

Space Details

Key:	CONF27X
Name:	Confluence 2.7 Temp Archive
Description:	Complete documentation for latest version of Confluence wiki
Creator (Creation Date):	mike@atlassian.com (Dec 17, 2003)
Last Modifier (Mod. Date):	smaddox (Dec 19, 2007)

Available Pages

- Administrators Guide
 - Administration
 - Cache Statistics
 - Changing time of Daily Backup
 - Confluence Data Directory Configuration
 - Confluence home directory contents
 - Content Index Administration
 - Finding Unused Spaces
 - Important Directories and Files
 - Manually Backing Up The Site
 - Configuring Daily Backups
 - User Submitted Backup & Restore Scripts
 - Migrate Or Clone Confluence Between Servers
 - Moving Confluence Between Servers
 - Rebuilding the Ancestor Table
 - Restoring a Site
 - Restoring a Space
 - Changing the version of a space backup
 - Restoring Data from other Backups
 - Restoring Data from the Administration Console
 - Retrieve file attachments from a backup
 - Troubleshooting failed XML site backups
 - Viewing and Editing License Details
 - Viewing System Information
 - Where Is My ConfluenceHome Directory?
 - Cluster Administration page
 - Cluster Troubleshooting
 - Configuring Confluence
 - Optional Settings
 - Attachment Storage Configuration
 - Enabling CamelCase Linking
 - Enabling Remote APIs
 - Enabling Rich Text Editing Option
 - Enabling Threaded Comments
 - Enabling Trackback

- Making Rich Text Editing default
 - WebDAV Configuration
- Other Settings
 - Configuring Attachment Size
 - Configuring Character Encoding
 - Configuring HTTP Timeout Settings
 - Configuring Indexing Language
 - Configuring Jira Issues Icon mappings
 - Configuring Number Formats
 - Configuring Shortcut Links
 - Configuring Time and Date Formats
 - Number of Ancestors to Show in Breadcrumbs
 - Thumbnail Settings
- Site Configuration
 - Configuring the Server Base URL
 - Configuring the Site Homepage
 - Customising Default Space Content
 - Editing the Global Logo
 - Editing the Site Title
 - Editing the Site Welcome Message
 - View Space Goes to Browse Space
- Configuring Encoding
 - Troubleshooting Character Encodings
 - "€" Euro character
 - MySQL 3.x Character Encoding Problems
- Configuring Mail
 - Configuring a Server for Outgoing Mail
 - Enabling the 'Mail Page' plugin
 - The Mail Queue
- Confluence and JIRA
 - Add Confluence EAR-WAR to JIRA Standalone
 - Integrating JIRA and Confluence
 - Override properties in JIRA to Confluence Bridge
 - Setting Up Trusted Communication between JIRA and Confluence
- Confluence Security
 - Confluence Community Security Advisory 2006-01-19
 - Confluence Security Advisory 2005-02-09
 - Confluence Security Advisory 2005-12-05
 - Confluence Security Advisory 2006-01-20
 - Confluence Security Advisory 2006-01-23
 - Confluence Security Advisory 2006-06-14
 - Confluence Security Advisory 2007-07-26
 - Confluence Security Advisory 2007-08-08


- Confluence Security Advisory 2007-11-19
- Confluence Security Advisory 2007-11-27
- Confluence Security Advisory 2007-12-14
- Java Policy Security with Confluence
- NoFollow Support
- Design and Layout
 - Custom Decorator Templates
 - Customising Look and Feel Overview
 - Customising Colour Schemes
 - Customising Layouts
 - Upgrading Custom Layouts
 - Global Templates
 - Working With Decorator Macros
 - Themes Configuration
 - Applying a Theme To A Site
 - Creating a Theme
 - Adding a theme icon
 - Customising the Left Navigation Theme
 - Deploying the theme as a plugin
 - Including Cascading Stylesheets in Themes
 - Modifying Look and Feel (for themes)
 - Configuring the theme plugin
 - Themes Overview
- Importing Data
 - Snip Snap Import
- Macros
 - Configuring the userlister Macro
 - Editing and Removing macros
 - Enable The Flowchart Macro
 - Enabling HTML macros
 - Enabling the html-include Macro
 - Troubleshooting the Gallery Macro
- Performance Tuning
 - Configuring a Large Confluence Installation
 - Confluence Performance Enhancement
 - Creating Memory Leaks with Spring
 - Filtering Regular Expression Application
 - How Adaptavist Runs Confluence
 - Memory usage and requirements
 - java.util.zip.ZipFile.open causes OutOfMemoryError for large zip files
 - Requesting Performance Support
 - Troubleshooting Slow Performance Using Page Request Profiling
- Profiling using the YourKit Plugin
- Recognised System Properties

- Scheduled Jobs
- Search
 - Setup Confluence To Index External Sites
 - Setup External Search Tool To Index Confluence
- Security
 - Adding SSL for Secure Logins and Page Security
 - Anonymous Access to Remote API
 - Enabling or Disabling Public Signup
 - Hiding External Links From Search Engines
 - Hiding the People Directory
 - Managing External Referrers
 - Excluding external referrers
 - Hiding external referrers
 - User Email Visibility
- Spam Prevention (Captcha)
- Troubleshooting slow search performance and "Too many open files" problem
- User Management
 - Confluence User Management
 - Adding a Group
 - Adding a New User
 - Adding or Removing a User from a Group
 - Changing Usernames
 - Editing User Details
 - Global Groups Overview
 - Global Permissions Overview
 - Migrating to new User Management
 - Removing a Group
 - Removing a User
 - Setting up Anonymous Access
 - Viewing members of a group
 - How to Improve User Search Performance
 - Integrating with Crowd
 - JIRA User Management
 - Delegate user management to use JIRA logins
 - Revert from JIRA to internal user management
 - JIRA User Management FAQ
 - LDAP User Management
 - Activating External User Management
 - Add LDAP Integration
 - Automatically Adding LDAP users to the confluence-users Group
 - Customising atlassian-user.xml
 - Add LDAP Integration For User Authentication Only
 - atlassian-user.xml reference

- Changes in osuser.xml from 1.0.3a to 1.1.x
- Configuring multiple LDAP repositories
- Confluence Caching OSUser Provider
- Importing LDAP Users
- LDAP FAQ
 - Connect to LDAP via SSL
- Troubleshooting the "Not Permitted" Screen under LDAP Integration
 - Cannot login with Confluence admin account
- Migrating users from Confluence to JIRA
- Requesting External User Management Support
 - Paddle
- Understanding User Management in Confluence
- User Management Frequently Asked Questions
- Working with Confluence Logs
 - log4j Logging Levels

Administrators Guide

This page last changed on Dec 17, 2007 by [smaddox](#).

Confluence 2 Administrator's Guide	Search
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	
	Download
	 <p>You can download the Confluence Admin Guide in PDF, HTML or XML formats.</p>
Additional Resources	
Visit the Configuration Guide for documentation on configuring databases and application servers. The Confluence User Guide has information on how to use Confluence as a collaborative tool. Go to Documentation Home for links to more resources.	Site Administrator?
	<p>The Confluence Administrators Guide provides information to site administrators on how to manage their Confluence instances.</p> <p>If you still have a question that hasn't been answered, write and tell us about it.</p> <p>If you are using Confluence Hosted, please refer to the Confluence Hosted Administrator's Guide.</p>
Configuring Confluence Site Configuration Configuring the Site Homepage Editing the Site Title Editing the Site Welcome Message View Space Goes to Browse Space Editing the Global Logo Configuring the Server Base URL Configuring HTTP Timeout Settings Recognised System Properties Customising Default Space Content Optional Settings Enabling Remote APIs	User Management Confluence User Management Global Groups Overview Global Permissions Overview Setting up Anonymous Access Adding a New User Editing User Details Removing a User Enabling or Disabling Public Signup Adding or Removing a User from a Group Adding a Group Removing a Group Viewing members of a group Restoring Passwords To Recover Admin User Rights External User Management

Enabling Rich Text Editing Option Making Rich Text Editing default Enabling CamelCase Linking Enabling Trackback Enabling Threaded Comments Attachment Storage Configuration Configuring Attachment Size Display Settings Configuring Indexing Language Number of Ancestors to Show in Breadcrumbs Configuring Character Encoding Configuring Time and Date Formats Configuring Number Formats Thumbnail Settings Configuring Shortcut Links Data and Backups Backups Configuration Configuring Daily Backups Changing time of Daily Backup Manually Backing Up The Site Restoring Data Restoring a Site Restoring a Space Restoring Data During Setup Restoring Data from the Administration Console Retrieve file attachments from a backup Scheduled Jobs Scheduled Jobs System Administration System Configuration Information Viewing System Information Viewing and Editing License Details Cache Statistics Cluster Administration page System Administration Content Index Administration Upgrading Confluence Moving Confluence Between Servers Migrate to a Different Database Migrate Or Clone Confluence Between Servers Important Directories and Files Rebuilding the Ancestor Table Finding Unused Spaces		Understanding User Management in Confluence Activating External User Management LDAP Integration Overview Confluence Caching OSUser Provider Requesting External User Management Support Troubleshooting the "Not Permitted" Screen under LDAP Integration Crowd User Management Integrating Confluence with Crowd JIRA User Management Delegating User Management in Confluence to JIRA Override properties in JIRA to Confluence Bridge Design and Layout Configuring Layouts Customising Look and Feel Overview Customising Colour Schemes Customising Layouts Working With Decorator Macros Global 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 Configuring Jira Issues Icon mappings Adding Confluence EAR-WAR to JIRA Standalone Setting Up Trusted Communication between JIRA and Confluence Plugin Management Confluence Plugin Guide Installing and Configuring Plugins manually Installing and Configuring Plugins using the Plugin Repository Client
---	--	---

<p>Importing Data</p> <p>Universal Wiki Converter Build jspwiki-exporter from source Snip Snap Import Importing Pages from Disk</p> <p>Mail Configuration</p> <p>Configuring a Server for Outgoing Mail The Mail Queue Enabling the 'Mail Page' plugin</p> <p>Security</p> <p>Overview and Advisories Security Overview and Advisories</p> <p>Security Options</p> <p>Spam Prevention (Captcha) Managing External Referrers Hiding external referrers Hiding External Links From Search Engines Excluding external referrers User Email Visibility Anonymous Access to Remote API Adding SSL for Secure Logins and Page Security Java Policy Security with Confluence</p>		<p>Setting Up Trusted Communication between JIRA and Confluence Enabling the 'Mail Page' plugin</p> <p>Macros Configuring User Macros Editing and Removing User Macros Enabling HTML macros Enabling the html-include Macro Enabling the Flowchart Macro Troubleshooting the Gallery Macro Configuring the userlister Macro Working With Decorator Macros Writing Macros</p> <p>Performance Tuning</p> <p>Memory usage and requirements Configuring a Large Confluence Installation Performance tuning Working with Confluence Logs Page Request Profiling Profiling using the YourKit Plugin</p> <p>Character Encoding</p> <p>Configuring Encoding Troubleshooting Character Encodings</p> <p>Support</p> <p>How to Get Support</p>
---	--	--

Administration

This page last changed on Feb 02, 2006 by [vidya](#).

- [Cache Statistics](#)
- [Changing time of Daily Backup](#)
- [Confluence Data Directory Configuration](#)
- [Confluence home directory contents](#)
- [Content Index Administration](#)
- [Finding Unused Spaces](#)
- [Important Directories and Files](#)
- [Manually Backing Up The Site](#)
 - [Configuring Daily Backups](#)
 - [User Submitted Backup & Restore Scripts](#)
- [Migrate Or Clone Confluence Between Servers](#)
- [Moving Confluence Between Servers](#)
- [Rebuilding the Ancestor Table](#)
- [Restoring a Site](#)
- [Restoring a Space](#)
 - [Changing the version of a space backup](#)
- [Restoring Data from other Backups](#)
- [Restoring Data from the Administration Console](#)
- [Retrieve file attachments from a backup](#)
- [Troubleshooting failed XML site backups](#)
- [Viewing and Editing License Details](#)
- [Viewing System Information](#)
- [Where Is My ConfluenceHome Directory?](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Cache Statistics

This page last changed on Oct 05, 2007 by [smaddox](#).

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 Tuning](#) for more information.

To view the cache statistics, go to the 'Administration Console' and click 'Cache Statistics' in the left panel. There you will find a list of all objects cached within Confluence. Click on 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	Flush
Content Object	80%	73%	4023 / 5000	374550 / 140460 / 55044	Flush

About the generated numbers :

Percent Used:	$=(\text{Objects})/(\text{Size})$
Effectiveness:	$=(\text{Hits})/(\text{Hits} + \text{Misses})$
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
Flush:	flushes the cache

For instance to calculate Percent Used :


`Percent Used = Objects / Size`

`Percent Used = 4023/5000 = 80%`

and to calculate Effectiveness :

`Effectiveness = (Hits)/(Hits + Misses)`

`Effectiveness = 374550 / (374550 + 140460) = 73%`

 The [clustered versions of Confluence](#) use distributed cache called [Tangosol Coherence](#).

Performance Tuning

If you need to tune your application when under high usage, you may like to review [this document](#) for suggestions.


RELATED TOPICS



[Cache Statistics](#)



[Viewing and Editing License Details](#)

 [Viewing System Information](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Changing time of Daily Backup

This page last changed on Nov 02, 2007 by [jlargman](#).

By default, Confluence runs its daily backup at 2.00 AM. You can configure Confluence to perform the backup at a time that is best suited to you or your organisational needs.



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, go to the 'Administration Console', click 'System Information' in the left-hand panel and look at the 'System Time'.

Confluence uses [Quartz](#) for scheduling periodic jobs. To change the time of your daily backup, you will need to edit the Quartz configuration.

To change the time of your daily backup

1. Open the Quartz configuration file `schedulingSubsystemContext.xml` located under `confluence/WEB-INF/lib/confluence-2.6.0.jar`
2. Find the following section of the file:

```
<bean id="backupTrigger" class="org.springframework.scheduling.quartz.CronTriggerBean">
  <property name="jobDetail">
    <ref bean="backupJob"/>
  </property>
  <property name="cronExpression">
    <value>0 0 2 * * ?</value>
  </property>
</bean>
```

3. The string `'0 0 2 * * ?'` sets up a [Cron Trigger](#) for the job to run at the zeroth second of the zeroth minute of the 2nd hour, every day of every month, every day of the week.
4. Re-jar the file, either with a zip utility (change the title of .zip back to .jar) or a java command.
5. You can set a new time by editing this string. Note that the date and time format in this configuration file is in this order:
Second minute hour day
6. Restart Confluence.



For example, to set the new time to twenty past ten PM, change the string to `'0 20 22 * * ?'`.

If you wanted to back up only once a week, for example, at midnight on Sundays, you would change the string to `'0 0 0 ? * SUN'`.

For complete details on the formatting of the cron string, please see <http://www.opensymphony.com/quartz/api/org/quartz/CronTrigger.html>.

RELATED TOPICS



[Alternative Backup Strategy for Large Confluence Sites](#)



[Backup FAQ](#)



[Changing time of Daily Backup](#)



[Configuring Daily Backups](#)



[Manually Backing Up The Site](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Confluence Data Directory Configuration

This page last changed on May 22, 2006 by david.soul@atlassian.com.

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.

Windows Configuration

On Windows, the path

`C:\confluence\data`

will be written as:

`confluence.home=C:/confluence/data`

Note that all backslashes (`\`) are written as forward slashes (`/`).

UNIX/Linux/Mac Configuration

On any UNIX-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.

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.

Confluence home directory contents

This page last changed on Sep 21, 2007 by don.willis@atlassian.com.

The Confluence home directory contains data that work in concert with the Confluence database to provide the wiki experience. This document outlines the purpose of the various files and directories in the Confluence home directory.

Files and directories

confluence.cfg.xml

This file is the most critical file in the Confluence home directory. It 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

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
```

An alternative directory may be specified 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
```

An alternative directory may be specified for backups by setting the `daily.backup.dir` property in `confluence.cfg.xml`.

bundled-plugins

 This directory exists for Confluence 2.3 and above

Recent versions of Confluence ship 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 and as such contains all Confluence runtime data. Instances 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

 This directory exists for Confluence 2.3 and above

As of Confluence 2.3, all Confluence plugins are now 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 database every time Confluence is restarted. As such, 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, any 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.

Confluence 2.2 and older

The following files and directories were used by versions of Confluence older than 2.3

config

The `config` directory is used to store data used by Confluence's bandana data persistence framework. This system is used by Confluence to store the global instance settings and is used by various plugins for their own configuration and data persistence needs. Confluence versions 2.3 and later store these data in the Confluence database and do not use this directory.

The most important file in this directory is the `confluence-global.bandana.xml` file. This file is used to store all of the settings from the Administration console in Confluence.

plugins

The `plugins` directory is where Confluence stores all installed plugin JARs. It is possible to install and remove plugins by placing and deleting plugin JARs from this directory.

default-formatting.properties

This properties file contains various formatting information such as the formats for decimal numbers and dates used in the Confluence user interface. These configuration data were relocated to the Confluence database from Confluence 2.3 and onwards.


Content Index Administration

This page last changed on Jun 24, 2007 by [smaddox](#).

The Content Index powers Confluence's search functionality and is also used for a number of related functions such as building email threads in the mail archive. While the index is maintained automatically, you may need to rebuild it manually under these circumstances:

- If you find that your searching and mail threading are malfunctioning.
- After an upgrade (if a reindex is required after an upgrade, it will be noted in upgrade section of the [release notes](#)).

To manually rebuild the content index,

1. Go to the 'Administration Console' and click on 'Content Indexing' under the heading 'Administration' in the left panel.
 -  For reasons of efficiency, content is not immediately added to the index. New and modified Confluence content is first placed in a queue, and the queue is processed once every minute.
2. Click 'Rebuild Index'.



Slow reindexing?

Indexing can take a long time to complete, depending on the number of pages, number, type and size of attachments and the amount of memory allocated to Confluence.

It may help to increase the heap memory allocation of Confluence by following [these instructions](#).

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).

RELATED TOPICS



[Configuring Indexing Language](#)



[Content Index Administration](#)



[Rebuild index from scratch](#)



[Working with Macros](#)

[!Administration Guide Attachments

directory^adminhome.gif]



[Confluence Documentation Home](#)

Finding Unused Spaces

This page last changed on Nov 21, 2007 by [smaddox](#).

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](#) and the [Global Statistics plugin](#) can provide hints, they still don'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. 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 via the [Plugin Repository](#). 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}
```

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

This page last changed on Dec 17, 2007 by [smaddox](#).

The Install Directory

This is the directory into which the downloaded Confluence application has been unpacked. Confluence does not modify or store any data in this 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.
- `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.

The Temp Directory

The temp directory is configured in the Java runtime and some Confluence components write temporary files or lockfiles into this directory.

Typically, this directory is `/tmp` on Unix systems, or `C:\Temp` on Windows.

To change the location of this directory, you should 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

This is the directory in which Confluence stores its configuration information, search indexes, custom decorators and page attachments. Also, if you're using the embedded HSQL database, the database is also stored in this 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 being stored.



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



[Administrators Guide Home](#)


[\[!Administration Guide](#)


[Attachments directory^dochome.gif!\]](#)

Manually Backing Up The Site


This page last changed on Dec 17, 2007 by [smaddox](#).


Confluence is configured to make a daily backup of your data and store it as a zipped XML file in the 'backups' folder under the Confluence Home Directory. A System Administrator can also manually back up the data from the Administration Console.

 You need to have [System Administrator](#) permissions in order to perform this function.




 Consider an [alternative backup strategy](#) if your Confluence site is large or you are encountering problems with your automated backup.

To manually back up your site,

1. Go to the 'Administration Console' and click 'Backup & Restore' in the 'Administration' section of the left-hand panel.
 2. Select 'Archive to backups folder' to store a copy of the backup in the same folder as Confluence's [daily backups](#). (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).
 3. Select 'Backup attachments' to include attachments in your backup.
 4. Click 'Backup'.
-  Please note that this process will take a few minutes.
5. Once the backup is completed, you will be prompted to download the zipped backup file.

 If you are running Confluence behind Apache and are facing timeout errors, please consider creating the export directly from Tomcat, instead of going through Apache. This will speed up the process and prevent timeouts.

RELATED TOPICS

-  [Alternative Backup Strategy for Large Confluence Sites](#)
-  [Backup FAQ](#)
-  [Changing time of Daily Backup](#)
-  [Configuring Daily Backups](#)
-  [Manually Backing Up The Site](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring Daily Backups

This page last changed on Dec 17, 2007 by [smaddox](#).

Confluence backs up your data on a daily basis into a zipped XML file. By default, the backup is performed at 2.00 a.m. and the backup files are stored in the `backups` folder under the Confluence Home Directory.



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, go to the 'Administration Console', click 'System Information' in the left-hand panel and look at the 'System Time'. You can [change the time of the daily backup](#).



Consider an [alternative backup strategy](#) if your Confluence site is large or you are encountering problems with your automated backup.

The default naming convention for the backup files is 'daily-backup-yyyy_MM_dd'. Confluence can write backups to both local and mapped network drives.

From the Administration Console, you can:

- Enable or disable backups.
- Include or exclude attachments in backups.
- Configure a different path to store backup files.
- Change the naming format used for the files.



You need to have [System Administrator](#) permissions in order to perform this function.

To configure your daily backups,

1. Go to the Administration Console and click 'Daily Backup Admin' in the 'Configuration' section.
2. Click the 'Edit' button on the 'Daily Backup Administration' screen.
3. Now you can do the following:
 - To disable backups — Select 'Disable'.
 - 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](#).
 - To exclude attachments from backups — Select 'Off' beside 'Backup Attachments'. By default, this 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](#).
4. 'Save' your changes.

Below is an example of daily backup being disabled.

Backup Path	<input type="radio"/> Default (/opt/j2ee/domains/atlassian.com/confluence/webapps/atlassian-confluence/data/backups)
	<input type="radio"/> Custom <input type="text"/>
	<input checked="" type="radio"/> Disable
Backup Attachments:	<input checked="" type="radio"/> On <input type="radio"/> Off
Backup File Prefix:	<input type="text" value="daily-backup-"/>
Backup File Date Pattern:	<input type="text" value="yyyy_MM_dd"/>
<input type="button" value="Save"/>	

RELATED TOPICS



[Alternative Backup Strategy for Large Confluence Sites](#)



[Backup FAQ](#)



[Changing time of Daily Backup](#)



[Configuring Daily Backups](#)



[Manually Backing Up The Site](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

User Submitted Backup & Restore Scripts

This page last changed on Aug 08, 2007 by [smaddox](#).

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 the Confluence user forum](#). Feel free to submit new scripts or post updates by logging in and adding them to the page as a comment.

Delete Old Backups - Wscript Script On Windows

This script examines backup filename and deletes them if necessary, it may need to be edited.

'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.

```
#!/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
```

Related Topics

- [Site Backup and Restore](#)
- [Backup FAQ](#)

Migrate Or Clone Confluence Between Servers

This page last changed on Sep 03, 2007 by david.soul@atlassian.com.

To copy a Confluence instance from one server to another, for example to transfer the current production snapshot to a test server as [permitted in the licence agreement](#):

On the original server:








1. Stop Confluence
2. Copy your Confluence install directory
3. Copy your Confluence home directory
4. Use your database administration tool to access your external database and create a Confluence database export
5. Start Confluence

On the target server:

1. If you are not using Standalone Confluence, setup the same version of the application server use on the original
2. Setup the database to be an exact clone of the original
 - a. Setup the same database version and driver
 - b. Setup the database user to have the same permissions as the original
 - c. Import the Confluence database export
3. Place the Confluence install directory but do not start Confluence yet
4. Place the Confluence home directory
5. If the home directory is in a different location, go to the Confluence install directory and edit `.. \confluence\WEB-INF\classes\confluence-init.properties`. The home directory is set under `confluence.home`
6. 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`
7. Start Confluence

The target instance will be a clone of the original instance.

Related Tasks

-  [Add LDAP Integration](#)
-  [Adding SSL for Secure Logins and Page Security](#)
-  [Customising Look and Feel Overview](#)
-  [Database Configuration](#)
-  [Installing the Confluence EAR-WAR edition](#)
-  [Troubleshooting Problems & Requesting Technical Support](#)
-  [Upgrading Confluence](#)

Moving Confluence Between Servers

This page last changed on Oct 17, 2006 by david.soul@atlassian.com.

Administrators may need to move a Confluence instance from one server to another for upgrades or downtime.



Avoid upgrades while transferring

If you are planning to switch databases, application servers or Confluence versions, perform the transfer and test that it is successful separately to any other changes.

Transferring Confluence Standalone To Another Server Using The Same Operating System

If you are using Confluence Standalone and 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. This next step is dependent on your database:
 - For users of the internal database, the content is stored inside the home directory. You should consider switching to an external database after the transfer is successful.
 - For 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.
 - For external databases stored locally:
 - A. On the original server, create a manual database backup.
 - B. Copy the database backup to the new server.
 - C. On the new server, install or upgrade the database version to match the original server.
 - D. Import the database backup.
 - E. Add a database user account with the same username and password as the original.
 - F. Provide the user with the full access to the imported mdatabase.
 - G. Use a database administration tool to confirm that the user can login from the localhost.
4. 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.
5. If you configured Confluence as a Windows service, [repeat those instructions](#).

All Other Transfers

Create a backup and import into the new server.

1. Create a backup from Confluence by going to 'Administration' -> 'Backup & Restore', checking the 'Backup Attachments' and selecting 'Backup'.
2. Identify the current version of Confluence you are using, displayed at the bottom of each Confluence page.
3. Download the same version as you are currently using to the new server, which may be the [current Confluence release](#), or an [older version](#).
4. Using the same version, follow the [Upgrading Confluence](#) guide.

Rebuilding the Ancestor Table


This page last changed on Jun 17, 2007 by rosie@atlassian.com.

In Confluence, the ancestor table controls the [breadcrumb](#) navigation at the top of each Confluence page. 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/rebuild_ancestor_table.action

[Dashboard](#) > [Administration](#) > Page Level Permissions


 Administration

Page Level Permissions


Configuration


- ☐ [General Configuration](#)
- ☐ [Daily Backup Admin](#)
- ☐ [Manage Referrers](#)
- ☐ [Plugins](#)

Rebuild Ancestor Table



RELATED TOPICS

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Restoring a Site

This page last changed on Dec 17, 2007 by [smaddox](#).



CAUTION: Restoring a backup of an entire confluence site (consisting of multiple spaces) will:

- Wipe out all Confluence content in the database. Ensure that your database is backed up.
- Log you out after the restore process. Make sure you know your login details contained in the data being restored.

Confluence supports backward compatibility for site backups. (But not for [space backups](#)). You can only successfully restore backups of a site from an older version of Confluence to a newer version of Confluence. For example, if you create a site backup in Confluence 2.4.3, it cannot be restored into a Confluence 2.2.2 instance. 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.

There are two ways to restore a site from a backup file:

1. [Restore a site from the Confluence Setup Wizard](#): This restores the data into a new instance of Confluence.
2. [Restore a site from the Administration Console](#): This restores data into the current instance of Confluence.



If your daily backup zips cannot be restored for whatever reason, but you have backups of both your database and your Confluence home directory, then it is still possible to [restore from these backups](#).



Selective space restore not possible

You cannot select a single space to restore from the entire site backup when the backup contains more than one space.

RELATED TOPICS



[Confluence 2.7 Temp Archive](#)



[Manually Backing Up The Site](#)



[Restoring a Site](#)



[Restoring a Space](#)



[Restoring Data from the Administration Console](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Restoring a Space

This page last changed on Dec 17, 2007 by [smaddox](#).

Confluence will only allow you to restore a space if a space by that name does not already exist 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.



Cannot restore to a different major Confluence release

Confluence only supports forward compatibility and backward compatibility for individual space import and export when executed within the same major version of Confluence instances.

This means that a space export created in a newer major version of Confluence cannot be imported into an older major version of Confluence. For example, if you create a space export in Confluence 2.4.5, it cannot be imported into a Confluence 2.2.2 instance. It can be however imported into 2.4.6. (because 2.2.2 and 2.4.5 are two different 'major' versions). Similarly, a space export created in 2.2.2 can not be imported into 2.4.5. However, it can be restored in 2.2.10. (Since 2.2.2 and 2.2.10 belong to the same major version release)

If such an operation is carried out, an error message similar to the one below will be displayed and the import action will be stopped.

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).



You need to have [System Administrator](#) permissions in order to perform this function.

To restore a space,

Go to the 'Administration Console' and click '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'.

Restoring Spaces between Major Releases

As described in the warning above, you cannot restore a space directly between two major versions. i.e. an individual space backup from 2.2.x cannot be imported into a 2.3.x.

Whilst there is presently no functionality in Confluence that allows you to do so, there is however a manual workaround to this problem.



Always back up your data before attempting this procedure.

Please follow the procedure below:

1. Create a manual [site backup](#)
2. Configure a separate installation of the Confluence version you want the space export for i.e. the version into which you want to export the space.
3. Use one of the [two restoration methods listed here](#) to import the site backup.
4. After restoring the site backup, create the [XML backup](#) for the space you want.

5. Import this backup into your main Confluence instance and you now have that space.

Alternative

Another way is to [change the version of a space backup](#).

RELATED TOPICS



[Confluence 2.7 Temp Archive](#)



[Manually Backing Up The Site](#)



[Restoring a Site](#)



[Restoring a Space](#)



[Restoring Data from the Administration Console](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Changing the version of a space backup

This page last changed on Jul 11, 2007 by [mryall](#).

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.

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 Data from other Backups

This page last changed on Sep 12, 2007 by dave@atlassian.com.

Typically, Confluence data is restored from the [Administration Console](#) or from the [Confluence Setup Wizard](#).

If you are experiencing problems restoring from a 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).

Embedded Database

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:

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

[Migrate to a Different Database](#)



[Administrators Guide Home](#)





[Confluence Documentation Home](#)

Restoring Data from the Administration Console

This page last changed on Dec 17, 2007 by [smaddox](#).

Use this option if you want to restore data into your current instance of Confluence. If you want to restore data into a new instance, follow the instructions [here](#).

 You need to have [System Administrator](#) permissions in order to perform this function.

 **CAUTION:** Restoring a backup of an entire confluence site (consisting of multiple spaces) will:

- Wipe out all Confluence content in the database. Ensure that your database is backed up.
- Log you out after the restore process. Make sure you know your login details contained in the data being restored.

To restore data from backup,

Go to the 'Administration Console' and click '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 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

 [Confluence 2.7 Temp Archive](#)

 [Manually Backing Up The Site](#)

 [Restoring a Site](#)

 [Restoring a Space](#)

 [Restoring Data from the Administration Console](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Retrieve file attachments from a backup

This page last changed on Jan 02, 2007 by ivan@atlassian.com.

File attachments on pages can be retrieved from a backup without needing to import the the backup into Confluence. This is useful for recovering attachments that have been deleted by users.

Both [daily](#) 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 [Administrators Guide](#) instead.

Before following the [instructions for recovering attachments](#), please review how backups store file and page information.

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:

```
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 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:

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

This page last changed on Dec 13, 2007 by [ganand](#).

Seeing an error when creating or importing a backup?

Problem	Solution
Exception while creating backup	Follow instructions below
Exception while importing backup	Follow Troubleshooting XML backups that fail on restore instead

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.

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=false
```

5. Find your Confluence output logs. On standalone, this is the `/logs` directory under your Confluence install. Move or delete all existing Confluence logs to makes 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 `my_confluence_install/logs/catalina.out`. Scroll to the bottom of the file.
9. Do a search for 'ObjectNotFoundException'. You should see an error similar to this:

```
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(ObjectNotFoundException.java:24)
```

```

10     at net.sf.hibernate.impl.SessionImpl.immediateLoad(SessionImpl.java:1946)
11     at net.sf.hibernate.proxy.LazyInitializer.initialize(LazyInitializer.java:53)
12     at
net.sf.hibernate.proxy.LazyInitializer.initializeWrapExceptions(LazyInitializer.java:60)
13     at net.sf.hibernate.proxy.LazyInitializer.getImplementation(LazyInitializer.java:164)
14     at
net.sf.hibernate.proxy.CGLIBLazyInitializer.intercept(CGLIBLazyInitializer.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.toGenericXML(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.
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
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 to 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.BucketPropertySetItem@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 Reoccurring

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

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Viewing and Editing License Details

This page last changed on Dec 17, 2007 by [smaddox](#).

