissions
Page	create/edit, remove, export
Blog Post	create/edit, remove
Comment	create, remove
Attachment	create, remove
Space	export, administer

Create space permission is still managed at the global level.

The permissions editing screens have been changed a little, too, taking into consideration the feedback we

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received from the last DR. All editing functions are now firmly on the edit screen, and we have introduced a user-picker to avoid having to find users in a massive drop-down list.

New Plugin Architecture

(CONF-1877)

Confluence now incorporates the plugin architecture that was written for JIRA 3.0 (which in turn was adapted from Confluence's macro management. Who said code reuse was dead?). Right now, there's not much you can do with it, but plugins pave the way to making Confluence a great deal more flexible and extensible.

See: Writing Confluence Plugins

New Macro Descriptor Format

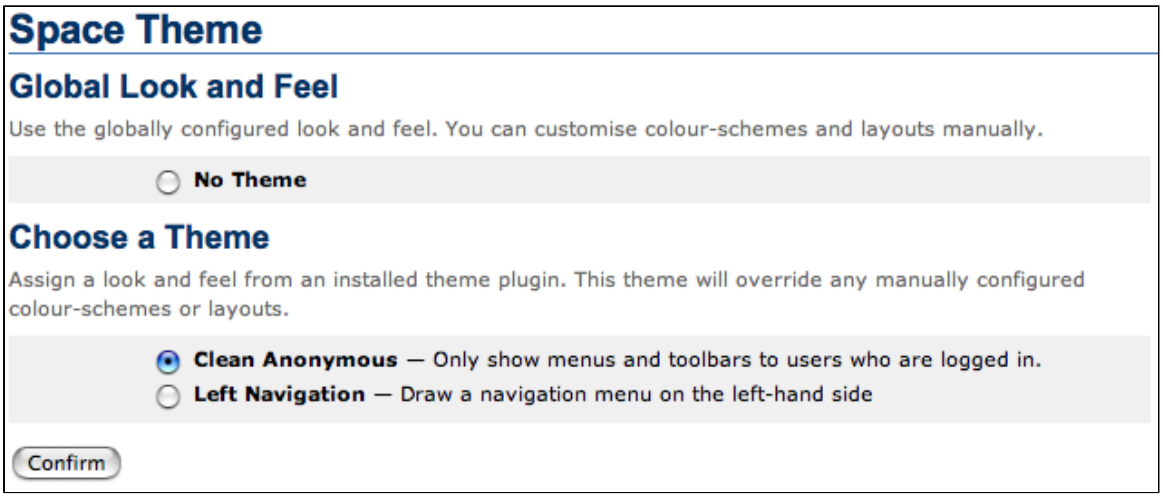
(CONF-1878)

Macro libraries are now implemented as plugins, which means that if you have written a macro library, you will need to convert your `macro-library.xml` files to `atlassian-plugin.xml` files.

Themes

(CONF-1856)

It is now possible to package a colour-scheme and a set of customised decorators into a portable Confluence plugin. Just drop the theme jar into your server's classpath, restart the server and space administrators will be able to select the theme from the space administration console.



DR-2 comes with two very simple themes (look under themes/ in your Confluence directory), but we will have more (and more useful) themes available by the time 1.3.0 is released. In addition, we're hoping that users will continue to share their Confluence modifications in the Confluence Extensions Space, and that themes will help you continue to share neat things you've done with Confluence.

Bugs fixed for 1.3-DR2

All the bug-fixes that were part of the Confluence 1.2.3 release have also been incorporated into 1.3-DR2. In addition, we've fixed a handful of issues specifically for 1.3-DR2, take a look in JIRA for the full list.

Release Notes 1.3-DR1

Confluence 1.3-DR1 is the first development release in the cycle leading up to Confluence 1.3. In it, we have rewritten the Space Summary/Space Administration pages to be more useable, adn implemented a much-requested feature: the ability to undelete pages.

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Who should upgrade?

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If you want to be running the most stable and most reliable version of Confluence, you should stick with the official, numbered releases.

Upgrade Procedure

Upgrading Confluence should be pretty easy. If you are upgrading from Confluence 1.2 or higher, you can find instructions here. *We strongly recommend that you backup your `confluence.home` directory and database before upgrading!*

If you are upgrading from Confluence 1.1.2 or earlier, be sure to read the upgrade instructions in the Confluence 1.2 release notes.

New Features in Confluence 1.3-DR1

Space Summary

The Space Summary page has been the dumping-ground for every space-related operation and report since Confluence's early alpha releases. As such, it had become confusing to navigate and hard to find anything on.

For 1.3-DR1, we have rewritten the space summary to be a suite of tabbed pages, making that whole area of Confluence easier to navigate, more self-explanatory, and much better-looking.

The Trash Can

When a page or blog post is deleted, it is no longer removed completely, but is placed in a space-wide trash can.

The trash can be found in the Administration tab of the newly rearranged Space Summary pages. Space Administrators can choose to restore pages from the trash, or purge them so they are unrecoverable.

New Emoticons

Just because.

Bug Fixes

All the bug-fixes that were part of the Confluence 1.2.2 release have also been incorporated into 1.3-DR1. In addition, we've fixed one or two issues specifically for 1.3-DR1, take a look in JIRA for the full list.

Troubleshooting Problems and Requesting Technical Support

This document tells you how to troubleshoot problems in Confluence and how to obtain technical support from Atlassian.

Troubleshooting a Problem

If you have a problem with Confluence, please follow the steps below.

To diagnose a problem and search for a solution:

1. If you are not a Confluence administrator, report your problem to the person in charge of your Confluence site and ask them to follow up on the issue.
2. Use the inbuilt log scanner (see below) to check your Confluence logs for errors and attempt to match

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them against known issues in our knowledge base and bug tracker.
3. Check our knowledge base for solutions to known issues.
4. Check our issue tracker for known bugs.
5. If your problem may be related to a plugin, you can enter plugin safe mode by temporarily disabling any third party plugins.
6. If you are having problems configuring a feature, please take a look at the appropriate guides:
    - Confluence Installation Guide
    - Confluence Setup Guide
    - Confluence Administrator's Guide
    - Configuring Confluence
    - Database Configuration
7. Check the following guides for troubleshooting specific problems:
    - Issues related to your database server: Known Issues For Supported Databases.
    - Issues related to your application server: Installing the Confluence EAR-WAR Edition.
    - Issues related to user management: Requesting Support for External User Management.
    - Issues related to performance: Requesting Performance Support.
8. If the above tools and documentation do not solve your problem, please create a support request and attach your support zip file. If you believe you have found a bug, you may wish to create a bug report instead. Instructions for both are given below.

On this page:

- Troubleshooting a Problem
- Scanning your Confluence Logs to Match Known Issues
- Raising a Support Request with a Plugin Author
- Raising a Support Request with Atlassian
    - Method 1: Using the Support Request Form via the Confluence Administration Console
    - Method 2 Raising a Support Request via the Internet
- Creating a Support Zip File via the Confluence Administration Console
- Logging a Bug Report

Scanning your Confluence Logs to Match Known Issues

Confluence provides an inbuilt log scanner that will check your Confluence logs for errors and attempt to match them against known issues in our knowledge base and bug tracker.

The log scanner is known as Hercules, or the Atlassian support bot. It uses a set of patterns that we have discovered in our knowledge base and issue tracker.

To use the Confluence log scanner:

1. Log in as a user with Confluence Administrator or System Administrator permissions.
2. Choose **Browse** > **Confluence Admin**.
3. Click '**Atlassian Support Tools**' under '**Administration**' in the left-hand panel.
4. Click the '**Log Scanner**' tab.
5. Click '**Scan**' to scan the Confluence log file in its default location, or change the location if necessary then click '**Scan**'.
6. The log scanner will return a list of links, pointing to articles in our knowledge base and/or bug reports in our issue tracker.
    - The latest-reported problems are displayed first. By default only the most recent 10 matches are displayed. If you have more than 10 matches and want to display all results, click the 'Show All' link that appears on the top of the results page.
    - Click a link to read the reported problem and possible solutions or workarounds.

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Screenshot above: The log scanner

Raising a Support Request with a Plugin Author

If you have a plugin-related issue, please check whether the plugin is supported by Atlassian or by the plugin developer.

- Visit the plugin's home page in the Atlassian Plugin Exchange.
- Check the '**Supported By**' entry under 'Plugin Details' on the right-hand side.
- If the plugin is not supported by Atlassian, you will need to contact the plugin author directly.

You can read more about Atlassian support for plugins.

Raising a Support Request with Atlassian

There are two ways to raise a support request with Atlassian:

- **Method 1:** *(Recommended)* Complete the support request form via your Confluence Administration Console, as described below. A possible problem with this method is that your mail may not be forwarded correctly, due to restrictions imposed by your mail server. For example, the zip of your log files might be too large for your mail server to forward.
- **Method 2:** Raise a support request via our support site on the Internet, as described below. Create a support zip file via your Confluence Administration Console, as described below, and attach the zip file to the support request.

