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## Introduction to Tomcat

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### Overview

#### Note:

This document only applies to Tomcat in cPanel & WHM version 76 and later.

Apache Tomcat® allows you to serve Java-based applications. EasyApache 4 provides the option to install Tomcat 8.5.

For more information about the Apache Tomcat open-source project, visit the <u>Apache Tomcat</u> website.

#### Important:

- We strongly recommend that only experienced Tomcat administrators install <u>Tomcat</u>.
- Tomcat can present security issues on systems with multiple users. We strongly recommend that you understand the risks of this feature before you use it. For more information, read Tomcat's <u>Security</u> <u>Considerations</u> documentation.

## How to install Tomcat

# Requirements

Tomcat requires root-level access to install.

#### Note:

cPanel & WHM does not support Tomcat on servers that run the CentOS 8 or AlmaLinux OS 8 operating systems.

### Install Tomcat

### In the interface

To install Tomcat, use WHM's <u>EasyApache 4</u> interface (*WHM >> Home >> Software* >> EasyApache 4). Tomcat appears in the Additional Packages section.

#### On the command line

To install Tomcat, run the following command on the command line as the **root** user:

yum install ea-tomcat85

### **Uninstall Tomcat**

#### In the interface

To uninstall Tomcat, use WHM's <u>EasyApache 4</u> interface (*WHM >> Home >> Software >> EasyApache 4*). Tomcat appears in the *Additional Packages* section.

#### On the command line

To uninstall Tomcat, run the following command on the command line as the **root** user:

https://docs.cpanel.net/ea4/tomcat/tomcat/

yum remove ea-tomcat85

# Configuration

In EasyApache 4, Tomcat runs as a per-user private instance. This increases security and allows the user to manage their own Tomcat services, but increases memory load on the server. We strongly recommend that you consider your server's configuration carefully before you enable Tomcat for many users. For more information, read our <u>Tomcat Private Instances</u> documentation.

Tomcat 8.5 places its configuration files in the following location, where user represents the name of the user for which you installed Tomcat:

/home/user/ea-tomcat85/conf

# Default configuration

EasyApache 4 makes the following configuration changes to the default Tomcat 8.5 behavior in the ~/ea-tomcat85/conf/server.xml file:

- Disable the shutdown port by default.
- Set the xpoweredBy attribute of all Connectors to a false value.
- Remove the redirectPort attribute.
- Add the ErrorReportValue class to all Hosts with the showServerInfo value set to a false value.
- Set the following Host attributes to a false value:
  - o autoDeploy
  - o deployOnStartup
  - o deployXML

#### Note:

You may need to make additional security changes, depending on your system's Tomcat requirements. For more information, read Tomcat's <u>Security</u> <u>Considerations</u> documentation.

# Add Tomcat support for a user

# Configure crontab access

You must grant crontab access to Tomcat users. Otherwise, the user will not be able to use Tomcat.

- If the /etc/cron.allow file exists, the user must exist in the file.
- If the /etc/cron.deny file exists, you must ensure that the user does not exist in the file.

To determine whether a user has crontab access, perform the following steps:

- 1. Navigate to WHM's <u>List Accounts</u> interface (*WHM >> Home >> Account Information >> List Accounts*).
- 2. Click the cPanel logo to log in to the account as the user.
- 3. Navigate to cPanel's <u>Terminal</u> interface (*cPanel* >> Home >> Advanced >> Terminal).
- 4. Run the crontab -1 command.
  - If you receive an error then you must grant crontab access to Tomcat users.

After you grant crontab access to the user, you will need to remove and re-add the user to Tomcat.

### In the interface

To add Tomcat 8.5 support to a user, use WHM's <u>Tomcat Manager</u> interface (*WHM* >> Home >> Software >> Tomcat Manager).

### On the command line

To add Tomcat 8.5 support to a user, run the following command as the **root** user:

https://docs.cpanel.net/ea4/tomcat/tomcat/

/usr/local/cpanel/scripts/ea-tomcat85 [argument] [option]

The /usr/local/cpanel/scripts/ea-tomcat85 script accepts the following arguments, where user represents the user you wish to change and command represents an argument for the script:

Header One	Description	Example
add user	Add Tomcat 8.5 support to a user.	/usr/local/cpanel/scripts/ea- tomcat85 add user123
rem user	Remove Tomcat 8.5 support from a user.	/usr/local/cpanel/scripts/ea- tomcat85 rem user123
list	View the users with a Tomcat 8.5 instance.	/usr/local/cpanel/scripts/ea- tomcat85 list
hint [command]	Display the abbreviated help information.	/usr/local/cpanel/scripts/ea- tomcat85 hint add
	Note: The command is optional. If you specify a command, only that command's abbreviated help information will display.	
help [command]	Display the script's help information.	/usr/local/cpanel/scripts/ea- tomcat85 help
	Note: The command is optional. If you specify a command, only that command's help information will display.	