The 'License Details' page tells you:

- How many users your Confluence instance is licensed to support, and how many are currently registered.
Note: The number of registered users only includes users who have 'can use Confluence' permission. [Deactivated users](#) are not included.
Click the 'Refresh' button to make sure you see the latest count.
- What type of license you have (e.g. Commercial, Academic, Community).
- 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 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.

i From Confluence release 2.5.5, the 'License Details' page shows Server ID instead of License ID.

To view the details of your Confluence license,

1. Log into Confluence as a user with Confluence Administrator or System Administrator permissions.
2. Go to the 'Administration Console' and click 'License Details' under the heading 'Administration in the left-hand panel.

i To look up your license details on the Atlassian website, please log in to my.atlassian.com

To update your Confluence license,

1. Log into Confluence as a user with Confluence Administrator or System Administrator permissions.
2. Go to the 'Administration Console' and click 'License Details' under the heading 'Administration in the left-hand panel.
3. Enter your new license details into the 'License' field and click the 'Save' button.

- i** 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](#).)

Screenshot : License Details

This page shows your current licensing information.
You can use the form below to update the license Confluence is running with.

Organisation	Atlassian
Date Purchased	Feb 11, 2007
License Type	Confluence: Commercial Server
Licensed Users	500 (0 signed up currently)
	Refresh
Support Period	Your commercial Confluence support and updates are available until Feb 12, 2008 .
Server ID	AACK-COIS-AACK-COIS (Atlassian sales or support may ask you to provide this ID)
License	<div></div>
	Save

RELATED TOPICS

 [Apache and Tomcat load balancing](#)

 [Cache Statistics](#)

 [Cluster Administration page](#)

 [Cluster safety mechanism](#)

 [Cluster Troubleshooting](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Viewing System Information

This page last changed on Dec 17, 2007 by [jnolen](#).

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, go to the 'Administration Console' and click 'System Configuration' in the 'Administration' section.



The handy Memory Graph helps you keep track of Confluence's memory usage.

RELATED TOPICS

- [Cache Statistics](#)
- [Viewing and Editing License Details](#)
- [Viewing and Managing Installed Plugins](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Where Is My ConfluenceHome Directory?

This page last changed on Mar 04, 2004 by [vidya](#).

Often in the documentation, you'll see a reference to the "ConfluenceHome" directory. This is the directory in which Confluence stores its configuration information, search indexes, custom decorators and page attachments. Also, if you're using the embedded HSQL database, the database is also stored in this directory.

When Confluence first starts up, it reads a file called `confluence-init.properties`, which is located inside the `confluence/WEB-INF/classes` directory under where you unpacked the distribution. This file contains a single line telling Confluence where the ConfluenceHome directory is. If you ever forget where you put your home directory, check `confluence-init.properties`.

Cluster Administration page

This page last changed on Dec 17, 2007 by [smaddox](#).

Overview

Any instance of Confluence which uses a clustered license has a Cluster Configuration page which includes information about the active cluster.

1. Click 'Administration', available at the top-right of every Confluence page.
2. Click 'Cluster Configuration' in the left-hand menu, in the section called 'Clustering'.


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

Administration

 **Cluster Configuration**

Welcome [Matt Ryall](#) | [Preferences](#)

Cluster Status	RUNNING
Cluster Name	extranet
Multicast Listen Address	235.54.69.161:32357
Active Nodes	2
Licensed Nodes	8

Active Nodes

Node ID	2
Unicast Listen Address	172.16.0.11:8088
Uptime	1 day, 20 hours, 49 minutes, 47 seconds
JVM Version	1.4.2_12
Operating System	Linux 2.6.9-42.0.3.ELsmp
Memory Graph	<div><div></div></div> 9 % Free

Node ID	3
Unicast Listen Address	172.16.0.10:8088
Uptime	1 day, 20 hours, 27 minutes, 32 seconds
JVM Version	1.4.2_12
Operating System	Linux 2.6.9-42.0.3.ELsmp
Memory Graph	<div><div></div></div> 17 % Free

Cluster Administration Page

This page shows your cluster configuration, and allows you to start a new Confluence cluster using data from 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

[Confluence Cluster Installation](#)
[Cluster Troubleshooting](#)

Cluster Troubleshooting

This page last changed on Nov 13, 2007 by david.soul@atlassian.com.

Symptoms

Below is a list of potential problems with a Confluence cluster, and their likely solutions. The solutions are listed below.

Problem	Likely solutions
Cluster panic errors at startup	Add multicast route , Check firewall
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 tcpdump)	Check firewall , Check intermediate routers , Increase multicast TTL
Any issue not covered here	Contact support

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.

Debugging tools

Listed below are some debugging tools that help determine what the status of the multicast traffic is:

Tool	Information provided
<code>netstat -gn</code>	Lists multicast groups. Does not work on Mac OS X.
<code>netstat -rn</code>	Lists system routing table.
<code>tcpdump -i interface</code>	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.

Usually, adding a route for all multicast traffic to use the correct interface will fix multicast traffic. 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](#).

Check firewall

Ensure your firewall allows UDP traffic on the [multicast address and port used by Confluence](#).

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.

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? 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.

Configuring Confluence

This page last changed on Feb 02, 2006 by [vidya](#).

- [Optional Settings](#)
 - [Attachment Storage Configuration](#)
 - [Enabling CamelCase Linking](#)
 - [Enabling Remote APIs](#)
 - [Enabling Rich Text Editing Option](#)
 - [Enabling Threaded Comments](#)
 - [Enabling Trackback](#)
 - [Making Rich Text Editing default](#)
 - [WebDAV Configuration](#)
- [Other Settings](#)
 - [Configuring Attachment Size](#)
 - [Configuring Character Encoding](#)
 - [Configuring HTTP Timeout Settings](#)
 - [Configuring Indexing Language](#)
 - [Configuring Jira Issues Icon mappings](#)
 - [Configuring Number Formats](#)
 - [Configuring Shortcut Links](#)
 - [Configuring Time and Date Formats](#)
 - [Number of Ancestors to Show in Breadcrumbs](#)
 - [Thumbnail Settings](#)
- [Site Configuration](#)
 - [Configuring the Server Base URL](#)
 - [Configuring the Site Homepage](#)
 - [Customising Default Space Content](#)
 - [Editing the Global Logo](#)
 - [Editing the Site Title](#)
 - [Editing the Site Welcome Message](#)
 - [View Space Goes to Browse Space](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Optional Settings

This page last changed on Jan 31, 2006 by [vidya](#).

- [Attachment Storage Configuration](#)
- [Enabling CamelCase Linking](#)
- [Enabling Remote APIs](#)
- [Enabling Rich Text Editing Option](#)
- [Enabling Threaded Comments](#)
- [Enabling Trackback](#)
- [Making Rich Text Editing default](#)
- [WebDAV Configuration](#)


Attachment Storage Configuration

This page last changed on Dec 17, 2007 by [smaddox](#).

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.

Attachment Storage Options

Local File System


By default, Confluence stores attachments in the `attachments` directory within the configured Confluence home folder.

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.

 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.

To perform a migration, follow the steps below:

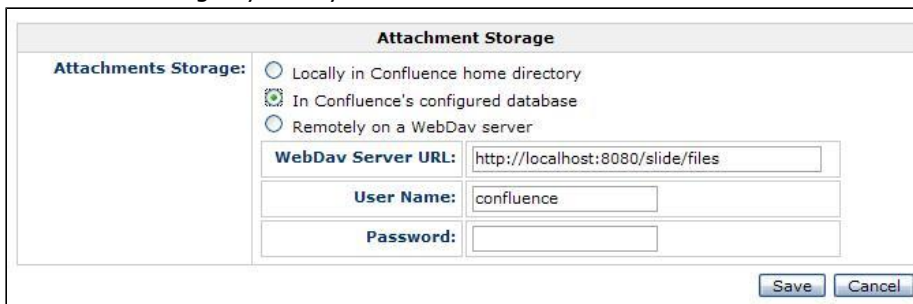
1. View the 'Administration Console'.
2. Click 'Attachment Storage' in the left-hand panel. The current configuration will be displayed.



The screenshot shows the 'Attachment Storage' configuration window. On the left, under 'Attachments Storage:', there is a 'WebDAV:' section. To the right, the 'WebDav Server URL' is set to 'http://localhost:8080/slide/files' and the 'User Name' is 'confluence'. An 'Edit' button is located at the bottom right of the window.

Attachment storage configuration

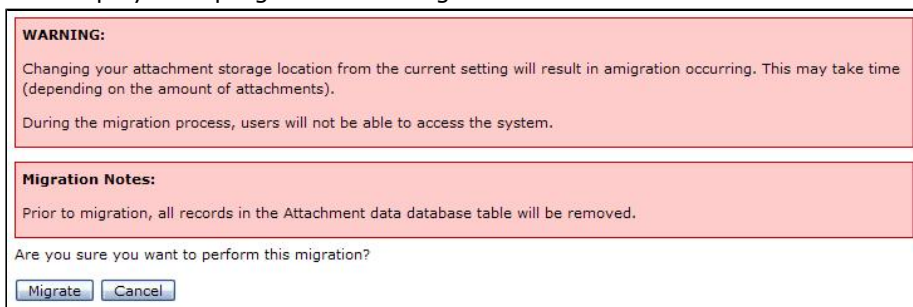
3. Click the 'Edit' button to modify the configuration.
4. Select the storage system you desire.



The screenshot shows the 'Edit Attachment Storage' window. Under 'Attachments Storage:', there are three radio button options: 'Locally in Confluence home directory', 'In Confluence's configured database' (which is selected), and 'Remotely on a WebDav server'. Below these, there are input fields for 'WebDav Server URL' (containing 'http://localhost:8080/slide/files'), 'User Name' (containing 'confluence'), and 'Password' (empty). 'Save' and 'Cancel' buttons are at the bottom right.

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.



The screenshot shows a migration warning and confirmation dialog. It has two main sections: 'WARNING:' and 'Migration Notes:'. The 'WARNING:' section states that changing the attachment storage location will result in a migration, which may take time and lock out users. The 'Migration Notes:' section states that all records in the Attachment data database table will be removed. At the bottom, it asks 'Are you sure you want to perform this migration?' with 'Migrate' and 'Cancel' buttons.

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
```

RELATED TOPICS

 [Important Directories and Files](#)

Enabling CamelCase Linking

This page last changed on Dec 17, 2007 by [smaddox](#).






[CamelCase linking](#) is a form of markup used in many wikis where words are capitalised and compounded together without spaces, 'LikeThis', in order to create links automatically.

By default, CamelCasing is not enabled in Confluence. To use CamelCasing, a Confluence administrator will need to enable this option from the 'Administration Console'.

To enable CamelCasing,

1. From the 'Administration Console' click 'General Configuration' in the left-hand panel.
2. Click 'Edit' on the 'General Configuration' screen.
3. Select 'On' beside 'CamelCase Links'.
4. Click 'Save'.

RELATED TOPICS

-  [Attachment Storage Configuration](#)
-  [Enabling CamelCase Linking](#)
-  [Enabling Remote APIs](#)
-  [Enabling Rich Text Editing Option](#)
-  [Enabling Threaded Comments](#)


[!Administration Guide Attachments

directory^adminhome.gif!]  [Confluence Documentation Home](#)

Enabling Remote APIs

This page last changed on Dec 16, 2007 by [smaddox](#).

Confluence provides XML-RPC and SOAP remote APIs. You need to enable the APIs from the Administration Console before you can access Confluence remotely.

 You need to have [System Administrator](#) permissions in order to perform this function.

To enable the remote API,

1. Go to the 'Administration Console' and click 'General Configuration' in the left-hand panel.
2. Click 'Edit' next to 'Site Configuration'.
3. Select 'On' next to 'Remote API (XML-RPC & SOAP)'.
4. 'Save' your changes.

RELATED TOPICS

 [Remote API Specification](#)

 [RPC Plugins](#)

[Confluencer.NET](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Enabling Rich Text Editing Option

This page last changed on Dec 17, 2007 by [smaddox](#).

With Confluence 2.0 and later versions, users have the option of using the [Rich Text](#) editor to create pages. By default, this is set to 'On'. If desired, a Confluence administrator can disable 'Rich Text Editing' from the Administration Console.

To disable Rich Text editing,

1. Go to the Administration Console and click 'General Configuration' in the left-hand panel.
2. In the 'General Configuration' screen, click 'Edit'.
3. Select 'Off' beside 'Rich Text Editing'.
4. Click 'Save'.

RELATED TOPICS

 [Enabling Rich Text Editing Option](#)

 [Making Rich Text Editing default](#)

 [Rich Text Editor Overview](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Enabling Threaded Comments

This page last changed on Jun 24, 2007 by [smaddox](#).

Comments on pages or news items are displayed in one of two views:

- Threaded: Shows the comments in a hierarchy of responses. Each subsequent 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 Flat mode.

To enable or disable the 'threaded view',

1. Go to the 'Administration Console', click on 'General Configuration' in the left panel.
2. In the 'Options and Settings' screen, click 'Edit'.
3. Select "On" beside 'Threaded Comments'.
4. Click 'Save'.

RELATED TOPICS



[Commenting on a Page](#)



[Viewing Comments](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Enabling Trackback

This page last changed on Jun 24, 2007 by [smaddox](#).

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. Go to the 'Administration Console', click on 'General Configuration' in the left panel.
2. In the 'Feature Settings' screen, click 'Edit'.
3. Select 'On' beside 'Trackback' and click 'Save'.

RELATED TOPICS

 [Attachment Storage Configuration](#)

 [Enabling CamelCase Linking](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Making Rich Text Editing default

This page last changed on Dec 17, 2007 by [smaddox](#).

A Confluence administrator can configure whether the default mode of editing on the site is 'Rich Text' or 'Wiki Markup'.

Users will still be able to [configure their individual preferences](#) from the 'Edit' tab of a page.

To make Rich Text Editing the default,

1. From the 'Administration Console' click 'General Configuration' in the left-hand panel.
2. Click 'Edit' on the 'General Configuration' screen.
3. Select 'On' beside 'Users see Rich Text Editor by default'.
(Select 'Off' to set 'Wiki Markup' editing as the default.)
4. Click 'Save'.

RELATED TOPICS

 [Enabling Rich Text Editing Option](#)

 [Making Rich Text Editing default](#)

 [Rich Text Editor Overview](#)

[!Administration Guide Attachments

directory^adminhome.gif!]  [Confluence Documentation Home](#)

WebDAV Configuration

This page last changed on Dec 17, 2007 by [jnolen](#).

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. They will be asked to log in, and the standard Confluence permissions apply.

On the 'WebDav Configuration' page, you can:

- allow/disallow specific actions on pages and attachments via WebDAV. The configurable actions are: create/move, edit and delete.
- enable/disable access to specific virtual files/folders.



- The 'WebDav Configuration' page will only be available if the [WebDAV plugin](#) has been enabled (see [Installing and Configuring Plugins using the Plugin Repository Client](#)).
- The settings on the 'WebDav Configuration' page do not apply to [external attachment storage configuration](#).

To configure WebDAV options for pages and attachments ,

1. Go to the 'Administration Console'.
2. Click 'WebDav Configuration' under 'Configuration' in the left panel. The 'WebDAV Configuration' page is displayed.
3. Check or uncheck the options in the 'Permissions' section as required.
4. Check or uncheck the options in the 'Virtual Files and Folders' section as required.
5. Click the 'Save' button.

Screenshot: WebDAV configuration

Dashboard > Administration > WebDAV Configuration

Welcome [Sarah Maddox](#) | [Preferences](#) | [Administration](#) | [Log Out](#)

WebDAV Configuration

WebDAV allows you to access Confluence content as if it were a folder in your computers file system.

Permissions

If an option is turned off, it is turned off for all users. If a setting is turned on, standard Confluence permissions will be applied to determine if an action is permitted.

	Create/Move	Edit	Delete
Pages	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Attachments	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Virtual Files and Folders

To enable access to extra information about Confluence content, various virtual files and folders are available.

	.url file	@exports	@versions
Pages	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

[Save](#)

RELATED TOPICS

- [Attachment Storage Configuration](#) (Confluence 2.7 Temp Archive)
- [Important Directories and Files](#) (Confluence 2.7 Temp Archive)
- [WebDAV Configuration](#) (Confluence 2.7 Temp Archive)
- [WebDAV Plugin](#) (Confluence Extension)

Other Settings

This page last changed on Jan 31, 2006 by [vidya](#).

- [Configuring Attachment Size](#)
- [Configuring Character Encoding](#)
- [Configuring HTTP Timeout Settings](#)
- [Configuring Indexing Language](#)
- [Configuring Jira Issues Icon mappings](#)
- [Configuring Number Formats](#)
- [Configuring Shortcut Links](#)
- [Configuring Time and Date Formats](#)
- [Number of Ancestors to Show in Breadcrumbs](#)
- [Thumbnail Settings](#)

Configuring Attachment Size






This page last changed on Dec 17, 2007 by [smaddox](#).

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.

RELATED TOPICS

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)


 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring Character Encoding

This page last changed on Jun 24, 2007 by [smaddox](#).

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 '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

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring HTTP Timeout Settings

This page last changed on Aug 07, 2006 by tom@atlassian.com.



This feature is available in 2.2.8 and later versions of Confluence

When macros such as the RSS macro, the Calendar macro or the Repository Client Plugin 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.

If you are using Tomcat, you can add this to the catalina.bat/sh file:

```
JAVA_OPTS=-Dhttp.timeout=timeInSecondsHere
```


Configuring Indexing Language

This page last changed on Jun 24, 2007 by [smaddox](#).

Changing the Indexing Language setting may improve the accuracy of Confluence search results if the majority of the content of your site is in some language other than English. Since Confluence v. 2.2.5, the content indexing support is provided in German, Russian, Chinese, CJK, French, Brazilian, Czech and Greek besides English (default).

To configure a different indexing language,

1. Go to the 'Administration Console' and click on 'General Configuration' in the left panel.
2. Click 'Edit' on the right hands side of the 'Formatting and International Settings' section.
3. There is a drop-down list of 'Indexing Language' currently supported in Confluence.
4. 'Save' your changes.


RELATED TOPICS

-  [Configuring Indexing Language](#)
-  [Content Index Administration](#)
-  [Rebuild index from scratch](#)
-  [Working with Macros](#)


Configuring Jira Issues Icon mappings

This page last changed on Jun 24, 2007 by [smaddox](#).






If you are using the `{jiraissues}` macro to retrieve information from a JIRA server, you will have to tell Confluence where to find the icons for any custom statuses or issue types you have configured in JIRA.

 Confluence is configured by default with all JIRA's standard issue type and status icons. You will only need to change these settings if you have customised additional statuses or issue types for JIRA or have changed JIRA's default icons.

To configure custom icons,

1. Go to the 'Administration Console' and click on 'Jira Issue Icon Mappings' in the left panel.
2. For each icon you wish to configure, enter the name of the issue type or status into the Jira entity field, and the filename of its icon into the filename field.
 Ensure that the icon with that filename is located in the `/images/icons` directory of the JIRA server.
3. You may edit existing icon mappings by clicking on the `remove` link by an existing mapping, then re-adding it with a new icon filename.

RELATED TOPICS

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)






Configuring Number Formats

This page last changed on Jun 24, 2007 by [smaddox](#).

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

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring Shortcut Links

This page last changed on Dec 17, 2007 by [smaddox](#).

Shortcut links provide a quick way of linking to resources frequently referenced from Confluence. When you create a shortcut link, you are assigning a key to a URL so that when a user edits Confluence documents they can type 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	<code>http://www.google.com/search?q=cache:</code>		Remove
imdb	<code>http://us.imdb.com/Title?</code>		Remove
jira	<code>http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=</code>	JIRA Issue %s	Remove
googlegroups	<code>http://groups.google.com/groups?q=</code>		Remove
google	<code>http://www.google.com/search?q=</code>		Remove
dictionary	<code>http://www.dict.org/bin/Dict?Database=*&Form=Dict1&Strategy=*&Query=</code>		Remove

Shortcut links are added and maintained by Confluence administrators from the Administration Console.

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

Specify in the link what should go on 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	<code>[CONF-1000@JIRA]</code>	<code>http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=CONF-1000</code>	CONF-1000
a Google search	<code>[Atlassian Confluence@Google]</code>	<code>http://www.google.com/search?q=Atlassian+Confluence</code>	Atlassian Confluence@Google

Shortcut links can have titles just like any other link:

To link to...	Type this	Resulting URL	Demonstration
Internet Movie Database	[Fight Club] tt0137523@IMDB]	http://us.imdb.com/Title?tt0137523	Fight Club
Google Cache	[Cached Homepage] www.atlassian.com@cache]	http://www.google.com/search?q=cache:www.atlassian.com	Cached Homepage

Deleting Shortcut Links

Once you have created a shortcut link, it is listed under 'Shortcut Links' in the 'Administration Console'. Click 'Remove' to delete the shortcut.

RELATED TOPICS

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring Time and Date Formats

This page last changed on Jun 24, 2007 by [smaddox](#).

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)
3. Change the formats using the guidelines in [this document](#).
4. 'Save' your changes.

RELATED LINKS

- [Java 1.4.2 SimpleDateFormat API](#)

RELATED TOPICS

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)


 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Number of Ancestors to Show in Breadcrumbs

This page last changed on Jun 24, 2007 by [smaddox](#).

Whenever there are three or more page links to be displayed in the breadcrumbs, Confluence will use an ellipsis like this '...' and display only the topmost and lowermost page links. Clicking on the ellipsis will display the page links in between.

 Note that the Dashboard and space homepage links are always displayed at the start of the breadcrumbs, and are not counted as ancestors for the purpose of this setting.

Screenshot: Breadcrumbs

[Dashboard](#) > [Confluence 2.0 User Guide](#) > ... > [Viewing Page Information](#) > [Viewing History of a Page](#)

You can configure how many immediate ancestors you want displayed in the breadcrumbs when you go to the page.

To configure the number of ancestors to show in the breadcrumbs,

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.
3. Beside 'Number of Ancestors to show in Breadcrumbs', enter a number. For example, if you enter 2, two immediate ancestors for the page will be displayed following the dots.
4. 'Save' your changes.



[Configuring Attachment Size](#)



[Configuring Character Encoding](#)



[Configuring HTTP Timeout Settings](#)



[Configuring Indexing Language](#)



[Configuring Number Formats](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Thumbnail Settings

This page last changed on Jun 24, 2007 by [smaddox](#).

The thumbnail settings allow you to define the height and width of images when they are displayed as thumbnails.

To configure thumbnail settings,

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.
3. Under the heading 'Thumbnail Settings', enter a value in pixels for:
 - Maximum Height: 200 pixels by default.
 - Maximum Width: 200 pixels by default.
4. 'Save' your changes.

RELATED TOPICS



[Gallery Macro](#)



[Thumbnail Macro](#)



[Uploading a Profile Picture](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Site Configuration

This page last changed on Jan 31, 2006 by [vidya](#).


- [Configuring the Server Base URL](#)
- [Configuring the Site Homepage](#)
- [Customising Default Space Content](#)
- [Editing the Global Logo](#)
- [Editing the Site Title](#)
- [Editing the Site Welcome Message](#)
- [View Space Goes to Browse Space](#)

Configuring the Server Base URL

This page last changed on Dec 16, 2007 by [smaddox](#).

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 autodetect 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.

To configure the Server Base URL,

1. Go to the 'Administration Console' and click 'General Configuration' in the left-hand panel.
2. Click the 'Edit' button next to 'Site Configuration'.
3. Enter the new URL in the 'Server Base URL' text box.
4. 'Save' your changes.



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.



Example

If Confluence is installed to run in a non-root context path, the server base URL should include the context path. For example, if Confluence is running at <http://www.foobar.com/confluence>, the server base URL will be <http://www.foobar.com/confluence>.

RELATED TOPICS



[Configuring the Server Base URL](#)



[Configuring the Site Homepage](#)



[Customising Default Space Content](#)



[Editing the Global Logo](#)



[Editing the Site Title](#)


Configuring the Site Homepage

This page last changed on Oct 16, 2007 by [smaddox](#).

You can configure Confluence to direct 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.
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.

 The spaces available to be set as your home page will depend on the access permissions of the space and the site.

- If your site allows anonymous access, the site home page must also be anonymously accessible.
- The site home page must be accessible to the 'confluence-users' group.






Screenshot : Configuring the site homepage

Site Configuration

Configure the appearance and behaviour of the site as a whole. The most important is the **Server Base URL**, which **must** be set to the externally-accessible address of your Confluence site.

Site Title:	Confluence
Server Base Url:	http://localhost:8080
Site Homepage:	dashboard ▼
Site Welcome Message:	dashboard ds ROLL
View Space Goes to Browse Space:	<input type="radio"/> On <input checked="" type="radio"/> Off

RELATED TOPICS

-  [Configuring the Server Base URL](#)
-  [Configuring the Site Homepage](#)
-  [Customising Default Space Content](#)
-  [Editing the Global Logo](#)
-  [Editing the Site Title](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Customising Default Space Content

This page last changed on Dec 16, 2007 by [smaddox](#).

[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.



Notes:

- The default content will appear only for new spaces created after you have defined the content. Content in existing home pages will not be changed.
- Confluence will replace the text '{0}' with the space name.

To define default content for home pages in global spaces,

1. Go to the 'Administration Console' and click 'Default Space Content' under 'Configuration' in the left panel.
2. The 'Space Home Pages' tab will open on the 'Default Space Content' page. Enter the content which you want to appear on the home page for new global spaces.
3. Click the 'Save' button.

To define default content for home pages in personal spaces,

1. Go to the 'Administration Console' and click 'Default Space Content' under 'Configuration' in the left panel.
2. The 'Space Home Pages' tab will open on the 'Default Space Content' page. Click the 'Personal Space Home Pages' tab.
3. Enter the content which you want to appear on the home page for new personal spaces.
4. Click the 'Save' button.

To undo your most recent changes,

1. Go to the 'Administration Console' and click 'Default Space Content' under 'Configuration' in the left panel.
2. Select either the 'Space Home Pages' tab or the 'Personal Space Home Pages' tab, as required.
3. Click the 'Revert' button.

Screenshot : Defining default space content

Dashboard > Administration > Default Space Content

Search

Default Space Content

Welcome Sarah Maddox | [History](#) | [Preferences](#) | [Administration](#) | [Log Out](#)

Configuration

- [General Configuration](#)
- [Daily Backup Admin](#)
- [Manage Referrers](#)
- [Plugins](#)
- [Plugin Repository](#)
- [Languages](#)
- [Shortcut Links](#)
- [Global Templates](#)
- [Mail Servers](#)
- [User Macros](#)
- [JIRA Issues Icon Mappings](#)
- [Attachment Storage](#)
- [Spam Prevention](#)
- [PDF Language Support](#)
- [Default Space Content](#)
- [WebDAV Configuration](#)

Look and Feel

- [Themes](#)
- [Colour Scheme](#)
- [Layouts](#)
- [Global Logo](#)
- [Custom HTML](#)

Default Space Content

This page allows you to customize what is shown on the *home page* of a space when it is first created. Customizations will only apply to spaces created after you have made your changes. Existing spaces will remain unchanged.

[Space Home Pages](#) | [Personal Space Home Pages](#)

This is the home page for the {0} space.

Revert

Save

The symbol {0} will be replaced with the name of the Space.

RELATED TOPICS

- [Configuring the Server Base URL](#)
- [Configuring the Site Homepage](#)
- [Customising Default Space Content](#)
- [Editing the Global Logo](#)
- [Editing the Site Title](#)

[Administrators Guide Home](#)

[Confluence Documentation Home](#)

Editing the Global Logo

This page last changed on Jun 24, 2007 by [smaddox](#).

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.

To edit the global logo,

1. From the 'Administration Console' click on 'Global logo' under the heading 'Look and Feel' in the left panel.
2. In the screen displayed, select 'Off' to disable logo.
3. To upload a new logo, click 'Browse' to select a new image and click 'Upload Logo'.

RELATED TOPICS

-  [Configuring the Server Base URL](#)
-  [Configuring the Site Homepage](#)
-  [Customising Default Space Content](#)
-  [Editing the Global Logo](#)
-  [Editing the Site Title](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Editing the Site Title





This page last changed on Jun 24, 2007 by [smaddox](#).

The site title appears in your browser's title bar. By default, it is set to 'Confluence'.

To change the title of your Confluence instance,

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.
3. Enter a new title for your site in the input field beside 'Site Title' and 'Save'.

RELATED TOPICS

-  [Configuring the Server Base URL](#)
-  [Configuring the Site Homepage](#)
-  [Customising Default Space Content](#)
-  [Editing the Global Logo](#)
-  [Editing the Site Title](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Editing the Site Welcome Message

This page last changed on Oct 21, 2007 by rosie@atlassian.com.

The site welcome message appears on the Dashboard. It can be used to provide users with an introduction to the site, or as a "message of the day".

To edit the site welcome message,

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..
3. In the text-entry box beside 'Site Welcome Message' enter your text using regular [Confluence markup](#).
4. 'Save' your changes.

RELATED TOPICS

-  [Configuring the Server Base URL](#)
-  [Configuring the Site Homepage](#)
-  [Customising Default Space Content](#)
-  [Editing the Global Logo](#)
-  [Editing the Site Title](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

View Space Goes to Browse Space

This page last changed on Jun 24, 2007 by [smaddox](#).

By default, when you click on a space link, you are taken to the space's homepage. 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' click on 'General Configuration' in the left panel.
2. Click 'Edit' at the bottom of the 'Options and Settings' screen. .
3. Select 'ON' beside 'View Space goes to Browse Space' and click 'Save'.

RELATED TOPICS

-  [Configuring the Server Base URL](#)
-  [Configuring the Site Homepage](#)
-  [Customising Default Space Content](#)
-  [Editing the Global Logo](#)
-  [Editing the Site Title](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring Encoding

This page last changed on Apr 09, 2007 by [mjensen](#).

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.

Troubleshooting Character Encodings

This page last changed on Jul 18, 2007 by ivan@atlassian.com.

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.

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, view the `/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.

Example:

`http://confluence.atlassian.com/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 Confluence, a round-trip through the database. All the test results should appear identical.

İñtërnâtîônàlizætîøn

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

İñtërnâtîônàlizætîøn

Test 2: Form submission

This is the test string pasted by you into the web form and submitted back to Confluence

İñtërnâtîônàlizætîøn

Test 3: Database round-trip (select as LOWER)

This is the string from Test 2 after being stored in the database and then retrieved

İñtërnâtîônàlizætîøn

Expected result (converting Java string to lowercase)

İñtërnâtîônàlizætîøn

Test 4: Database round-trip (select as UPPER)

This is the string from Test 2 after being stored in the database and then retrieved

İÑTËRNÂTÎÔNÂLİZÆTIØN

Expected result (converting Java string to uppercase)

İÑTËRNÂTÎÔNÂLİZÆTIØN

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

This page last changed on Sep 17, 2006 by [cmiller](#).

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.

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.

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

This page last changed on Mar 21, 2006 by jeremy@atlassian.com.

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 encoding test has now been run. Below, you can compare the raw text delivered from Confluence round-trip through the database. All the test results should appear identical.

İñtërnâtiônàlizætiøn

This image is how all of the test results below *should* appear on this page, and all of your [System Information](#).

Test 1: Raw text

This is the test string generated in Confluence

İñtërnâtiônàlizætiøn

Test 2: Form submission

This is the test string pasted by you into the web form and submitted back to Confluence

İñtërnâtiônàlizætiøn

Test 3: Database round-trip (select as LOWER)

This is the string from Test 2 after being stored in the database and then retrieved

İñtërnâtiônàlizætiøn

Expected result (converting Java string to lowercase)

İñtërnâtiônàlizætiøn

Test 4: Database round-trip (select as UPPER)

This is the string from Test 2 after being stored in the database and then retrieved

İñTërnâtiônàlizætiøn

Expected result (converting Java string to uppercase)

İñTërnâtiônàlizætiøn

Solution

Upgrade to a newer version of MySQL. (4.1 is confirmed to work.)

Configuring Mail

This page last changed on Feb 02, 2006 by [vidya](#).

- [Configuring a Server for Outgoing Mail](#)
- [Enabling the 'Mail Page' plugin](#)
- [The Mail Queue](#)



[Administrators Guide Home](#)




[Confluence Documentation Home](#)

Configuring a Server for Outgoing Mail

This page last changed on Dec 17, 2007 by [smaddox](#).

Configuring your Confluence server to send outgoing mail allows your Confluence users to:

- [receive Daily Reports](#)
- [send a page via email](#)

 You need to have [System Administrator](#) permissions in order to perform this function.

To configure Confluence Standalone to send outgoing mail,

1. Go to the 'Administration Console' and click 'Mail Servers' under 'Configuration' in the left panel. This will list all currently configured SMTP servers.
2. Click 'Add New SMTP Server' (or edit an existing server).
 - Name: By default, this is set to 'SMTP Server'.
 - From: Enter the email address that will be displayed in the 'from' field for email messages originating from this server.
 - Subject Prefix: Enter a subject prefix, if required.
3. Configuring the Host Address, Username and Password:
 - Manually enter your 'Host Address', 'Username' and 'Password' details in the form fields displayed (recommended).
 - OR
 - Specify the 'JNDI' location of a mail session configured in your application server in the form field displayed.

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. `javamail-x.x.x.jar`
2. `activation-x.x.x.jar`
3. `mail-x.x.x.jar`

Ideally, these should be:

- `javamail-1.3.2.jar`
- `activation-1.0.2.jar`
- `mail-1.3.2.jar` (or later)

You will then need to move these into the proper directory:

Standalone Version: Please move the above three jar files from the `confluence/WEB-INF/lib` directory to the `common/lib` directory and restart Confluence.

RELATED TOPICS



[Configuring a Server for Outgoing Mail](#)



[Enabling the 'Mail Page' plugin](#)




[The Mail Queue](#)


Enabling the 'Mail Page' plugin


This page last changed on Dec 17, 2007 by [smaddox](#).

The 'Mail Page' plugin allows anyone with the 'View' [space permission](#) to [email a Confluence page](#).

 Confluence versions 2.4 and later come with the 'Mail Page' plugin preinstalled.

The 'Mail Page' plugin is disabled by default. This is because, when someone [emails a Confluence page](#), they can select from a list of all Confluence users and groups (note, however, that email addresses are not visible), or even mail the page to arbitrary addresses. If you have enabled [anonymous access](#) or [self-signup](#), visitors could potentially use this feature to send spam or nuisance email through your Confluence server.

 This plugin only works when the mail server is configured.

 You need to have [System Administrator](#) permissions in order to perform this function.

To enable the 'Mail Page' plugin,

1. Go to the 'Administration Console' and click 'Plugins' under 'Configuration' in the left-hand panel.
2. This will list all plugins that are currently installed in your Confluence system. Click 'Mail Page Plugin'.
3. This will display the 'Mail Page Plugin' details. To enable the 'Mail Page' plugin, click 'Enable plugin'.
4. Ensure that both of the following are enabled:
 - 'Mail Page Link' — displays the 'E-mail' link next to the 'Copy' link on the 'Page Info' screen (see ['E-mailing a page'](#))
 - 'mailpageactions' — enables the e-mail operation.

RELATED TOPICS

-  [Configuring a Server for Outgoing Mail](#)
-  [Enabling the 'Mail Page' plugin](#)
-  [The Mail Queue](#)

The Mail Queue

This page last changed on Dec 17, 2007 by [smaddox](#).

Email messages waiting to be sent out are queued in a mail queue and periodically flushed from Confluence once a minute. A Confluence administrator can also manually flush emails from the mail queue.

If there is an error sending messages, the failed emails are sent to an error queue from which you can either try to resend them or delete them.

To view the mail queue,

1. Go to the 'Administration Console' and click 'Mail Queue' in the left-hand panel. This will display the emails currently in the queue.
2. Click 'Flush Mail Queue' to send all emails immediately.
3. Click '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 'Delete' them from here.

RELATED TOPICS

-  [Configuring a Server for Outgoing Mail](#)
-  [Enabling the 'Mail Page' plugin](#)
-  [The Mail Queue](#)

RELATED TOPICS

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Confluence and JIRA

This page last changed on Dec 04, 2007 by [smaddox](#).

- [Add Confluence EAR-WAR to JIRA Standalone](#)
- [Integrating JIRA and Confluence](#)
- [Override properties in JIRA to Confluence Bridge](#)
- [Setting Up Trusted Communication between JIRA and Confluence](#)

RELATED TOPICS

- [Configuring Jira Issues Icon mappings](#)
- [JIRA Issues Macro](#)
- [JIRA Portlet Macro](#)

Add Confluence EAR-WAR to JIRA Standalone

This page last changed on Mar 16, 2007 by david.soul@atlassian.com.

This document will assist you in adding Confluence to your existing JIRA Standalone.

Step 0 - Consider alternatives

This guide is for experts only. If you run into any difficulties with this process, Atlassian technical support may provide limited assistance outside of helping users switch to running [Confluence Standalone separately](#).

Before embarking on this process, consider whether you could not rather run JIRA and Confluence in separate Tomcat instances running behind an Apache frontend server (see guides for [Confluence](#) and [JIRA](#)). There are some benefits to keeping them separate:

- Each app 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), particularly if you later want to install a third webapp not from Atlassian.

Offsetting this is the extra complexity of having to run Apache.

If you wish to proceed, please follow these instructions:

Step 1 - Download and extract WAR

1. Download the [Confluence WAR file](#)
2. Extract the downloaded zip file. It should extract to a folder called confluence-**<version>**. Inside this folder you'll find a folder called "confluence". Make a note of the absolute path to this directory (as you will need to use it later). Note: Do not copy the confluence folder to the webapps folder inside tomcat - this may cause Confluence to be deployed more than once.

Step 2 - Configure confluence-init.properties

1. Open `confluence/WEB-INF/classes/confluence-init.properties` in a text editor
2. Set the `confluence.home` property to a directory of your choosing. This is the directory that will contain all of Confluence's configuration, backup and attachment files.

Step 3 - Edit tomcat context descriptors

If you are deploying to JIRA version 3.3 or higher:

1. Create a file called `confluence.xml` in your JIRA standalone's `conf/Catalina/localhost` directory (if you have set up a different hostname for your JIRA tomcat instance, please specify that instead of `localhost`)
2. Open `confluence.xml` and add these lines:

```
<Context path="/confluence" docBase="c:/applications/confluence-2.1.3/confluence"
debug="0" reloadable="true"> <Logger className="org.apache.catalina.logger.FileLogger"
prefix="atlassian-confluence." suffix=".log" timestamp="true"/> </Context>
```
3. For `docBase` specify the value you noted down earlier. ⚠ This is the full path to the confluence folder in your confluence-**<version>** installation folder, not the confluence home folder. It should look like: `c:/<path to confluence installation>/confluence-<version>/confluence`.

Otherwise (for older versions of JIRA):

1. Open `conf/server.xml` in a text editor
2. Find the block that begins: `<Context path="" docBase="../atlassian-jira" debug="0" reloadable="true">` and ends with `</Context>` block.
3. After the `</Context>`, append the following:

```
<Context path="/confluence" docBase="c:/applications/confluence-2.1.3/confluence"
debug="0" reloadable="true"> <Logger className="org.apache.catalina.logger.FileLogger"
prefix="atlassian-confluence." suffix=".log" timestamp="true"/> </Context>
```

4. For docBase specify the value you noted down earlier. ⚠ This is the full path to the confluence folder in your confluence-**<version>** installation folder, not the confluence home folder. It should look like: c:/<path to confluence installation>/confluence-**<version>**/confluence.
5. Remove the commons-logging-1.0.4.jar file from the confluence\WEB-INF\lib directory

⚠ Do not delete the existing Jira <Context> block. Insert the code above after the Jira <Context> block.

Step 4 - Modify your setenv.sh/bat (ONLY IF YOU ARE RUNNING A SUN MICROSYSTEMS JVM)

1. Open JIRA's bin/setenv.sh/bat (.sh on unix, .bat on windows) in a text editor.
2. Find the line that says: "... JAVA_OPTS=..." and add **-XX:MaxPermSize=128m** to its end.

The Java Virtual Machine sets aside a portion of memory as the "permanent space", for objects that it never expects to have to garbage-collect. Because JIRA and Confluence are both quite large applications, it is possible that this permanent space will be filled up. Increasing the application heap size will not help, because the permanent generation size is a separate setting.

⚠ This flag is only supported on JVM's created by Sun Microsystems. If you include this flag while running another vendors JVM (such as JRocket, or IBM's JVM) they will not start.

Step 5 - Restart the Server

1. Shut down, and then restart the standalone server
2. Confluence should now be accessible on the same server as your existing JIRA standalone, under the confluence directory.
For example, if your JIRA is running at <http://jira.example.org:8080/>, Confluence will be running on <http://jira.example.org:8080/confluence>

⚠ When setting up the Confluence database do not reuse the JIRA database. Create a new database for Confluence.

Troubleshooting

When I try to send a test mail from Confluence, I get **javax.mail.NoSuchProviderException: smtp**

In some circumstances, Confluence will be unable to send email after being deployed in the same application-server as JIRA. If, when you try to send a test mail from the administration tool, you get the error: "javax.mail.NoSuchProviderException: smtp", please follow [these instructions](#) to fix it.

I have installed JIRA and Confluence in some other application server than Tomcat


These instructions only apply to the standalone Tomcat version of JIRA. Other application servers have not been tested in this configuration, and users have specifically reported difficulties deploying the two applications together in Orion Server and JBoss. We hope to resolve these issues soon.

Confluence is slow, and dumps enormous amounts of information to its logfiles

If you are seeing a large amount of DEBUG logging output, then ensure that you have removed the commons-logging-1.0.4.jar file from the confluence\WEB-INF\lib directory

Integrating JIRA and Confluence

This page last changed on Dec 11, 2007 by [smaddox](#).

 Take a look at the technical guide to the process of [adding your Confluence EAR-WAR to JIRA Standalone](#)

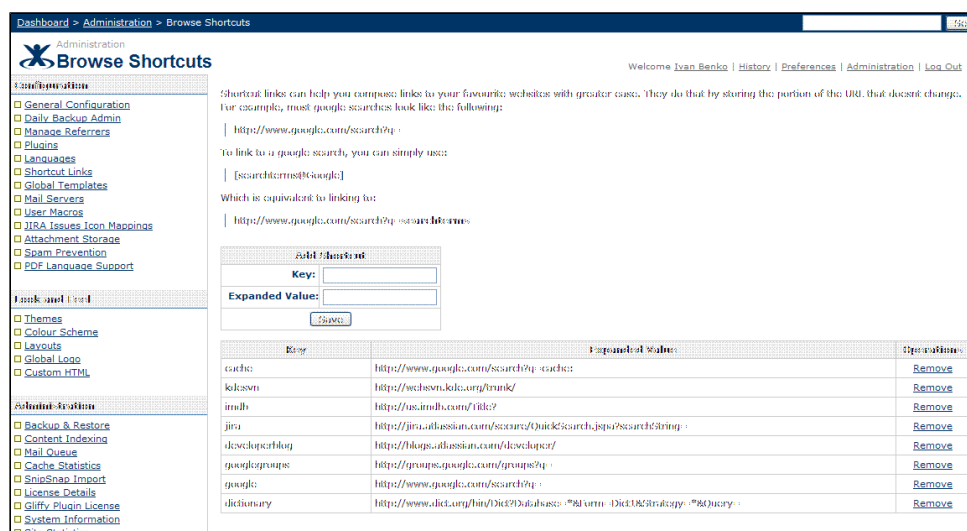
[JIRA](#) and [Confluence](#) were designed to complement each other. We've all seen projects where people try to store all their knowledge in the issue tracker, and we've seen projects where people have suffered trying to track issues in a knowledge management tool. We say: collect your team's thoughts, plans and knowledge in Confluence, track your issues in JIRA, and let the two applications work together to help you get your job done.

Here are four ways you can get JIRA and Confluence working together: use Confluence shortcuts to make easy links to JIRA issues, use [trackback](#) for two-way linking between Confluence and JIRA, use macros to include JIRA reports in Confluence pages, and integrate your JIRA and Confluence user management.

Combine Confluence Shortcuts and JIRA Quick Search

The simplest ideas can often be the most useful. In our Confluence site's global configuration - Administration > Shortcut Links, we have the following shortcut defined:

JIRA: `http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=`



Key	Expanded Value	Operations
cache	<code>http://www.google.com/search?q=cache:</code>	Remove
kolsen	<code>http://www.kolsen.org/trunk/</code>	Remove
imulh	<code>http://www.imulh.com/?file=</code>	Remove
jira	<code>http://jira.atlassian.com/secure/QuickSearch.jspa?searchString=</code>	Remove
developerblog	<code>http://blogs.atlassian.com/developer/</code>	Remove
googlegroups	<code>http://groups.google.com/groups?q=</code>	Remove
google	<code>http://www.google.com/search?q=</code>	Remove
dictionary	<code>http://www.dict.org/bin/Dict?Database=*&Form=DictUS&InApp=*&Query=</code>	Remove

This way, it's simple to create links using Confluence's shortcut notation. Link directly to JIRA issues: [CONF-1000](#), or use JIRA's intuitive quick-search functionality to create links to particular groups of issue: [CONF open improvements](#) will link to a list of all open issues in the Confluence project of type "Improvement" (try it and see!)

Use Trackback for easy two-way linking

Activate Trackback in JIRA and Confluence, and if someone makes a link from one application to the other, the link will automatically lead both ways: create a link from a JIRA issue to an example in a Confluence page, and the Confluence page will automatically know to link back to the JIRA issue, and vice versa. This is the perfect way to keep discussion connected to an issue.

- Document your user stories or use-cases in Confluence, and see at a glance which issues affect each use-case.
- If a JIRA issue requires more discussion or thought than can be conveniently held in comments, link them to a Confluence page.

(Note: as of Confluence 1.0 and JIRA 2.6, there is no mechanism for trackback to log in to JIRA or Confluence, so the use of trackback is limited to pages that are visible to anonymous visitors. In a protected Intranet environment, you may wish to open up Anonymous access to JIRA and Confluence to

allow traceback to take place. Future revisions of the applications will give you the opportunity to allow Confluence to "log in" to JIRA and vice versa, avoiding this limitation)

Use the {jiraissues} and {jiraportlet} macros to embed JIRA reports and portlets into your Confluence site

Any JIRA search-result can be embedded in a Confluence page using the [{jiraissues} macro](#) with your choice of included fields and field ordering, and any JIRA dashboard portlet can be embedded in a Confluence page using the [{jiraportlet} macro](#).

This way you can incorporate information from JIRA into the normal flow of your knowledge management. Combined with other macros like {junitreport}, {rss} and {html-include} and the FatCow suite, you can create dashboards in Confluence consolidating information from across your project, with Confluence and JIRA at the centre.

For Confluence 2.7.0 and later, 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 user to log in again or to supply a password.

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).

Read more about [trusted communication](#).

Link to Confluence pages from JIRA issues

While it is possible to simply paste links to Confluence pages into text fields of an issue (e.g. descriptions), the [JIRA Linker Plugin](#) provides a custom field that helps you find the correct page.

Integrate JIRA and Confluence user-management

To save you having to enter users into both JIRA and Confluence, you may benefit from using [Atlassian Crowd](#) as the user-repository for both applications.

Alternatively you can [configure Confluence to use JIRA's user database](#) (this requires that you are using JIRA with an external database; it will not work if you are using JIRA with an embedded HSQL database).

And much more coming...

When you buy a license for JIRA or Confluence, you are automatically entitled to a year of updates. We listen to our customers needs, and having our products complement and work well with each other is very important to us. So if there is any way you think Confluence and JIRA could be made to work better, suggest it in our [discussion space](#), and it may very well end up in a future version.

Override properties in JIRA to Confluence Bridge

This page last changed on May 10, 2005 by [vidya](#).

Overriding properties used in the JIRA and Confluence Bridge

If, for some reason, you need to override the name of a column or a table used in Confluence's bridge to JIRA, you may do so in `osuser.xml` (see below).

This is most likely something you would consider doing if columns names were failing because your database is case sensitive.

```
<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcCredentialsProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcAccessProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcProfileProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
```

Simply add the `<property name="chain.PROPERTY_NAME_HERE">NEW_VALUE</property>` element, to override a property (see below) with a new value.

Name Value Pairs for `JiraJdbcAccessProvider`, `JiraJdbcProfileProvider` and `JiraJdbcCredentialsProvider`

Property	Default value
userTable	userbase
userName	userName
userPassword	password_hash
groupTable	groupbase
groupName	groupname
membershipTable	membershipbase
membershipUserName	user_name
membershipGroupName	group_name
userId	id
membershipId	userId

Setting Up Trusted Communication between JIRA and Confluence

This page last changed on Dec 11, 2007 by [smaddox](#).

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 two macros have been enhanced to use trusted communication:

- [JIRA Issues macro](#)
- [JIRA Portlet 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](#)
- [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](#)

Prerequisites

- JIRA 3.12.0 or later.
- Confluence 2.7.0 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](#) and the [JIRA Portlet](#) macros allow 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

Trust only has to be established once between the two applications. Once trust has been established, it is entirely transparent to the Confluence users.

Using the JIRA Administration Console, the JIRA System Administrator defines Confluence as a trusted application by specifying the Confluence instance's URL and other information. Refer to the [JIRA documentation](#) for details.

Configuring the Macro Plugin in Confluence

By default, Confluence ships with trusted communication enabled for the following macros:

- [JIRA Issues macro](#)
- [JIRA Portlet 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. Go to the 'Administration Console' in Confluence and click 'Plugins' in the left-hand panel.
2. The 'Plugin Manager' screen appears, showing a list of installed plugins. Scroll down and click the 'JIRA Macros' link.
3. 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 or Portlet 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

JIRA Macros
Vendor: [Atlassian Software Systems](#)
Plugin Version: 2.4

Macros to retrieve information from JIRA.

☐ [Disable plugin](#)

jiraportlet Macro to display a JIRA portlet - requires JIRA 3	Disable
jiraissues Macro to retrieve a feed of JIRA issues and summarise them in the page	Disable
JIRA application trust support Send user authentication via trusted application link	Disable
JIRA application trust warnings Display warning messages when trusted user authentication is not available	Enable

Adding the Macro to a Confluence Page

The Confluence user can add and edit the macros as described on the following pages:

- Using the [JIRA Issues macro](#)
- Using the [JIRA Portlet 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
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.			<p>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:</p> <ul style="list-style-type: none"> • 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	<p>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</p>

			trusted communication link with JIRA in this case.
--	--	--	--

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 or JIRA Portlet 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 [enabled](#) via 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](#) below.

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.
- 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

Below are the warning messages which may appear on your Confluence page, above the output of the JIRA Issues or JIRA Portlet macro.

Warning Message	Cause	Solution	Warning Message Can be Turned Off?
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 that 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: <ul style="list-style-type: none"> • Configure JIRA to trust Confluence. • Disable trusted communications for the JIRA macros in Confluence. • Use the anonymous parameter in all your JIRA Issues and JIRA Portlet macros. 	Yes
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: <ul style="list-style-type: none"> • 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 and JIRA Portlet macros. 	Yes

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.
 - 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](#)
[JIRA Portlet Macro](#)

Confluence Security

This page last changed on Dec 17, 2007 by [smaddox](#).

Application Security Overview

As a public-facing web application, Confluence's application-level security is obviously important. This document answers a number of questions that commonly arise when customers ask us about the security of our product.



This document is for system administrators looking to evaluate the security of the Confluence web application. It does not address Confluence's internal security – user/group management and content permissions – except as it relates to the overall application security.

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 new random password 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 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: [Adding SSL for Secure Logins and Page Security](#)

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 Standalone. 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.

Vulnerabilities, Advisories and Patches.

If you find a security bug in Confluence

Open an issue on <http://jira.atlassian.com> in the Confluence 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 we can keep track of the issue and get a patch out as soon as possible.

Confluence Security Advisories

When a security issue in Confluence is discovered and resolved, we will inform customers through the following mechanisms:

- A security advisory will be posted on this page
- A copy of the advisory will be sent to the `confluence-users` and `confluence-announce` mailing-lists ([subscribe here](#)). These lists are mirrored on [our forums](#)
- If the person who reported the issue wants to publish an advisory through some other agency (for example, CERT), we'll assist in the production of that advisory, and link to it from our own.

Our Patch Policy

When a security issue is discovered, we will endeavour to:

- issue a new, fixed Confluence version as soon as possible
- issue a patch to the current stable version of Confluence
- issue patches for older versions of Confluence if feasible

Patches will generally be attached to the relevant JIRA issue.

Past Security Advisories

- [Confluence Community Security Advisory 2006-01-19](#)
- [Confluence Security Advisory 2005-02-09](#)
- [Confluence Security Advisory 2005-12-05](#)
- [Confluence Security Advisory 2006-01-20](#)
- [Confluence Security Advisory 2006-01-23](#)
- [Confluence Security Advisory 2006-06-14](#)
- [Confluence Security Advisory 2007-07-26](#)
- [Confluence Security Advisory 2007-08-08](#)
- [Confluence Security Advisory 2007-11-19](#)
- [Confluence Security Advisory 2007-11-27](#)
- [Confluence Security Advisory 2007-12-14](#)
- [Java Policy Security with Confluence](#) — If you would like to secure the confluence webapp to make sure plugins (or other code executed) cannot access unwanted system resources, the following will restrict file system access.
- [NoFollow Support](#)

Related Server Security Pages

 [Adding SSL for Secure Logins and Page Security](#)

 [Java Policy Security with Confluence](#)



Click to see pages related

to user and group permissions.

 [Assigning Space Permissions](#)

 [Confluence Permissions Architecture](#)

 [Confluence Security](#)

 [Confluence Security Advisory 2006-01-23](#)

 [Hiding the People Directory](#)

 [How do I tell if a user has permission to...?](#)

 [HTML Macro](#)

 [Revoking Space Permissions](#)

 [Security Overview](#)

 [Space Permissions Overview](#)

Confluence Community Security Advisory 2006-01-19

This page last changed on Jan 20, 2006 by jeremy@atlassian.com.



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 official advisory.

I hope this helps some of you!

Confluence Security Advisory 2005-02-09

This page last changed on Feb 08, 2005 by [jnolen](#).

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):

```
<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

This page last changed on Dec 04, 2005 by [cmiller](#).

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

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

This page last changed on Jan 20, 2006 by jeremy@atlassian.com.

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.

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 initially 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

This page last changed on Jan 20, 2006 by jeremy@atlassian.com.

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

This page last changed on Jun 14, 2006 by [cmiller](#).

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.

Fix

This issue has been fixed in Confluence 2.2.3. Patches are also available for all versions of Confluence between 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

This page last changed on Jul 25, 2007 by [smaddox](#).

In this advisory:

- [Users with view permission in a space can copy and save a page](#)
- [Space name and key are not validated nor escaped](#)

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

This page last changed on Aug 07, 2007 by [smaddox](#).

In this advisory:

- [Input in the RSS Feed Builder is not validated](#)
- [Input when editing Space Permissions is not validated](#)
- [Number of labels that can be added to a page is not restricted](#)
- [Input when editing navigation themes is not validated](#)
- [Viewing of space content alphabetically is not validated](#)
- [Input when editing Space Name is not validated](#)
- [Input when viewing attachments by file-type is not validated](#)

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

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

This page last changed on Nov 18, 2007 by [smaddox](#).

In this advisory:

- [DWR debug mode enabled](#)
- [XSS vulnerability in exception error page](#)
- [XSS vulnerability in the URL destination for the print icon](#)
- [XSS vulnerability in wiki markup for images](#)

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 who 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

This issue has been fixed in Confluence 2.6.1. For customers with Confluence 2.6 who do not wish 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

This page last changed on Nov 27, 2007 by [smaddox](#).

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 by the [SANS Institute](#). The scale allows us to rank a vulnerability as critical, high, moderate or low, as described in the [SANS vulnerability analysis](#).

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.

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

This page last changed on Dec 13, 2007 by [smaddox](#).

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 by the [SANS Institute](#). The scale allows us to rank a vulnerability as critical, high, moderate or low, as described in the [SANS vulnerability analysis](#).

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. 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.

Java Policy Security with Confluence

This page last changed on Jan 14, 2007 by dhardiker@adaptavist.com.

If you would like to secure the confluence webapp to make sure plugins (or other code executed) cannot access unwanted system resources, the following will restrict file system access.

Create the following .java.policy file and place it somewhere:

.java.policy

```
grant {
permission java.util.PropertyPermission "*", "read,write";
permission java.net.SocketPermission "*:-", "connect,accept,listen";
permission java.io.FilePermission "/tangosol-coherence-override.xml", "read";
permission java.io.FilePermission "/tangosol-coherence-override-prod.xml", "read";
permission java.io.FilePermission "/path/to/confluenceWebapp/-", "read,write";
permission java.io.FilePermission "/path/to/confluence.home", "read,write,delete";
permission java.io.FilePermission "/path/to/confluence.home/-", "read,write,delete";
permission java.io.FilePermission "/path/to/resin/lib/-", "read";
permission java.io.FilePermission "/tmp", "read";
permission java.io.FilePermission "/tmp/*", "read,write,delete";
permission java.io.FilePermission "quartz.properties", "read";
permission java.util.logging.LoggingPermission "control";
permission java.awt.AWTPermission "*";
permission java.lang.reflect.ReflectPermission "suppressAccessChecks";
permission java.io.SerializablePermission "*";
permission java.lang.RuntimePermission "*";
permission java.net.NetPermission "*";
permission ognl.OgnlInvokePermission "*";
};
```

Make sure the following java options are defined:

```
-Djava.security.manager -Djava.security.policy=/path/to/.java.policy
```

Of course you might be able to get away with less - please edit with any improvements you have!

NoFollow Support

This page last changed on May 23, 2005 by [vidya](#).



NoFollow support is a new feature in the release of Confluence 1.4.

Nofollow Support

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.

By default, all URLs inserted in a page (or in comments) will be given the nofollow tag. Inter-page links (i.e. Documentation Home) or shortcut links (i.e. CONF-2622@JIRA) will not be tagged.

The site administrator can turn the feature off in General Configuration.

Hide External Links From Search Engines:	ON
--	----

Design and Layout

This page last changed on Jan 31, 2006 by [vidya](#).

- [Custom Decorator Templates](#)
- [Customising Look and Feel Overview](#)
 - [Customising Colour Schemes](#)
 - [Customising Layouts](#)
 - [Upgrading Custom Layouts](#)
 - [Global Templates](#)
 - [Working With Decorator Macros](#)
- [Themes Configuration](#)
 - [Applying a Theme To A Site](#)
 - [Creating a Theme](#)
 - [Adding a theme icon](#)
 - [Customising the Left Navigation Theme](#)
 - [Deploying the theme as a plugin](#)
 - [Including Cascading Stylesheets in Themes](#)
 - [Modifying Look and Feel \(for themes\)](#)
 - [Configuring the theme plugin](#)
 - [Themes Overview](#)

Custom Decorator Templates

This page last changed on Jul 08, 2007 by [smaddox](#).

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 [Cannot resolve external resource into attachment](#) 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.

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.

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:

```
<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("spacename:title")</td>

<td width="40%" align="right" valign="top">#globalnavbar("table")</td>
</tr>
<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:

```

<td width="60%" rowspan=2 class="logocell">
<img align="right"
src=http://www.atlassian.com/images/atlassian_logo.gif
width="203" height="60">#pagetitle("spacename")</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 [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 inside the `confluence.home` directory you defined in `confluence-init.properties` when installing Confluence. If you have somehow managed to render Confluence completely unuseable through editing your templates, simply delete the `confluence.home/velocity` directory, and restart Confluence. The default templates will be restored.

WARNING: Only delete the `velocity` directory! Changing anything else inside your `confluence.home` is dangerous, and you could lose important data!

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

This page last changed on Dec 17, 2007 by [smaddox](#).






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. An individual space can be configured to have its own look and feel through the [space administration screens](#).

Here's how you can customise the look and feel of your site:

- [Colour Scheme](#) : Change the colour scheme of the user interface.
- [Layouts](#) : Edit how the controls are laid out in the site. This does not change the actual page layouts but the way the surrounding controls appear in the page.
- [Themes](#) : Use themes for advanced layout customisation.

RELATED TOPICS

-  [Customising Colour Schemes](#)
-  [Customising Layouts](#)
-  [Customising Look and Feel Overview](#)
-  [Global Templates](#)
-  [Upgrading Custom Layouts](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)


Customising Colour Schemes

This page last changed on Dec 17, 2007 by [smaddox](#).

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.

To change the site's colour scheme,

1. Go to the 'Administration Console' and click 'Colour Scheme' in the left-hand panel. This will bring up a new screen. See screenshot below.
2. 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 – i.e. the path from Dashboard to current screen which runs across the top of the Confluence page.
- Breadcrumbs Text - the text of the breadcrumbs.
- 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


Screenshot : Editing a site's colour scheme


Customising Layouts

This page last changed on Dec 17, 2007 by [smaddox](#).

You can customise the layout of your Confluence instance by editing the 'decorators' that define the look and feel of the site.

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. Learn [more about Velocity](#). Once you become familiar with Velocity, you can edit the decorator files to personalise the appearance of Confluence.

 You need to have [System Administrator](#) permissions in order to perform this function.

-  You can customise the layouts for a particular space or for the whole site. This page tells you how to customise layouts for the site as a whole. To customise the layouts for a space, use the 'Layout' menu on the ['Space Admin' page](#).
- When you upgrade Confluence, you must [reapply your custom layouts](#) to the newly installed default layouts.

The decorator files are grouped into:

- 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 news items: they don't 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.

To edit a site decorator file,

1. Go to the 'Administration Console' and click 'Layouts' under 'Look and Feel' in the left-hand navigation panel. The decorators are grouped under Site, Content and Group layouts.
 - 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.
2. Make changes and click 'Update'.

 If something goes wrong : Click 'Reset Default' to revert to the original layouts.

Alternatively, the custom templates are stored inside the `confluence.home` directory you defined in `confluence-init.properties` when installing Confluence. If you have somehow managed to render Confluence completely unuseable through editing your templates, simply delete the `confluence.home/velocity` directory, and restart Confluence. The default templates will be restored.

CAUTION: Only delete the `velocity` directory! Changing anything else inside your `confluence.home` is dangerous, and you could lose important data!

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

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.



WARNING

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.

RELATED TOPICS



[Customising Colour Schemes](#)



[Customising Layouts](#)



[Customising Look and Feel Overview](#)



[Global Templates](#)



[Upgrading Custom Layouts](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Upgrading Custom Layouts

This page last changed on Nov 05, 2007 by [smaddox](#).

As Confluence evolves, so do the default layouts that drive the rendering of every page. As new functionality is added or current functionality 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.

To reapply your custom layouts, you need to:

1. Obtain the source of your custom layout from your current version of Confluence.
2. Reapply your customisations to the new default layouts.

Step 1. Obtaining your Custom Layouts

Before Confluence 2.3, custom layouts are stored in the `velocity` directory within your Confluence home directory tree. You can open these files in any text editor.

With Confluence 2.3 and later, 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 relevant for all SQL databases.

Step 2. Reapplying your Customisations

You will need to manually apply the changes you made to the new default layouts provided by the new version of Confluence.

Use the documentation on [customising layouts](#) to create a new custom layout and use the source obtained in step 1 to manually reintegrate them.

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.

For Confluence 2.6, the `velocity.properties` file is available in the `confluence-2.6.0.jar` file. 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-2.6.0.jar` file.
6. Relocate the jar file to the appropriate directory.
7. Restart Confluence.

Test your modifications carefully



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.

Global Templates

This page last changed on Dec 17, 2007 by [smaddox](#).

A template is a pre-defined page that can be used as a prototype when creating new pages. Templates are useful for giving pages a common style or format.

Global Templates are defined by Confluence administrators and are available in every space across the site.

Templates are written in regular [Confluence markup](#), using [special markup](#) to define form fields that need to be filled in.

To add a global template,

1. Go to the Administration Console and click 'Global templates' in the left navigation panel.
2. Click 'Add new global template'.
3. Enter a name for your template in the 'Name' text field and an optional description in the 'Description' text field.
4. Using regular [Confluence markup](#) and [form field markup](#) (if you are using forms), enter content in the text-entry box as you would in any other Confluence page.
5. Click 'edit' next to 'Labels' if you want to use [labels](#) to categorise information. Add your labels. These labels will be included in all pages created using this template.
6. Preview and click 'Save'.

Screenshot: A template as used to create a page

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.