Method 1: Using the Support Request Form via the Confluence Administration Console

The advantage of this method is that it is convenient. The disadvantage is that your mail may not be forwarded correctly due to a problem (for example, the zip file is too large) or due to a security restriction on your mail server.

You can also use this method to append system information to an existing support request.

To submit a support request via the Confluence Administration Console:

1. Log in as a user with Confluence Administrator or System Administrator permissions.
2. Choose **Browse** > **Confluence Admin**.
3. Make sure that SMTP email is set up on your Confluence site and your mail server allows zip files.
4. Click '**Atlassian Support Tools**' under '**Administration**' in the left-hand panel.
5. Click the '**Support Request**' tab.
6. Provide as much information as possible, following these guidelines:
    - '**Contact Email**' – This will default to the email address of the logged-in user.
      Note: This email address will be used to find your support account on the Atlassian Support

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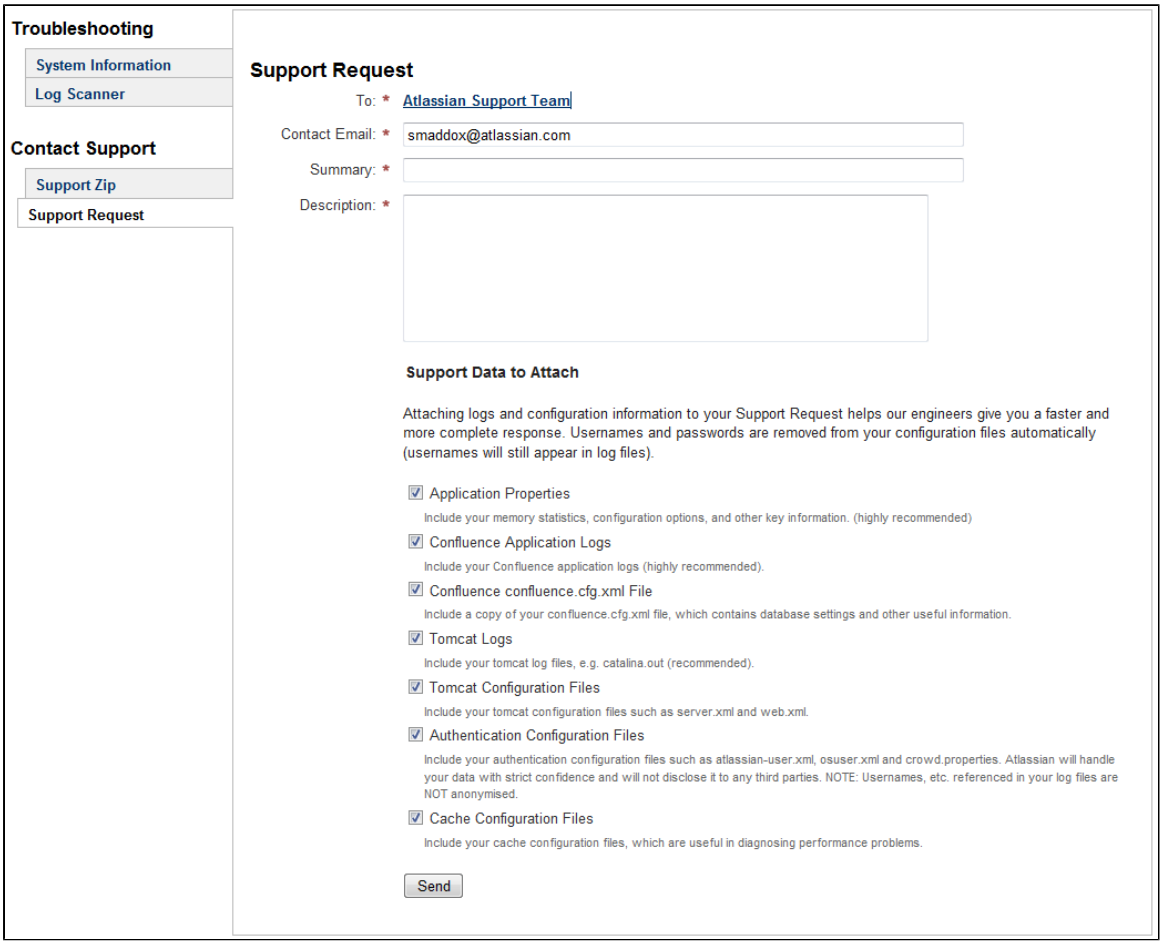
System. If no matching account is found, a new account will be created. Confluence will also send all further notifications and updates to this address.
- '**Summary**' – Enter a short and meaningful description of the problem.
- '**Description**' – Enter as much information as possible, including any error messages that are appearing and any steps the support team can take to reproduce the problem.

7. In the section titled '**Support Data to Attach**', select the types of additional information you would like to be included in a zip file that will be attached to your support request.
8. Click the '**Send**' button.
9. Confluence will submit your request via email to the Atlassian support site. If you do not already have a support account, Confluence will automatically request one for you. The submitted request will include all the system and environment information which you see on the support request form. It will also include a zipped copy of your Confluence log file. Refer to Working with Confluence Logs for information about the log files.
   Log files can be very big. It is possible that your email server may bounce the message if it is too large. With the default log4j configuration, the log file could be up to 20Mb in size. If you have customised the log settings, the maximum size could be even larger. Please check whether the email message has been successfully sent, and consult your email administrator if you need special provisions for this email message.
10. Once you have submitted your support request, you will receive email updates about its progress. These emails will give you the support request number.

You can view the status of your support request and add any additional information required by visiting the Atlassian Support System at any time.



Screenshot above: The support request form on the Confluence Administration Console

Method 2 Raising a Support Request via the Internet

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If your Confluence instance is not configured with SMTP mail or your Confluence instance is not running, you can raise a support request via the Atlassian Support System on the Internet.

To raise a support request via the Internet:

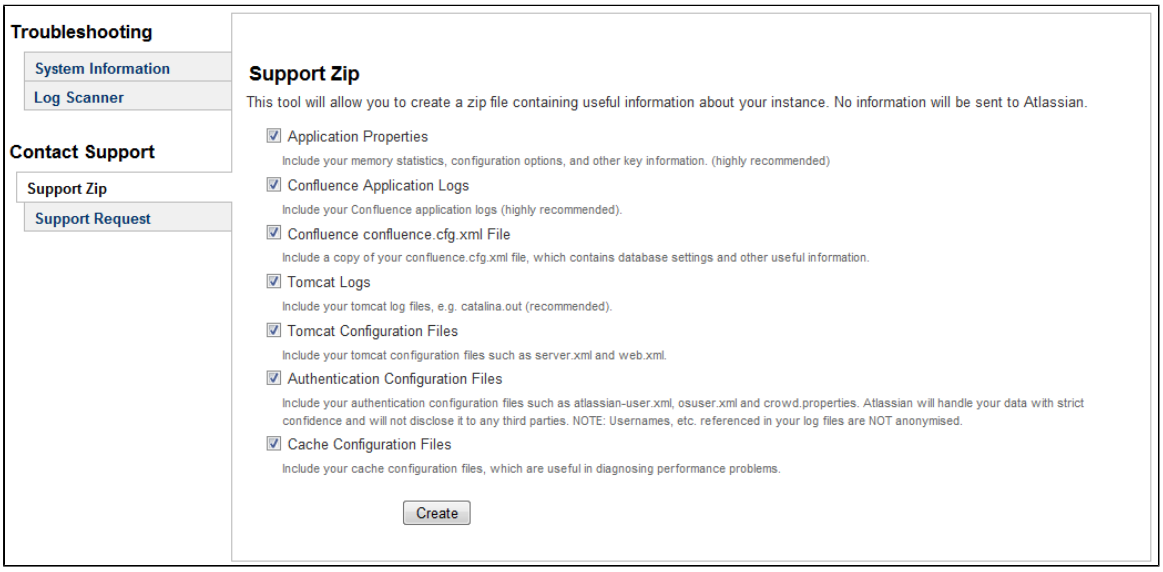
1. If you do not already have a free Atlassian support account, create one here.
2. Log in to https://support.atlassian.com and select '**Create New Issue**'.
3. Lodge a detailed description of your problem in the new support request.
4. Fill in all applicable information about your system, such as application server, database, etc.
5. If Confluence is running, go to the '**System Information**' screen in your **Administration Console** and copy the text of your system information into the request.
6. Create a support zip file, as described below to attach to the request. If your instance does not start up, refer to Working with Confluence Logs for information about the log files.
7. If your problem concerns user management or performance, please take a look at the additional requirements in Requesting Support for External User Management or Requesting Performance Support.
8. Once your request is lodged, wait to be notified by email of updates.

