

AccuRev Web Interface

Version 2009.3

Installation and Release Notes

Revised 4-November-2009

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Installation Notes



The AccuRev Web Interface (Web GUI) is a Web application that runs on the Apache Tomcat server. The Web GUI allows users to access data managed by the AccuRev Server via a browser.

Existing users: To upgrade to the latest version of the Web GUI, refer to *Upgrading the Web GUI*.

New users:

- To perform a quick, standalone installation of the Web GUI (for example, to evaluate the product), refer to the instructions in *Web GUI Quick Start*.
- To perform a full installation of the Web GUI you will need to obtain these components:
 - Java 2 Standard Edition JRE 6 or later — See *Setting Up the Java Environment*.
 - Apache Tomcat 5.5 or later — See *Installing Apache Tomcat*.
 - AccuRev 4.7 or later — (client installation at minimum, server may be on another machine) See *Installing and Configuring AccuRev*.
 - AccuRev Web GUI 2009.3 or later — See *Installing the Web GUI*.

Note: You will need **root** (on Linux) or **administrator** (on Windows) privileges to install these components.

Web GUI Quick Start

If you have the correct versions of the JRE and AccuRev (listed above) on your machine, and you are familiar with Tomcat and Web applications, you can use the following instructions to quickly install and run the AccuRev Web GUI. These instructions result in a standalone installation of the AccuRev Web GUI (that is, the client and server are on the same physical machine).

If you need to upgrade an existing Web GUI installation, access a networked AccuRev Server, integrate the Web GUI into an existing Tomcat server, or perform other custom setup tasks, complete installation and configuration instructions are provided in the remainder of this document.

1. Download the Web GUI **standalone** bundle from the AccuRev Web site at <http://www.accurev.com/download.htm>.
2. Unpack the downloaded file into a directory on the target machine.

Note: After unpacking the file, Linux users should verify that the Tomcat executables in the **bin** subdirectory have execute permissions set correctly.
3. Start Tomcat.
4. Navigate to <http://localhost:8080/accurev> in your browser. You will see a login prompt for the AccuRev Web GUI.
5. Log in using your AccuRev user name and password.

Upgrading the Web GUI

If you are already running the Web GUI and would like to upgrade to the latest version, perform the following steps:

1. If you have not already installed AccuRev 4.7.x, download the latest AccuRev installer from the AccuRev Web site at <http://www.accurev.com/download.htm> and run it according to the instructions in the *AccuRev Installation and Release Notes* document.
2. Download the compressed **war** file containing the Web GUI from the AccuRev Web site at <http://www.accurev.com/download.htm>.
3. Shut down Tomcat:
 - (Windows) Right-click on the Tomcat icon in the System Tray, and choose **Stop service** from the menu.
 - (Linux) Run `<CATALINA_HOME>/bin/shutdown.sh`.
4. Back up any customized configuration files under `<CATALINA_HOME>` by copying them to another location. The XML files mentioned in *Configuring the Web GUI* and *Troubleshooting* may have been customized.
5. Delete files in the **webapps** directory under `<CATALINA_HOME>` that are part of the previous release:
 - (for versions 2009.1 and later) **accurev.war** and the **accurev** directory
 - (for versions prior to 2009.1) **accurev-gui.war** and the **accurev-gui** directory
6. Unpack the downloaded file into the **webapps** directory.
7. Start up Tomcat:
 - (Windows) Right-click on the Tomcat icon in the System Tray, and choose **Start service** from the menu.
 - (Linux) Run `<CATALINA_HOME>/bin/startup.sh`.
8. After the service has started, restore the backed up files to their correct locations under `<CATALINA_HOME>`.
9. Navigate to http://<tomcat_server_host>:8080/accurev to verify access to the Web GUI. You should see a dialog prompting you to log in to the AccuRev Server.

Setting Up the Java Environment

Tomcat requires a Java Runtime Environment (JRE) from J2SE version 6 or later. These instructions will help you install and set up a JRE on the target machine.