This is a template about (Thing)

Name	<input type="text"/>	(Name)
Phone Number	<input type="text"/>	(PhoneNumber)
Date of Birth	<input type="text"/>	(DOB)

<< Back Insert Variables

RELATED TOPICS

 [Creating a Page using a Template](#)

 [Form Field Markup for Templates](#)

Working With Decorator Macros

This page last changed on Jun 24, 2007 by [smaddox](#).

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.

Macro	Usage
<code>#breadcrumbs()</code>	Draws the "You are here" breadcrumbs list, like the one found above the page name in the default template.
<code>#includePage(pageTitle)</code>	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.
<code>#searchbox()</code>	Inserts a search box into the page, like the one to the far right of the breadcrumbs in the default template.
<code>#globalnavbar(type)</code>	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:
<code>#globalnavbar("table")</code>	Displays the navigation bar in its default mode: drawn as a table of links with coloured backgrounds and mouse-over effects.
<code>#globalnavbar("text")</code>	Displays the navigation bar as series of text links separated by characters.
<code>#usernavbar()</code>	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.
<code>#helpicon()</code>	Draws the Cannot resolve external resource into attachment. help icon, and link to the Confluence help page.
<code>#printableicon()</code>	On pages where a printable version is available, draws the Cannot resolve external resource into attachment. printable page icon, linking to the printable version of the page. Otherwise, draws nothing
<code>#pagetitle(class)</code>	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 "spacename" as the class: <code>#pagetitle("spacename")</code>
<code>#poweredby()</code>	Writes out the "Powered by Confluence" and Confluence version-number boilerplate found at the bottom of the default template.
<code>#bottomshadow()</code>	Draws the fading shadow-effect found at the bottom of the content area in the default template.
<code>#dashboardlink()</code>	Inserts a link to the dashboard page.

RELATED TOPICS

-  [Editing and Removing macros](#)
-  [Enabling HTML macros](#)
-  [Enabling the html-include Macro](#)
-  [User Macros](#)
-  [Writing Macros](#)

Themes Configuration

This page last changed on Jan 31, 2006 by [vidya](#).

- [Applying a Theme To A Site](#)
- [Creating a Theme](#)
 - [Adding a theme icon](#)
- [Customising the Left Navigation Theme](#)
- [Deploying the theme as a plugin](#)
- [Including Cascading Stylesheets in Themes](#)
- [Modifying Look and Feel \(for themes\)](#)
 - [Configuring the theme plugin](#)
- [Themes Overview](#)

Applying a Theme To A Site

This page last changed on Dec 18, 2007 by [smaddox](#).

Themes can be applied across the site or to individual spaces.

Themes can be installed as [plugins](#). Once a theme has been installed, a Confluence administrator can apply it via the Administration Console. Once installed, themes become available to be applied across a site or to individual spaces. Any theme applied at the global level will become the default theme for all spaces in the site.



Confluence 2.6 introduced a fresh, clean look for the Default theme. If you prefer the original Confluence look and feel, select the Confluence Classic Theme.

To apply a theme across the site,

1. Ensure that the theme plugin you wish to apply has been [installed](#).
2. Go to the 'Administration Console' and click 'Themes' under 'Look and Feel' in the left navigation panel.
3. If there are any themes installed, they will be listed here.
4. Select a theme and click 'Confirm'.

Screenshot : Applying a theme

Current Theme

The current theme controls the layout and colours of this space.



Default Theme

Assign the default Confluence look and feel. You can customise colour-schemes and layouts manually.

Choose New Theme

To change the theme of this space, select one below.



☐ Confluence Classic Theme

Confluence Classic Theme (with old typography)



☐ Clickr Theme

A simple, clean Confluence theme inspired by Flickr - www.flickr.com.



☐ Left Navigation Theme

Provides a navigation bar on the left hand side of the screen.

RELATED TOPICS



[Adding a theme icon](#)



[Applying a Theme To A Site](#)



[Applying A Theme To A Space](#)



[Creating a Theme](#)



[Including Cascading Stylesheets in Themes](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Creating a Theme






This page last changed on Jun 24, 2007 by [smaddox](#).

There are three steps involved in creating a theme:

- [Modifying the look and feel of Confluence](#): Work with the different components that define the look and feel of Confluence and modify them to suit your theme:
 - Layout
 - Colour Scheme (optional)
 - Stylesheet (optional)
- [Configuring the atlassian-plugin.xml file](#): Edit the central configuration file for the theme plugin to reference the new files defining your theme.
- [Adding a theme icon](#): Add a preview icon for your theme.
- [Deploying the theme as a plugin](#): Bundle the files into a jar file and deploy the theme as a plugin into Confluence.

[Unsure what a theme is?](#)

RELATED TOPICS

-  [Adding a theme icon](#)
-  [Applying a Theme To A Site](#)
-  [Applying A Theme To A Space](#)
-  [Creating a Theme](#)
-  [Including Cascading Stylesheets in Themes](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Adding a theme icon

This page last changed on Jun 24, 2007 by [smaddox](#).

A theme icon can be packed with a theme to give the user a little preview on how the theme will change the layout of Confluence. If you do not specify a custom icon for your theme, a default icon will be shown in the preview.

Defining the theme icon in the atlassian-plugin.xml

To include an icon in the theme, you will need to reference it as a [Downloadable Plugin Resource](#) from within the [theme module](#).

Here is an example where an icon called my-theme-icon.gif is being used in the Dinosaur Theme:

```
<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"/>
<resource name="themeicon.gif" type="download" location="com/example/themes/dinosaur/my-theme-
icon.gif">
<property key="content-type" value="image/gif"/>
</resource>
</theme>
```

The resource parameter takes three arguments:

- Name: The name of the icon (⚠️ has to be themeicon.gif).
- Type: The type of resource-in this instance, 'download'.
- Location: The location of the file represented in the jar archive you will use to bundle your theme.

The icon will automatically appear on the themes screen in the space and global administration and will be displayed next to the text and description of the theme.



☒ Default Theme

Assign the default Confluence look and feel. You can customise colour-schemes and layouts manually.





Creating your own theme icon

In order to keep the look and feel of the icons consistent, we recommend to base the icon style on icons shipped with the Confluence themes. A good starting point when creating new icons is to use the default theme icon or the left navigation theme icon:



RELATED TOPICS

 [Adding a theme icon](#) (Confluence 2.7 Temp Archive)

-  [Applying a Theme To A Site](#) (Confluence 2.7 Temp Archive)
-  [Applying A Theme To A Space](#) (Confluence 2.7 Temp Archive)
-  [Creating a Theme](#) (Confluence 2.7 Temp Archive)
-  [Including Cascading Stylesheets in Themes](#) (Confluence 2.7 Temp Archive)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

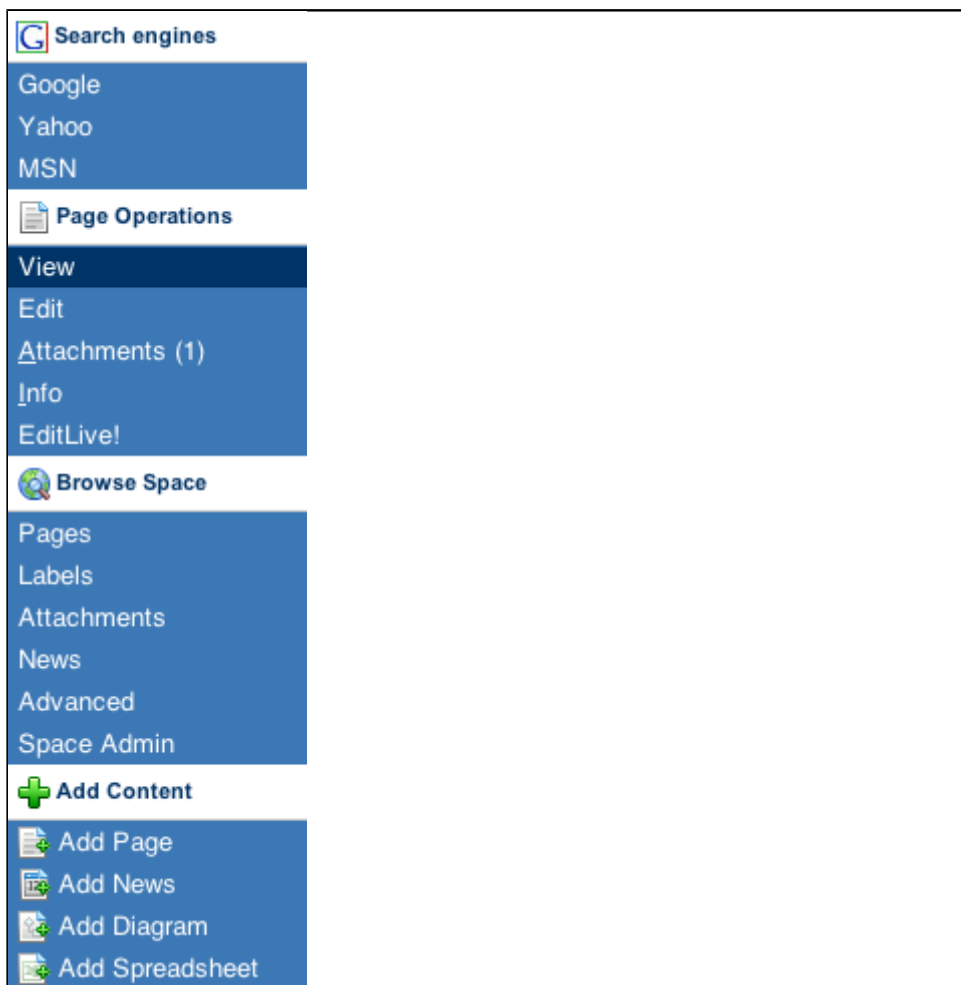
Customising the Left Navigation Theme

This page last changed on Jun 13, 2007 by rosie@atlassian.com.

Introduction

Confluence comes bundled with the Left Navigation theme. This theme has a navigation menu on the left-hand side of the screen, which can be customised to contain additional links, sections and even macros.

Creating a custom navigation page



Custom left navigation

By default, the left-navigation theme just displays the space icon (or profile icon for a personal space), and three menus: page operations, browse space, and add content.

To add your own content to the top, create a page in your space called 'Navigation'. Put content there that you want to appear on the left navigation menu.

A couple of tips:

- items in a bulleted list show up as normal menu items
- use 'h1' to add a section heading for your menu items.

Examples

As an example, create a page called 'Navigation' with the following content:

```
h1. Search engines
```

- * [Google|<http://www.google.com>]
- * [Yahoo|<http://www.yahoo.com>]
- * [MSN|<http://search.msn.com>]

This will give a left navigation menu like the image on the side of this page.

You can see another example of customised left-navigation theme on the [Codegeist space](#) with its associated [Navigation page](#).

See Also

To insert an expandable/collapsible left navigation menu, see the [PageTree Plugin](#). Note that this looks better on the 'Default' theme rather than on the 'Left Navigation Theme'.

Deploying the theme as a plugin

This page last changed on Jun 24, 2007 by [smaddox](#).

In order to deploy your custom Confluence theme, you will have to have [Ant](#) installed. To learn how to install and use Ant, please follow the [instructions](#) on the projects website.

To deploy the theme, execute the following command from within the theme directory in your Confluence installation:

```
ant build -Dtheme=<specifynameoftheme>
```

For example to build a theme with the name dinosaur, you will have to type:

```
ant build -Dtheme=dinosaur
```

You will find the build jar of the dinosaur theme in you Confluence install directory under .../themes/dinosaur/dist_ directory.

Installing the theme

To install the theme you can simply drop the previously created .jar file into the .../confluence/WEB-INF/lib directory in your Confluence installation as described under [Installing and Configuring Plugins](#).

As a second option, you can also call the following ant command instead of the one found above to install the theme and copy the jar automatically in the appropriate directory.






```
ant install -Dtheme=<specifynameoftheme>
```

Read more about [plugins](#)

[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 : determines the time format for when each news item is posted
 - Date Time Format : determines date and time format for historical versions of pages.
 - Date Format : determines date and time format for all new and modified content.
3. Change the formats using the guidelines in [this document](#).
4. 'Save' your changes.

RELATED TOPICS

-  [Adding a theme icon](#) (Confluence 2.7 Temp Archive)
-  [Applying a Theme To A Site](#) (Confluence 2.7 Temp Archive)
-  [Applying A Theme To A Space](#) (Confluence 2.7 Temp Archive)
-  [Creating a Theme](#) (Confluence 2.7 Temp Archive)
-  [Including Cascading Stylesheets in Themes](#) (Confluence 2.7 Temp Archive)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Including Cascading Stylesheets in Themes

This page last changed on Nov 19, 2007 by [smaddox](#).

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/WEB-INF/classes/styles/site-css.vm`.



CSS for Confluence 2.6

Please refer to the information about [changes in Confluence 2.6](#).

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 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

-  [Adding a theme icon](#) (Confluence 2.7 Temp Archive)
-  [Applying a Theme To A Site](#) (Confluence 2.7 Temp Archive)
-  [Applying A Theme To A Space](#) (Confluence 2.7 Temp Archive)
-  [Creating a Theme](#) (Confluence 2.7 Temp Archive)
-  [Including Cascading Stylesheets in Themes](#) (Confluence 2.7 Temp Archive)

 [Administrators Guide Home](#)


 [Confluence Documentation Home](#)

Modifying Look and Feel (for themes)

This page last changed on Jun 24, 2007 by [smaddox](#).

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](#)
 - [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.

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 looks, 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'	
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".	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)

		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".	
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).

```

#*
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. Go to the 'Administration Console' and click on Layouts in the left panel. This will display options to view and edit the default decorators.
2. 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

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
<code>\$helper.domainName</code>	displays the base URL of your Confluence instance on your page. This is useful for constructing links to your own Confluence pages.
<code>\$helper.spaceKey</code>	returns the current space key or null if in a global context.
<code>\$helper.spaceName</code>	returns the name of the current space
<code>\$helper.renderConfluenceMacro("{create-space-button}")</code>	renders a call to a Confluence Macro for the velocity context
<code>\$helper.getText("key.key1")</code>	looks up a key in a properties file matching <code>key.key1=A piece of text</code> and returns the matching value ("A piece of text")
<code>\$helper.action</code>	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. Go to the 'Administration Console' and click on 'Colour scheme' in the left panel.
2. 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.
 - 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

-  [Adding a theme icon](#)
-  [Applying a Theme To A Site](#)
-  [Applying A Theme To A Space](#)
-  [Creating a Theme](#)
-  [Including Cascading Stylesheets in Themes](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Configuring the theme plugin

This page last changed on Jun 24, 2007 by [smaddox](#).

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 structure of an `atlassian-plugin.xml` file is fairly self-explanatory. In the code segment below you will find a full example of an `atlassian-plugin.xml`:

```
<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" />
<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"/>
</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 module complete key as shown above.

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 overridden 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.

see [configuring colour scheme](#)

RELATED TOPICS

-  [Adding a theme icon](#)
-  [Applying a Theme To A Site](#)
-  [Applying A Theme To A Space](#)
-  [Creating a Theme](#)
-  [Including Cascading Stylesheets in Themes](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Themes Overview

This page last changed on Dec 17, 2007 by [smaddox](#).

Themes are pre-defined styles that can be applied to alter the appearance of your site.

Use themes when you want to add new functionalities or to change the appearance of Confluence. For example, you will need to use themes to apply a left-navigation scheme instead of the default top-navigation scheme.

Themes are installed as plugins and added via the Administration Console. Once installed, themes can be applied across the site or to individual spaces.

[What do you want to do?](#)

[Apply a theme](#)

[Create a new theme](#)

[Include cascading stylesheets in a theme](#)

RELATED TOPICS



[Adding a theme icon](#)



[Applying a Theme To A Site](#)



[Applying A Theme To A Space](#)



[Creating a Theme](#)



[Including Cascading Stylesheets in Themes](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Importing Data

This page last changed on Nov 14, 2007 by [smaddox](#).

- [Snip Snap Import](#)
- [Universal Wiki Converter](#)
- [Build jspwiki-exporter from source](#)
- [Importing Pages from Disk](#)

Snip Snap Import

This page last changed on Dec 17, 2007 by [smaddox](#).

The snipsnap importer allows you to import a Snip Snap XML backup file into a space in Confluence.



What is Snip Snap?

Snip Snap is a wiki used as a knowledge and content management tool. For more information, take a look at the [Snip Snap home page](#) and the [Wikipedia page about Snip Snap](#).

Some limitations:

- Currently, attachments are not imported, and Confluence does not recognise duplicate users.
- You cannot import content into multiple spaces.



You need to have [System Administrator](#) permissions in order to perform this function.

To import a Snip Snap backup file into Confluence,

1. First, use Snip Snap to export a backup to an XML file.
2. In Confluence, go to the Administration Console and click 'SnipSnap Import' in the left-hand panel.
3. Enter the location of the Snip Snap backup file in the input field displayed. You can also 'browse' and locate the file.
4. Select a space to import the content into and click 'Save'.

RELATED TOPICS

[Importing Data](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Macros

This page last changed on Dec 12, 2007 by [smaddox](#).

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](#).

- [Configuring the userlist Macro](#)
- [Editing and Removing macros](#)
- [Enable The Flowchart Macro](#)
- [Enabling HTML macros](#)
 - [Enabling the html-include Macro](#)
- [Troubleshooting the Gallery Macro](#)
- [Setting Up Trusted Communication between JIRA and Confluence](#)

Configuring the userlister Macro

This page last changed on Dec 18, 2007 by [smaddox](#).

The [userlister macro](#) has an optional 'online' parameter. If the 'User Listener' plugin is configured to allow this feature, then the page author can specify 'online=true' to show a list of all online users.



List of online users can be misleading

When the parameter 'online=true' 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.



You need to have [System Administrator](#) permissions in order to perform this function.

To enable the 'online' filter in the [userlister macro](#),

1. Go to the 'Administration Console' and click 'Plugins' in the left-hand panel. This will list the currently installed plugins.
2. Scroll down and click the 'User Listener' link. The User Listener plugin panel will appear at the top of the screen.
3. Enable the 'User Log In Listener' module by clicking the 'Enable' link on its right.
4. Restart Confluence.

Screenshot: Enabling the User Log In Listener

User Listener
Vendor: [Atlassian Software Systems](#)
Plugin Version: 2.1

A plugin which reports on Users, per group, within Confluence

[Disable plugin](#)


userlister Outputs lists of users, whether entirely or in specified groups	Disable
User Log in Listener Informs the UserLISTER macro when users log in or out of Confluence.	Enable

RELATED TOPICS


[Userlister Macro](#)
[Macros](#)

Editing and Removing macros






This page last changed on Dec 18, 2007 by [smaddox](#).

 You need to have [System Administrator](#) permissions in order to perform this function.

To edit or remove a user macro,

1. Go to the 'Administration Console' and click 'User Macros' in the left-hand panel. This will list the currently configured user macros with options to 'Edit' or 'Remove' each macro.
 - Click 'Edit'. This will display the edit screen for the macro. [Make changes](#) in the 'template' input field and click 'Save'.
 -  Templates are in HTML, not wiki markup.
 - Click 'Remove' to delete the macro.

RELATED TOPICS

-  [Editing and Removing macros](#)
-  [Enabling HTML macros](#)
-  [Enabling the html-include Macro](#)
-  [User Macros](#)
-  [Writing Macros](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Enable The Flowchart Macro

This page last changed on Dec 18, 2007 by [smaddox](#).

Installation

This plugin must be installed by a System Administrator.

1. [Install GraphViz](#)
2. [Install Apache Ant](#)
3. If running on Windows, restart your computer
4. Instructions to insert the GraphViz installation directory path into PATH variable depend on your operating system.
 - Windows Users
 1. Open the directory GraphViz is installed under and confirm the path. An example path is `c:\Program Files\ATT\Graphviz\bin`
 2. Go to Start > Control Panel > System
 3. Select the 'Advanced' tab, then 'Environment Variables'
 4. Under 'System Variables', select the 'Path' variable
 5. Select 'Edit' and view the 'Variable value' text
 6. Confirm that path to the `bin` directory of GraphViz is appended to this string in the MS-DOS 8.3 standard and separated by a semicolon. An example might be `;%C:\PROGRA~1\ATT\Graphviz\bin`
 - Linux, OS X or Unix Users
 1. Open the directory GraphViz is installed under and confirm the path
 2. Login as the user who runs Confluence or starts the Confluence service
 3. Append the path to the `bin` directory of GraphViz to the 'Path' variable
5. Build the GraphViz plugin from source.
 2. Stop Confluence
 3. Open a command window in your Confluence install directory and go to the `plugins` directory
 4. From the `plugins` directory, compile the GraphViz by running `ant -Dlibrary=graphviz install`
 5. Start Confluence

Usage

See the [Flowchart Macro](#) in the User Guide.

Troubleshooting

Error Message

flowchart: No useable executable name defined in graphviz.properties
graphviz: No useable executable name defined in graphviz.properties
spacegraph: No useable executable name defined in graphviz.properties

Solution

1. Check that the system 'Path' variable includes a path to `dot.exe`, the executable file contained in the Graphviz `bin` directory.
2. Restart Confluence server


Enabling HTML macros

This page last changed on Dec 18, 2007 by [smaddox](#).

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 webpage 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 to have [System Administrator](#) permissions in order to perform this function.

To enable the HTML macros,

1. Go to the 'Administration Console' and click 'Plugins' in the left-hand panel. This will display the installed plugins active for this Confluence installation.
2. Click 'HTML macros', then click 'Enable Plugin'

RELATED TOPICS

-  [Editing and Removing macros](#)
-  [Enabling HTML macros](#)
-  [Enabling the html-include Macro](#)
-  [User Macros](#)
-  [Writing Macros](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Enabling the html-include Macro


This page last changed on Dec 18, 2007 by [smaddox](#).

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

CAUTION: Including unknown HTML inside a webpage 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.

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. Go to the 'Administration Console' and click 'Plugins' in the left-hand panel. This will display the installed plugins active for this Confluence installation.
2. Click 'HTML macros', then click 'Enable Plugin'

Usage Example

To embed an external page:

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

RELATED TOPICS

-  [Editing and Removing macros](#)
-  [Enabling HTML macros](#)
-  [Enabling the html-include Macro](#)
-  [User Macros](#)
-  [Writing Macros](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Troubleshooting the Gallery Macro

This page last changed on May 29, 2007 by rosie@atlassian.com.

Gallery Macro

Usage:	<code>{gallery:columns=3\ title=Example Title}</code> <code>{gallery}</code>
Description:	Forms a thumbnail gallery of all images attached to a page
Example:	<code>{gallery:columns=3\ title=Example Title}</code> <code>{gallery}</code>
Input:	optional: columns=<int n> title=<title string>
Output:	a thumbnail gallery with the number of columns specified (default 4) and a heading for the title parameter
Bundled with Confluence?:	yes

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](#)

Performance Tuning

This page last changed on Dec 17, 2007 by [smaddox](#).

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 this document: [Requesting Performance Support](#)

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](#).

Choice of Database

The embedded database that is provided with Confluence is meant only to be used for evaluation, or for low-volume Confluence sites. Once your site grows, you will almost certainly need to switch to an external 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.

Antivirus Software

Antivirus Software can greatly decrease the performance of Confluence. Antivirus Software that intercepts all access to the hard disk is particularly detrimental, and may even cause errors with Confluence. If possible configure your software to ignore the Confluence home directory, or at least its index directory.

Database Indexes

If Confluence is running slowly, the most likely cause is that there is some kind of bottleneck in the database.

If you have the luxury of access to a DBA, it would be worthwhile having them tune the database specifically to the demands that your particular Confluence installation is placing on it. If you do not have a DBA, 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)

Cache Tuning

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). Future versions of Confluence will allow you to tune the size of this cache from within the web application.

In Confluence 2.3 to 2.5, the cache is configured in `confluence/WEB-INF/classes/confluence-coherence-cache-config.xml` (or `confluence/WEB-INF/classes/confluence-coherence-cache-`

config-clustered.xml for clustered versions). In Confluence 2.6, these files can be found in confluence/WEB-INF/lib/confluence-2.6.0.jar.

There is also a [Cache Statistics](#) page provided with Confluence. This page shows the size of each cache and its hit ratio.

Important Caches

- `com.atlassian.confluence.core.ContentEntityObject` 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`.
- `com.atlassian.confluence.core.ContentEntityObject.bodyContents` 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`.
- `com.atlassian.confluence.security.PermissionCheckDispatcher.isPermitted()` should be set to at least the number of concurrent users you expect to access Confluence at the same time
- `com.atlassian.confluence.user.DefaultUserAccessor.deactivatedUsers` must be set to at least the number of users with `USE_CONFLUENCE` permission (don't worry, it only takes up a few bytes per user). To find an upper bound for this, use the query `select count(*) from OS_USER`, or if you have configured `atlassian-user.xml` to use the Hibernate repository, `select count(*) from users`.
- `com.atlassian.confluence.security.SpacePermission` 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`.

The following are more specific performance problems that can be resolved from tuning the cache.

"Edit Page" screen takes a long time to load

If your installation of Confluence is suffering from this problem, it may be due to an 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 `ehcache.xml` file. It looks like this:

```
<cache name="com.atlassian.confluence.security.SpacePermission" maxElementsInMemory="10000"
eternal="false" timeToIdleSeconds="3600" timeToLiveSeconds="0" overflowToDisk="false" />
```

The equivalent for `confluence-coherence-cache-config.xml` would be:

```
<local-scheme>
<scheme-name>cache:com.atlassian.confluence.security.CachingSpacePermissionManager.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 2.6.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 2.7.0 and later, you will find the cache name mappings in the file `com/atlassian/confluence/core/ConfluenceActionSupport.properties` which is packed into the `confluence-2.7.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.
 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.ContentEntityObject.bodyContents</scheme-
name>
<high-units>2000</high-units>
<scheme-ref>default</scheme-ref>
<expiry-delay>0s</expiry-delay>
</local-scheme>
```

You can find more information about configuring the Coherence cache in the [Coherence cache documentation](#).

Adjust Application Server Memory Settings

See [Managing Application Server Memory Settings](#).

Use A Web Server

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.

RELATED TOPICS

[Working with Confluence Logs](#)

Configuring a Large Confluence Installation

This page last changed on Jan 24, 2007 by noam@atlassian.com.

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.

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.

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](#).

Things to Keep an Eye On

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 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.

Confluence Performance Enhancement

This page last changed on Oct 24, 2005 by [jnolen](#).

One of our current tasks is improving Confluence's performance, in time and space. This page lists some of the things we've done to speed up Confluence, and to reduce its memory footprint.

- [Creating Memory Leaks with Spring](#)
- [Filtering Regular Expression Application](#)

Creating Memory Leaks with Spring

This page last changed on Oct 24, 2005 by [jnolen](#).

I've spent the last few days looking at Confluence's memory footprint.

The biggest win so far (besides turning off all the caches 😊) has been in Spring. Confluence uses dependency injection everywhere, both for its services and to initialise short lived objects like xwork actions. It seems that Spring doesn't directly cater for the latter use, and is very easy to misuse if you aren't careful.

Spring keeps track of dependencies between the beans it manages, so if you inject bean A into bean B, Spring will record the fact. Spring will call `B.setA(A)` of course, to perform the injection. Then it adds the name of B to the list of beans which depend on A, so that during shutdown it can remove B before A.

Confluence autowires beans using the `DefaultListableBeanFactory.autowireBeanProperties()` method. This assumes that the bean is a singleton, and registers it. It also doesn't check whether the bean it is registering is already a dependent of the bean being injected. So the linked list of dependencies grows with every page view. Five hundred views go it up to almost 10MB!

Spring does allow non-singleton beans, and it understands that they shouldn't be registered as dependents, but `DefaultListableBeanFactory` doesn't provide a way of autowiring a non-singleton bean.

I created a new factory to do the job:

```
private static class BucketListableBeanFactory extends DefaultListableBeanFactory
{
    public BucketListableBeanFactory(ApplicationContext context)
    {
        super(context);
    }

    public void autowireNonSingletonBeanProperties(Object existingBean, int autowireMode, boolean
dependencyCheck)
        throws BeansException
    {
        if (autowireMode != AUTOWIRE_BY_NAME && autowireMode != AUTOWIRE_BY_TYPE)
        {
            throw new IllegalArgumentException("Just constants AUTOWIRE_BY_NAME and AUTOWIRE_BY_TYPE allowed");
        }
        RootBeanDefinition bd = new RootBeanDefinition(existingBean.getClass(), autowireMode,
dependencyCheck);
        bd.setSingleton(false);
        populateBean(existingBean.getClass().getName(), bd, new BeanWrapperImpl(existingBean));
    }
}
```

That's just a copy of `autowireBeanProperties()`, with the addition of a call to `setSingleton()`.

Confluence's calisthenics and orthodontia is under way. Soon we'll be running light without overbyte!

Filtering Regular Expression Application

This page last changed on Oct 24, 2005 by [jnolen](#).

Confluence uses (mostly) regular expressions to convert wiki style markup into html. These are simple to write, fairly simple to compose (that is, you can add another regular expression which gets applied on top of the ones you already have), and most importantly, are forgiving.

It wouldn't be too hard to write a grammar expressing the markup language, but when a user enters markup which the system doesn't understand, you need to fail softly – not throwing away any input, and not presenting the user with an error message. The mechanics of the markup process must be invisible to the user.

Regular expressions can be expensive to apply – for instance, when viewing a 100 line page in Confluence 1.4, 17% of the CPU time used during the request is used in `java.util.regex.Matcher.replaceAll()`.

A typical regular expression is

```
"(^|\\s)---(\\s|$)"
```

which finds

```
---
```

and replaces it with an emdash,

```
&#8212;
```

which renders as — .

It's simple to see when this regular expression certainly doesn't apply to some wiki text – when that text doesn't include

```
---
```

You can do an analogous test for each of our many regular expressions, just look for a constant part of the regex. Of course, the existence of the constant part is a necessary, not a sufficient condition to know that the regex will match, but it works well enough to be worthwhile.

A simple

```
wikiText.indexOf(constantPart) > 0
```

check before each application of a regular expression reduces that 17% to 9%, on a page of 100 lines which has bold and italic markup on every other line.

It's interesting that `replaceAll()` doesn't try that itself. Presumably its optimised for the case when the string you give it does match the expression, which is probably the most common situation.

A very simple but worthwhile saving. The only situation we need to worry about is if many of the lines in our pages have many types of markup on them, because then we not only pay for the `replaceAll()`, but also pay for the `indexOf`.

How Adaptavist Runs Confluence

This page last changed on Sep 19, 2006 by brendan.patterson@gmail.com.

Key information about performance tuning and how Adaptavist runs many instances of Confluence. This was posted to the mailing list but not captured in the forums so I wanted to copy it here:

Confluence Performance Recommendations from Adaptavist

Hi,

> 1) Opterons – for better or worse, we're solely an Intel shop at this point (i.e. I'll get some resistance going down the AMD path). It seems like the latest Woodcrest Xeons have caught up with the Opterons performance-wise (although AMD was smacking around Intel for a while before that). Have you the Woodcrest Xeons at all? (I'm guessing at this point you're probably just interested in pursuing an Opteron path but figured I'd ask.)

We found the Opterons are perfect for running multithreaded apps - especially when running lots of Confluence / JIRA installs on a server in their own Resin containers. In addition, the Opterons use a less electrical power than their Intel counterparts which reduces our energy bills - for that reason we've not tried the Woodcrest chip yet. The chassis used for Opteron chips is also more established than the Woodcrest counterpart and is thus cheaper at the moment and has more options. Any dual-core will likely give better results, but you'll obviously need your OS and other software on the server to be set-up to take advantage of them.

> 2) Resin vs. Tomcat – would you mind guessing at performance numbers from what you've seen? In a ton of Googling, it seems like people are saying that Tomcat was slow back with 4.x but got much faster with 5.x and even more with 5.5.x. See the comments in the first link.

Resin, properly configured, is still faster 😊 In addition, it uses a lot less RAM (important when you have 50 web apps in their own containers). We spent a lot of time super-fine-tuning Resin (about 4 months if memory serves - huge thanks to Caucho and the chaps at BeJUG) to run Confluence very nicely indeed. I can't vouch for it's speed with regards to other apps. We've found Resin to be highly stable (when correctly configured) and it deals very well with that elusive Confluence memory leak (something you notice on a site like JavaPolis^[1] with over 17,600 registered users). It's garbage collection, again when properly tuned, was better than Tomcat and we found many tasks easier to automate with Resin as compared to Tomcat.