Creating a Support Zip File via the Confluence Administration Console

We recommend that you attach a support zip file to every interaction with the Atlassian support team. You can use this method to append system information to an existing support request. The tool described below will also dump your system information to the logs before zipping them.

To create a support zip file via the Confluence Administration Console:

1. Log in as a user with System Administrator or Confluence Administrator permissions.
2. Go to the **Administration Console** and click '**Atlassian Support Tools**' under '**Administration**' in the left-hand panel. Click '**Support Zip**'. Ensure that everything is checked, then click the '**Create**' button.
3. Confluence will create the support zip file and display its location on the screen. Log in to the Confluence server to retrieve the file.
4. Attach the zip file to the support case you raised on our support system, as described above.



Screenshot above: Creating a support zip file

Logging a Bug Report

If you have found a bug, the easiest way to report it is to:

- Create numbered instructions on how to reproduce the bug.

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- Log it as a support request, as described above.
- The Atlassian support team will confirm your bug and lodge a bug report.

Alternatively, you can check to see if anyone else has reported the bug, then log a bug report yourself.

To log a bug report:

1. Go to the Confluence issue tracker.
2. Type keywords for your problem into the search box on the left under '**Query**'.
3. Click '**Search**' to find any existing bug reports that match your problem.
4. Read through the summaries of the bugs shown. If any summary describes your problem, you may wish to set a watch to be notified of updates.
5. If there are no existing bug reports that match your problem, log the new bug in the issue tracker. Include information on how to duplicate the problem.
6. Sometimes it may be useful to include the result of the 500 error page, which you will find at this location:

```
https://<domain><host>:<port>/500page.jsp
```

7. Once your issue is lodged, wait to be notified by email of updates.

RELATED TOPICS

- Requesting Support for External User Management
- Requesting Performance Support
- Confluence Knowledge Base

- Content Anonymiser for Data Backups
- Enabling Detailed SQL Logging
- Generating a Heap Dump
- Generating a Thread Dump
- Getting Java Crash Log File
- Profiling using the YourKit Plugin

Administrators Guide Home Confluence Documentation Home

Content Anonymiser for Data Backups

Atlassian may request a copy of the `entities.xml` file from a customer's exported zip file (backup file), in order to diagnose database corruption or to find a bug in Confluence.

If your data is confidential, you can run an anonymiser program over your `entities.xml` file to remove all your data and leaving only the structure of the export.

Usage

To run the Content Anonymiser on your backup file:

1. Download the anonymiser JAR (attached to this page).
2. Extract the `entities.xml` file from your zipped backup file to the same directory as the JAR.
3. Use the command prompt to go to the directory where all three files are located.
4. To create `cleaned.xml`, run the command

```
java -jar confluence-export-cleaner-1.1-jar-with-dependencies.jar
entities.xml cleaned.xml
```

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5. Re-ZIP `cleaned.xml` with its `exportDescriptor.properties` to ensure we (eg. Atlassian Support) knows exactly which version of Confluence does the XML backup exported from.

How it works

The Content Anonymiser program replaces all the text content in file `entities.xml` with 'x' characters. For example, the word "Atlassian" will be transformed to "xxxxxxxxx". The resulting `cleaned.xml` file is expected to have the same size as the original file.

This release of the Content Anonymiser uses STX, a fast and efficient XML transformation technology. It should not require a lot of memory to run, even for a large backup.

Development

For Atlassian developers:

- Source code.
- Maven repository.

Enabling Detailed SQL Logging

Confluence uses the open source persistence framework Hibernate. This page tells you how to configure Confluence's logging to report individual SQL requests that are sent to the database by Hibernate. It is useful for troubleshooting the following events:

- XML site backups that fail to import.
- Exceptions caused by an illegal database operation.

> **Enable SQL logging via the Administration Console**
>
> Since the 2.7 release, you can also enable SQL logging at runtime via the Administration Console — read the instructions. This runtime option does not allow you to enable logging of SQL parameter values.

To enable detailed SQL logging in Confluence, you need to modify `log4j.properties`, located in `confluence/WEB-INF/classes`.

After you have enabled hibernate logging, please replicate the action that is causing the error in the first place. This is the best way to ensure that the Confluence log file contains relevant SQL logging.

> If you require support assistance with a database related problem, it is advisable to enable detailed SQL logging **before** sending us the log files. This will assist us in determining what SQL queries were running during the reported problem.

If the entries mentioned below are not defined in the `log4j.properties file`, you can manually add the entries to the file in the 'Hibernate Logging' section.

To Log SQL Queries

Stop Confluence, then change the following lines in `log4j.properties` from `ERROR` to `DEBUG`:

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```
## log hibernate prepared statements/SQL queries (equivalent to setting
'hibernate.show_sql' to 'true')
## DEBUG, TRACE or ALL is required to see query strings
log4j.logger.net.sf.hibernate.SQL=DEBUG
```

To Log SQL Queries with Parameters

1. Stop Confluence
2. Uncomment the following lines in `log4j.properties`:

```
## log hibernate prepared statement parameter values. Note: due to
caching in net.sf.hibernate.type.NullableType, requires restart to
take effect
## TRACE or ALL is required to see parameter values
## Note that log4j.appender.confluencelog.Threshold (or other
appenders) also must be TRACE or ALL to see any trace messages in
the logs
log4j.logger.net.sf.hibernate.type=TRACE
```

3. Change the following lines in `log4j.properties` from `DEBUG` to `TRACE`:

```
log4j.appender.confluencelog.Threshold=TRACE
```

4. Restart Confluence

This needs to be done along with the changes to log SQL queries above (whether by the UI or by modifying the properties file).

To Disable Batched Updates for Simpler Debugging

Stop Confluence, then edit `databaseSubsystemContext.xml`:

- In Confluence 2.5.x and earlier, the `databaseSubsystemContext.xml` file is at `confluence/WEB-INF/classes/databaseSubsystemContext.xml`
- From Confluence 2.6.x, the `databaseSubsystemContext.xml` file is available in the `confluence-2.6.0.jar` file located in the <confluence-install>/WEB-INF/lib directory.

Uncomment the `<prop>` line in the following location:

```
<!-- it can be useful to disable batching during debugging, as HSQLDB
doesn't report the exact statement which fails in batch mode -->
<prop key="hibernate.jdbc.batch_size">0</prop>
```

RELATED TOPICS

Troubleshooting SQL exceptions
Working with Confluence Logs

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Generating a Heap Dump

Sometimes you may see that Confluence is holding onto a chunk of memory over a period of time (for example, tenured space is increasing close to Xmx). In such a situation, it is useful to find out what is stacking up in the memory by analysing the heap dump.

On this page:

- Automatically Generating a Heap Dump when Confluence Hits OutOfMemory Error
- Manually Generating a Heap Dump when Confluence Stops Responding
- Submitting a Heap Dump to Atlassian Support

> **Tips when getting a heap dump**
>
> If you have a large Xmx size, please limit your Xmx size to 1024m. This will help to keep Confluence heap dump smaller while still containing sufficient information to analyse it.

Automatically Generating a Heap Dump when Confluence Hits OutOfMemory Error

Typically, we would like to analyse the heap dump produced when Confluence died from an OutOfMemory Error. For this, you can add additional JVM parameters like below:

```
-XX:+HeapDumpOnOutOfMemoryError -XX:HeapDumpPath=<path to this heap dump file>
```

If you do not set the HeapDumpPath parameter, by default the heap dump will be saved in the folder where Tomcat is run from.

If you are setting these parameters in the Windows registry (when running Confluence on Windows as a service), be sure that each parameter is on its own line.

Manually Generating a Heap Dump when Confluence Stops Responding

It is also possible to get a heap dump manually using a JDK bundled tool called jmap, although we recommend that you use the automatic method above for best result.

For Linux/Solaris-based Operating Systems:
Please execute the following command on Linux OS:

```
$JAVA_HOME/bin/jmap -dump:format=b,file=heap.bin <pid>
```

For Windows:
Please find your Confluence process ID (see below) and then execute the command below on a Windows command line:

```
%JAVA_HOME%\bin\jmap -dump:format=b,file=heap.bin <pid>
```

To find out the process ID for your Java process in Windows, you can use Process Explorer from Microsoft. This is what it looks like:

Using Process Explorer to find your Tomcat process ID

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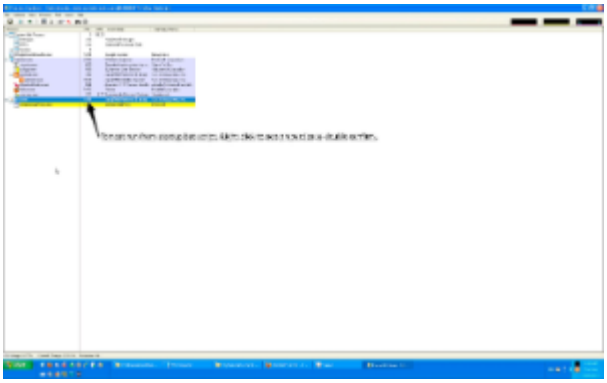
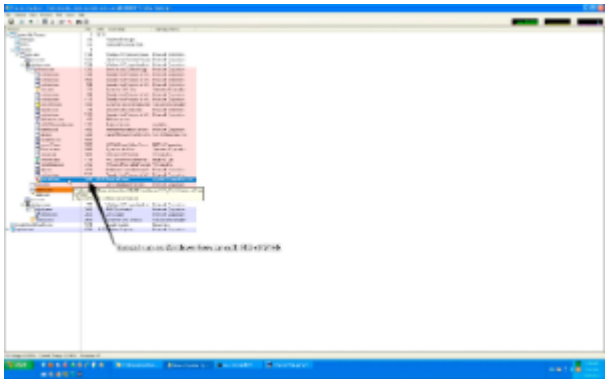


Tomcat run from startup.bat script



Tomcat run as Windows Service

Submitting a Heap Dump to Atlassian Support

Please zip the file and then send it to Atlassian Support.

RELATED TOPICS

Getting Java Crash Log File
Memory usage and requirements
Garbage Collector Performance Issues
Generating a Thread Dump
How to Fix Out of Memory Errors by Increasing Available Memory

Generating a Thread Dump

- Stack Traces and Security
- Method 1: Generating a Thread Dump Externally
- Method 2: Generating a Thread Dump via the Administration Console

If Confluence is performing poorly, behaving unexpectedly or stops responding and you can generate a thread dump to help diagnose the cause of the problem. Furthermore, if you wish to contact Atlassian Support for assistance about it, you should include a thread dump in your support enquiry to help the Support team determine the cause of the problem.

A thread dump will show the state of each thread in the JVM, including a stack trace. Thread dumps are only useful if they are taken at the appropriate time. They normally need to be taken at or close to the time when the application is experiencing problems.
Information about what locks are being held and waited upon by a thread are not produced by Confluence's Thread Dump tool. If you require this information, then generate a thread dump externally.

Stack Traces and Security

To help debug support cases and provide legendary support, Confluence provides stack traces through the web interface when an error occurs. These stack traces include information about what Confluence was doing at the time, and some information about your deployment server.

Only non-personal information is supplied such as operating system and version and Java version. With proper network security, this is not enough information to be considered dangerous. No usernames or passwords are included.

Method 1: Generating a Thread Dump Externally

If Confluence stops responding or you require information on locks being held and waited upon by threads, then use one of methods described in Generating a Thread Dump Externally.

Atlassian support may ask you to use this method if a thread dump generated using method 2 does not include

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enough information to diagnose the problem.

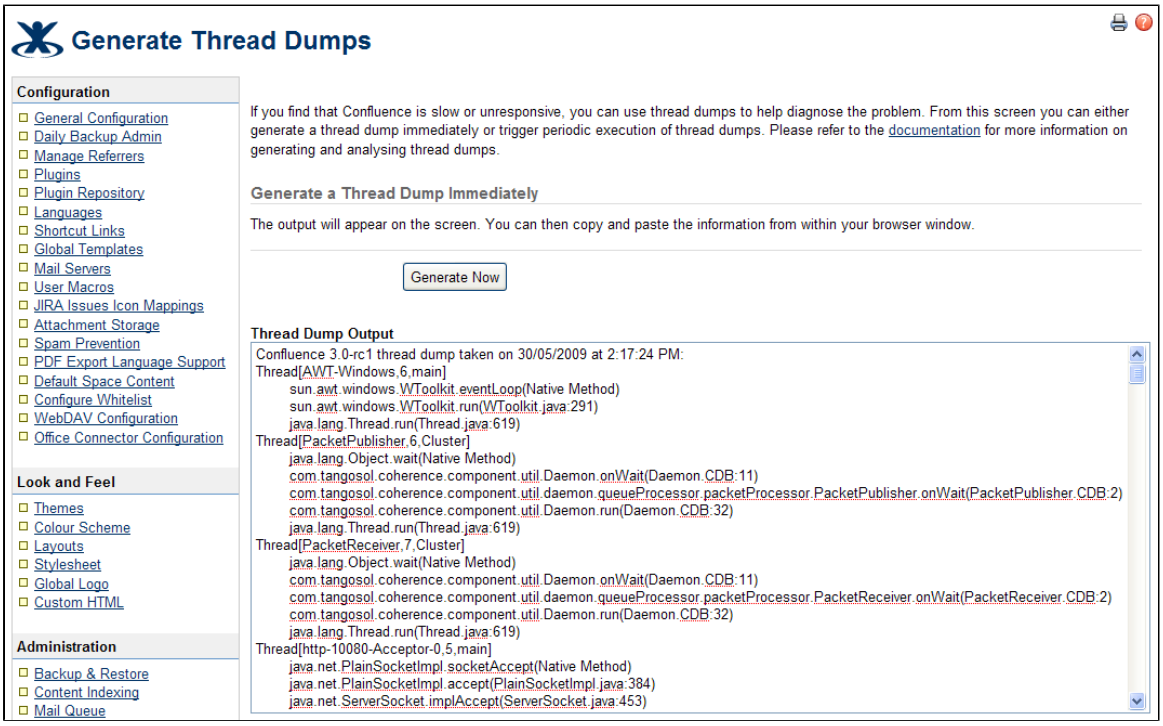
Method 2: Generating a Thread Dump via the Administration Console

> **For Confluence 2.10.3 or below**
>
> This feature was introduced in Confluence 3.0. if you are using a prior version then please consult this documentation on Generating a Thread Dump Externally.

To generate a Thread Dump from the Administration Console,

1. Choose **Browse** > **Confluence Admin**.
2. Select '**Thread Dump**' in the left-hand panel.
3. Click the '**Generate Now**' button in the centre of the page. The output is displayed in a new text box that appears just below the button.
4. Copy the contents of the thread dump in the text box and save it to a text file.

Screenshot: Example of a generated thread dump from the Confluence administration console



Scheduling Thread Dumps via the Administration Console

If you were asked by Atlassian Technical Support to generate regular thread dumps, please set the Thread Dump Scheduler to take 2 to 3 thread dumps with a 30 seconds time interval in between so the Support team can observe any important patterns that may assist with the diagnosis of the problem. Attach the log file to the support ticket.

Example: Scheduling thread dumps from the Confluence administration console

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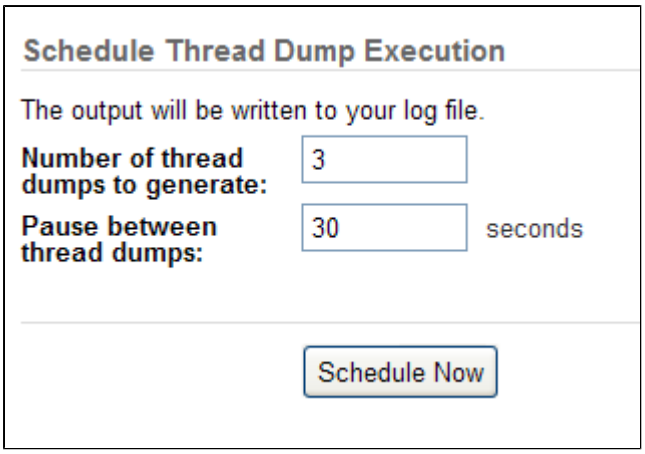

Generating a Thread Dump Externally

If Confluence stops responding and you cannot access its integrated Generate Thread Dump feature, it is possible to create thread dumps outside the application. External thread dumps are also useful if you require information on locks being held or waited upon by threads.

> **Take Multiple Thread Dumps**
>
> Typically you'll want to take several dumps about 10 seconds apart, in which case you can generate several dumps and output the stack traces to a single file as follows:

Generating a Thread Dump on Linux, including Solaris and other Unixes

1. Identify the **java** process that Confluence is running in.: This can be achieved by running a command similar to:

```
ps -ef | grep java.
```

2. Find the process ID of the JVM and use the **ps** command to get list of all processes:

```
kill -3 <pid>
```

> This will not kill your server (so long as you included the "-3" option, no space in between).

The thread dump will be printed to Confluence's standard output (catalina.out).

Generating Thread Dumps on Windows

From the console

If you are running Confluence through a console, rather than as a service, you can click on the console and press `<CTRL>+BREAK`

Using jstack

The JDK ships with a tool named jstack for generating thread dumps.

1. Identify the process. Launch the task manager by, pressing `Ctrl + Shift + Esc` and find the Process ID of the Java (Confluence) process. You may need to add the PID column using `View` -> `Select`

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```
Columns ...
```

2. Run jstack <pid> to Capture a Single Thread Dump. This command will take one thread dump of the process id <pid>, in this case the pid is 22668:

```
adam@track:~$ jstack -l 22668 > threaddump.txt
```

This will output a file called threaddump.txt to your current directory.