1. Download the Java 2 Standard Edition JRE 6, from <http://java.sun.com/javase/downloads/index.jsp>.
2. Install the JRE on the target machine according to the instructions in the download package.

3. Set an environment variable named `JRE_HOME` to the directory into which you installed the JRE. The default installation locations are:
 - (Windows) `C:\Program Files\Java\<JRE_version>`
 - (Linux) `<JRE_version>` in the directory where the self-extracting binary was run
4. Append `JRE_HOME/bin` to the `PATH` environment variable.

Note: You may choose to use the full JDK rather than just the JRE. In this case, set the `JAVA_HOME` environment variable (*not* `JRE_HOME`) to the directory into which you installed the JDK, and append `JAVA_HOME/bin` to the `PATH` environment variable.

Installing Apache Tomcat

The AccuRev Web GUI requires Apache Tomcat version 5.5 or later. Choose **one** of the following options to install Tomcat:

- Download the **standalone** bundle from the AccuRev download page, located at <http://www.accurev.com/download.htm>. Note that this file contains both Tomcat and the AccuRev Web GUI. See the instructions in *Installing from the Standalone Bundle* to complete the installation.
- Download an Apache Tomcat 5.5 installer from <http://tomcat.apache.org/download-55.cgi> and follow the instructions in <http://tomcat.apache.org/tomcat-5.5-doc/setup.html> to complete the installation.

To aid in managing Tomcat on Windows machines, select the **Service Startup** box under Tomcat on the Choose Components pane when it appears in the installer. This will automatically install and run the Windows service to control Tomcat.

Important! After installing Tomcat on Windows, ensure that the Tomcat service is not running as the Local System account. Right-click on the Tomcat icon in the System Tray, and choose **Configure** from the menu. On the Log on tab, specify a user name and password to log on as, and click **OK** to save the changes.

Throughout this document, the Tomcat installation directory is referred to as `<CATALINA_HOME>`.

To run Tomcat automatically on startup:

- (Windows) Configure the Tomcat service to start automatically using the Services control panel, which can be accessed from the **Start** menu by choosing **Settings > Control Panel > Administrative Tools > Services**.
- (Linux) Add the following line to `/etc/rc.d/rc.local`:
`<CATALINA_HOME>/bin/startup.sh &`

Installing and Configuring AccuRev

The Web GUI requires an AccuRev installation on the same machine with Tomcat. Consult the *AccuRev Installation and Release Notes*, available from the AccuRev download page (<http://www.accurev.com/download.htm>) for information on installing AccuRev.

After AccuRev is installed, use it to perform the tasks listed below, which will grant Web GUI users access to depots on an AccuRev Server. Refer to the topics under **AccuRev Security** in the AccuRev GUI online help for more information.

- Create user identities for any potential Web GUI users. Note that the “traditional” authentication method (the default prior to AccuRev 4.5) is not supported in the Web GUI.
- Set appropriate permissions for the user identities.
- Verify that the AccuRev **bin** directory is appended to the PATH environment variable.
- If your organization has multiple AccuRev Servers, use the instructions in *Setting Access to an AccuRev Server* to define which one the Web GUI will access.

Installing the Web GUI

The AccuRev Web GUI is available for download from the AccuRev Web site at <http://www.accurev.com/download.htm>. Download one of the following bundles:

- A **standalone** bundle containing Apache Tomcat 5.5 and the Web GUI. See *Installing from the Standalone Bundle* for further installation instructions.
- A compressed **war** file containing the Web GUI. Download this file if you have already installed Tomcat 5.5. See *Installing from the WAR File* for further installation instructions.

Installing from the Standalone Bundle

Use this installation method if Apache Tomcat 5.5 is not installed on the target machine, or if you have a version of Tomcat prior to 5.5.