Admittedly, a lot of the reasons that we chose Resin for are geared to an environment where we're running up to 50 Confluences on a single server, each in their own web app. That's quite a different scenario to what you are doing where you maybe have one or two Confluences on a server. Although, having said that, we use the same set-up for our dedicated hosting (we're hosting some real BIG Confluence installs as you'll know if you followed the discussion about the import routine we've been working on) and it works great in that environment too.

We use the commercial version of Resin^[2] - it's much better than the OS version as it has fewer bugs, runs more smoothly and has some real nice features (read: absolutely critically essential for the sanity of our staff thus reducing our monthly bills for padded cells and therapy) for the type of environment we use it in. We also really liked Caucho's licensing of resin^[3]: \$500 per physical server with 2 cores (additional cores @ \$500/core which is very reasonable) regardless of the number of Resin containers on that server.

It should be noted that some of the stats you provided links to were done on Windows running Cygwin

- hardly an ideal server environment 😊 The second link (with all the graphs that people like me understand) was far more representative. We run on SuSE Linux 10 EMT64 (or something like that - whatever the latest version of their 64-bit OS is) so there's no Windows bloat getting in the way of the web apps, etc.

> 3) Memory. I think I'll go for DDR667 and see if I can bump Confluence up to 2 GB. Is there ever a point where you can allocate too much RAM? (i.e. java and/or Confluence just don't handle tracking that many cached objects well)

I think we're up to 16GB in most of our servers now. Confluence does enjoy more RAM (although containers such as Resin bring the overall RAM consumption down a fair bit - very noticeable on servers with 50 containers/apps). More RAM means more space to cache and longer gaps between forced GC. RAM allocation is also vital when it comes to the nightly backup (or "the dreaded backup hour" as we refer to it) - you can imagine the CPU and RAM spikes caused by 50 large Confluence installations all deciding to backup at the same time (roll on Confluence 2.3!)...

Should you have too much memory, you can always run a Quake server on there :o)

FYI: We also separate our database out on to a separate server.

Best Regards,

Guy

[1] <http://www.javapolis.com> - at last year's conference the Belgian's were somewhat annoyed at the term "SOA" which is an obscenity over there. They were also less than happy about the spoons in sexual positions plastered all over Antwerp (and several thousand Javapolians wearing the conference t-shirts). So this year Stephan and the crew have decided to push the boundaries to hitherto unimaginable levels - anyone who's seen the promo video will know exactly what I mean (and no, not the white painted bloke next to the urinal - the video goes waaaay beyond that - how they got James Gosling to... well, you'll have to wait and see)

[2] <http://www.caucho.com/resin-3.0/features/overview.xtp>

[3] <http://www.caucho.com/sales/sales.xtp>

Dan will probably be along in the morning to correct any mistakes I've made 😊

-

Memory usage and requirements

This page last changed on Oct 04, 2007 by dave@atlassian.com.

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:

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.

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. The default size of these caches will be reduced significantly in Confluence 1.5 (although this means that 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 [allocating more memory to tomcat](#).

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. Since Confluence 1.4.1 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 system's resources, and may result in indexing failing because the attachment could not be fully loaded into memory.

System backup / resort

The Confluence backup and resort 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 `OutOfMemoryErrors` during either a backup or restore, you will either need to move to per-space backups or increase the memory allocated to Confluence. This is addressed in the upcoming Confluence 2.0.

If you are attempting to restore a backup and encountering the `OutOfMemoryError`, how much memory will you need to make it 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.

This problem has been resolved in Confluence post 1.4.x. To increase the amount of memory available to Confluence, see [allocating more memory to tomcat](#).

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're having problems that appear to be a memory leak, file an issue on <http://support.atlassian.com>. Our memory profiler of choice is [YourKit](#), so if you can get a memory dump from that tool showing a 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 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 minimize the impact that garbage collection has on the running application.

java.util.zip.ZipFile.open causes OutOfMemoryError for large zip files

This page last changed on Nov 29, 2006 by ivan@atlassian.com.

Problem

For large backup zip files (bigger than 1GB) OutOfMemoryErrors can occur during restore, even though the maximum heap size is way above this value.

The error will look something like this:

```
Cause:
javax.servlet.ServletException: Servlet execution threw an exception
at
org.apache.catalina.core.ApplicationFilterChain.internalDoFilter(ApplicationFilterChain.java:275)
caused by: java.lang.OutOfMemoryError
at java.util.zip.ZipFile.open(Native Method)
```

However, when looking at the system information you will find that there is still a lot of memory available on the heap.

```
Memory Information:
Total Memory: 2480 MB
Free Memory: 2385 MB
Used Memory: 95 MB
```

Solution

The problem seems to be a [bug in Java](#). The method `java.util.zip.ZipFile.open` does not actually use the allocated memory of the heap, it maps the entire zip file into virtual memory outside the heap. If you run into this problem, you should try to reduce your heap size to about 600MB and try the restore again. This seems to accord with the experience of other developers:

if you set a small value for max heap size, it works correctly, but if you specify too large a value, then OutOfMemoryErrors occur. There is no obvious relationship between the max heap size, the size of the zip file, and the computer's available memory. With a max heap size less than about 600 MB, errors never occur. Large than that, and they occur. A 1.2 GB zip file always opens correctly, but a 1.4 GB one never does (if the max heap size is larger than 600 MB). I have tested this on computers with both 256 MB of RAM and 2 GB of RAM, and the behavior is nearly identical.

Related topics

[Allocating more memory](#)

Requesting Performance Support

This page last changed on Nov 01, 2007 by [jeff](#).

If you are having performance issues with Confluence, and the advice on [Performance Tuning](#) has not helped, you can always ask us for help. Performance issues can be hard to diagnose, however, and we often spend a lot of time going back and forth looking for more information about what may be causing Confluence to be slow for you. The best way to get a speedy resolution to your issue is to provide this information up front.

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?
- How many spaces are there in your Confluence server?
- Approximately how many pages? (Connect to your database and perform `'select count(*) from content where prevver is null and contenttype = 'PAGE''`)

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?

- 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?

Access logs

- [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.

Next Step

Open a ticket on <https://support.atlassian.com> and attach all the data you have collected. This should give us the 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.

Troubleshooting Slow Performance Using Page Request Profiling

This page last changed on Dec 18, 2007 by [smaddox](#).

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.

In this page:

- [Enabling Page-Request Profiling](#)
- [Profiling an Activity](#)
- [Example of a Profile](#)

Enabling Page-Request Profiling

There are two ways to turn on profiling for your Confluence instance:

- Append `?profile=on` to the URL of any Confluence page.
- Use the 'Logging and Profiling' option in the 'Administration Console'.

Both methods are described below.

Using a Page's URL to Enable/Disable Profiling

1. Go to any page in your Confluence instance.
2. Turn profiling on or off as follows:
 - To turn profiling on: In your browser address bar, change the URL by appending `?profile=on` to the end of the URL for static pages, or `&profile=on` if the URL is dynamic and already has parameters.
For example, if your Dashboard link is:

```
http://localhost:8080/dashboard.action
```


then you must manually add `?profile=on` to the end of the URL:

```
http://localhost:8080/dashboard.action?profile=on
```
 - To turn profiling off: In your browser address bar, change the URL by appending `?profile=off` to the end of the URL for static pages, or `&profile=off` if the URL is dynamic and already has parameters.
For example, if your Dashboard link is:


```
http://localhost:8080/dashboard.action
```


then you must manually add `?profile=off` to the end of the URL:

```
http://localhost:8080/dashboard.action?profile=off
```
3. Press Enter.

Using the Administration Console to Enable/Disable Profiling

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

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

- Locate Confluence's standard screen output, or stdout, on the Confluence server.
 - i** If you are running [Confluence as a Windows service](#), the log entries will be written to the `/logs/stdout.log` file under the Confluence install directory, while users running Confluence using `startup.bat` under Windows have stdout written to the command prompt window.
- 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.
- Confirm that profiles are being printed to stdout.

4. Perform the activity that is resulting in unusually slow response time.
5. 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.
6. If you were instructed to profile your instance by Atlassian technical support, attach all relevant profiles to your support ticket.
7. Turn profiling off again, using either of the methods described [above](#).
8. Confirm that profiles are no longer being printed to stdout.

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())
...
```

RELATED TOPICS

[Requesting Performance Support](#)
[Working with Confluence Logs](#)

Profiling using the YourKit Plugin

This page last changed on Dec 12, 2007 by [mryall](#).

Introduction

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.

 JIRA also has a plugin to [profile JIRA's CPU and memory usage](#) with YourKit.

Configuring YourKit in your JVM

[Download YourKit 6.0 or higher](#) for your platform, and install it by following the installation instructions.

The following instructions apply to Confluence Standalone and Tomcat installations with Sun JDK 1.5. 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 a Sun 1.5 JDK, you add the `agentlib` parameter:

```
java -agentlib:yjpagent ...
```

You can add this to Tomcat's `bin/setenv.sh` like this:

```
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:

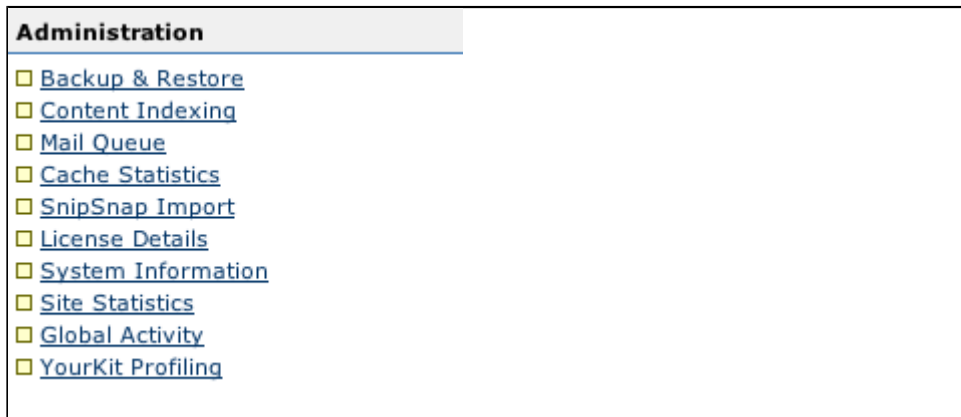
```
-agentlib:yjpagent=disablecounts,disablealloc,disablej2ee
```

See also ["Profiling overhead: how to reduce or avoid"](#) in the YourKit documentation.

Installing the YourKit plugin

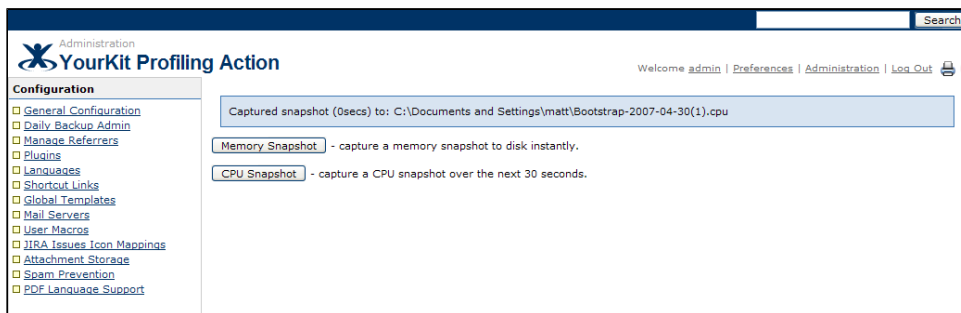
[Download the plugin](#) and upload it into Confluence through the Administration, Plugins page.

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.



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.



You can take either a memory or CPU snapshot

Why would I do this?

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.

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/.

Recognised System Properties

This page last changed on Jul 23, 2007 by [smaddox](#).

Confluence has a small number of obscure 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.

Property	Since	Possible Values	Module...	Effect
<code>confluence.home</code>	1.0	Any filesystem path	Confluence and atlassian-config	If this system property is set, Confluence will ignore the contents of the <code>confluence-init.properties</code> file, and use this property as the setting for the Confluence Home directory.
<code>confluence.devmode</code>	1.0	true	Confluence	Enables additional debugging options that may be of use to Confluence developers. Do not enable this flag on a production system.
<code>atlassian.forceSchemaUpdate</code>	1.0	true	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.
<code>confluence.ignoredebug.logging</code>	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.i18n.reload	10 bundles	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.
atlassian.disable	24 caches	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 development if you are frequently changing static resources and don't want to continually flush your browser cache.

Scheduled Jobs

This page last changed on Oct 04, 2007 by [smaddox](#).

This page provides a quick overview of the jobs that are scheduled to run regularly in your Confluence instance.

Job Name	Description
backupJob	performs a site backup
mailQueueFlushJob	sends notifications that have been queued up
referralQueueFlushJob	referrals to Confluence pages are queued up. This job writes this referrals to the database
taskQueueFlushJob	flushes the task queue
cleanTempDirectoryJob	this cleans up temp files created in Confluence home temp directory (created by exports etc.)
dailyReportJob	sends out an email summary of all changes in Confluence to all subscribers
clearOldMailErrorsJob	notifications that fail to send due to errors are added tot he mail error queue. This job resets this clear periodically.
indexQueueFlushJob	each content update to Confluence needs to be updated in index so search results are accurate. This job flushes changes to the index.
indexOptimizerJob	index optimization is performed to compact the index and maintain searching performance. This task is expensive and does not need to be performed too regularly. If you see Confluence performance deteriorate around 3pm, you can try scheduling this job for 3am only and check that search performance remains reasonable.
indexQueueCleanJob	this job is responsible for periodically triggering an Index Queue clean to ensure that size of the index queue does NOT grow indefinitely.
mailPollJob	polls POP accounts on all spaces that have them configured.
clusterSafetyJob	ensures that only one cluster is ever writing to the database at one time. For non-clustered instances, this job is still useful for alerting customers that have accidentally deployed two instances of Confluence against the same database.

Search

This page last changed on Jun 22, 2007 by [smaddox](#).



[Setup Confluence To Index External Sites](#)



[Setup External Search Tool To Index Confluence](#)

Setup Confluence To Index External Sites

This page last changed on May 07, 2007 by david.soul@atlassian.com.

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](#)

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](#) and 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.

Setup External Search Tool To Index Confluence

This page last changed on Jul 06, 2007 by david.soul@atlassian.com.

Any web crawler can be configured to index Confluence content. 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.

Security

This page last changed on Jan 31, 2006 by [vidya](#).

- [Adding SSL for Secure Logins and Page Security](#)
- [Anonymous Access to Remote API](#)
- [Enabling or Disabling Public Signup](#)
- [Hiding External Links From Search Engines](#)
- [Hiding the People Directory](#)
- [Managing External Referrers](#)
 - [Excluding external referrers](#)
 - [Hiding external referrers](#)
- [User Email Visibility](#)

Adding SSL for Secure Logins and Page Security

This page last changed on Dec 12, 2007 by [smaddox](#).

This document describes how to configure Confluence to use a HTTPS encrypted secure socket layer for user logins and page data.

Unencrypted confidential data within Confluence may be intercepted by an attacker. To secure user logins, you can enable access via HTTPS (HTTP over SSL), and require its use for pages where passwords are sent. In some cases where issue data is sensitive, all pages can be set to be accessed over HTTPS.

Enabling SSL access is different for each application server, but specifying which pages to require protection for is generic. This document is specific to Tomcat, the default application server shipped with Confluence.

Adding Secure User Logins

Adding HTTPS requires a valid SSL certificate. If you have a Certificate prepared, skip to the 'Modify the <INSTALL>/conf/server.xml File' section.

Creating A New SSL Certificate

On Windows, perform the following at the command prompt:

```
"%JAVA_HOME%\bin\keytool" -genkey -alias tomcat -keyalg RSA
```

Or on other platforms, perform the following at the command prompt:

```
$JAVA_HOME/bin/keytool -genkey -alias tomcat -keyalg RSA
```

Some questions will be asked, including a password for the certificate (the default is 'changeit'). Please note down what you choose, as it will be used in the next step.

Modify the <INSTALL>/conf/server.xml File

In the confluence directory, open the conf/server.xml file and insert one of the following just after the closing </Engine> tag:

1. For users of Confluence 2.2 or later:
Open conf/server.xml, uncomment the 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"
URIEncoding="UTF-8" keystorePass="<MY_CERTIFICATE_PASSWORD>" />
```

Or for users of Confluence 2.1.x or earlier, add or uncomment the following lines:

```
<Connector className="org.apache.coyote.tomcat4.CoyoteConnector" port="8443" minProcessors="5"
maxProcessors="75"
enableLookups="true" acceptCount="100" debug="0" scheme="https" secure="true"
useURValidationHack="false" disableUploadTimeout="true" URIEncoding="UTF-8">
<Factory className="org.apache.coyote.tomcat4.CoyoteServerSocketFactory" clientAuth="false"
protocol="TLS" keystorePass="<MY_CERTIFICATE_PASSWORD>" />
</Connector>
```

2. Change <MY_CERTIFICATE_PASSWORD> to the password you entered for the certificate when you generated it.

If you have a Certificate Prepared

If you just created your new Certificate or your existing one is in the default location, skip to the 'Testing SSL' section. By default, Tomcat will look for the certificates in C:\Documents and Settings\\#CURRENT_USER#\keystore on Windows or ~/.keystore on Unix. If your Certificate is not in this

location, you will need to update your `<INSTALL>/conf/server.xml` file as outlined below, so that Tomcat can find it. Advanced users who require an official CA-issued key pair for their Certificate can find instructions in the [Tomcat documentation](#).

1. For users of Confluence 2.2 or later:

Open `conf/server.xml`, add the `keystoreFile="<MY_CERTIFICATE_LOCATION>"` parameter to the Connector tag as shown below:

```
<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"
URIEncoding="UTF-8" keystorePass="<MY_CERTIFICATE_PASSWORD>"
keystoreFile="<MY_CERTIFICATE_LOCATION>" />
```

Or for users of Confluence 2.1.x or earlier, change the `<Factory>` tag to following:

```
<Factory className="org.apache.coyote.tomcat4.CoyoteServerSocketFactory"
clientAuth="false" protocol="TLS" keystoreFile="<MY_CERTIFICATE_LOCATION>"
keystorePass="<MY_CERTIFICATE_PASSWORD>" />
```

2. Change `<MY_CERTIFICATE_LOCATION>` to the path of the Certificate.

Testing SSL

Restart Tomcat and access your instance on `https://<MY_BASE_URL>:8443/`.

For more detailed information on setting up SSL with Tomcat (including additional configuration options), have a look at [Tomcat 4 SSL Howto](#) or [Tomcat 5.5 SSL Howto](#).

Although HTTPS is now activated and available, the old HTTP URLs (<http://localhost:8080>) are still available. In most situations one wants these URLs to continue working, but for some to redirect to their HTTPS equivalent.



If you have changed the port that the SSL connector is running on from the preconfigured 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.

To configure which URLs you want secured, edit the `confluence/WEB-INF/web.xml` file and add the following declariaont to the end, before the `</web-app>` tag:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>Login and Restricted Space URLs</web-resource-name>
<url-pattern>/login.action</url-pattern>
</web-resource-collection>
<user-data-constraint>
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
</security-constraint>
```

Note that the example above specifies a `url-pattern` for the login URL `/login.action`. This means that whenever a user tries to access the unprotected version of the login page, they will be redirected automatically to the secured version of it.

If you want to protect individual spaces, there isn't a complete way of doing this at the moment. You can add a pattern like this:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>Login and Restricted Space URLs</web-resource-name>
<url-pattern>/login.action</url-pattern>
<url-pattern>/display/SALARIES/*</url-pattern>
</web-resource-collection>
<user-data-constraint>
```

```
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
</security-constraint>
```

This will redirect all URLs for page views in the SALARIES space. This does not however, protect pages that are accessed via a URL like `/pages/viewpage.action?pageId=123`. Confluence generates these types of URLs for pages that have non-ASCII characters in the title. Hence this is not a complete solution.

If you want to protect all pages and spaces, use:

```
<security-constraint>
<web-resource-collection>
<web-resource-name>Restricted URLs</web-resource-name>
<url-pattern>*.action</url-pattern>
</web-resource-collection>
<user-data-constraint>
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
</security-constraint>
```

Once this change is made, restart Confluence and access <http://localhost:8080>. You should be redirected to <https://localhost:8443/login.action>.



There does not seem to be an easy way to make subsequent pages revert to HTTP after logging in via HTTPS - see [JRA-7250](#)

Note for users of Confluence versions prior to 2.2

You are required to configure a Realm, even though the security-constraint above does not access it. Add this realm tag inside the Engine tag:

```
<Engine ...
<Realm className="org.apache.catalina.realm.MemoryRealm" />
...
</Engine>
```



You can protect other paths as necessary, but be aware that if attachments are protected, they will not be downloadable from Internet Explorer (see [this issue](#)).

Anonymous Access to Remote API






This page last changed on Jun 24, 2007 by [smaddox](#).

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. 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.
3. Select 'Off' beside 'Anonymous Access to API'.
4. 'Save' your changes.

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)
-  [Enabling or Disabling Public Signup](#)
-  [Excluding external referrers](#)
-  [Hiding External Links From Search Engines](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Enabling or Disabling Public Signup

This page last changed on Dec 17, 2007 by [smaddox](#).






Enabling 'Public Signup' allows users to sign themselves up to the site.

If you want to restrict your site to a particular set of users, you may want to disable 'Public Signup'. In this instance, administrators can [add new users](#) from the Administration Console.

To enable or disable public signup,

1. From the 'Administration Console' click 'General Configuration' in the left-hand panel.
2. This will display the 'General Configuration' screen. Click 'Edit'.
3. Beside 'Public Signup', select 'On' to enable Public Signup. Select 'Off' to disable it.
4. Click 'Save'.

RELATED TOPICS

-  [Adding a Group](#)
-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)
-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)


 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Hiding External Links From Search Engines

This page last changed on Dec 17, 2007 by [smaddox](#).






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.

 Shortcut links and links to other pages within Confluence are not affected.

To hide external links from search engines,

1. Go to the 'Administration Console' and click 'General Configuration' in the left panel.
2. This will display the 'General Configuration' screen. Click 'Edit'.
3. Select 'On' beside 'Hide External Links From Search Engines'.
4. 'Save' your changes.

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)
-  [Enabling or Disabling Public Signup](#)
-  [Excluding external referrers](#)
-  [Hiding External Links From Search Engines](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Hiding the People Directory

This page last changed on Jun 17, 2007 by rosie@atlassian.com.

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,

```
-Dconfluence.disable.peopledirectory.all=true
```

These two properties are available in Confluence 2.5.2 and later.



Note that the 'People Directory' link will still appear on the dashboard, so you will need to modify the following file to remove the link: `/decorators/global.vmd` (In Confluence Standalone, this is located in the `confluence` directory)

Managing External Referrers

This page last changed on Jun 24, 2007 by [smaddox](#).






An external referrer is any site that links to your Confluence instance.

By default, external referrers for a page are listed under 'Incoming Links' under the 'Info' tab of the page.

Here's how you can manage your external referrers:

1. [Hide all external referrers](#) : By default, Confluence lists all external referrers under the 'Info' tab of a page. If you turn this option on, external referrers will not be listed here.
2. [Specify which external referrers to exclude](#) : You can decide which referrers you want to exclude from being displayed on your site.

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#) (Confluence 2.7 Temp Archive)
-  [Anonymous Access to Remote API](#) (Confluence 2.7 Temp Archive)
-  [Enabling or Disabling Public Signup](#) (Confluence 2.7 Temp Archive)
-  [Excluding external referrers](#) (Confluence 2.7 Temp Archive)
-  [Hiding External Links From Search Engines](#) (Confluence 2.7 Temp Archive)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Excluding external referrers

This page last changed on Dec 17, 2007 by [smaddox](#).

Excluding external referrers prevents them from being displayed anywhere on your site.


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 know the URL of the site to add it to the excluded referrers list.






To add a URL to the excluded referrers list,

1. Go to the Administration Console and click 'Manage Referrers' in the left-hand panel.
2. 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.

Once saved, all incoming links from URLs that match the blocked 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>

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)
-  [Enabling or Disabling Public Signup](#)
-  [Excluding external referrers](#)
-  [Hiding External Links From Search Engines](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Hiding external referrers






This page last changed on Sep 17, 2007 by don.willis@atlassian.com.

By default, Confluence lists all external referrers under the 'Info' tab of a page. You can configure Confluence to hide referrers from this view.

To hide external referrers,

1. Go to the 'Administration Console' and click on 'Manage Referrers' in the left panel.
2. Click 'Off' beside 'External Referrers'

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)
-  [Enabling or Disabling Public Signup](#)
-  [Excluding external referrers](#)
-  [Hiding External Links From Search Engines](#)

User Email Visibility

This page last changed on Dec 18, 2007 by [smaddox](#).

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 setting [Page Restrictions](#)).






To configure user email visibility,

1. From the 'Administration Console' click 'General Configuration' in the left-hand panel.
2. This will display the 'General Configuration' screen. Click 'Edit'.
3. Select one of the options next to 'User email visibility': 'public', 'masked', or 'only visible to site administrators'.
4. 'Save' your changes.

Screenshot : email visibility

User email visibility:	<input type="radio"/> public
	<input type="radio"/> masked (i.e. user at example dot com)
	<input checked="" type="radio"/> only visible to site administrators

RELATED TOPICS

-  [Adding SSL for Secure Logins and Page Security](#)
-  [Anonymous Access to Remote API](#)
-  [Enabling or Disabling Public Signup](#)
-  [Excluding external referrers](#)
-  [Hiding External Links From Search Engines](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Spam Prevention (Captcha)

This page last changed on Dec 17, 2007 by [smaddox](#).

Captcha Configuration

If your Confluence site is open to the public you may find that automated spam is being added, in the form of 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



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. When Captcha is enabled, users are required to read some text from an image (see the example on the right) and type the text into the form.

When Captcha is 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.

You can choose which users don't have to complete Captchas. You can exempt signed-in users (they will have completed a Captcha when they signed up), or members of particular groups.

By default Captchas will not be shown to registered users. Only anonymous users will have to perform the Captcha test when creating comments or editing pages.

If you don't trust all registered users, you can choose to disable Captchas for only a certain group/groups of users.

You can also customise the Captcha image (see [Advanced Configuration](#) below).

You need to be a Confluence administrator to enable Captcha.

[To enable Captcha for Confluence,](#)

1. Click the 'Administration' link in the top right corner of any Confluence screen.
2. Choose 'Spam Configuration' 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 a single or multiple groups to the list.
 - To remove a group from the list, delete the group name.
5. Click the 'Save' button.

Advanced Configuration

You can also control which type of image is presented to your users. This requires editing the `applicationContext.xml` file which you can find in the `confluence/WEB-INF/classes` directory under your Confluence installation.

The section of this file which configures Captchas looks like this:

```
<!-- Image capture service -->
<!-- this is a very easy captcha generator. If you want difficult captures, uncomment the
DefaultGimpyEngine below,
or use an engine class from http://jcaptcha.sourceforge.net -->
<bean id="captchaEngine" class="com.atlassian.confluence.security.ConfluenceCaptchaEngine"
autowire="byName"/>
<!--bean id="captchaEngine" class="com.octo.captcha.engine.image.gimpy.DefaultGimpyEngine"
autowire="byName"-->
<bean id="captchaManager" class="com.atlassian.confluence.security.DefaultCaptchaManager"
autowire="byName"/>
```

You can replace the 'captchaEngine' class with any text-based engine from [jcaptcha](http://jcaptcha.sourceforge.net).

Troubleshooting slow search performance and "Too many open files" problem

This page last changed on Mar 16, 2007 by dave@atlassian.com.

The purpose of this document is to provide a workaround for customers using Confluence version 2.2.x and who are experiencing slow search performance and/or Too many open files error in their logs.

This problem has been properly addressed as of Confluence 2.3. If upgrading is an option for you, we recommend upgrading to the latest stable version.

The workaround

The workaround for this problem involves two steps.

1. Reducing the frequency of index optimisation

Index optimisation is performed over your entire search index periodically to maintain good search performance. However, this process will lock down the index for the entire duration that it occurs. Searching will not be possible during this time. For small Confluence instances with small indexes, optimisation time is negligible. However, for larger instances, where optimisation is potentially expensive to perform, it could cause a noticeable inconvenience for users.

In Confluence 2.2.x, index optimisation is scheduled to occur every time the index queue is flushed (every minute). Optimisation does not need to be performed this regularly. To fix this:

1. Extract [DefaultConfluenceLuceneIndexManager.zip](#) to your `confluence/WEB-INF/classes/com/atlassian/confluence/search/lucene` directory. This patch will allow you to specify a JVM parameter to adjust the frequency of optimization. For example if you want it to occur on every 20th flush of the index queue start Confluence with this JVM parameter:

```
-Dconfluence.optimize.index.modulo=20
```

Setting it back to 1 will revert back to normal behaviour (optimize on every flush).

2. Restart Confluence

2. Apply a patched bonnie jar

To address the Too many open files issue, you need to download the patched bonnie jar attached to this issue: <http://jira.atlassian.com/browse/CONF-7401>. Copy the jar to your `{[confluence/WEB-INF/lib]}` directory and remove the old one. Now restart and rebuild the index.

If are still experiencing problems after this, please file a support request at <http://support.atlassian.com> and we'll investigate the issue further.

User Management

This page last changed on Jan 31, 2006 by [vidya](#).

- [Confluence User Management](#)
 - [Adding a Group](#)
 - [Adding a New User](#)
 - [Adding or Removing a User from a Group](#)
 - [Changing Usernames](#)
 - [Editing User Details](#)
 - [Global Groups Overview](#)
 - [Global Permissions Overview](#)
 - [Migrating to new User Management](#)
 - [Removing a Group](#)
 - [Removing a User](#)
 - [Setting up Anonymous Access](#)
 - [Viewing members of a group](#)
- [How to Improve User Search Performance](#) — If your Confluence instance contains thousands of user accounts and you are experiencing performance issues when searching for users, the following migration guide is for you.
- [Integrating with Crowd](#)
- [JIRA User Management](#)
 - [Delegate user management to use JIRA logins](#)
 - [Revert from JIRA to internal user management](#)
 - [JIRA User Management FAQ](#)
- [LDAP User Management](#)
 - [Activating External User Management](#)
 - [Add LDAP Integration](#)
 - [Automatically Adding LDAP users to the confluence-users Group](#)
 - [Customising atlassian-user.xml](#)
 - [Add LDAP Integration For User Authentication Only](#)
 - [atlassian-user.xml reference](#)
 - [Changes in osuser.xml from 1.0.3a to 1.1.x](#)
 - [Configuring multiple LDAP repositories](#)
 - [Confluence Caching OSUser Provider](#)
 - [Importing LDAP Users](#)
 - [LDAP FAQ](#)
 - [Connect to LDAP via SSL](#)
 - [Troubleshooting the "Not Permitted" Screen under LDAP Integration](#)
 - [Cannot login with Confluence admin account](#)
- [Migrating users from Confluence to JIRA](#) — There is currently no way to delegate user management from JIRA to Confluence. So, if you are in a situation where your users are defined in Confluence and would like to take advantage of Confluence's ability to use JIRA user management, you will need to transfer all of your existing Confluence users into JIRA. You can do this manually, or if you have a large number of users, you can use the attached XML-RPC script.
- [Requesting External User Management Support](#)
 - [Paddle](#)
- [Understanding User Management in Confluence](#)
- [User Management Frequently Asked Questions](#)

Confluence User Management

This page last changed on Jan 31, 2006 by [vidya](#).

- [Adding a Group](#)
- [Adding a New User](#)
- [Adding or Removing a User from a Group](#)
- [Changing Usernames](#)
- [Editing User Details](#)
- [Global Groups Overview](#)
- [Global Permissions Overview](#)
- [Migrating to new User Management](#)
- [Removing a Group](#)
- [Removing a User](#)
- [Setting up Anonymous Access](#)
- [Viewing members of a group](#)

Adding a Group

This page last changed on Jun 24, 2007 by [smaddox](#).

To add a new group,

1. Go to the 'Administration Console' and click on 'Manage Groups' in the left panel.
2. Enter a name for your group in the 'Add Group' input field and click 'Save'.

You are now ready to start [adding users](#) to the group.

RELATED TOPICS

 [Adding or Removing a User from a Group](#)

 [Global Groups Overview](#)

 [Removing a Group](#)

 [Viewing members of a group](#)

[!Administration Guide Attachments

directory^adminhome.gif!]  [Confluence Documentation Home](#)

Adding a New User

This page last changed on Dec 17, 2007 by [smaddox](#).

There are two ways a new user can be added to Confluence:






Public Signup: [Enabling public signup](#) from the Administration Console allows users to sign themselves up to the site.

By Confluence Administrators : If you want to restrict your site to a select group of users, you may want to disable 'Public Signup'. In this instance, administrators with Confluence Administrator or System Administrator [permissions](#) can add new users from the Administration Console.

To add a new user to Confluence from the Administration Console,

1. Go to the 'Administration Console' and click 'Manage Users' in the left-hand panel.
2. Click the link 'Add new user' at the top of the page.
3. In the form displayed, enter the user's details: username, password, name and email address.
4. Click 'Create' to add the user.

RELATED TOPICS

-  [Adding a Group](#)
-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)
-  [Changing Usernames](#)
-  [Editing User Details](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Adding or Removing a User from a Group

This page last changed on Jun 24, 2007 by [smaddox](#).

To add or remove a user from a group,

1. Go to the 'Administration Console' and click on 'Manage Users' in the left panel.
All members of the Confluence-Users group are listed in alphabetical order (first name). To find a user, you can either browse through the pages; or do a search on the user's mail id or the group to which they belong.
2. Click on the user link. This will display the user's current details and links to edit them.
3. Click 'Edit Groups'. This will display two lists of groups:
 - 'Not a member of groups': All groups to which the user doesn't belong. To add the user to a group, select a group and click 'Join'. Hold Ctrl and click to select more than one group.
 - 'Member of groups': All groups to which the user belongs. Select a group and click 'Leave' to remove the user from the group.



You cannot use the Edit Groups option to add or remove users from external groups, as Confluence access to LDAP and JIRA groups is read only.

RELATED TOPICS



[Adding a Group](#)



[Adding a New User](#)



[Adding or Removing a User from a Group](#)



[Changing Usernames](#)



[Editing User Details](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Changing Usernames

This page last changed on Jun 24, 2007 by [smaddox](#).

A username is the name used to login to Confluence, eg. jsmith. There is no support for changing a username via Confluence yet, but you can to vote towards a [feature request to allow usernames to be changed from the web interface](#).

Instructions For Changing Usernames

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. Creating a usermigration table:

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

5. 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');
```

6. If your DB administration tool does not support multiple SQL queries, these must be entered individually.

```
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 lastmodifier = newusername from usermigration u
where lastmodifier = u.oldusername;
```

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7. If using Confluence 2.1 or newer, run the following command:

```
update user
set name = newusername from usermigration u
where name = u.oldusername;
```

8. Reassign personal spaces 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.

```
update spaces
set spacekey = '~newusername'
```








```
where spacekey = '~oldusername';
```

9. 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 fullname in the `user` or `os_user` table.