> Common issues with jstack:
>
> - You must run jstack as the same user that is running Confluence
> - If the jstack executable is not in your $PATH, then please look for it in your <JDK_HOME>/bin directory
> - If you receive `java.lang.NoClassDefFoundError: sun/tools/jstack/JStack` check that tools.jar is present in your JDK's lib directory. If it is not, download a full version of the JDK.

Output

Standard logging for Confluence Stand-alone is sent to the atlassian-confluence.log, in the confluence-home directory, not in the confluence-install directory. Thread dumps are an exception since they dump the threads of the entire application server - they'll appear in the catalina.out file in the application directory's logs folder. You can search for the term "thread dump" in the log file for the beginning of the dump. Submit this along with the atlassian-confluence.log in your support ticket.

Thread Dump Analysis Tools

- Samurai
- Thread Dump Analyzer TDA TDA 1.0 Final can be obtained from the `java.net`

Getting Java Crash Log File

If you discovered that Confluence died without manual intervention, there may be something goes wrong during a local Java session. Java will produce a log file that looks like the following: `hs_err_pid20929.log`.

The location of this log file is usually in the directory where Tomcat is run eg. `/bin` folder. For Windows Services, it should be located in where Windows Services are run, eg. `c:\Windows\System32` if you are on 32 bit.

Useful VM Option

If using Java 6, it's possible to define the path to the `hs_err_pid` file.

Add the following JVM Parameter to your existing ones:

```
-XX:ErrorFile=./hs_err_pid<pid>.log
```

RELEVANT TOPICS

Generating a Heap Dump
Java Crashes

Profiling using the YourKit Plugin

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There is a plugin for Confluence 2.2 and later which allows easy profiling using the YourKit profiler. No license is required to generate a memory or CPU snapshot, but you will need at least an evaluation license to analyse the results.

On this page:

- Configuring YourKit in your JVM
  - Windows Configuration
  - Linux/Mac OS X Configuration
- Performance Impact
- Installing the YourKit Plugin
- Why would I do this?
- Plugin Source Code

Configuring YourKit in your JVM

Download YourKit 6.0 for your platform and follow the installation instructions to install it.
⚠️ Note: YourKit version 7 is not compatible with the Confluence yourkit plugin.

The following instructions apply to Confluence and Tomcat installations with the Oracle (previously Sun) JDK. They should be easily applicable to other application servers and JVMs, however. The YourKit documentation covers this in more detail.

Windows Configuration

On Windows, add to your PATH environment variable the `bin/win32/` directory underneath the YourKit installation directory. For example, you might add "C:\Program Files\YourKit Java Profiler 6.0.12\bin\win32" to your PATH, via Control Panel, System, Advanced, Environment Variables.

To configure Confluence's JVM to use the YourKit agent, you need to add a parameter to JAVA_OPTS in the `bin/setenv.bat` file in your Confluence application directory. This file controls the startup parameters for Tomcat, so you'll need to restart it after making the changes.

Add the 'agentlib' parameter to the end like this:

```
set JAVA_OPTS=%JAVA_OPTS% -Xms128m -Xmx256m -agentlib:yjpagent
```

Linux/Mac OS X Configuration

On Unix-based systems, include the installation directory in the library path environment variable, as shown below:

- For the Mac: `export DYLD_LIBRARY_PATH=$DYLD_LIBRARY_PATH:/path/to/yourKitAgent`
- For other Unix-based systems: `export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/path/to/yourKitAgent`

In general, to configure the JDK, you add the `agentlib` parameter:

```
java -agentlib:yjpagent ...
```

You can add this to Tomcat's `bin/setenv.sh` like this:

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```
JAVA_OPTS="-Xms128m -Xmx256m $JAVA_OPTS -Djava.awt.headless=true
-agentlib:yjpagent "
```

Performance Impact

Running YourKit can have detrimental effects on performance.

To minimize performance problems use the following modifications to the agentlib parameter:

```
-agentlib:yjpagent=disablecounts,disablealloc,disablej2ee
```

See also Profiling overhead: how to reduce or avoid in the YourKit documentation.

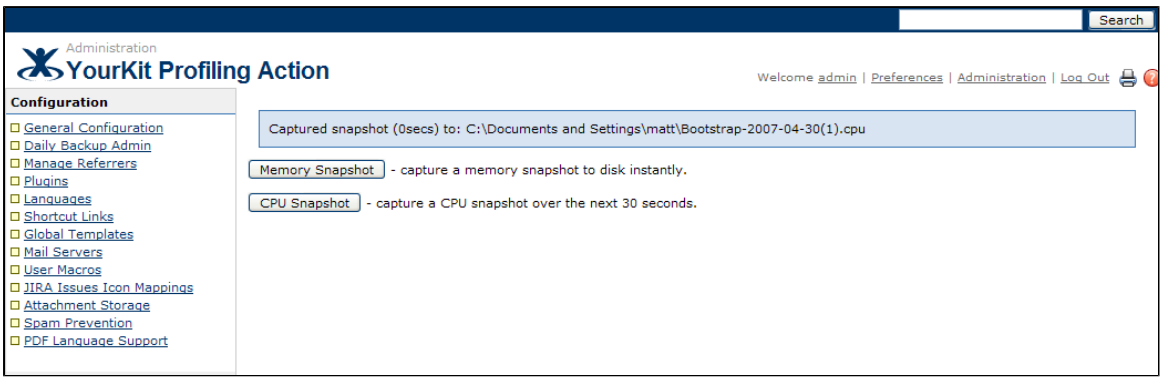
Installing the YourKit Plugin

Download the plugin and upload it into Confluence through the Administration, Plugins page.

A new menu option will appear under the 'Administration' heading. Click it and you should see the options to take a memory or CPU snapshot.

Screenshot above: YourKit Profiling menu item

This profiler dump will be saved to a local temp directory, and the path shown once it is complete. For the CPU snapshot, this will take at least 30 seconds. For the memory snapshot, 10-15 seconds.



Screenshot above: You can take either a memory or CPU snapshot

Why would I do this?

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Analysing a profiler dump enables Atlassian Support (or you, if you are interested) to see exactly what is happening in your application: what classes are using the memory, what is using CPU and so on. This can help us debug tricky performance problems which would otherwise be impossible to analyse remotely.

Take a CPU snapshot if:

- Confluence is sometimes unresponsive
- Pages take a long time to load
- Confluence's CPU usage is peaking.

Take a memory snapshot if:

- Confluence's memory usage is higher than you expect
- You are getting OutOfMemoryError's in your logs.

If you run into situations where Confluence is unresponsive and you are not able to trigger a memory snapshot, please ensure that you start Confluence with the `onexit=memory` parameter in the JVM options (as in the example below) and simply shut down Confluence. Before shutting down a memory snapshot will be created.