1. Unpack the downloaded file into a directory on the target machine. This installation directory (which contains **bin**, **common**, **logs**, and other directories) is referred to as `<CATALINA_HOME>` throughout this document.
2. (*Windows users*) From a command prompt, run the following commands to install the Tomcat service:

```
cd <CATALINA_HOME>\bin
service.bat install
tomcat5w //MS//
```

3. (*Linux users*) Verify that the executables in `<CATALINA_HOME>/bin` have execute permissions set correctly.
4. Start Tomcat:
 - (*Windows users*) Right-click on the Tomcat icon in the System Tray, and choose **Start service** from the menu.
 - (*Linux users*) Run `<CATALINA_HOME>/bin/startup.sh` to start Tomcat. You can also configure Tomcat to run as a daemon. See <http://tomcat.apache.org/tomcat-5.5-doc/setup.html> for more information.

Installing from the WAR File

Use this installation method if Apache Tomcat 5.5 has already been installed on the target machine.

1. Shut down Tomcat:
 - (*Windows*) Right-click on the Tomcat icon in the System Tray, and choose **Stop service** from the menu.
 - (*Linux*) Run `<CATALINA_HOME>/bin/shutdown.sh`.

2. If **accurev.war** and an **accurev** directory exist in the **webapps** directory under `<CATALINA_HOME>`, delete them.
3. Unpack the downloaded file into the **webapps** directory.
4. Start up Tomcat:
 - (*Windows*) Right-click on the Tomcat icon in the System Tray, and choose **Start service** from the menu.
 - (*Linux*) Run `<CATALINA_HOME>/bin/startup.sh`.

Configuring the Web GUI

Ensuring Secure Use of the Web GUI

Before the Web GUI, your users accessed AccuRev data from within the organization's LAN, or from a VPN or similar secure connection. There were two layers of security -- your organization's network security measures and AccuRev's security settings. Using the Web GUI, you can access data on an AccuRev Server directly via the Internet. Before proceeding, please acquaint yourself with common security issues that arise when using a Web interface to access sensitive data.

At a minimum, we recommend the following measures to secure your use of the Web GUI:

- Obtain an SSL certificate and install it on the machine running Tomcat. SSL certificates are used to encrypt Web traffic. See <http://tomcat.apache.org/tomcat-5.5-doc/ssl-howto.html> for information on installing and configuring SSL support on Tomcat.
- Set up password strength checking for the Web GUI, as described in [Troubleshooting](#).
- Review your existing AccuRev security measures stringently. Consider the implications of an outsider gaining access to data stored in AccuRev. Set strong passwords for all AccuRev users, and put user and group permissions in place if none exist. Set ACL permissions to restrict user access by depot and stream to further secure the environment.
- Consult with your local system administrator to determine the best way to run the Tomcat server securely within your organization's network.

Changing the Default Tomcat Session Length

If you want to change the default Tomcat session length, change the value of the following tag in the `<CATALINA_HOME>\conf\web.xml` file:

```
<session-config>
  <session-timeout>30</session-timeout>
</session-config>
```

The session length is shown in minutes, with a default of 30. Restart the Tomcat server after saving changes to the file.

Changing the Default AccuRev Session Length

A successful user login creates a session that by default expires 4 hours (240 minutes) after the last AccuRev command is executed. You can change this behavior by creating or modifying the `SESSION_TIMEOUT` setting in `acsserver.cnf`. Set this value to 0 to prevent expiration.

```
SESSION_TIMEOUT = <number-of-minutes>
```

On Unix/Linux systems, a user can control the timeout for an individual session by setting the `SESSION_TIMEOUT` environment variable before logging in. For example, to set a 15-minute timeout interval for a single session:

```
export SESSION_TIMEOUT=15
accurev login derek    # limits derek's login to 15 minutes
```

Setting Login Security

You can configure the AccuRev Web GUI to constrain usernames and passwords to conform to your site's security requirements using the `wui_config.xml` file. To do so:

1. Stop the Tomcat server.
2. Navigate to the `.accurev` subdirectory under the home directory of the user running Tomcat, located in:
 - (Windows) `C:\Program Files\Documents and Settings\<user name>`
 - (Linux) the user's login directory
3. Check this directory for a customized version of `wui_config.xml`. If there is no file by that name, copy `<CATALINA_HOME>\webapps\accurev\wui_config.xml` to this directory.
4. Edit the `<security>` element to conform to your site's security requirements.

```
<security>
  <userName minLength = "0" minDigitCount = "0" minLetterCount = "0"/>
  <password minLength = "0" minDigitCount = "0" minLetterCount = "0"/>
</security>
```

5. Save the edited file.
6. Restart the Tomcat server.

When the Web GUI is accessed, it checks that the user names and passwords used to log in meet the requirements specified in `wui_config.xml`. The Web GUI cancels any login attempt that does not meet the specified criteria.