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

RELATED TOPICS

-  [Adding a Group](#)
-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)
-  [Changing Usernames](#)
-  [Editing User Details](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Editing User Details

This page last changed on Jun 24, 2007 by [smaddox](#).

To update a user's details,

1. Go to the 'Administration Console' and click on the link 'Manage Users' in the left panel.
2. Locate the user by doing a search on the user's mail id or the groups to which they belong.
3. Click on the user link. This will display the user's current details and links to edit them.
 - View Profile : View the user's profile.
 - Edit Groups : [Add or remove](#) this user from a group.
 - Edit Details : Edit the user's name and email address. Changing a user's username is not supported through the application, see [Changing Usernames](#) for other solutions.
 - Set Password : Edit the user's password details.
 - Deactivate : It is not possible to 'remove' a user if the user is responsible for content on the site because Confluence will need the user information to maintain history of pages. In this instance, you can deactivate the user so that they can no longer log in to Confluence.
 - Remove : You can remove a user permanently if the user has not added or edited any content on the site.








Deactivating users

This functionality was removed in Confluence 2.1.x. See [Removing a User](#) for more information.

Screenshot : User Details

User:	testfoo2@atlassian.com
Full Name:	test foo 2
Email:	testfoo2@atlassian.com
Groups:	<input checked="" type="checkbox"/> confluence-users
View Profile Edit Groups Edit Details Set Password Deactivate Remove	

RELATED TOPICS


-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)
-  [Editing User Details](#)
-  [Global Permissions Overview](#)
-  [Removing a User](#)

Global Groups Overview

This page last changed on Dec 18, 2007 by [smaddox](#).

There are two special default groups in Confluence:

1. **confluence-administrators**: This is a group of 'super-users' who can access the 'Administration Console' and perform site-wide administration. Members of this group can also see all spaces in the Confluence instance.

 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.



There is an outstanding request to remove the 'confluence-administrators' group from a future version of Confluence (see [CONF-4616](#)).

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.

Other user groups : A Confluence administrator can also group users together into user groups for more convenient administration. Once created, groups become available at the space and page levels to allow for flexible access control. A user in one of these groups will automatically be granted all permissions granted to the group.

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](#). This will allow non-registered users to access pages and spaces in Confluence. A space administrator can then further control anonymous access per space via the [space permissions](#).

RELATED TOPICS



[Adding a Group](#)



[Adding a New User](#)



[Adding or Removing a User from a Group](#)



[Changing Usernames](#)



[Editing User Details](#)



[Enabling or Disabling Public Signup](#)



[Global Groups Overview](#)



[Global Permissions Overview](#)



[Removing a Group](#)



[Removing a User](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

Global Permissions Overview

This page last changed on Dec 18, 2007 by [smaddox](#).

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.



To grant global permissions, go to the 'Global Permissions' section of the Administration Console. 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.

On this page:

- [Overview of the Global Permissions](#)
- [Comparing the System Administrator with the Confluence Administrator Permission](#)
- [Comparing the Administrator Permissions with the confluence-administrators Group](#)
- [Updating Global Permissions](#)

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 .
Attach Files to User Profile	This allows the user to upload files to be stored in their user profile.  Attaching files to a user profile was a feature made obsolete by personal spaces. This permission is therefore not relevant since Confluence 2.2.
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. Users with this permission are

listed on the 'Site Administrators' page that is linked from 'Contact Administrators' in the footer throughout the Confluence site. See the comparison of 'System Administrator' and 'Confluence Administrator' [below](#). Refer also to the note about the 'confluence-administrators' group [below](#).



The first system administrator is defined during installation

During the installation of Confluence, the [Installation 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](#).

Comparing the System Administrator with the Confluence Administrator Permission

New with Confluence 2.7 and later comes the ability to have two levels of administrator in Confluence:

- 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 administrative functions.



Tip: 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 excluded from the 'Confluence Administrator' permission:

Administration Screen	Excluded Function
General Configuration	The following functionality is disallowed: <ul style="list-style-type: none">• Server Base URL• Remote API plugin• External user management• Public Signup
Daily Backup Admin	This function is disallowed entirely.
Plugins	This function is disallowed entirely.
Plugin Repository	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.
SnipSnap Import	This function is disallowed entirely.

Logging and Profiling	This function is disallowed entirely.
Cluster Configuration	This function is disallowed entirely.

Comparing the Administrator Permissions with the confluence-administrators Group

The 'confluence-administrators' group defines a set of 'super-users' who can access the Administration Console and perform site-wide administration. Members of this group can also see all spaces in the Confluence instance. The settings on the 'Global Permissions' screen do not affect the powers allowed to members of this 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.



Confluence Administrator permission and 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. To resolve confusion, we want to make explicit that granting a user or group 'Confluence Administrator' permission is not the same as granting them membership to 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, on the other hand, gives complete access.



There is an outstanding request to remove the 'confluence-administrators' group from a future version of Confluence (see [CONF-4616](#)).

Read more about [global groups](#).

Updating Global Permissions

To edit the global permissions for a group or user,

1. Go to the Administration Console and click 'Global Permissions' in the 'Security' section of the left-hand panel.
2. The 'View Global Permissions' screen appears. Click the 'Edit Permissions' button.
3. The 'Edit Global Permissions' screen appears, as shown below. Add or edit group and user permissions as follows:
 - To add permissions for a group:
 - First [add the group](#) to Confluence, if you have not already done so.
 - Now on the 'Edit Global Permissions' screen, enter the group name in the text box labelled 'Grant browse permission to' in the 'Groups' section. You can click the magnifying glass to search for the group name.
 - Click the 'Add' button.
 - The group will appear in the list and you can now edit its permissions.
 - To add permissions for a specific user:
 - First [add the user](#) to Confluence, if you have not already done so.
 - 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.
 - To assign permissions to a specific user on the 'Edit Global Permissions' screen, enter the username in the text box labelled 'Grant browse permission to' in the 'Individual Users' section. You can click the magnifying glass to search for the username.
 - Click the 'Add' button.

- The username will appear in the list and you can now edit its permissions.
- To edit the permissions for a user or group:
 - Click the checkbox under the relevant permission and next to the relevant user/group. A tick in the box indicates that the permission is granted. Click again to uncheck the permission.
- To allow anonymous access to your Confluence site, check 'can use' in the 'Anonymous Access' section. See [more information](#).
- Click the 'Save All' button to save your changes.

Screenshot: Editing global permissions

Groups

These are the global permissions currently assigned to groups.

		Attach Files to User Profile	Personal Space	Create Space(s)	Confluence Administrator	System Administrator
confluence-administrators	<input checked="" type="checkbox"/> can use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
confluence-users	<input checked="" type="checkbox"/> can use	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Grant browse permission to

Individual Users

These are the global permissions currently assigned to individual users.

		Attach Files to User Profile	Personal Space	Create Space(s)	Confluence Administrator	System Administrator
Admin	<input checked="" type="checkbox"/> can use	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Grant browse permission to

Anonymous Access

When a user is using Confluence while not logged in, they are using it anonymously.
For example: Enabling anonymous 'USE' permission, allows non-logged-in users to browse pages and spaces in Confluence.

	Use Confluence
Anonymous	<input type="checkbox"/> can use

RELATED TOPICS

- [Adding a Group](#)
- [Adding a New User](#)
- [Adding or Removing a User from a Group](#)
- [Changing Usernames](#)
- [Editing User Details](#)
- [Enabling or Disabling Public Signup](#)
- [Global Groups Overview](#)
- [Global Permissions Overview](#)
- [Removing a Group](#)
- [Removing a User](#)
- [Security Overview](#)
- [Setting up Anonymous Access](#)
- [Viewing members of a group](#)

Migrating to new User Management

This page last changed on Dec 18, 2007 by [smaddox](#).

In order to support advanced forms of user management, Confluence now uses the AtlassianUser management framework, which can store users in the database (through Hibernate) instead of delegating the user management to OSUser.



Manual migration no longer required from Confluence 2.7.0

This page describes how to perform a manual migration of your users from OSUser to AtlassianUser. For Confluence 2.7.0 and later, there is no need to perform a manual migration of your users to the AtlassianUser framework. If you are installing Confluence 2.7.0 or later for the first time, you will automatically receive the AtlassianUser framework. If you are upgrading from an earlier version to Confluence 2.7.0 or later and have not changed the default user management configuration, your users will be automatically migrated. Refer to the details in the [Confluence 2.7 Upgrade Guide](#).

For Confluence 2.6.x and earlier, Confluence delegates user management to OSUser by default. However, you may wish to migrate your users away from OSUser for one or more of the following reasons:

- In preparation to use external user management.
- To take advantage of the native AtlassianUser's much more efficient searching and user administration.
- Because you are having problems with OSUser, such as [CONF-5218](#).




The migration instructions below are valid for Confluence version 2.2 and later.

Step 1 - Upgrade Confluence

Please check that you are running the [latest version](#) of Confluence. If not, we strongly recommend that you consider upgrading Confluence according to [this guide](#). Confirm that you have upgraded successfully before trying to add LDAP to the new version.

Step 2 - Confluence User Migration

1. Find your Confluence base URL. To check this from Confluence, go to Administration > General Configuration > Base Url. Record this for later in the process.
2. Make a backup of your:
 - database
 - Confluence home directory
 - confluence/WEB-INF/classes/atlassian-user.xml (only if you have made changes)

 If you do not create a backup, you cannot roll back to the old version if the migration is unsuccessful.
3. Download [hibernate_osuser_atlassian-user.xml](#) and rename to `atlassian-user.xml`. Then copy this file to your `confluence/WEB-INF/classes` directory. (You can overwrite the one that's there).
4. Restart Confluence.
5. Log in as a System Administrator, copy the address `http://<BASEURL>/<contextpath>/admin/osuser2atluser.jsp` and paste it into your browser's address bar. Change `<BASEURL>` to your actual base URL and `<contextpath>` to your context path (usually 'confluence') and follow the link.
6. Click the link Begin migration. You will know the migration has been successful if you see this reported:

```
Migrating users and groups ...
Users and groups migrated successfully!
```

If you encounter errors, please create a support ticket at <http://support.atlassian.com> and attach your application server logs.

7. Stop Confluence.
8. Start up Confluence and check that you can log in using the admin account you first set up when running through the Confluence Setup Wizard. If not, re-examine your steps and repeat from the point where you may have gone wrong.

9. Download [hibernate_cache_atlassian-user.xml](#), rename it to `atlassian-user.xml` then copy to your `<INSTALL>/confluence/WEB-INF/classes` directory. It should overwrite the previous `atlassian-user.xml`.
10. Restart Confluence. Check that your users can still log in.

RELATED TOPICS

[Understanding User Management in Confluence](#)
[Confluence 2.7 Upgrade Guide](#)






Removing a Group

This page last changed on Jun 24, 2007 by [smaddox](#).

To remove a group,

1. Go to the 'Administration Console' and click on 'Manage Groups' in the left panel. A list of all existing groups is displayed along with links to remove them.
2. Click 'Remove' beside the group you want to remove. You will need to confirm your action before the group is deleted.

RELATED TOPICS

-  [Configuring Attachment Size](#)
-  [Configuring Character Encoding](#)
-  [Configuring HTTP Timeout Settings](#)
-  [Configuring Indexing Language](#)
-  [Configuring Number Formats](#)

Removing a User

This page last changed on Nov 13, 2007 by [jfleming](#).

i It is not possible to remove a user if the user is responsible for content on the site, because Confluence will need the user information to maintain a history of pages. If you wish to prevent such a user from accessing Confluence, you can deactivate a user so that they can no longer log in to Confluence.

You can remove a user if the user has not added or edited any content on the site.

To deactivate or remove a user,

1. Go to the 'Administration Console' and click 'Manage Users' in the left panel.
2. Find the user by searching on the username, full name or email address. You can also click 'Show all users' to browse the list of all users.
3. Click the username. This will display the user's current details and links to edit them.
4. Click 'Remove' if the user is not responsible for any content on the site.
5. If the user is responsible for content on the site, you will need to deactivate the user (also known as disabling the user):
 - Remove the user from all groups that have the global 'Can Use' [permission](#). Click 'Edit Groups' to remove the person from the group(s).
 - If the specific user has the global 'Can Use' permission, you will also need to remove this [permission](#).

i Number of users and your license

The [License Details](#) page tells you how many users your Confluence instance is licensed to support, and how many are currently registered. The number of registered users includes only users who have the 'Can Use' global permission. Deactivated users, as described above, are not included.


i Deactivating users in Confluence 2.0.x and earlier

Earlier Confluence releases provide a 'Deactivate' link. If you click this link, the user will be prevented from logging in to the Confluence site. This function was removed from Confluence 2.1.x and later for performance reasons.

Screenshot: Adding and removing users to/from groups

Not a member of groups:	Member of groups:
<div>atlassian-developers</div> <div>atlassian-partners</div> <div>atlassian-staff</div> <div>atlassian-training</div> <div>bnp-consulting</div> <div>bnpp-boys</div> <div>case-studies</div> <div>citigroup-users</div> <div>Join >></div>	<div>confluence-users</div> <div><< Leave</div>

RELATED TOPICS

-  [Adding a Group](#)
-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)

 [Changing Usernames](#)

 [Editing User Details](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Setting up Anonymous Access


This page last changed on Jun 24, 2007 by [smaddox](#).


You can enable public access to your site by granting the 'Use Confluence' permission to 'Anonymous' users from the Administration Console.

This user category has been created for convenient administration of users who have not logged into the site. Permissions assigned to this group apply to all anonymous users of the site.






To enable public access to your site,

1. Go to the 'Administration Console' and click 'Global Permissions' in the left panel.
2. Click 'Edit Permissions'.
3. Under 'Anonymous Access' check 'Can Use' Confluence.

 Once you grant this permission, further permissions can be granted from the space administration screens to control the viewing and editing privileges of anonymous users. See [Space Permissions Overview](#).

 To turn off "Anonymous Access", uncheck the "Can Use" option.

RELATED TOPICS

-  [Adding a New User](#)
-  [Adding or Removing a User from a Group](#)
-  [Editing User Details](#)
-  [Global Permissions Overview](#)
-  [Removing a User](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Viewing members of a group

This page last changed on Jun 24, 2007 by [smaddox](#).

To view the members of a group,

1. Go to the 'Administration Console' and click on 'Manage Groups' in the left panel. This will list all the existing groups on the site along with the number of users in each group (displayed within parenthesis).
2. Click on the number within the paranthesis to display all the users in the group.

RELATED TOPICS

 [Adding or Removing a User from a Group](#)

 [Global Groups Overview](#)

 [Removing a Group](#)

 [Viewing members of a group](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

How to Improve User Search Performance

This page last changed on Dec 11, 2007 by [smaddox](#).


If your Confluence instance contains thousands of user accounts and you are experiencing performance issues when searching for users, the following migration guide is for you.


Background


In Confluence 2.1, we introduced a new system for user management inside Confluence (atlassian-user) that was more powerful than the previous system (OSUser). However, to avoid potential upgrade issues, we continued to use OSUser when storing users in the local Confluence database.

The native atlassian-user storage format provides much more efficient searching, and greatly improves the performance of user administration and Confluence's 'user picker' pop-up. We plan on migrating all Confluence instances to the new format around version 2.6 or 2.7, but until then Confluence instances with large numbers of users can still take advantage of these performance improvements by performing the migration manually.

Migration procedure

 Do not use this procedure if you have LDAP user management enabled.

 This guide assumes that you are using Confluence's local users and groups. If you have already configured Confluence for LDAP user/group management and are experiencing user management slowness, please follow the guide for [Requesting External User Management Support](#).

 Manual migration no longer required from Confluence 2.7.0

This page describes how to perform a manual migration of your users from OSUser to AtlassianUser. For Confluence 2.7.0 and later, there is no need to perform a manual migration of your users to the AtlassianUser framework. If you are installing Confluence 2.7.0 or later for the first time, you will automatically receive the AtlassianUser framework. If you are upgrading from an earlier version to Confluence 2.7.0 or later and have not changed the default user management configuration, your users will be automatically migrated. Refer to the details in the [Confluence 2.7 Upgrade Guide](#).

For details of the procedure, refer to [Migrating to new User Management](#).

Integrating with Crowd

This page last changed on Nov 26, 2007 by [smaddox](#).

Atlassian's Crowd identity management system can be integrated with Confluence. Please see [Integrating Crowd with Confluence](#).

JIRA User Management

This page last changed on Jan 31, 2006 by [vidya](#).

- [Delegate user management to use JIRA logins](#)
 - [Revert from JIRA to internal user management](#)
- [JIRA User Management FAQ](#)

Delegate user management to use JIRA logins

This page last changed on Dec 16, 2007 by [smaddox](#).

If you already have a significant user base set up inside JIRA, it makes sense to connect Confluence to JIRA so that user management is centralised and not duplicated. This document outlines how to delegate Confluence's user authentication and group management to JIRA so that you can use your JIRA users to log in to Confluence.

Read Before Proceeding

1. The examples used in this document are based on Tomcat Application Server and the MySQL database. The same concepts (but not the verbatim examples) can be applied to other application servers or databases.
2. Always install Confluence with a new database. Do not attempt to use the existing JIRA database, with either JDBC or data source. Do not add any spaces or content once Confluence installation is complete. Users in Confluence will no longer be valid once you switch over to using your JIRA users.
3. If JIRA is using LDAP for authentication, you should not use JIRA for Confluence user management. Use [Add LDAP Integration](#) instead.
4. If you have existing users or groups in Confluence, these users will not be available once you switch to using JIRA's user management. Any existing content will no longer be associated with valid users.
5. If you run into a problem, check the [Troubleshooting](#) section.

Technical Overview

In the configuration described below, Confluence will use JIRA's database for its user and group information. The Confluence application will have two database connections:

1. A connection to the primary database, set up during Confluence installation. This database stores all the normal Confluence data: spaces, pages, comments, etc.
2. A read-only data source connection to JIRA's database, set up after Confluence is installed. Confluence reads information about users and groups from this database.

The reason this works is because both JIRA and Confluence use the same user management library, OSUser. The OSUser database schema is the same in JIRA and Confluence, so Confluence can easily read from JIRA's tables to get the user and group information.

Step One: Installing Confluence


Skip this step if you have installed Confluence already and completed the setup wizard.


1. If you are running JIRA standalone please follow [these instructions](#) for installing Confluence.
2. If you have JIRA deployed under your own tomcat server, please follow [these instructions](#).
3. Ensure that Confluence is running and has been set up, that is, you have completed the setup wizard and verified that you can create pages.
4. Shut down Confluence.

Step Two: Setting up a Datasource to JIRA's Database

In order to delegate all user authentication attempts and group membership queries to JIRA, Confluence needs to be aware of JIRA's database, and hence the user tables in JIRA's database.


In Tomcat this is achieved by specifying JIRA's database as a resource. You will need to declare it inside the <context> descriptor you set up in Step One.

 If there is an existing block of <Resource> in the <context> descriptor, please do not replace it. Rather, just add the following <Resource> block inside the <context> descriptor.

 If you are running Confluence WAR/EAR version separate to JIRA, or under JIRA standalone 3.3 and later, your Confluence context will be in the confluence.xml file.

If you are running Confluence standalone separate to JIRA, or Confluence WAR/EAR version under an older version of JIRA, your Confluence context will be in the server.xml file. You should never have a Confluence context in both.

If you are running Confluence standalone (or Confluence inside a JIRA standalone) and aren't sure which version of Tomcat you are using, check your log files. You'll see `*INFO: Starting Servlet Engine: Apache Tomcat/5.5.nn*` if you are using Tomcat 5.5.

 The DataSource configuration below is using MySQL as an example. You will need to modify these settings according to the database that you are using.

- Tomcat 4.x and Tomcat 5.0.x: Sample context descriptor

```
<Context path="/confluence" docBase="C:/programs/confluence" swallowOutput="true">
  <Resource name="jdbc/JiraDS" auth="Container" type="javax.sql.DataSource"/>
  <ResourceParams name="jdbc/JiraDS">
    <parameter>
      <name>username</name>
      <value>your_db_username</value>
    </parameter>
    <parameter>
      <name>password</name>
      <value>your_db_password</value>
    </parameter>
    <parameter>
      <name>driverClassName</name>
      <value>com.mysql.jdbc.Driver</value>
    </parameter>
    <parameter>
      <name>url</name>
      <value>jdbc:mysql://your.domain.com/jira_database_name?autoReconnect=true</value>
    </parameter>
    <parameter>
      <name>factory</name>
      <value>org.apache.commons.dbcp.BasicDataSourceFactory</value>
    </parameter>
  </ResourceParams>
</Context>
```

- Tomcat 5.5.x: This version of Tomcat has a new syntax for specifying resources (note that you don't add a new context to server.xml, just add the Resource to your existing Context):


```
<Context path="/confluence" docBase="C:/programs/confluence" swallowOutput="true">
  <Resource name="jdbc/JiraDS" auth="Container" type="javax.sql.DataSource"
    username="your_db_username"
    password="your_db_password"
    driverClassName="com.mysql.jdbc.Driver"
    url="jdbc:mysql://your.domain.com/jira_database_name?autoReconnect=true"/>
</Context>
```

Step Three: Installing the JDBC Driver

Ensure that your JDBC driver is on the classpath of your application server. In this example, a jar for the mysql driver should be in the `/common/lib` folder.

1. Download the mysql driver from [here](#).
2. Copy the jar file into the `/common/lib` folder

Step Four: Modifying osuser.xml

 Please perform this step after you have completed the Confluence setup wizard.

1. Find the `osuser.xml` file in the `/confluence/WEB-INF/classes` folder and open in a text editor. Comment out the following block of code:

```

<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider</
property>
<property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateAccessProvider</
property>
<property name="chain.configuration.provider.class">bucketuser.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateProfileProvider</
property>
<property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>

```

2. Uncomment this block:

```

<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcCredentialsProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcAccessProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcProfileProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
<property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>

```

Your osuser.xml should now look like this:

```

<opensymphony-user>
<!--
Authenticators can take properties just like providers.

This smart authenticator should work for 'most' cases - it dynamically looks up
the most appropriate authenticator for the current server.
-->
<authenticator class="com.opensymphony.user.authenticator.SmartAuthenticator"/>

<!-- JIRA User management (with caching) -->
<!-- Note: Do not add any line breaks or spaces when specifying the chain.classname, otherwise
a ClassNotFoundException will be thrown -->

<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcCredentialsProvider</
property>
<property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>

```

```

<provider class="bucket.user.providers.CachingAccessProvider">
  <property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcAccessProvider</
property>
  <property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
  <property
name="chain.classname">com.atlassian.confluence.user.providers.jira.JiraJdbcProfileProvider</
property>
  <property name="chain.datasource">java:comp/env/jdbc/JiraDS</property>
  <property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>

<!--
<provider class="bucket.user.providers.CachingCredentialsProvider">
  <property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider</
property>
  <property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
  <property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateAccessProvider</
property>
  <property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
  <property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateProfileProvider</
property>
  <property
name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</property>
</provider>
-->

<!--<provider class="com.opensymphony.user.provider.memory.MemoryCredentialsProvider" />
<provider class="com.opensymphony.user.provider.memory.MemoryAccessProvider" />
<provider class="com.opensymphony.user.provider.memory.MemoryProfileProvider" />-->
</opensymphony-user>

```

Please make sure your file looks like this.

In this example, JiraDS is the name of the JIRA datasource you are sharing with Confluence. If you have changed the name in step 2 of this documentation, you will need change all occurrences of the value here too.


You can also download the already configured file [here](#).

Step Five: Customising osuser.xml

In some cases you may need to customise the behaviour of the JiraJdbc classes. You can do this by setting properties within the osuser.xml file.

This process is documented [here](#).

Step Six: Modifying atlassian-user.xml

 This step is only applicable for Confluence 2.7 and later .

Please comment-out/remove the following line from your <Confluence-Install>/confluence/web-inf/classes/atlassian-user.xml file:

```
<hibernate name="Hibernate Repository" key="hibernateRepository" description="Hibernate Repository" cache="true"/>
```

and add this line instead:

```
<osuser name="OSUser Repository" key="osuserRepository"/>
```

Step Seven: Creating Confluence Groups in JIRA


1. Add `confluence-users` and `confluence-administrators` groups in JIRA
2. Add yourself to both these groups.
 - To give your existing JIRA users access to Confluence, you have two options.
 - Manually edit the groups of these users inside JIRA and give them membership to one or both of these confluence groups OR
 - Start up Confluence. Log in using your JIRA account, and go to Administration and then Global Permissions. Now assign the 'can use' permission to your desired JIRA groups.



In order to use Confluence, users must be a member of the `confluence-users` group (or have Confluence 'can use' permission).

Step Eight: Activating External User Management

Since user management is now conducted in JIRA and outside of Confluence, you will need to switch external user management on.

 **NOTE:** Activating external user management will remove user and group management options from Confluence. Your users will also no longer be able to edit their full name or email address inside Confluence. (If they want to, they would have to do so in JIRA).

To switch external user management on:

1. Log into Confluence using your JIRA account.
2. Go to the Administration Console and click General Configuration in the left-hand panel
3. Click 'Edit' at the bottom of the 'Options and Settings' screen.
4. Select 'ON' beside 'External User Management'.

For answers relating to [JIRA User Management](#), click on any query below.

Troubleshooting



loads with 'NullPointerException' system error

Confluence login page


If the page loads with 'System error' with cause 'java.lang.NullPointerException at com.atlassian.user.impl.osuser.OSUUserManager.getOpensymphonyUser(OSUUserManager.java:85)' and output logs shows 'user.provider.jdbc.BaseJDBCProvider] init Could not look up DataSource using JNDI location' error, either the Resource for the DataSource is not being loaded by the application server, or it is being loaded but the resource names do not match. Check the names first, so if '/confluence/WEB-INF/classes/osuser.xml' specifies a datasource named 'java:comp/env/jdbc/JiraDS', the datasource specified in server.xml or confluence.xml must be 'jdbc/JiraDS'.




loads with 'HTTP Status 404' and output log shows 'java.lang.ClassNotFoundException' for driver, eg 'com.mysql.jdbc.Driver'

Confluence login page

Missing the database driver library. On standalone or Apache Tomcat, download the database jar to the common\lib directory.

 Confluence login page loads but login fails with 'Username and password are incorrect' and output log shows 'Access denied for user'

Caused by an incorrect database URL or login in the datasource.




 Confluence login page loads but login fails with 'Username and password are incorrect' and output log shows 'Cannot create JDBC driver'

If your log outputs an error with "FATAL [user.provider.jdbc.JDBCCredentialsProvider] Could not list users. org.apache.commons.dbcp.SQLNestedException: Cannot create JDBC driver of class "" for connect URL 'null'", you are using the incorrect Tomcat format for specifying the Datasource resource. You should check your Tomcat version and use the alternative format.

 I cannot get my JIRA integration to work, where can I get technical support?

See [Requesting External User Management Support](#) for information on logging a support request.

RELATED TOPICS

-  [Delegate user management to use JIRA logins](#)
-  [Migrating users from Confluence to JIRA](#)
-  [Revert from JIRA to internal user management](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Revert from JIRA to internal user management

This page last changed on Oct 25, 2006 by david.soul@atlassian.com.

Administrators can revert a Confluence instance that uses JIRA for user management back to internal user management. With few users, it is easier to manually recreate the JIRA users and groups in Confluence. For more users, migrate JIRA users and groups into the Confluence database instead.

Option A - Manually Recreate Users In Confluence

This option is too time consuming for hundreds or thousands of users. After completing the reversion, links to users who created or updated Confluence content may go to error screens.

To manually recreate the users, you must first have an instance of Confluence with internal user management and your data.

- If you have made limited customisations to Confluence and migrating would be desirable - follow the [upgrade guide](#) and import your data to a new installation.
- Alternatively, if you have made extensive customisations or do not wish to migrate - go to [delegating user management to JIRA](#) and remove your JIRA user management by undoing the instructions in reverse order. These steps are specific to your instance so cannot be covered here.

Then manually create JIRA's groups and users in Confluence. If you have assigned permissions in Confluence 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, you must also create that user in Confluence.

Option B - Transfer JIRA Users & Groups To Confluence

This option manually migrates JIRA users into the Confluence database, but requires knowledge of SQL.



Users not using mySQL

Users of non-mySQL databases must be experienced enough to modify the SQL to work in their database as examples are provided for mySQL only. If you adapt the SQL to another database, please consider posting the SQL you used to the comments.



Users of Confluence 2.0 or older

Pre-Confluence 2.0 users may need to modify the instructions to your older schema, or [upgrade Confluence](#). For example, on Confluence 2.1.5 and older, SQL references to the property table must be updated to be called OS_PROPERTYENTRY in all upper-case.

Stage One - Create Backups

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

1. From Confluence, create a full XML backup including attachments.
2. Stop Confluence.
3. Take a backup copy of the Confluence home and install directories.
4. Repeat the above steps for JIRA.
5. From your mySQL admin tool, create a database backup for the JIRA and Confluence databases.

Stage Two - Replace Confluence User Management

Replace the Confluence user and group permissions with JIRA by transferring table content. The SQL provided is specific to mySQL and must be modified for other databases. For each SQL statement, do a find and replace on the JIRA and Confluence table names to your table names. In the examples, they are called confluence224 and jira364.