```
-agentlib:yjpagent=onexit=memory
```

Plugin Source Code

The source code for this Confluence plugin is available from Subversion and browseable in Fisheye. The JAR produced by 'mvn package' includes a copy of the YJP redistributable bundled in META-INF/lib/.

Confluence Resources

Resources for evaluators

- Trying Confluence on a demonstration site
- Free trial
- Feature tour

Resources for administrators

- Confluence knowledge base
- Guide to installing an Atlassian integrated suite
- The big list of Atlassian gadgets

Resources for developers

- Atlassian Developers site
- Developer topics on Atlassian Answers

Downloadable documentation

- Confluence documentation in PDF, HTML and XML formats
- Setting up local online Confluence documentation

Plugins

- Documentation for the Confluence SharePoint Connector
- Atlassian Plugin Exchange

Support

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- Atlassian Support
- Support policies

Training

- Atlassian training

Answers

- Confluence at Atlassian Answers

Mailing lists

- Visit http://my.atlassian.com to sign up for mailing lists relating to Atlassian products, such as technical alerts, product announcements and developer updates.

Feature requests and bug reports

- Issue tracker for Confluence

Trying Confluence in a Demonstration Site or Demo Space

Atlassian have set up a demonstration Confluence site called the Confluence Sandbox so that you can try out Confluence for yourself.

The Confluence Sandbox has been configured so that anyone can create or edit pages within it. When using it, you should keep the following in mind:

- This server may not be running exactly the same version of Confluence as is available for purchase. While we try to keep the two in sync, there may be differences between the Confluence Sandbox and the downloadable version of Confluence. The version that the Confluence Sandbox is running can be found at the bottom of each page.
- Because the Confluence Sandbox is open for anyone to edit, Atlassian cannot be responsible for the content on it. Do not rely on anything you read in the sandbox.
- The contents of the Confluence Sandbox may be edited or deleted at any time. Atlassian will restore the Confluence Sandbox from backup periodically (usually every night), deleting everything that visitors have been added to it.
- The Confluence Sandbox contains a demonstration space with a tutorial and some sample content.

For a full demonstration of Confluence, including its administrative features, you should download and install an evaluation version of Confluence instead.

- Get an evaluation version from our download site.
- Once you have set up your evaluation installation, you will see a **demonstration space** (with a space key of 'DS') in your Confluence site. This is your own version of the demo space, including a tutorial and some sample content.
- If you have any questions, contact us and we will be happy to answer them.

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Screenshot above: The demonstration space. (Click the image to expand it.)

RELATED TOPICS

Confluence Resources
Confluence User's Guide

Confluence Tutorial Videos

This page contains videos giving tutorials on some of the Confluence functionality. The videos are intended to supplement, not replace, the online Confluence documentation.

Videos and Confluence version number

The Confluence tutorial videos below are all recorded in Confluence 4.x. While there are commonalities between different versions of Confluence, you may find that the example scenarios in the tutorials differ from your Confluence site.

Watch a full product demonstration of Confluence on Atlassian's website

On this page:

- Confluence Overview
  - Content Structure
  - Space Directory
- Editor Features
  - Autocomplete for Links, Media, and Macros
  - Autoconvert for Pasted Links
  - Autoformatting of Wiki Markup
  - Drag and Drop File Sharing
  - How to Build a Kick Ass Confluence Wiki Page in 10 minutes
  - Inserting Links
  - Image Effects
  - Table and Image Editing
  - Using Macros
  - Autosave and Versioning
  - Commenting
- Sharing and Notifications
  - Share Button
  - Watch Content
  - Build a Network
- Search
  - Quick Navigation
  - Advanced Search
- Permissions
  - Global
  - Space
  - Page
- JIRA Integration
- Administration
  - Managing Groups
  - Installing Plugins

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- Importing and Exporting Content

Confluence Overview

Content Structure

Space Directory

Editor Features

Autocomplete for Links, Media, and Macros

Autoconvert for Pasted Links

Autoformatting of Wiki Markup

Drag and Drop File Sharing

How to Build a Kick Ass Confluence Wiki Page in 10 minutes

Inserting Links

Image Effects

Table and Image Editing

Using Macros

Autosave and Versioning

Commenting

Sharing and Notifications

Share Button

Watch Content

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Build a Network

Search

Quick Navigation

Advanced Search

Permissions

Global

Space

Page

JIRA Integration

Administration

Managing Groups

Installing Plugins

Importing and Exporting Content

Local Confluence Documentation

This page tells you how to set up a copy of the Confluence documentation on your own local Confluence site.

On this page:

- Reasons for Setting up your own Local Documentation
- Setting up your Local Online Documentation
  - Additional Documentation Spaces Required
- Redirecting Confluence's Help Links to your Local Documentation
  - Changing the Base URL for your Help Links
  - Changing the Links for Individual Help Pages
  - Example of the Help Property File
  - Example of a Help Link
  - More Notes about Help Links

Reasons for Setting up your own Local Documentation

You may wish to run the documentation locally. In addition, you may want to point Confluence's links at your

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local documentation.

- If you are working in an environment without an internet connection, you will need a local copy of the documentation.
- If you have customised Confluence, you may wish to update the documentation to reflect your changes.
- You may want to change the look and feel of the documentation to integrate into your company's intranet.
- Confluence's interface contains links to help pages in the online documentation on confluence.atlassian.com. You may wish to point these help links to a different destination. Possible reasons include:
  - You want to point the help links to a destination behind your firewall.
  - You may want to link to a translated version of the documentation.

Setting up your Local Online Documentation

To set up your own Confluence site with a copy of our Confluence documentation:

1. Install Atlassian Confluence, if you have not already installed it. (If you do not already have Confluence, ask for a free evaluation license or a starter license. You can use 'Anonymous' access to allow your users to view the documentation.)
2. Download the XML source code for the Confluence documentation. Note that the Confluence version of the XML source needs to be the same major Confluence version as your local Confluence site. For example, if the Confluence version in the XML is 3.0, you can import it into a Confluence site running version 3.0, 3.0.1 or 3.0.2. But you cannot import it into Confluence 2.9 nor into Confluence 3.1.
3. Import the XML file into your Confluence site. This will create a new space with key 'DOC'. *Note*: If there is already a 'DOC' space in your Confluence site, it will be overwritten. For detailed instructions, see the Confluence documentation on Restoring a Space.
4. Remove or adjust the customised header, footer and left-hand navigation bar in your new space. **Explanation:** When you create your new space from our XML source code, the space will inherit the Confluence 'Documentation' theme. The XML source code also includes the customisations we have made to the header, footer and left-hand navigation bar. These customisations include references to our Atlassian Documentationspace. Since your Confluence site does not have that space, you will see errors like this in the left-hand navigation bar, header and footer in your new space:

   ```
   Unable to render {include} Couldn't find a space with key: ALLDOC
   ```

   To fix these errors, take one of the following steps:

   - Customise the navigation, header and footer sections to suit your Confluence site or environment. See our documentation on configuring the Documentation theme.
   - Or restore the default left-hand navigation bar, by removing all content from the navigation, header and footer sections and selecting the '**Page Tree**' check box. See our documentation on configuring the Documentation theme.
   - Or change the theme of your space to the Confluence default theme or another theme of your choice.
5. Download the XML source code for the additional documentation spaces listed below and import them into your Confluence site too.
6. *(Optional)* Follow the steps in the next section if you want to redirect Confluence's help links to point to your local documentation.

Additional Documentation Spaces Required

Why You Need the Additional Documentation Spaces

The Confluence documentation shares some content with other Atlassian products, such as JIRA. For the sake of efficiency, we reuse the same content across documentation spaces. You will notice that some of our pages contain an {include} macro that draws in content from another space.

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For example, the following macro includes content from the Application Links (APPLINKS) space into the Confluence documentation space:

```
{include:APPLINKS:_securityTrustedApps}
```

You will need to import those documentation spaces into your Confluence site, to ensure that the reused content is accessible in your Confluence documentation.

Determining the Version Required

We supply different versions of the documentation, for each version of the software or plugin concerned. To see which version you need, take a look at the space key in the {include} macro concerned.

- If the space key has a number at the end, that number indicates the version. For example, `012` means version 1.2, and `011` means version 1.1.
- If the space key does not include a number, you need the latest version of the documentation.

Here is an example of an include macro that requires version 1.2 of the Application Links documentation:

```
{include:APPLINKS012:_securityTrustedApps}
```

This example requires the **latest** version of the Application Links documentation:

```
{include:APPLINKS:_securityTrustedApps}
```

List of Spaces Required

Retrieve the relevant version of the XML backups from these pages:

- Application Links
- Universal Plugin Manager
- User Management

Redirecting Confluence's Help Links to your Local Documentation

In some parts of the Confluence user interface, you will see hyperlinks that point to the documentation for detailed information. These hyperlinks are Confluence's help links. You can redirect Confluence's help links to point to your local documentation.

There are two types of configuration changes you can make to the help property file:

- Change the base URL that determines the destination website of all your help links.
- Change the page name for each individual help link.

Changing the Base URL for your Help Links

You can set the base URL via the Confluence Administration Console.

To change the base URL for your help links:

1. Choose **Browse** > **Confluence Admin**.
2. Click '**General Configuration**' in the left-hand navigation bar.

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3. Click '**Edit**'.
4. Change the '**Documentation Url Pattern**' to determine the destination website for all your help links. This value forms the first part of the destination URL. For example, if you want to point your help links the 'DOC' space in your local Confluence site, your URL prefix will look like this:

   ```
   help.prefix=http://confluence.mycompany.com/display/DOC/
   ```

   In addition, you can use the following special characters in the URL:

   - {0} – Optional. This value will be replaced with the version of Confluence running on your site.
   - {1} – Optional. This value will be replaced with the page name from the configuration file.

Changing the Links for Individual Help Pages

If necessary, you can also change the individual page names to point to specific pages in your local documentation. You may want to do this if you are using a translated version of the documentation, for example, or your own custom guide rather than a copy of the Atlassian documentation.

The help links are contained in a property file. In summary, you will need to do the following:

- Make a copy of the property file that Confluence uses to control the help links.
- Place the copy in a given directory where it will override the default property file.
- Update the copy with your own values.

To change the destination of your Confluence help links:

1. Copy the `confluence-x.x.x.jar` file from your `{CONFLUENCE-INSTALLATION}\confluence\WEB-INF\lib` directory and place it in a temporary location.
   Note: Do not remove the JAR, just make a copy of it.
2. Unzip the `confluence-x.x.x.jar` file into your temporary location and copy the `help-paths.properties` file.
3. Put the copy of the `help-paths.properties` file into your `{CONFLUENCE-INSTALLATION}\confluence\WEB-INF\classes` directory.
   Note: The property file will override the file in the JAR.
4. Edit your new `help-paths.properties` file.
5. Change the individual page names to point to specific pages in your local documentation. In our example file below, the first key-value pair looks like this:

   ```
   help.restore.site=Restoring+a+site
   ```

   You could change it to something like this:

   ```
   help.restore.site=My+page+about+Restoring+Confluence
   ```

6. Restart Confluence.

Example of the Help Property File

Below is an example of part of the Confluence `help-paths.properties` file.

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```
help.prefix=http://docs.atlassian.com/confluence/docs-{0}/{1}

## Page Names
help.restore.site=Restoring+a+site
help.manually.backup.site=Manually+Backing+Up+The+Site
help.configure.server.URL=Configuring+the+Server+Base+URL
help.configure.time.date.format=Configuring+Time+and+Date+Formats
help.edit.user.details=Editing+User+Details
```

The first line (`help.prefix`) shows the destination website of the help links. This value forms the first part of the destination URL.