Setting Access to a Third-Party Issue Tracking System

You can configure the Web GUI to allow click-through access to a third-party issue tracking system such as JIRA by using the `wui_config.xml` file to specify an AccuRev Server, depot name, and URL to access the issue tracking system.

Restriction: The third-party issue tracking system must include its issue identifier in the URL used to access the issue (`*ISSUE_KEY*` shown in step 4, below).

1. Stop the Tomcat server.
2. Navigate to the `.accurev` subdirectory under the home directory of the user running Tomcat, located in:
 - (Windows) `C:\Program Files\Documents and Settings\<user name>`
 - (Linux) the user's login directory
3. Check this directory for a customized version of `wui_config.xml`. If there is no file by that name, copy `<CATALINA_HOME>\webapps\accurev\wui_config.xml` to this directory.

4. Edit the `<issueURLMap>` element.

```
<issueURLMap>
  <issueURLMapEntry
    accurevServer = "accu3:5050"
    depotName = "accurev"
    issueURL = "http://<its_server>:<port>/browse/*ISSUE_KEY*" />
  </issueURLMap>
```

5. Save the edited file.
6. Restart the Tomcat server.

Setting Access to an AccuRev Server

If your organization has multiple AccuRev Servers, you can use the `wui_config.xml` configuration file to set which AccuRev Server can be accessed from the Web GUI. To do so:

1. Stop the Tomcat server.
2. Navigate to the `.accurev` subdirectory under the home directory of the user running Tomcat, located in:
 - (Windows) `C:\Program Files\Documents and Settings\<user name>`
 - (Linux) the user's login directory
3. Check this directory for a customized version of `wui_config.xml`. If there is no file by that name, copy `<CATALINA_HOME>\webapps\accurev\wui_config.xml` to this directory.
4. Edit the `<serverMap>` element.

```
<serverMap>
  <serverMapEntry host = "localhost:8080" accurevServer = "accu3:5050"/>
</serverMap>
```

5. Save the edited file.
6. Restart the Tomcat server.

Troubleshooting

The following issues may arise during the Web GUI installation and testing process.

Tomcat

- *Another Web server (or other process) uses port 8080.* By default, Tomcat attempts to bind to port 8080 at startup. To change this value, open `<CATALINA_HOME>\conf\server.xml`, and search for **8080**. Change that number to a port (higher than 1024) that isn't in use. Save your changes and restart Tomcat.
- *The Tomcat server fails to start due to port conflicts or because another Tomcat instance is already running.* When the Tomcat server starts, it binds two ports (HTTP and Server Shutdown), which are configurable in `<CATALINA_HOME>\conf\server.xml`. These bindings prevent more than one instance of the Tomcat server from starting unless each instance is configured to run on separate ports. The details of configuring multiple Tomcat server instances are beyond the scope of this document. If other applications are already running on Tomcat, we recommend using the `war` file install (described in *Installing from the WAR File*) to add the Web GUI application to your existing environment.

- *The Tomcat application tries to use the wrong JRE/JDK. For Linux installations, check that the JRE_HOME or JAVA_HOME environment variable indicates the version specified in [Setting Up the Java Environment](#). For Windows installations, use the instructions below:*
 - Right-click the Tomcat icon in the System Tray, and choose **Configure** from the menu.
 - Navigate to the Java tab on the Configuration dialog, and select the **Use default** checkbox.
 - Click **OK** to save the change.