### Jailshell user considerations

Jailshell users cannot see the status of their previously started Tomcat service. The default jailshell permissions only allow users to view their current session's processes. If they attempt to restart an already active service with Ubic, the system will launch a duplicate process.

You can address this behavior with one of the following actions:

- Select Always mount a full /proc under the Jailed /proc mount method option of the System section of WHM's <u>Tweak Settings</u> interface (WHM >> Home >> Server Configuration >> Tweak Settings). If you enable this functionality, a jailshelled user can see all running processes. This can allow the jailshell user to break out of their shell.
  - If you enable this functionality, a jailshelled user can see all running processes. This can allow the jailshell user to break out of their shell.
  - If you do not enable this setting, Ubic will stop the Tomcat service when you exit the shell.
- You can assign the user a normal shell.
- You can do nothing. We do not recommend this action, as it may cause confusion and the user may start duplicate processes.

# Running Tomcat

#### Note:

Tomcat may take a long time to start to serve requests on initial startup. This usually happens on virtual machines. For suggestions of ways to start your Tomcat server faster, read the <u>Tomcat Faster Startup</u> documentation. System administrators must choose the solution that best fits their needs.

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# Custom configurations

When you add a user with either WHM's <u>Tomcat Manager</u> interface (*WHM* >> Home >> Software >> Tomcat Manager) or the /usr/local/cpanel/scripts/ea-tomcat85 script, the script creates an environment that the user can configure for their unique requirements.

When a you assign Tomcat access to a cPanel user, the script assigns two ports to the user. You can find these port assignments in the

/etc/cpanel/cpuser\_port\_authority.json file and the user's ~/eatomcat85/conf/server.xml file.

You must configure any custom behavior manually. To change how Tomcat interacts with Apache, edit or create the appropriate file in the <a href="/etc/apache2/conf.d/userdata/">/etc/apache2/conf.d/userdata/</a> directory. For more information, read our <a href="Advanced Apache Configuration">Advanced Apache Configuration</a> and <a href="Modify Apache Virtual Hosts with Include Files">Modify Apache Virtual Hosts with Include Files</a> documentation.

#### Important:

You must update your custom Tomcat configuration if you make any changes to an Apache user's username or home directory.

# Proxy an app with Apache JServ Protocol (AJP)

Tomcat 8.5 can use AJP to serve applications in EasyApache 4. For more information, read our Tomcat Proxies documentation.

### LiteSpeed Web Server

Versions of LiteSpeed earlier than 5.3.5 (build 6) are not compatible with the **ProxyPassMatch** directive. This causes LiteSpeed to not proxy from the assigned port to port 80. Update your LiteSpeed server to a newer, compatible version or use the Tomcat instance's assigned port.

# Differences between Tomcat in EasyApache 3 and EasyApache 4

EasyApache 3 handles Tomcat differently than EasyApache 4. EasyApache 4 provides Tomcat 8.5, rather than Tomcat 7.

In EasyApache 3, Tomcat existed as a shared service and all applications ran as the tomcat user. The server created a container within a shared server.xml file.

In EasyApache 4, Tomcat runs as a per-user private instance and allows the user to configure their instance themselves. Tomcat runs as the individual user, rather than as the tomcat user. This increases security and places management of the Tomcat instance in the user's control, but may affect your server's performance due to the memory requirements.

- For more information, read our <u>Tomcat Private Instances</u> documentation.
- For more information about managing services in Tomcat, read our <u>The</u> <u>cpuser service manager script and the Ubic subsystem</u> documentation.
- EasyApache 4 provides the <u>mod\_proxy\_ajp</u> Apache module rather than the <u>mod\_jk</u> connector.

#### Additional Documentation

Background Process Killer
Basic WebHost Manager Setup
Configuration Cluster
EasyApache 4 Interface
How to Edit Your php.ini File
The cPanel Glossary



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https://docs.cpanel.net/ea4/tomcat/tomcat/