- {0} – Optional. This value will be replaced with the version of Confluence running on your site.
- {1} – Optional. This value will be replaced with the page name from the configuration file.

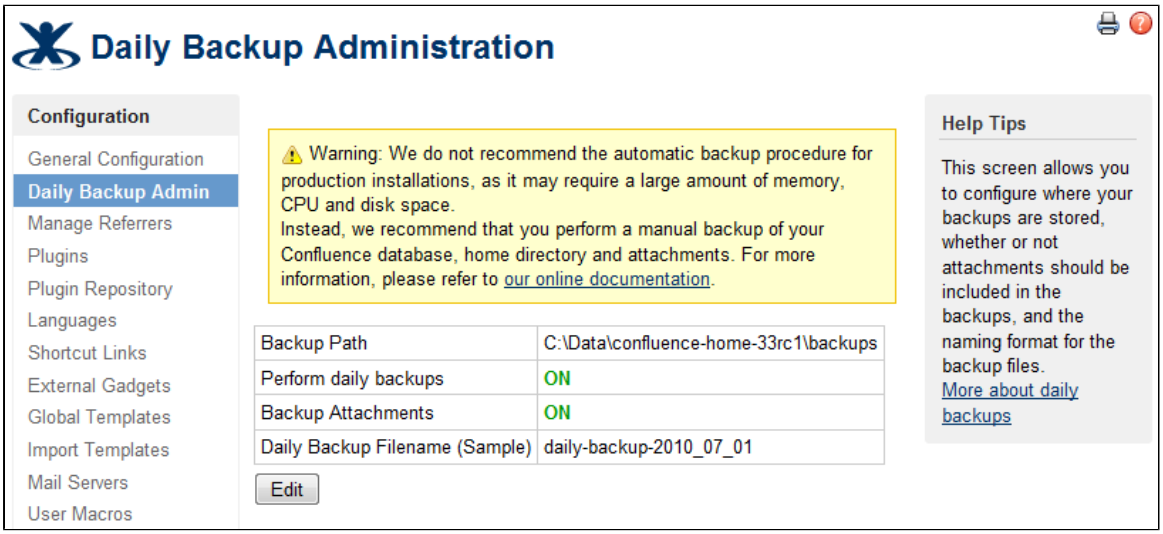
Below the description '## Page Names' there are a number of key-value pairs.

- The key (such as `help.restore.site`) is an identifier used by Confluence to find the help link for a specific screen or dialogue.
- The page name (such as `Restoring+a+site`) is the URL-encoded page name that forms the last part of the destination URL.

Example of a Help Link

Here is an example of a Confluence screen with two help links, one on the words '**our online documentation**' and another on '**More about daily backups**':

Screenshot: Example of help links in Confluence



More Notes about Help Links

- The ability to configure the destination of the help links is available only in Confluence 3.3.x and later.
- Make sure that you keep all the key-value pairs for the page names in the `help-paths.properties` file. If you want to point them all to the same location, you should retain all the keys and replace all the page names with the same name. For example:

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```
help.prefix=http://myguide.mycompany.com