AccuRev Web GUI

- *My attempt to configure the Web GUI using **wui_config.xml** is not being recognized.* The edited configuration file must be saved into an **.accurev** subdirectory under the home directory of the user who started Tomcat, which may not be the current user. If you are running the Tomcat Windows service as the “Local System account” user (not recommended), this file should be placed in **C:\.accurev**.
- *(The Login dialog does not respond after I enter a user name and password.* This will happen if the AccuRev Server is not responding.
- *No server appears in the Login dialog.* This will happen if the AccuRev **bin** directory has not been appended to the PATH environment variable.
- *When attempting to access the Web GUI, I get a message stating that the 'localhost' machine could not be found.* This could happen if your machine uses a proxy for network access. If so, make sure the proxy configuration options for your browser are set to skip using the proxy to access 'localhost'. In Firefox, this option is located under **Tools > Options**, on the Network tab under the Advanced section. In Internet Explorer, it is under **Tools > Internet Options**, via the **LAN Settings** button on the Connections tab.

Testing the Installation

To test that the AccuRev Web GUI installation is functioning correctly:

1. Obtain a user name and password for the AccuRev Server that the Web GUI will be accessing.
2. Test browser access to the AccuRev Web GUI from the Tomcat install machine, from another machine in your organization’s internal network, and from an Internet-connected machine outside your organization's internal network. To do so, open a browser and navigate to the URL (*http://<tomcat_server_host>:8080/accurev*) used to access the Web GUI. You should see a dialog prompting you to log in to the AccuRev Server.

Informing Web GUI Users

When the AccuRev Web GUI has been installed, configured, and tested, distribute the correct URL to your users. Remember to use the new port assignment if you changed it from the default of **8080** as described in [Troubleshooting](#).

Web GUI end users should already have:

- Access to one of the following Web browsers, equipped with the Adobe Flash Player plugin.
 - Internet Explorer (version 6 or later)
 - Firefox (1.5.0 or later)
- An AccuRev user name and password
- A basic understanding of AccuRev functionality

Release Notes



The AccuRev Web Interface (Web GUI) is a Web application that runs on the Apache Tomcat Web server. The Web GUI allows users to access data managed by the AccuRev Server via a browser.

Highlights of this Release

The 2009.3 release of the Web GUI includes:

- New Version Browser now available from several locations, including the History Browser and context menus on the File Browser.
- Improvements to the Annotate Tool include an annotate timeline, navigation to a specific line, and a new context menu.
- Login changes now allow logged-in users to navigate to Web GUI URLs with no intervening login prompt.
- Improvements to the History view include access to the Version Browser and new context menu commands on the Versions pane.
- Improvements to the File Browser include a new Streams pane and access to stream comparisons by file and issue. The context menu on the Streams pane contains many of the commands previously available on the **Actions** menu in Version 2009.2.
- Issue lists can now show incomplete issues. When incomplete issues are showing in the Show Active Issues tab, selecting one will highlight the missing versions that cause the issue to be incomplete.
- Bulk update improvements include the ability to ignore issues that fail schema validation. It also now works on fields of (AccuWork) data type **log**.
- Charting capabilities now include a line graph.
- URL access to the Annotate Tool, Version Browser, History Browser, and File Browser.

Known Issues in this Release

- The Web GUI does not support the use of AccuWorkflow. AccuWorkflow icons will not display on the Issue Edit form, and the Web GUI will ignore all AccuWorkflow validations.
- The URL links provided in the Version Browser, History Browser, and Annotate tool are not permanent. Permanent URLs always refer to the same version of an element, and contain references to both the element-ID and version numbers.
- If you attempt to add a stream in the Version Browser, and the path to the element has changed in that stream (for example, if the element was moved or renamed), the stream will not be added, and no error message will be displayed. This issue is scheduled to be fixed in the next Web GUI release.

- Due to Web GUI performance issues, we do not recommend using the History Browser to view the details of a transaction involving more than 1000 elements and versions.
- (*Ubuntu Linux only*) The right-click menus available in the Web GUI are overlaid with the standard browser right-click menus. *Workaround:* Click once on the selected item to dismiss the browser menu and reveal the Web GUI menu.