1. Login to a DBA tool that can execute SQL on your DB.
2. Erase user and group content from the Confluence DB:


```
delete from confluence224.os_propertyentry where entity_name='OSUser_user';
delete from confluence224.os_user_group;
delete from confluence224.os_group;
delete from confluence224.os_user;
```

3. Copy JIRA's groupbase table into Confluence's os_group table:

```
insert into confluence224.os_group (id, groupname)
select *
from jira364.groupbase;
```

4. Copy JIRA's userbase table into Confluence's os_user table:

```
insert into confluence224.os_user (id, username, passwd)
select *
from jira364.userbase;
```

5. Copy JIRA's membershipbase table into Confluence's os_user_group table.

```
insert into confluence224.os_user_group (group_id, user_id)
select distinct groupbase.id as "group_id", userbase.id as "user_id"
from jira364.groupbase, jira364.membershipbase, jira364.userbase
where membershipbase.user_name = userbase.username and membershipbase.group_name =
groupbase.groupname;
```

6. Merge relevant content from JIRA's propertyentry and propertystring tables into Confluence's os_propertyentry table. Some versions of SQL use "0" instead of "false" for boolean values.

```
insert into confluence224.os_propertyentry (entity_name, entity_id, entity_key, key_type,
boolean_val, double_val, string_val, text_val, long_val, int_val, date_val)
select 'OSUser_user', propertyentry.entity_id, propertyentry.property_key, 5, false, 0,
propertystring.propertyvalue, '', 0, 0, null
from jira364.propertyentry, jira364.propertystring
where propertyentry.entity_name='OSUser' and propertyentry.id=propertystring.id;
```

Stage Three - Revert To Local Management

- If you have made limited customisations to Confluence and migrating would be desirable - Install a new instance of Confluence using the [upgrade guide](#) and use Method 1 to import your updated database.
- Alternatively, if you have made extensive customisations or do not wish to migrate - go to [Delegating User Management to JIRA](#) and remove your JIRA user management by undoing the instructions in reverse order. These steps are specific to your instance so cannot be covered here.

Done! Note that the original administrator may not display their groups correctly, however their groups are still present.

JIRA User Management FAQ

This page last changed on Jan 14, 2007 by david.soul@atlassian.com.

For answers relating to [JIRA User Management](#), click on any query below.

Troubleshooting



Confluence login page

loads with 'NullPointerException' system error

If the page loads with 'System error' with cause 'java.lang.NullPointerException at com.atlassian.user.impl.osuser.OSUUserManager.getOpensymphonyUser(OSUUserManager.java:85)' and output logs shows 'user.provider.jdbc.BaseJDBCProvider] init Could not look up DataSource using JNDI location' error, either the Resource for the DataSource is not being loaded by the application server, or it is being loaded but the resource names do not match. Check the names first, so if '/confluence/WEB-INF/classes/osuser.xml' specifies a datasource named 'java:comp/env/jdbc/JiraDS', the datasource specified in server.xml or confluence.xml must be 'jdbc/JiraDS'.



Confluence login page

loads with 'HTTP Status 404' and output log shows 'java.lang.ClassNotFoundException' for driver, eg 'com.mysql.jdbc.Driver'

Missing the database driver library. On standalone or Apache Tomcat, download the database jar to the common\lib directory.



Confluence login page

loads but login fails with 'Username and password are incorrect' and output log shows 'Access denied for user'

Caused by an incorrect database URL or login in the datasource.



Confluence login page

loads but login fails with 'Username and password are incorrect' and output log shows 'Cannot create JDBC driver'

If your log outputs an error with "FATAL [user.provider.jdbc.JDBCCredentialsProvider] Could not list users. org.apache.commons.dbcp.SQLNestedException: Cannot create JDBC driver of class '' for connect URL 'null'", you are using the incorrect Tomcat format for specifying the Datasource resource. You should check your Tomcat version and use the alternative format.



I cannot get my JIRA

integration to work, where can I get technical support?

See [Requesting External User Management Support](#) for information on logging a support request.

LDAP User Management

This page last changed on May 17, 2007 by [ganand](#).

Grouping page for external user management documentation (including LDAP, ActiveDirectory, etc). What resource do you need?

- [Overview of external user management](#)
- [Help with troubleshooting external user management](#)
- [Guide to adding LDAP integration with group management](#)
- [LDAP FAQ](#)

Check the listing of children pages below for other useful resources.

Activating External User Management

This page last changed on Dec 17, 2007 by [smaddox](#).

If your user management is being handled outside of Confluence by JIRA you will need to turn on the external management option in Confluence, from the Administration Console.


Running Confluence with Crowd:

- If you would like to handle your user management outside of Confluence via [Crowd](#), you will need to turn on the external management option.
- For Confluence 2.5.6 and later: External user management when running with Crowd is optional. You can leave external user management off and still run Confluence under Crowd. But external user management is recommended, because it allows you to use Crowd's powerful cross-directory administration features instead of Confluence's more limited Confluence-centric user management.

If your user management is being done with LDAP, you must not turn on external user management, although users and groups which exist in your LDAP repository cannot be modified.

Activating an external user management system will remove all user and group management options from Confluence. The assignment of permissions to groups and users is still carried out within Confluence, but the creation of groups and users is not.






This will also prevent users from signing up to the site, as well as editing their name, email and password particulars from within Confluence.

 You need to have [System Administrator](#) permissions in order to perform this function.

To activate an external user management system,

1. Go to the 'Administration Console' and click 'General Configuration' in the left-hand panel.
2. In the 'General Configuration' screen, click 'Edit'.
3. Select 'On' beside 'External User Management'.
4. Click 'Save'.

RELATED TOPICS

-  [Activating External User Management](#)
-  [Add LDAP Integration For User Authentication Only](#)
-  [Changes in osuser.xml from 1.0.3a to 1.1.x](#)
-  [Confluence Caching OSUser Provider](#)
-  [Importing LDAP Users](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

Add LDAP Integration

This page last changed on Dec 17, 2007 by [smaddox](#).



Try Atlassian Crowd for powerful LDAP integration

Atlassian's [Crowd](#) is a web-based single sign-on (SSO) tool that simplifies application provisioning and identity management. Crowd supports features that Confluence-only LDAP integration cannot support, such as multiple user directories.

Confluence can delegate user authentication to LDAP and use LDAP group memberships to set the user's Confluence access permissions. This also allows Active Directory (AD) integration. This guide is for both users enabling LDAP, and those upgrading their LDAP scheme to support group management. It applies to LDAP over HTTP and SSL/HTTPS.

Once the LDAP is enabled and LDAP users are using Confluence, you cannot revert to local user management without those users being disabled. However, you can create new local users while using LDAP integration.

Who is this guide for?

To decide if this is the correct document for you, please answer these 2 questions:

1. Are you using Atlassian-User LDAP on Confluence 2.1.x? If so, follow the [2.1.x LDAP Upgrade Instructions](#) instead.
2. Are you using a version of Confluence older than 2.1? If you are using 2.0.x, follow [OSUser LDAP integration](#) instead. If it is older than 2.0, you must [upgrade Confluence](#).

Step 1 - Upgrade Confluence

Please check that you are running the [latest version](#) of Confluence. If not, we strongly recommend that you consider upgrading Confluence according to [this guide](#). Confirm that you have upgraded successfully before trying to add LDAP to the new version.

Step 2 - Contact your LDAP/AD Administrator

Integration can only be setup by an administrator confident with running user queries against their LDAP directory. You should request assistance from your LDAP or Active Directory administrator for the following steps.

Step 3 - Check your LDAP server

Confirm this information about your LDAP server.

1. Check your server LDAP version. Supported versions are v2 and v3. Supported LDAP servers include OpenLDAP, Microsoft Active Directory, Novell eDirectory, and any server that uses Java JNDI-LDAP mapping.
2. Your LDAP or Active Directory server must support static groups. This means that the user DN's must be stored against a membership attribute inside an LDAP groups. An example of a static group is shown below:

```
Dn: CN=Sales and Marketing,CN=Users,DC=ad,DC=atlassian,DC=com
objectClass: top; group;
cn: Sales and Marketing;
distinguishedName: CN=Sales and Marketing,CN=Users,DC=ad,DC=atlassian,DC=com;
name: Sales and Marketing;
...
member: CN=John Smith,CN=Users,DC=ad,DC=atlassian,DC=com
member: CN=Sally Smith,CN=Users,DC=ad,DC=atlassian,DC=com
...
```

The membership attribute in this case is member, but this is not required. Note that the full DN's of John and Sally Smith are listed. If the values against member are not full DN's, but are just usernames, then you need to add the flag

```
<useUnqualifiedUsernameForMembershipComparison>true
</useUnqualifiedUsernameForMembershipComparison>
```

to your LDAP configuration. Open Directory on OS X uses this configuration.

3. You must not have LDAP groups called 'confluence-users' or 'confluence-administrators'.
4. You must have at least one existing Confluence administrator with System Administrator [permissions](#), whose username does not exist in the LDAP server (see Step 4).

Step 4 - Check the System Administrator account

This step assumes that you have at least one Confluence user account which has System Administrator [permissions](#) for your Confluence site. For this account, please check that there isn't an account on your LDAP system that has the exact same username.

If there is an LDAP account with the exact same username, and you do not have another local Confluence account that has System Administrator [permissions](#) rights, then you should perform one of the following:

- create another account, that doesn't exist on LDAP, to act as the administrator
OR:
- rename your local Confluence administrator account to use another username that doesn't exist in LDAP
OR:
- rename your LDAP account

This will ensure that you will have an account that has sufficient rights to administer your site after you migrate your users.


Step 5 - Configure your LDAP repository

1. Follow [Customising atlassian-user.xml](#)
2. Start up Confluence and check that you can log in using the System Administrator account you first set up when running through the Confluence Setup Wizard. If not, re-examine your steps and repeat where necessary.
3. If you can't successfully log in with this account, please check that the username of this account does not already exist in your LDAP server. If usernames are the same, Confluence recognises LDAP accounts over local Confluence accounts.

Step 6 - Grant access to LDAP users and groups

To grant Confluence login access to your LDAP groups and users:

1. From Confluence, go to Administration > Global Permissions
2. Click to Edit Permissions for Groups
3. In the textbox to Grant Browse Permission, enter the name of an LDAP group that should have Confluence access. Click Add.
4. Tick the Can Use box for the LDAP group. If the group is not found, it was not present in your LDAP server.
5. For other LDAP groups that need access to Confluence, add them using the same method.
6. If you are integrating LDAP with Confluence for authentication only, no LDAP groups will appear in Confluence. All the individual LDAP users will have to be manually added to an internal Confluence group with Can Use permissions enabled before they can have access to Confluence.
7. Set up your Confluence page and space permissions for these LDAP groups and users.

 Tip: To set up all LDAP users as members of particular Confluence internal groups, you can try the [LDAP Dynamic Groups Plugin](#).

Installation complete!

Related Pages

- [Confluence LDAP Documentation Index](#)

Troubleshooting

Check your Confluence version

This documentation applies to Confluence 2.7. There are a couple key bugs that have been resolved in Confluence 2.6 or 2.6.1, but that pertain to 2.5.6 and 2.5.7.

1. <http://jira.atlassian.com/browse/CONF-9434> relates to hibernate cache=true; The xml file supplied here has the hibernate cache set to "true".
2. <http://jira.atlassian.com/browse/CONF-9195> relates to the migration step. Version 2.6.1 corrects this problem.

More information

- [LDAP FAQ](#)
- If LDAP users or groups are not displayed in Confluence, download the [Paddle diagnostic tool](#)
- List of [known, unresolved LDAP bugs](#)
- Comments on this page.

Support

Failing all else, lodge a [support request](#). Be sure to attach your atlassian-user.xml, [Paddle](#) logs and a zip of your Confluence logs.

Automatically Adding LDAP users to the confluence-users Group

This page last changed on Nov 07, 2007 by [ganand](#).

This Authenticator adds users to confluence-users as they log in. To use it, change the line:

```
<authenticator class="com.atlassian.confluence.user.ConfluenceAuthenticator"/>
```

in `seraph-config.xml` to:

```
<authenticator class="com.atlassian.confluence.user.ConfluenceGroupJoiningAuthenticator"/>
```

If you are using Confluence 2.2 you need to download the [ConfluenceGroupJoiningAuthenticator.class](#) file and put it in `WEB-INF/classes/com/atlassian/confluence/user`.

Confluence 2.3 and later include this class as standard.

From Confluence 2.6, the directory structure `WEB-INF/classes/com/atlassian/confluence/user` no longer exists. The files and classes that used to exist here, now reside within the `confluence-2.6.0.jar` in `WEB-INF/lib` directory.

Customising atlassian-user.xml

This page last changed on Jul 25, 2007 by ivan@atlassian.com.

The LDAP server connection is specified by manually editing the file `atlassian-user.xml`. Confluence 2.3 onwards supports multiple LDAP servers by repeating the instructions below for each server so that there are multiple repositories defined.

Stage 1 - Configure Connection Details

1. Edit the file `.../confluence/WEB-INF/classes/atlassian-user.xml` and configure the connection for either AD or LDAP.
 - [Connections in Active Directory](#)
 - [Connections in other LDAP servers](#)
2. If your Active Directory Server allows anonymous searches, then you do not need to specify a `securityPrincipal` and `securityCredential` at all. For an example of how you would configure Confluence to allow anonymous authentication, see [Enable Anonymous Authentication in LDAP or Active Directory](#)
3. To connect to LDAP over SSL, see [Connect to LDAP via SSL](#)
4. Check your configuration against the example connection details shown below.

```
<ldap key="ldapRepository" name="LDAP Repository@hecate.atlassian.com" cache="true">
<host>hecate.atlassian.com</host>
<port>389</port>
<securityPrincipal>cn=admin,dc=atlassian,dc=private</securityPrincipal>
<securityCredential>secret</securityCredential>
<securityProtocol>plain</securityProtocol>
<securityAuthentication>simple</securityAuthentication>
<baseContext>dc=atlassian,dc=private</baseContext>
```

....

Stage 2 - Map LDAP Data Tree

1. Configuring the mappings in `atlassian-user.xml` for either AD or LDAP.
 - [Mapping Active Directory](#)
 - [Mapping other LDAP servers](#)
2. Check your configuration against the example connection details shown below.

...

```
<baseUserNamespace>dc=staff,dc=perftest,dc=atlassian,dc=private</baseUserNamespace>
<baseGroupNamespace>dc=groups,dc=perftest,dc=atlassian,dc=private</baseGroupNamespace>
<usernameAttribute>cn</usernameAttribute>
<userSearchFilter>(objectClass=inetorgperson)</userSearchFilter>
<firstnameAttribute>givenname</firstnameAttribute>
<surnameAttribute>sn</surnameAttribute>
<emailAttribute>mail</emailAttribute>
<groupnameAttribute>cn</groupnameAttribute>
<groupSearchFilter>(objectClass=groupOfNames)</groupSearchFilter>
<membershipAttribute>member</membershipAttribute>
</ldap>
```

Stage 3 - Directory Search Depth Settings

These are the default settings:


...

```
<userSearchAllDepths>>false</userSearchAllDepths>
<groupSearchAllDepths>>false</groupSearchAllDepths>
```

The above settings configure the search depth on users and groups. If you set either attribute to:

- `false` - Confluence will search only for users/groups directly defined in `<baseUserNamespace>` and `<baseGroupNamespace>`.

- true - Confluence will search for users/groups defined in the above namespaces and also in namespaces nested within them. For example, if your users are distributed across multiple namespaces, you should set this option to true.

 Setting the value to true may have a high cost in performance for large directories, because Confluence will search the whole tree and not just the immediate namespace.

Stage 4 - Optional LDAP Settings

The following settings do not appear in the default `atlassian-user.xml` file:

```
<poolingOn>true</poolingOn>
<maxSize>0</maxSize>
<initSize>10</initSize>
<prefSize>10</prefSize>
<debugLevel>none</debugLevel>
<securityProtocol>plain ssl</securityProtocol>
<authentication>simple</authentication>
<timeout>0</timeout>
<initialContextFactory>com.sun.jndi.ldap.LdapCtxFactory</initialContextFactory>
<batchSize>100</batchSize>
<timeToLive>0</timeToLive>
```

However, if you want to override the default values listed above, you can add the value onto the end like so:









```
...
<groupnameAttribute>cn</groupnameAttribute>
<groupSearchFilter>(objectClass=groupOfNames)</groupSearchFilter>
<membershipAttribute>member</membershipAttribute>
<initSize>20</initSize>
</ldap>
```

It is important that the connection pool timeout value be set to 0, as this will force Atlassian User (via the JNDI layer) to clean up lingering connections that have lived past one request. More information about LDAP pools [here](#).

Stage 5 - Configure LDAP for User Authentication only

Description

There are two kinds of Confluence/LDAP integration available:

User Authentication	Internal Users	Internal Groups	LDAP Users	LDAP Groups
LDAP Without Groups				
LDAP With Groups				

This section covers LDAP without groups, where if a username exists in both Confluence and LDAP, they use their LDAP password to login. You still maintain users from Confluence and use internal Confluence groups for group permissions.

Alternatively, you may use LDAP with Groups to have users and groups automatically updated from LDAP, and use LDAP groups for group permissions.

Applies For

- Enabling LDAP for the first time
- Upgrading existing LDAP without enabling group management

Important Points

- Only the password lookup is done against LDAP and only if the Confluence username coincides with the LDAP username. Users and user profiles are still managed in Confluence. See [technical explanation](#) below.
- Each LDAP user in Confluence must be added to an internal Confluence group having Can Use permissions in order for those LDAP users to access Confluence. If a password is created for an LDAP user in Confluence, it will be ignored as the LDAP password will override it.
- User management in Confluence 2.0 and earlier is handled by [OSUser](#). OSUser is configured through the osuser.xml file located in `confluence/WEB-INF/classes`.

Instructions

If you do not wish Confluence to retrieve any of your LDAP groups and display them inside Confluence then you can do this by specifying a dummy value for the groupSearchFilter filter in your atlassian-user.xml file. That is update your atlassian-user.xml file with the following:

```
<groupSearchFilter>(objectClass=dummyValue)</groupSearchFilter>
```

An example atlassian-user.xml file:

```
<baseUserNamespace>cn=users,dc=ad,dc=atlassian,dc=com</baseUserNamespace>
<baseGroupNamespace>ou=groups,dc=ad,dc=atlassian,dc=com</baseGroupNamespace>
<usernameAttribute>sAMAccountName</usernameAttribute>
<userSearchFilter>(objectClass=user)</userSearchFilter>
<firstnameAttribute>givenname</firstnameAttribute>
<surnameAttribute>sn</surnameAttribute>
<emailAttribute>mail</emailAttribute>
<groupnameAttribute>cn</groupnameAttribute>
<groupSearchFilter>(objectClass=dummyValue)</groupSearchFilter>
<membershipAttribute>member</membershipAttribute>
<userSearchAllDepths>>false</userSearchAllDepths>
<groupSearchAllDepths>>false</groupSearchAllDepths>
```

Please note: You will still have to provide a valid LDAP DN for `baseGroupNamespace`. You could use the base DN for example.

Configuring multiple LDAP repositories

For some LDAP servers, it might be necessary to configure Confluence to connect to multiple LDAP servers. This functionality is available in Confluence 2.3 and above, and has a separate guide: [Configuring multiple LDAP repositories](#).

Related pages

[Add LDAP Integration](#)
[Configuring multiple LDAP repositories](#)

Add LDAP Integration For User Authentication Only

This page last changed on Dec 13, 2007 by [ganand](#).



This document is only for users using Confluence prior to v2.7.
It has been deprecated from Confluence v2.7 onwards.

Description

There are two kinds of Confluence/LDAP integration available:

User Authentication	Internal Users	Internal Groups	LDAP Users	LDAP Groups
LDAP Without Groups	✓	✓	✓	✗
LDAP With Groups	✓	✓	✓	✓

This guide covers LDAP without groups, where if a username exists in both Confluence and LDAP, they use their LDAP password to login. You still maintain users from Confluence and use internal Confluence groups for group permissions.

Alternatively, you may use [LDAP with Groups](#) to have users and groups automatically updated from LDAP, and use LDAP groups for group permissions.

Applies For

- Enabling LDAP for the first time
- Upgrading existing LDAP without enabling group management

Important Points

- Only the password lookup is done against LDAP and only if the Confluence username coincides with the LDAP username. Users and user profiles are still managed in Confluence. See [technical explanation](#) below.
- Confluence account must be created for each LDAP user, as they do not automatically have access. For an LDAP user to access Confluence, a site administrator will still need to create an account for them. The password in this Confluence account will be ignored as the LDAP password will override it.
- User management in Confluence 2.0 and earlier is handled by [OSUser](#). OSUser is configured through the osuser.xml file located in `confluence/WEB-INF/classes`.

Instructions

CAUTION: Make sure that when you first set up Confluence, you make no changes to the default osuser.xml. Once Confluence is up and running, you can then apply the changes described here to enable LDAP integration.

Step One: Open the osuser.xml file located in your home directory under WEB-INF/classes

In the osuser.xml file, the CredentialsProviders are responsible for authenticating passwords. The default CachingCredentialsProvider looks in the Confluence database. To enable LDAP authentication, you will need to add a LDAPCredentialsProvider, so that LDAP users can also be authenticated:

Here's what the default osuser.xml contains:

```
<provider class="bucket.user.providers.CachingCredentialsProvider">
```

```

<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateAccessProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateProfileProvider</property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>

```

Step Two: Edit the osuser.xml file as shown below:

For Confluence version 2.1 and later:

```

<provider class="com.atlassian.confluence.user.ConfluenceLDAPCredentialsProvider">
<property name="java.naming.factory.initial">com.sun.jndi.ldap.LdapCtxFactory</property>
<property name="java.naming.provider.url">ldap://localhost:389</property>
<property name="searchBase">dc=atlassian,dc=com</property>
<property name="uidSearchName">cn</property>
<!--
<property name="java.naming.security.principal">cn=Manager,dc=atlassian,dc=com</property>
<property name="java.naming.security.credentials">secret</property>
<property name="exclusive-access">true</property>
-->
</provider>

<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateAccessProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateProfileProvider</property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>

```

For older versions of Confluence

```

<provider class="com.opensymphony.user.provider.ldap.LDAPCredentialsProvider">
<property name="java.naming.factory.initial">com.sun.jndi.ldap.LdapCtxFactory</property>
<property name="java.naming.provider.url">ldap://localhost:389</property>
<property name="searchBase">dc=atlassian,dc=com</property>
<property name="uidSearchName">cn</property>
<!--
<property name="java.naming.security.principal">cn=Manager,dc=atlassian,dc=com</property>
<property name="java.naming.security.credentials">secret</property>

```


```

<property name="exclusive-access">true</property>
-->
</provider>






<provider class="bucket.user.providers.CachingCredentialsProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingAccessProvider">
<property name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateAccessProvider</
property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>
<provider class="bucket.user.providers.CachingProfileProvider">
<property
name="chain.classname">com.opensymphony.user.provider.hibernate.HibernateProfileProvider</property>
<property name="chain.configuration.provider.class">bucket.user.BucketHibernateConfigProvider</
property>
</provider>

```

- Update the following properties to suit your LDAP server:
 - url (currently set to ldap://localhost:389)
 - searchBase (currently set to dc=atlassian,dc=com)
 - uidSearchName (currently set to cn)
- If your LDAP server is not configured to allow anonymous lookups, you need to:
 - remove comment tags
 - enter the username; including searchBase (currently set to cn=Manager,dc=atlassian,dc=com)
 - enter password (currently set to secret)

 The Credentials (password) checking is a separate operation from user-profile lookups. The profile can be loaded from the Confluence database, but the password is looked up from LDAP. Furthermore, multiple credentials providers can be specified (here, LDAP and OSUser), and if one fails, the other will be used. This allows non-LDAP users to log in with their Confluence password.

RELATED TOPICS

-  [Activating External User Management](#)
-  [Add LDAP Integration For User Authentication Only](#)
-  [Changes in osuser.xml from 1.0.3a to 1.1.x](#)
-  [Confluence Caching OSUser Provider](#)
-  [Importing LDAP Users](#)

 [Administrators Guide Home](#)

 [Confluence Documentation Home](#)

atlassian-user.xml reference

This page last changed on Sep 17, 2006 by dave@atlassian.com.

This page describes the function of each of the tags in an atlassian-user.xml file.

Child tags of the <ldap> tag:

host	The host name of the machine running the LDAP server. This must resolve from the machine running Confluence.
port	The port number that the LDAP server is running on. This should usually be 389.
securityPrincipal	The distinguished name of a user who is allowed to browse the entire LDAP repository. This is omitted if the repository has anonymous access enabled.
securityCredential	That user's password. This is omitted if the repository has anonymous access enabled.
securityProtocol	Must be 'plain'. This is omitted if the repository has anonymous access enabled.
securityAuthentication	Must be 'simple', or 'none' if the repository has anonymous access enabled.
baseContext	This should be set to a context at the 'top' of your LDAP tree.
baseUserNamespace	This should be set to a context which contains all your user entities.
userSearchFilter	A filter which matches only user entities.
baseGroupNamespace	This should be set to a context which contains all your group entities
groupSearchFilter	A filter which matches only group entities
usernameAttribute	The name of the attribute on a user entity which contains the Confluence user name of the user.
firstnameAttribute	The name of the attribute on a user entity which contains the first name of the user.
surnameAttribute	The name of the attribute on a user entity which contains the surname of the user.
emailAttribute	The name of the attribute on a user entity which contains the email address of the user.
groupnameAttribute	The name of the attribute on a group entity which contains the Confluence group name of the group.
membershipAttribute	The name of an attribute on a group entity which contains the distinguished name of a member of a group. This should occur multiple times on a group to indicate multiple members of the group.
userSearchAllDepths	

	Set to 'true' to search the baseUserNamespace level and all nodes underneath for users. Defaults to 'false'.
groupSearchAllDepths	Set to 'true' to search the baseGroupNamespace level and all nodes underneath for groups. Defaults to 'false'.
useUnqualifiedUsernameForMembershipComparison	Set to 'true' to use the value of the usernameAttribute for membership comparisons instead of the distinguished name. Defaults to 'false'.

Changes in osuser.xml from 1.0.3a to 1.1.x

This page last changed on Sep 14, 2006 by david.soul@atlassian.com.

If you have setup Confluence to:

- delegate user management to JIRA (as per our documentation [here](#)) or
- use LDAP/Active directory authentication (as per our documentation [here](#))

Then you will need to make the following changes to your `osuser.xml` file:

1. replace

```
com.atlassian.confluence.user.providers.Caching
```

with

```
bucket.user.providers.Caching
```

Doing this will effectively convert the following:

```
com.atlassian.confluence.user.providers.CachingCredentialsProvider
com.atlassian.confluence.user.providers.CachingAccessProvider
com.atlassian.confluence.user.providers.CachingProfileProvider
```

to

```
bucket.user.providers.CachingCredentialsProvider
bucket.user.providers.CachingAccessProvider
bucket.user.providers.CachingProfileProvider
```

2. and replace

```
com.atlassian.confluence.user.ConfluenceHibernateConfigProvider
```

with

```
bucket.user.BucketHibernateConfigProvider
```

Alternatively

You can just reconfigure the new `osuser.xml` with your changes.

Configuring multiple LDAP repositories

This page last changed on May 17, 2007 by [ganand](#).

Availability

Confluence 2.3 and above support multiple LDAP servers configured in `atlassian-user.xml`. Instructions are below.

Confluence releases prior to 2.3 do not support multiple LDAP repositories.

Prerequisites

Before reading this, ensure you understand the configuration details outlined in [Customising atlassian-user.xml](#). This describes how to configure a single LDAP repository in Confluence, and is prerequisite knowledge for following the instructions below.

For brevity, all examples on this page are partial examples. A complete `atlassian-user.xml` LDAP configuration can be found in [Customising atlassian-user.xml](#).

Configuration

To configure multiple LDAP repositories in Confluence, put multiple `<ldap>...</ldap>` entries into `confluence/WEB-INF/classes/atlassian-user.xml`.

The order of the entries in the file will be the order that the repositories are searched for users. That is, if a user tries to log in with the username `jsmith`, the first repository in `atlassian-user.xml` will be searched for the user with the username `jsmith`. If no user is found in that repository, the second repository specified in `atlassian-user.xml` will be searched.

Here is a partial configuration that connects Confluence to two different LDAP servers. They are given the identifiers `ldap1` and `ldap2`, and connect to the servers `ldap-sf.example.org` and `ldap-nyc.example.org` respectively.

```
<atlassian-user>
<repositories>
<ldap key="ldap1" name="San Francisco Example Repository" cache="true">
<host>ldap-sf.example.org</host>
<port>389</port>

<!-- ... remainder of server configuration ... -->

</ldap>

<ldap key="ldap2" name="New York City Example Repository" cache="true">
<host>ldap-nyc.example.org</host>
<port>389</port>

<!-- ... remainder of server configuration ... -->

</ldap>

<hibernate key="hibernate" name="Hibernate Repository" description="Hibernate Repository" />
</repositories>
</atlassian-user>
```

Points to note:

- each server must have a unique key attribute
- each server must include the full LDAP configuration, including `baseUserNamespace`, `baseGroupNamespace` and so on
- Confluence's internal repository, the `<hibernate>` repository, must be specified last
- you can include more than two LDAP repositories, but please read the Side effects section below.

Side effects

The main side effect of configuring multiple LDAP servers is degrading performance. There are many activities in Confluence where user or group information is retrieved:

- logging in
- user/group searches
- permission checks when viewing or editing a page.

Confluence tries to cache as much information as possible from the LDAP queries, but almost certainly adding multiple LDAP servers will degrade the performance of the application. This is especially true if any of the LDAP servers are geographically distant from Confluence, where any LDAP query has a significant latency (> 50 ms roundtrip).

Two connections to the same server

It is also possible, but not usually recommended, for Confluence to connect twice to the same server. When connecting twice to the same server, you must not have overlapping group or user namespaces in the LDAP tree.

Here is an partial configuration, retrieving two separate LDAP user branches, but only one LDAP group branch. To configure only a single group branch, the group filter in the second LDAP repository searches for a non-existent value so it will not return any results. (This is generally fast as long as your LDAP server has an index on objectClass for the given tree section.)

```
<atlassian-user>
<repositories>
<ldap key="ldap1" name="Example Repository, SF user tree" cache="true">
<host>ldap.example.org</host>
<port>389</port>
<!-- ... remainder of connection configuration ... -->

<!-- user search filter -->
<baseUserNamespace>cn=San Francisco,dc=ldap,dc=example,dc=org</baseUserNamespace>
<userSearchFilter>(objectClass=user)</userSearchFilter>

<!-- ... remainder of user configuration ... -->

<!-- group search filter -->
<baseGroupNamespace>cn=Groups,dc=ldap,dc=example,dc=org</baseGroupNamespace>
<groupSearchFilter>(objectClass=group)</groupSearchFilter>

<!-- ... remainder of server configuration ... -->
</ldap>
<ldap key="ldap2" name="Example Repository, NYC user tree" cache="true">
<host>ldap.example.org</host>
<port>389</port>
<!-- ... remainder of connection configuration ... -->

<!-- user search filter -->
<baseUserNamespace>cn=New York City,dc=ldap,dc=example,dc=org</baseUserNamespace>
<userSearchFilter>(objectClass=user)</userSearchFilter>

<!-- ... remainder of user configuration ... -->

<!-- group search filter -->
<baseGroupNamespace>cn=Groups,dc=ldap,dc=example,dc=org</baseGroupNamespace>
<groupSearchFilter>(objectClass=nothing)</groupSearchFilter>

<!-- ... remainder of server configuration ... -->
</ldap>
<hibernate key="hibernate" name="Hibernate Repository" description="Hibernate Repository" />
</repositories>
</atlassian-user>
```

Points to note:

- each repository will have its own connection pool, so Confluence will use twice as many connections to the LDAP server
- performance will typically be degraded, as discussed in Side effects above
- each server must have a unique key attribute
- each server must include the full LDAP configuration, including `baseUserNamespace`, `baseGroupNamespace` and so on
- Confluence's internal repository, the `<hibernate>` repository, must be specified last.

Related pages

[Customising atlassian-user.xml](#)
[Add LDAP Integration](#)

Confluence Caching OSUser Provider

This page last changed on Apr 06, 2004 by [mryall](#).

During some operations such as rendering pages, Confluence makes a large number of queries to the user management subsystem ([OSUser](#)). To cater for this, the OSUser providers built in to Confluence in v1.0 performed a certain amount of in-memory caching of user identities. Unfortunately, this means that if you configure Confluence to use some other provider (such as LDAP or JIRA), this caching is no longer performed, and the application slows significantly as a result.