## Page Names
help.restore.site=My+guide
help.manually.backup.site=My+guide
help.configure.server.URL=My+guide
help.configure.time.date.format=My+guide
help.edit.user.details=My+guide
```

- In the above instructions on configuring help links, we assume that you want to host your local documentation on your own Confluence site. Instead, you could choose to point the Confluence help links to an entirely different set of documentation, on a website or intranet. After reading through the instructions above, you will have an idea of how to adapt them for your own purposes.
- The `help-paths.properties` file is currently in the `confluence-x.x.x.jar` in the **WEB-INF/lib** dir ectory. Instead, it should be a config file in the **WEB-INF/classes** directory. This will make it easy for people to change the values in the file and repoint their help links. It will also standardise the help design with that of JIRA and other Atlassian applications. This issue is tracked at CONF-20105.

Confluence SharePoint Connector

Latest version of the Confluence SharePoint Connector

Confluence SharePoint Connector 1.5.5 has now been released. See the SharePoint Connector 1.5.5 Release Notes.

With the Confluence SharePoint Connector you can combine Confluence's free-form, easy to edit wiki with the document management and workflow strengths of SharePoint.

- Display SharePoint document libraries, calendars, links, discussions and more on your Confluence wiki pages. Edit SharePoint's Office documents directly from Confluence and save them back to SharePoint.
- Embed Confluence pages and Confluence page trees into a SharePoint page. Click through from SharePoint to Confluence.
- Enjoy automatic login (single sign-on) between Confluence and SharePoint.
- Search Confluence and SharePoint content together, retrieving a unified set of results

Please refer to the SharePoint Connector documentation for more information.

Support Policies

Welcome to the support policies index page. Here, you'll find information about how Atlassian Support can help you and how to get in touch with our helpful support engineers. Please choose the relevant page below to find out more.

- Bug Fixing Policy
- How to Report a Security Issue
- New Features Policy
- Patch Policy
- Security Advisory Publishing Policy
- Security Patch Policy
- Severity Levels for Security Issues

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To request support from Atlassian, please raise a support issue in our online support system. To do this, visit support.atlassian.com, log in (creating an account if need be) and create an issue under Confluence. Our friendly support engineers will get right back to you with an answer.

Bug Fixing Policy

Summary

- Atlassian Support will help with workarounds and bug reporting.
- Critical bugs will generally be fixed in the next maintenance release.
- Non critical bugs will be scheduled according to a variety of considerations.

Raising a Bug Report

Atlassian Support is eager and happy to help verify bugs — we take pride in it! Please open a support request in our support system providing as much information as possible about how to replicate the problem you are experiencing. We will replicate the bug to verify, then lodge the report for you. We'll also try to construct workarounds if they're possible.

Customers and plugin developers are also welcome to open bug reports on our issue tracking systems directly. Use http://jira.atlassian.com for the stand-alone products and http://studio.atlassian.com for JIRA Studio and Atlassian OnDemand.

When raising a new bug, you should rate the priority of a bug according to our JIRA usage guidelines. Customers should watch a filed bug in order to receive e-mail notification when a "Fix Version" is scheduled for release.

How Atlassian Approaches Bug Fixing

Maintenance (bug fix) releases come out more frequently than major releases and attempt to target the most critical bugs affecting our customers. The notation for a maintenance release is the final number in the version (ie the 1 in 3.0.1).

If a bug is critical (production application down or major malfunction causing business revenue loss or high numbers of staff unable to perform their normal functions) then it will be fixed in the next maintenance release provided that:

- The fix is technically feasible (i.e. it doesn't require a major architectural change).
- It does not impact the quality or integrity of a product.

For non-critical bugs, the developer assigned to fixing bugs prioritises the non-critical bug according to these factors:

- How many of our supported configurations are affected by the problem.
- Whether there is an effective workaround or patch.
- How difficult the issue is to fix.
- Whether many bugs in one area can be fixed at one time.

The developers responsible for bug fixing also monitor comments on existing bugs and new bugs submitted in JIRA, so you can provide feedback in this way. We give high priority consideration to security issues.

When considering the priority of a non-critical bug we try to determine a 'value' score for a bug which takes into account the severity of the bug from the customer's perspective, how prevalent the bug is and whether roadmap features may render the bug obsolete. We combine this with a complexity score (i.e. how difficult the bug is). These two dimensions are used when developers self serve from the bug pile.

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Further reading

See Atlassian Support Offerings for more support-related information.

How to Report a Security Issue

Finding and Reporting a Security Vulnerability

If you find a security bug in the product, please open an issue on http://jira.atlassian.com in the relevant project.

- Set the priority of the bug to 'Blocker'.
- Provide as much information on reproducing the bug as possible.
- Set the security level of the bug to 'Developer and Reporters only'.

All communication about the vulnerability should be performed through JIRA, so that Atlassian can keep track of the issue and get a patch out as soon as possible.

> If you discover a security vulnerability, please attempt to create a test case that proves this vulnerability locally before opening either a bug or a support issue. When creating an issue, please include information on how the vulnerability can be reproduced; see our Bug Fixing Policy for general bug reporting guidelines. We will prioritise fixing the reported vulnerability if your report has information on how the vulnerability can be exploited.

Further reading

See Atlassian Support Offerings for more support-related information.

New Features Policy

Summary

- We encourage and display customer comments and votes openly in our issue tracking system, http://jira.atlassian.com.
- We do not publish roadmaps.
- Product Managers review our most popular voted issues on a regular basis.
- We schedule features based on a variety of factors.
- Our Atlassian Bug Fixing Policy is distinct from our Feature Request process.
- Atlassian provides consistent updates on the top 20 feature/improvement requests (in our issue tracker systems).

How to Track what Features are Being Implemented

When a new feature or improvement is scheduled, the 'fix-for' version will be indicated in the JIRA issue. This happens for the upcoming release only. We maintain roadmaps for more distant releases internally, but because these roadmaps are often pre-empted by changing customer demands, we do not publish them.

How Atlassian Chooses What to Implement

In every major release we *aim* to implement highly requested features, but it is not the only determining factor. Other factors include:

- **Direct feedback** from face to face meetings with customers, and through our support and sales channels.
- **Availability of staff** to implement features.
- **Impact** of the proposed changes on the application and its underlying architecture.
- How **well defined** the requested feature is (some issues gain in popularity rapidly, allowing little time to plan their implementation).
- Our long-term **strategic vision** for the product.

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How to Contribute to Feature Development

Influencing Atlassian's release cycle
We encourage our customers to vote on feature requests in JIRA. The current tally of votes is available online in our issue tracking system, http://jira.atlassian.com. Find out if your improvement request already exists. If it does, please vote for it. If you do not find it, create a new feature or improvement request online.

Extending Atlassian Products
Atlassian products have powerful and flexible extension APIs. If you would like to see a particular feature implemented, it may be possible to develop the feature as a plugin. Documentation regarding the plugin APIs is available. Advice on extending either product may be available on the user mailing-lists, or at Atlassian Answers.

If you require significant customisations, you may wish to get in touch with our partners. They specialise in extending Atlassian products and can do this work for you. If you are interested, please contact us.

Further reading

See Atlassian Support Offerings for more support-related information.

Patch Policy

Patch Policy

Atlassian will only provide software patches in extremely unusual circumstances. If a problem has been fixed in a newer release of the product, Atlassian will request that you upgrade your instance to fix the issue. If it is deemed necessary to provide a patch, a patch will be provided for the current release and the last maintenance release of the last major version only.

Patches are issued under the following conditions:

- The bug is critical (production application down or major malfunction causing business revenue loss or high numbers of staff unable to perform their normal functions).
- A patch is technically feasible (i.e., it doesn't require a major architectural change)
  OR
- The issue is a security issue, and falls under our Security Patch Policy.

Atlassian does not provide patches for non-critical bugs.

Provided that a patch does not impact the quality or integrity of a product, Atlassian will ensure that patches supplied to customers are added to the next maintenance release. Customers should watch a filed bug in order to receive e-mail notification when a "Fix Version" is scheduled for release.

Patches are generally attached to the relevant http://jira.atlassian.com issue.

Further reading

See Atlassian Support Offerings for more support-related information.

Security Advisory Publishing Policy

Publication of Security Advisories

When a security vulnerability in an Atlassian product is discovered and resolved, Atlassian will inform customers through the following mechanisms:

- We will post a security advisory in the latest documentation of the affected product at the same time as releasing a fix for the vulnerability. This applies to all security advisories, including severity levels of critical, high, medium and low.

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- We will send a copy of all security advisories to the **'Technical Alerts' mailing list** for the product concerned.
  Note: To manage your email subscriptions and ensure you are on this list, please go to my.atlassian.com and click 'Email Prefs' near the top right of the page.
- If the person who reported the vulnerability wants to publish an advisory through some other agency, such as CERT, we will assist in the production of that advisory and link to it from our own.

Early warning of critical security vulnerabilities:

- If the vulnerability is rated critical (see our criteria for setting severity levels) we may send an early warning to the 'Technical Alerts' mailing list approximately one week before releasing the fix. This early warning is in addition to the security advisory itself, described above.
- However, if the vulnerability is publicly known or being exploited, we will release the security advisory and patches as soon as possible, potentially without early warning.

Further reading

See Atlassian Support Offerings for more support-related information.

Security Patch Policy

Product Security Patch Policy

Atlassian makes it a priority to ensure that customers' systems cannot be compromised by exploiting vulnerabilities in Atlassian products.

Scope

This page describes when and how we release security patches and security upgrades for our products. It does not describe the whole of disclosure process that we follow. It also excludes JIRA Studio, since JIRA Studio will always be patched by Atlassian without additional notifications.

Critical vulnerabilities

When a **Critical** security vulnerability is discovered by Atlassian or reported by a third party, Atlassian will do all of the following:

- Issue a new, fixed release for the current version of the affected product as soon as possible, usually in a few days.
- Issue a binary patch for the current release.
- Issue a binary patch for the latest maintenance release of the previous version of the product.
- Patches for older versions or releases normally will not be issued.

Patches will be attached to the relevant JIRA issue. You can use these patches as a "stop-gap" measure until you upgrade your installation in order to fully fix the vulnerability.

Non-critical vulnerabilities

When a security issue of a **High, Medium or Low** severity is discovered, Atlassian will do all of the following:

- Include the fix into the next scheduled release, both for the current and previous maintenance versions.
- Where practical, provide new versions of plugins or other components of the product that can be upgraded independently.

You should upgrade your installation in order to fix the vulnerability.

Other information

Severity level of vulnerabilities is calculated based on Severity Levels for Security Issues.

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Visit our general Atlassian Patch Policy as well.

Examples

Example 1: A critical severity vulnerability is found in a (hypothetical current release) JIRA 5.3.2. The last bugfix release in 5.2.x branch was 5.2.3. In this case, a patch will be created for 5.3.2 and 5.2.3. In addition, new bugfix releases, 5.3.3 and 5.2.4, which are free from this vulnerability, will be created in a few days.

Example 2: A high or medium severity vulnerability is found in the same release as in the previous example. The fix will be included into the currently scheduled releases 5.3.3 and 5.2.4. Release schedule will not be brought forward and no patches will be issued. If the vulnerability is in a plugin module, then a plugin upgrade package may still be supplied.

Further reading

See Atlassian Support Offerings for more support-related information.

Severity Levels for Security Issues

Severity Levels

Atlassian security advisories include a severity level. This severity level is based on our self-calculated CVSS score for each specific vulnerability. CVSS is an industry standard vulnerability metric. You can learn more about CVSS at FIRST.org web site.

CVSS scores are mapped into the following severity ratings:

- Critical
- High
- Medium
- Low

An approximate mapping guideline is as follows:

CVSS score range	Severity in advisory
0 – 2.9	Low
3 – 5.9	Medium
6.0 – 7.9	High
8.0 – 10.0	Critical

Below is a summary of the factors which illustrate types of vulnerabilities usually resulting in a specific severity level. Please keep in mind that this rating does not take into account details of your installation.

Severity Level: Critical

Vulnerabilities that score in the critical range usually have most of the following characteristics:

- Exploitation of the vulnerability results in root-level compromise of servers or infrastructure devices.
- The information required in order to exploit the vulnerability, such as example code, is widely available to attackers.
- Exploitation is usually straightforward, in the sense that the attacker does not need any special authentication credentials or knowledge about individual victims, and does not need to persuade a target

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user, for example via social engineering, into performing any special functions.

For critical vulnerabilities, is advised that you patch or upgrade as soon as possible, unless you have other mitigating measures in place. For example, if your installation is not accessible from the Internet, this may be a mitigating factor.

Severity Level: High

Vulnerabilities that score in the high range usually have some of the following characteristics:

- The vulnerability is difficult to exploit.
- Exploitation does not result in elevated privileges.
- Exploitation does not result in a significant data loss.

Severity Level: Medium

Vulnerabilities that score in the medium range usually have some of the following characteristics:

- Denial of service vulnerabilities that are difficult to set up.
- Exploits that require an attacker to reside on the same local network as the victim.
- Vulnerabilities that affect only nonstandard configurations or obscure applications.
- Vulnerabilities that require the attacker to manipulate individual victims via social engineering tactics.
- Vulnerabilities where exploitation provides only very limited access.

Severity Level: Low

Vulnerabilities in the low range typically have very little impact on an organisation's business. Exploitation of such vulnerabilities usually requires local or physical system access.

Further reading

See Atlassian Support Offerings for more support-related information.

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