This document is aimed at Confluence users who have, or wish to have Confluence use an external user management through customising their `osuser.xml` file. If you are just using Confluence's built-in user-management, you do not need to read this document.

Note

While the caching providers should work with any OSUser provider, we have only tested them against Confluence's built-in user-management, and the JIRA provider that ships with Confluence.

Provider Configuration

Confluence 1.0.1 introduces the following OSUser providers:

`com.atlassian.confluence.user.providers.CachingCredentialsProvider`,
`com.atlassian.confluence.user.providers.CachingAccessProvider`,
`com.atlassian.confluence.user.providers.CachingProfileProvider`. They are written as caching wrappers around another provider that does all the real work. So, for example, this is the default `CredentialsProvider` configuration that ships with Confluence:

```
<provider class="com.atlassian.confluence.user.providers.CachingCredentialsProvider">
  <property name="chain.classname">
    com.opensymphony.user.provider.hibernate.HibernateCredentialsProvider
  </property>
  <property name="chain.configuration.provider.class">
    com.atlassian.confluence.user.ConfluenceHibernateConfigProvider
  </property>
</provider>
```

To configure the caching provider, you need to supply:

1. The class-name of the provider that will ultimately be providing the credentials, as the property `chain.classname`
2. Any properties that need to be passed to that next provider. If the next provider requires a property `configuration.provider.class`, then you can pass that property to the provider by prepending `chain.` to the property name: `chain.configuration.provider.class`

The configuration for the Access and Profile providers is identical.

Importing LDAP Users

This page last changed on Jun 24, 2007 by [smaddox](#).



Deprecation Notice

A new improved LDAP integration was introduced in Confluence 2.1. This document describes the old style LDAP integration and has been deprecated. If you are new to Confluence and have not set up LDAP integration before, we recommend using the [new LDAP integration](#).

To import users from your LDAP server into Confluence,

1. Download the [LDAP user importer](#).
2. Open ldap2confluence.sh (Unix) or ldap2confluence.bat (Windows)
3. Set the Base URL to the URL of your Confluence system (e.g. <http://my.server/confluence>).
4. Set the 'ADMINUSER' and 'ADMINPASSWORD' variables to the username and password of your Confluence Admin user.
5. Setup the connection.properties file as described [here](#).
6. Setup the mappings.properties file as described [here](#).
7. Run ldap2confluence to import your users.

RELATED TOPICS



[Activating External User Management](#)



[Add LDAP Integration For User Authentication Only](#)



[Changes in osuser.xml from 1.0.3a to 1.1.x](#)



[Confluence Caching OSUser Provider](#)



[Importing LDAP Users](#)



[Administrators Guide Home](#)



[Confluence Documentation Home](#)

LDAP FAQ

This page last changed on Dec 13, 2007 by [ganand](#).

For answers relating to [LDAP User Management](#), click on any query below.

Troubleshooting

▶ I just added LDAP integration, why can't I login using my original account?

If there is an LDAP user with the same username as your administrator account, you must now use their password to login. LDAP logins override internal logins.

▶ Why do my LDAP users sees 'Not Permitted' screens when they login?

To login, the user must be a member of one or more groups that have been granted 'Can Use' permission from the Administration -> Global Permissions -> Group Permissions.

▶ Confluence fails to start with error 'Error creating bean with name 'userManager' defined in class path resource [atlassianUserContext.xml]'?

Your atlassian.xml file may contain filters with characters that must be escaped from XML. Check [here](#) for details.

▶ Editing a user under Administration -> Manage Users throws an error 'org.apache.velocity.exception.MethodInvocationException'

If you see an error:
"org.apache.velocity.exception.MethodInvocationException: Invocation of method 'isUserDeactivated' in class com.atlassian.confluence.user.actions.ViewUserAction threw exception class java.lang.NullPointerException : null"
You should open \confluence\WEB-INF\classes\atlassian-user.xml and check that your Hibernate Repository is not wrapped in a comment tag (<!-- and -->). The line to uncomment is:
<hibernate name="Hibernate Repository" key="hibernateRepository" description="Hibernate Repository" />

▶ After setting up LDAP, I cannot see LDAP users or groups from the Confluence user or group browser

Are your users or groups located in subtrees beneath the directory returned by the search filter? If so, you may need to add <usersearchalldepths>TRUE</usersearchalldepths> or <groupsearchalldepths>TRUE</groupsearchalldepths> to your atlassian-user.xml See [Map LDAP Users and Groups](#) for details.

▶ I cannot see an LDAP/AD group in Confluence

Is the group in a subtree? If so, you will need to edit atlassian-user.xml and add a `groupSearchAllDepths=true` parameter to the LDAP repository to set Confluence to search subtrees of the base group namespace. See [Map LDAP Users and Groups](#) for details.

▶ I cannot get my LDAP to work, where can I get technical support?

See [Requesting External User Management Support](#) for information on logging a support request.

General Questions

▶ How can I enable LDAP?

See [Add LDAP Integration](#).

▶ Are all users in LDAP visible in Confluence administration? Can they can be assigned groups/permissions?

All LDAP users with 'Can Use' permission can be viewed from the user browser, even if they have never logged in. When an LDAP user logs in for the first time, a Confluence user account is created automatically to store their information. You have read-only access to LDAP groups, and can add/remove Confluence internal groups to any user.

▶ How are LDAP/AD users counted toward my license limit?

Your user count is determined by the number of internal users plus the number of LDAP users who can potentially login. LDAP users that are a member of an LDAP group with 'Can Use' permission granted in Confluence can all potentially login, which means that all members of groups with this permission granted will be counted towards your license. To manage your license usage, only grant login permission to AD groups where all members need accounts. You may like to setup a special confluence LDAP group if no combination of your existing groups is suitable.

▶ When a user is deleted from LDAP, how does Confluence handle this? Is the user's assignment to one or more groups still visible?

Users are not deleted from Confluence, but their logins are disabled within one hour as they expire in the cache. Only non-LDAP groups are retained. Refer to the [overview](#) for more detail.

▶ How can I assign an LDAP user a Confluence account?

LDAP groups or users granted 'Can Use' permission under 'Global Permissions' can login to Confluence.

▶ Can we use LDAP and Confluence groups simultaneously, as a 'mixed mode', where some groups are kept in Confluence and others in LDAP?

Yes.

▶ If a user is in Confluence with one password, and an LDAP user with the same username is added, which password gets used?

The LDAP login has priority over the Confluence login. If LDAP 'Can Use' permission is removed or the user is deleted, the Confluence login will still work.

▶ I enabled LDAP and some users are now returned twice under the user browser

When LDAP is enabled, it is normal for the user browser to return two copies of users who have both LDAP and internal users accounts. If you are interested in a fix for this, please vote towards '[User browser shows duplicate accounts when a user exists both locally and in LDAP](#)'.

▶ The original internal user had a lowercase username, but the LDAP user has the same username in Uppercase, does it matter which one I use?

As mentioned above, LDAP login has priority over the confluence login; however only the password is taken into account here. You can log in with either the lowercase or UPPERCASE username.

Active Directory Questions

▶ Can it make distinctions between security and distribution groups, or group types?

No, Confluence has no group types. However, you can configure Confluence to only recognise some of these groups over others. For example, you can configure Confluence to only recognise distribution groups. this is done by adjusting the `groupSearchFilter` in your `atlassian-user.xml` file.

▶ Can group memberships be retrieved from multi-domain forests?

Yes, you can do this by configuring multiple repositories: one for each domain. More instructions on how to do this can be found here: <http://confluence.atlassian.com/x/AgDUAg>

▶ Can Confluence support multiple Active Directory repositories?

Yes.

▶ Can it handle nesting?

No, each child group must be individually specified instead. You may wish to vote towards support for nested groups at [CONF-6755](#).

Domino LDAP Questions



Groups are found under Administration->Security->Manage Groups with the correct user membership. But individual users are always shown as not belonging to any groups?

Domino servers allow user groups to be set as 'mail-only', 'access control' and 'multi-purpose'. If the groups are set to 'mail-only', when Confluence queries the Domino LDAP server about a given user, Domino will return null. Groups that are created as 'multi-purpose' seem to work fine.

Other Questions

For troubleshooting, please [create a problem report](#). General enquiries should be [posted to a support ticket](#)

Connect to LDAP via SSL

This page last changed on Oct 17, 2007 by [jffleming](#).

Atlassian User LDAP supports connecting to an LDAP server over SSL/HTTPS.

1. Import your LDAP server's public certificate into the [Confluence JVM keystore](#). This is the certificate that the LDAP server will use to set up the SSL encryption, and you can use any alias of your choosing in place of "ldapCert".

```
keytool -import -alias ldapCert -file <LdapServerCertificate.crt> -keystore %JRE_HOME%/lib/security/cacerts
```

2. Edit the file in your Confluence install directory, `confluence\WEB-INF\classes\atlassian-user.xml`:

Change the value of `securityProtocol` from "plain" to "ssl": `<securityProtocol>ssl</securityProtocol>`

Switch the LDAP connection to the SSL port, if it's different from the default LDAP port. If you're using the most common LDAPS port, set `<port>636</port>`

3. 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 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 <RootCertificate.crt> -keystore %JRE_HOME%/lib/security/cacerts
```

The keytool will ask you for a password. The default password is "changeit" without the quotes.

4. Verify that the certificate has been added successfully by entering the following command:

```
keytool -list -keystore %JRE_HOME%/lib/security/cacerts
```

5. Ensure that you've updated `JAVA_OPTS` to specify the path to the keystore, as specified in [Connecting to SSL services](#), before restarting tomcat/Confluence.

There's 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 the "Not Permitted" Screen under LDAP Integration

This page last changed on Jun 14, 2006 by [mryall](#).

If you have set up Confluence with AtlassianUser integration and attempted a login with an LDAP/AD account and got a page titled "Not Permitted" here are the steps to troubleshoot this:

- Have you assigned USE permission to the relevant LDAP groups from the Administration > Global Permissions page?

Before an LDAP user can login and use Confluence, the LDAP group they belong to must be given USE permission directly. (Please note: nested groups is not supported in Confluence as yet, so you cannot specify the parent group. If you want this feature, please vote for it [here](#).)

- Does an account exist on your LDAP/AD server that has the same name as your local admin account? (for example, is there an account on LDAP called 'admin'?)

If so, then you will not be able to login with your local admin account once you enable LDAP integration. To rectify this, you need to either rename your LDAP admin account or rollback your LDAP integration and create another Confluence admin account.

- You have assigned USE permission to the relevant LDAP groups, but LDAP users in those groups still get "Not Permitted"?

Here, you need to check if Confluence is actually aware that your LDAP users belong to those LDAP groups. To work this out, here is what we need from you:

1. login as the local admin account you created when you first set up Confluence.
2. enable profiling by appending `?profile=on` to the end of a Confluence URL (say the URL of the dashboard, if you happen to be on that page) and hit enter to refresh the page. This setting will now be enabled and cause additional information to be written to your log files to help us diagnose the problem.
3. Now browse to the Administration > Manage Users screen and do a search for any LDAP user.
4. Now click on the user to view their details (including the groups they belong to).
5. Now submit a support ticket at <http://support.atlassian.com> and attach:
 - a screenshot of the user details page
 - your server logs files

If you are feeling brave, you can attempt to decipher the logs yourself. Here's how:

1. your logs should display something similar to this:

```
[0ms] -
com.atlassian.user.impl.ldap.adaptor.LDAPStaticGroupAdaptor_search((&(objectClass=groupOfNames)
(member=cn=confadmin,ou=users,ou=people,ou=functest,dc=atlassian,dc=com)))
[0ms] - com.atlassian.user.impl.ldap.repository.DefaultLDAPRepository_getLDAPContext
[0ms] -
com.atlassian.user.impl.ldap.adaptor.LDAPStaticGroupAdaptor_search_JNDI_RAW((&(objectClass=groupOfNames)
(&(objectClass=groupOfNames)
(member=cn=confadmin,ou=users,ou=people,ou=functest,dc=atlassian,dc=com))))
```

This means that Confluence is using this LDAP search filter `(&(objectClass=groupOfNames)(member=cn=confadmin,ou=users,ou=people,ou=functest,dc=atlassian,dc=com))` to find the groups that the user 'confadmin' belongs to. Obviously, the objectClass and member attributes may differ in your install, but the filter should be similar.

2. connect to your LDAP/AD server with [JXplorer](#) or an LDAP tool of your choice, and issue the above filter and check that you get the results you expect. This should help you to identify if and why the filter is incorrect and what it should be. Please add what you find in this step to the support ticket if you are unable to resolve it from here.

Cannot login with Confluence admin account

This page last changed on Aug 20, 2006 by dave@atlassian.com.

By 'admin account', we are referring to the account that was setup during the Confluence setup wizard.

If you have just integrated Confluence with LDAP or Active Directory, but find yourself not being able to login with this account but instead get a 'not permitted' screen: here's the explanation and fix:

Explanation

This is caused by there being an account on LDAP with the same username as your admin account. (so for example, your Confluence admin account is 'admin' and there's a user on LDAP that also has username 'admin').

Fix

1. Shutdown Confluence
2. Open `confluence/WEB-INF/classes/atlassian-user.xml` in a text editor and comment out the LDAP statements for now. For example:

```
<atlassian-user>
<repositories>

<osuser key="osuserRepository" name="OSUser Repository"/>

<!--
<ldap key="ldapRepository" name="LDAP Repository@hecate.atlassian.com" cache="true">
<host>hecate.atlassian.com</host>
<port>389</port>
<securityPrincipal>cn=admin,dc=atlassian,dc=private</securityPrincipal>
<securityCredential>secret</securityCredential>
<securityProtocol>plain</securityProtocol>
<securityAuthentication>simple</securityAuthentication>
<baseContext>dc=atlassian,dc=private</baseContext>

<baseUserNamespace>dc=staff,dc=perftest,dc=atlassian,dc=private</baseUserNamespace>
<baseGroupNamespace>dc=groups,dc=perftest,dc=atlassian,dc=private</baseGroupNamespace>
<usernameAttribute>cn</usernameAttribute>
<userSearchFilter>(objectClass=inetorgperson)</userSearchFilter>
<firstnameAttribute>givenname</firstnameAttribute>
<surnameAttribute>sn</surnameAttribute>
<emailAttribute>mail</emailAttribute>
<groupnameAttribute>cn</groupnameAttribute>
<groupSearchFilter>(objectClass=groupOfNames)</groupSearchFilter>
<membershipAttribute>member</membershipAttribute>
</ldap>
-->

<hibernate name="Hibernate Repository" key="hibernateRepository" description="Hibernate
Repository" />

</repositories>
</atlassian-user>
```

Notice the `<!--` and `-->` symbols added before and after the `<ldap>` tags.

3. Start up Confluence. You should now be able to login with your admin account
4. Create another admin account that has a different name to the one that exists in LDAP or Active Directory.
5. Undo the changes you made to `atlassian-user.xml` and restart Confluence.

Alternative Fix

Alternatively, you can either rename or remove the admin account present on LDAP or Active Directory. But if this is not an option, stick to the fix above.

Migrating users from Confluence to JIRA

This page last changed on Sep 06, 2006 by [mryall](#).

There is currently no way to delegate user management from JIRA to Confluence. So, if you are in a situation where your users are defined in Confluence and would like to take advantage of Confluence's ability to use JIRA user management, you will need to transfer all of your existing Confluence users into JIRA. You can do this manually, or if you have a large number of users, you can use the attached XML-RPC script.



You should [backup your JIRA installation](#) before running this script. This is an experimental script that has not gone through the same extensive testing as the Confluence and JIRA products.

Getting the migration tool

- Download the attached [rpc-tools-0.9.zip](#).
- Extract the ZIP file to a temporary directory on your computer.

Patching Confluence 2.0.x

A patched RPC plugin is included in the ZIP file to allow remote retrieval of a full list of users from Confluence 2.0.x. To install it:

- In your Confluence webapp, move `confluence/WEB-INF/lib/confluencerpc.jar` to a backup location
- Copy `plugins-confluencerpc.jar` from the `patch/` directory in the extracted ZIP file to `confluence/WEB-INF/lib`.

No patch is required for Confluence 2.1 and later.

Running the migration tool

- [Back up your JIRA database](#).
- If you do not have an 'admin' username with password 'admin' in both JIRA and Confluence, create it now.
- Ensure JIRA and Confluence have remote API access enabled. In both applications, it is configured in the General Configuration screen in Administration.
- Edit `connection.properties` in the extracted ZIP file to set the XML-RPC URLs for JIRA and Confluence. The XML-RPC URLs in the default file correspond to the following application base URLs:
 - JIRA - <http://localhost:8080>
 - Confluence - <http://localhost:8080/confluence>
- Run `java -jar tools.jar` in the extracted ZIP file directory.

A successful run will generate output like the following:

```
$ java -jar tools.jar
- Transferring group: confluence-administrators
- Transferring group: confluence-users
- Transferring user: testuser1
- Transferring user: testuser2
```

Things to note:

- This script requires that both the Confluence and JIRA remote APIs are available and accessible to a username 'admin', password 'admin'. You can temporarily add this user to both system to run the script, then remove it afterwards.
- A random password will be assigned to each user that is transferred because it is not possible to access password information via the XML-RPC API. Therefore they will have to retrieve a new password via the password reminder.
- Jira does not allow users to sign up if they do not have a valid email address. Therefore we will assign them an email address of type `username@example.com` to any Confluence users that do not

have a email address. This will allow you to find the users and help them to create a password or change the email address.

Trouble running the script?

- Ensure you have created a user 'admin' with password 'admin' in both Confluence and JIRA.
- Ensure both applications have remote API access enabled (see above).
- Ensure you have patched the Confluence RPC plugin if running Confluence 2.0.x.

If you're still having trouble, please [raise a support request](#), and include a copy of the error you're getting.

Requesting External User Management Support

This page last changed on Dec 12, 2007 by [smaddox](#).

If you are having external user management issues with Confluence, and the advice on [Add LDAP Integration](#) has not helped, you can always ask us for help. External user management issues can be hard to diagnose, however, and we often spend a lot of time understanding the particular configuration you have. The best way to get a speedy resolution to your issue is to provide this information up front.

Please gather all of the information listed below and include it in your support request (<http://support.atlassian.com>), 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.

Confluence server

- Take a screenshot of Confluence's Administration # System Information (or save the page as HTML)
- Take a screenshot of Confluence's Administration # Global Permissions, if you are having problems with logging in
- Take a screenshot of the Space permissions page, if you are having problems with space or page permissions.

Confluence configuration files

- Attach a copy of `atlassian-user.xml`, found in `confluence/WEB-INF/classes`
- Attach a copy of `osuser.xml`, found in `confluence/WEB-INF/classes`.
- If you have implemented a [custom authenticator](#) or in any way modified `seraph-config.xml` or `seraph-paths.xml`, please provide the modified files as well.

If you are running Confluence 2.1 you will have to attach the following file instead of `atlassian-user.xml`

- Attach a copy of `atlassianUserContext.xml`, found in `confluence/WEB-INF/classes`

User management system

- What is the name and version of your LDAP server?
- Does your LDAP server use dynamic or static groups?

Using Active Directory for LDAP?

Please include [LDAP Studio](#) Entry Editor snapshots with the information specified on [this page](#)

Diagnostics

- Enable profiling (as described [here](#))
- Enable detailed user management logging by editing `confluence/WEB-INF/classes/log4j.properties`:

Change this section:

```
###
# Atlassian User
###
#log4j.logger.com.atlassian.user=DEBUG, confluencelog
#log4j.additivity.com.atlassian.user=false
#log4j.logger.com.atlassian.confluence.user=DEBUG,console
#log4j.additivity.com.atlassian.confluence.user=false
#log4j.logger.bucket.user=DEBUG,console
#log4j.additivity.bucket.user=false
```

To this:

```
###
# Atlassian User
###
```



```
log4j.logger.com.atlassian.user=DEBUG, confluencelog
log4j.additivity.com.atlassian.user=false
log4j.logger.com.atlassian.confluence.user=DEBUG,confluencelog
log4j.additivity.com.atlassian.confluence.user=false
log4j.logger.bucket.user=DEBUG,confluencelog
log4j.additivity.bucket.user=false
log4j.logger.com.atlassian.seraph=DEBUG, confluencelog
log4j.additivity.com.atlassian.seraph=false
log4j.logger.com.opensymphony.user=DEBUG, confluencelog
log4j.additivity.com.opensymphony.user=false
```

- 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. An example location might be confluence-2.2.2-std/logs.



If you are using LDAP, download [Paddle](#) and run it. Attach the logs created to the support ticket.

Paddle

This page last changed on Nov 08, 2007 by rosie@atlassian.com.

Introduction

Paddle is a tool that will test the LDAP or Active Directory settings in your `atlassian-user.xml`.

Quote from a customer:

Really, REALLY glad you had the paddle tool so I didn't spend too much time beating my head on that one, BTW

Instructions for use

You will not need to have Confluence running to run this tool. The steps are:

1. [Download](#) into a directory where you have permissions to create files
2. Copy your `atlassian-user.xml` into that directory - this is found in your `<Confluence-Install>/confluence/WEB-INF/classes/` directory
3. Run `java -jar paddle-x.x.jar` (where x.x is the version of Paddle you downloaded).

Parameters

Paddle currently supports the following parameters:

Name	Example	Purpose
debug	<code>java -jar paddle-x.x.jar debug</code>	Prints DEBUG messages to the console as well as <code>paddle.log</code> .
limit	<code>java -jar paddle-x.x.jar limit=100</code>	Sets the limit on the number of results returned by user and group queries. Defaults to 10.

Sample output

This is an example of a successful run:

```
#####
LDAP Support Tool version 1.1
#####

Connection to LDAP/Active Directory Server at ldap://192.168.0.86:389 SUCCESSFUL.

-----
TEST 1: Search and list 10 users
-----

User: CN=Administrator
Member of:
(1) CN=Schema Admins
(2) CN=Enterprise Admins
(3) CN=Domain Admins
(4) CN=Group Policy Creator Owners

User: CN=Guest
Does not belong to any LDAP groups.

User: CN=SUPPORT_388945a0
```

Member of:
(1) CN=HelpServicesGroup

User: CN=IUSR_MALTSHOVEL
Does not belong to any LDAP groups.

User: CN=IWAM_MALTSHOVEL
Member of:
(1) CN=IIS_WPG

User: CN=ASPNET
Does not belong to any LDAP groups.

User: CN=krbtgt
Does not belong to any LDAP groups.

User: CN=John\, Smith
Member of:
(1) CN=Domain Users
(2) CN=Sales and Marketing

User: CN=Matt Ryall
Member of:
(1) CN=Enterprise Admins
(2) CN=Domain Admins

User: CN=Justin Koke
Member of:
(1) CN=Domain Controllers
(2) CN=Enterprise Admins

Found more than 10 results.

TEST 2: Search and list 10 groups

Group: CN=HelpServicesGroup
Members:
(1) CN=SUPPORT_388945a0,CN=Users,DC=ad,DC=atlassian,DC=com

Group: CN=TelnetClients
No members in this group.

Group: CN=IIS_WPG
Members:
(1) CN=S-1-5-20,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com
(2) CN=S-1-5-6,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com
(3) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com
(4) CN=IWAM_MALTSHOVEL,CN=Users,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005SQLBrowserUser\$MALTSHOVEL
Members:
(1) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005MSSQLServerADHelperUser\$MALTSHOVEL
Members:
(1) CN=S-1-5-20,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005SQLAgentUser\$MALTSHOVEL\$MSSQLSERVER
Members:
(1) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005MSSQLUser\$MALTSHOVEL\$MSSQLSERVER
Members:
(1) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005MSFTEUser\$MALTSHOVEL\$MSSQLSERVER

Members:

(1) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com

Group: CN=SQLServer2005MSOLAPUser\$MALTSHOVEL\$MSSQLSERVER

Members:

(1) CN=S-1-5-18,CN=ForeignSecurityPrincipals,DC=ad,DC=atlassian,DC=com


Group: CN=SQLServer2005NotificationServicesUser\$MALTSHOVEL


No members in this group.

Found more than 10 results.

Understanding User Management in Confluence

This page last changed on Dec 11, 2007 by [smaddox](#).

 Looking for help with your user management configuration? See [Requesting External User Management Support](#).

 Try Atlassian Crowd for powerful user administration

Atlassian's [Crowd](#) is a web-based single sign-on (SSO) tool that simplifies application provisioning and identity management, including LDAP integration. For more information, please see the Crowd documentation on [Integrating Crowd with Confluence](#).

On this page:

- [Components of User Management](#)
- [Authentication](#)
- - [Seraph](#)
 - [XML-RPC and SOAP Authentication](#)
 - [Password Authentication and User Management](#)
- [Confluence User Management Frameworks](#)
- - [AtlassianUser](#)
 - [OSUser](#)
- [Related pages](#)

Components of User Management

1. Authentication - determining what user identity is making a request to Confluence.
2. User management - storing and retrieving core information about users.
3. Group membership - storing and retrieving groups, and group membership.
4. Profile information - providing metadata associated with users.

It's important to understand that these are separate components of the user management system. The term LDAP integration is not really meaningful, because you could use LDAP repository for any or all of the above tasks.

For example, in OSUser authentication can be performed against different repository to that used for group membership queries. In AtlassianUser, authentication and group membership can be retrieved from LDAP, but profile information is still stored in the Confluence database.

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

If you were looking to integrate [Confluence with a Single Sign-On \(SSO\) infrastructure](#), you would do so by writing a [custom Seraph authenticator](#) (and in fact, many customers have done so).

XML-RPC and SOAP Authentication

Authentication for requests performed by the [remote API](#) do not go through Seraph, so they can't take advantage of Seraph authenticators. XML-RPC and SOAP authentication requests are checked

directly against the user-management framework, and tokens are assigned directly by the remote API subsystem.

Password Authentication and User Management

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.

Confluence User Management Frameworks

The rest of this document covers the user management frameworks used by Confluence: AtlassianUser and OSUser.

AtlassianUser

AtlassianUser is a new user and group management framework developed by Atlassian, and is the core framework used in Confluence since version 2.1. AtlassianUser was developed with the following goals in mind:

- Support LDAP as a fully functional repository for authentication, group management and profile information (profile information not yet implemented).
- Compatibility with both JIRA and Confluence (JIRA support not yet implemented).
- Be simple to configure.

AtlassianUser provides user, group and profile management services to Confluence. It does so by delegating tasks to configurable repositories. Multiple repositories can be configured, so for example Confluence can draw user information from both the database and an LDAP server.

Default Configuration

Configuration of AtlassianUser is done through the `<<confluence-install>>\confluence\WEB-INF\classes\atlassian-user.xml` file. See the [atlassian-user.xml reference page](#). (In Confluence 2.1, configuration of AtlassianUser is done through the `atlassianUserContext.xml` file.)

For Confluence 2.7.0 and later:

- All user management is performed by AtlassianUser's native providers.
- OSUser delegation is still supported for customers who rely on the OSUser/JIRA bridge or the old-style OSUser LDAP support.
- Refer to the [Confluence 2.7 Upgrade Guide](#) for details of the automatic migration which may occur during the upgrade process, for customers who are using the standard user management framework.

For Confluence 2.6.x and earlier:

- Confluence's AtlassianUser configuration delegates all user, group, profile and password authentication to OSUser.

Database (Hibernate) Support in AtlassianUser

AtlassianUser can store user, group and profile data directly in Confluence's database. This is the default behaviour for Confluence 2.7.0 and later.

LDAP Support in AtlassianUser

AtlassianUser currently supports password authentication, user management and group management with an LDAP server. Follow the instructions on [configuring AtlassianUser LDAP integration](#).

At this point, only read-only access to LDAP is planned. Java's JNDI-LDAP interface does not support updating an LDAP repository, and the administration tools that come with LDAP servers such as Microsoft Active Directory are generally comprehensive and already available in enterprise IT departments.

AtlassianUser will not support delegating Confluence user management to JIRA. Instead, our goal is to implement AtlassianUser as the JIRA user management framework as well. Once this is done, both Confluence and JIRA can use the same LDAP server for their authentication and group management.

OSUser

[OpenSymphony User](#) was Confluence's core user management framework until it was replaced by AtlassianUser in version 2.1. OSUser is still supported through AtlassianUser's OSUser repositories. OSUser is also built around the model of pluggable providers, but its LDAP support is limited.

OSUser Database (Hibernate) Providers

In its default configuration, Confluence's OSUser providers store a list of users and groups together with profile information in tables in the Confluence database:

- os_user (authentication)
- os_group (group membership)
- os_user_group (group membership)
- os_propertyentry (profile information)

The hashed password in the os_user table is used to authenticate the user unless LDAP support is enabled. The os_user_group table is queried for group membership information.

OSUser configuration is controlled through the <<confluence-install>>\confluence\WEB-INF\classes\osuser.xml file.

LDAP Support in OSUser

OSUser only supports authentication against an LDAP server. That is, you can check user passwords against LDAP, but all other user information must be shadowed in the Confluence database. Follow the instructions on [configuring OSUser LDAP authentication](#).

If you need support for LDAP user information or group membership as well, you should use AtlassianUser instead (see above).

Delegating User Management to JIRA via OSUser

Confluence can use OSUser to retrieve information for authentication, group membership and profile information from JIRA.

If you look at the discussion of OSUser's implementation above, you can see how this can work pretty easily. A data source to JIRA database is configured in Confluence which lets Confluence read directly from JIRA's os_* tables. For example, when a user is created in JIRA, the username and password goes in the os_user table in the JIRA database. Confluence looks at the same table in the JIRA database to authenticate the user.

Access to the JIRA database is read-only. For this reason, Confluence maintains a subset of the user's profile information locally in the Confluence database (things like last login time and user preferences that Confluence needs to be able to modify) .

Follow the instructions on [configuring OSUser delegation to JIRA](#).

Related pages

[HTTP authentication with Seraph](#)
[Single Sign-on Integration with JIRA and Confluence](#)
[Add LDAP Integration](#)
[Adding LDAP Integration To Confluence 2.0.x](#)
[Delegate user management to use JIRA logins](#)
[Migrating to new User Management](#)
[Confluence 2.7 Upgrade Guide](#)
[atlassian-user.xml reference](#)

User Management Frequently Asked Questions

This page last changed on Jan 17, 2007 by david.soul@atlassian.com.

This page has been split into the [LDAP FAQ](#) and [JIRA User Management FAQ](#).

Working with Confluence Logs

This page last changed on Dec 18, 2007 by [smaddox](#).

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](#).

On this page:

- [Finding the Log Configuration File](#)
- [Finding the Confluence Log Files](#)
- [Changing the Destination of the Log Files](#)
- [Changing the Logging Levels](#)
- [Using Some Specific Confluence Logging Options](#)

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](#).

Finding the Confluence Log Files

This section describes Confluence's default logging behaviour, assuming that you have not changed the destination of the logs.

For Confluence 2.6.x and earlier, the default behaviour is:

- For Confluence Standalone, log entries are written to `<confluence_install>/logs`. The main log file is called `atlassian-confluence.log`.
- For Confluence EAR/WAR, log entries are written to the application server logs, i.e. the default log files of the application container.

For Confluence 2.7.x and later, both Standalone and EAR/WAR editions 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 written to the console 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.

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 supplied with Confluence 2.7 and later, 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

We recommend that you configure Confluence's logging to your own requirements. You can change the log settings in two ways:

- Edit the properties file – Your changes will take effect next time you start Confluence, and for all subsequent sessions.
- Set the logging levels at runtime – Your changes will be in effect only until you next restart Confluence.

Both methods are described below.

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`.

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](#).

[Below](#) are some guidelines on specific configuration options you may find useful.

Changing the Logging Levels at Runtime

From Confluence 2.7, 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:

- 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.

To change the log levels at runtime,

1. Go to the 'Administration Console' and click '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.

2. 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.
3. Click the 'Save' button to save any changes you have made in the 'Existing Levels' section.

Screenshot: Changing Log Levels and Profiling

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.

ProductionDiagnostic

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

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:

- 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](#).

RELATED TOPICS

- [Important Directories and Files](#)
- [Enabling detailed SQL logging](#)
- [Enabling user access logging](#)
- [Logging A Thread Dump](#)
- [Enabling Page Request Profiling](#)

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](#).

- Modifying the runtime log levels via the Administration Console.
- Manually modifying the `<Confluence-Install>\confluence\WEB-INF\classes\log4j.properties` file.

Default Log Level

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](#)