

AccuRev® Web Interface

Installation and Release Notes

Version 2011.3
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This product incorporates technology that may be covered by one or more of the following patents:

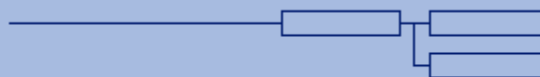
U.S. Patent Numbers: 7,437,722; 7,614,038.

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Preface



This book is your guide to installing the AccuRev® Web Interface (Web UI) from AccuRev, Inc. It is intended for the AccuRev system administrator.

Using This Book

This book assumes you are familiar with your operating system and its commands, as well as with AccuRev and AccuWork. The following table summarizes how the chapters in the book are organized.

Chapter	Description
Chapter 1 Introduction	Describes the highlights of the current release and where to find more information.
Chapter 2 Installing the AccuRev® Web Interface	Provides background information and procedures for installing and upgrading the Web UI.
Chapter 3 Configuring the AccuRev® Web Interface	Provides background and procedures for managing Tomcat and AccuRev Server sessions and security.
Chapter 4 Testing the AccuRev® Web Interface Installation	Describes testing and troubleshooting techniques for Web UI installations.
Chapter 5 Integrating the AccuRev® Web Interface with other Applications	Describes features and procedures for integrating the Web UI with third-party applications.
Chapter 6 Setting Up End Users	Describes how to set up Web UI end users following a successful Web UI installation.
Chapter 7 Installing Apache Tomcat	Describes how to install Apache Tomcat manually.
Chapter 8 Release Notes	Provides information on changes to and known issues in the current release.

Typographical Conventions

This book uses the following typographical conventions:

Convention	Description
<code>blue sans-serif</code>	Used for sample code or output.
<code>red monospace</code>	Used for examples.
bold	Used for command names, and button names in the AccuSync Web user interface
<i>light italic</i>	Used for emphasis, book titles, and for first use of important terms

Convention	Description
<i>blue italic</i>	Identifies a hyperlink (to a page or Web URL, for example)

Contacting Technical Support

AccuRev offers a variety of options to meet your technical support needs. For complete information about AccuRev technical support services, visit our Web site:

<http://www.accurev.com/support.html>

License Issues

If you are having trouble with a license for your AccuRev product, visit the License Self Help page first to see if there is a solution for your problem:

<http://www.accurev.com/support/license-self-help.html>

Other Support Issues

To obtain technical support for an AccuRev product:

- Go to <http://support.accurev.com/>
- Or write AccuRev technical support at support@accurev.com

When you contact AccuRev technical support, please include the following information:

- The AccuRev version
- The operating system
- If you are using an AccuBridge™ product:
 - The AccuBridge version
 - The version of the system used by the AccuBridge (JIRA or Rally, for example)
- A brief description of the problem you are experiencing. Be sure to include which AccuRev interface you were using (Web user interface, Java GUI, or CLI), any error messages you received, what you were doing when the error occurred, whether the problem is reproducible, and so on.
- A description of any attempts you have made to resolve the issue, including using the resources described in [Other Resources](#).
- A simple assessment of how the issue affects your organization.

Other Resources

In addition to contacting AccuRev technical support, consider taking advantage of the following resources:

- AccuRev Known Problems and Solutions – <http://www.accurev.com/support/kps.html>

The AccuRev Known Problems and Solutions page describes known problems in released versions of AccuRev products.

- AccuRev User Forum – <http://www.accurev.com/ubbthreads/>

The AccuRev User Forum is a valuable resource. In addition to access to AccuRev's international user community, the User Forum is the place to go for resources like:

- The AccuRev knowledge base
- The AccuRev FAQ

Register as a User Forum member today.

- AccuRev documentation – <http://www.accurev.com/documentation.html>

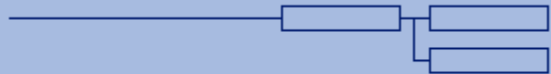
This page provides access to AccuRev product documentation for all current and previous releases of most AccuRev products.

Table of Contents

Preface	iii
Using This Book	iii
Typographical Conventions	iii
Contacting Technical Support	iv
License Issues	iv
Other Support Issues	iv
Other Resources	iv
1. Introduction	1
Highlights of this Release	1
2. Installing the AccuRev® Web Interface	3
Installation Overview	3
System Requirements	3
Choosing an Installation Package	4
Installation Package Locations	5
Installing the Standalone Installation Package	5
How to Install	5
Installing the War Installation Package	6
How to Install	6
3. Configuring the AccuRev® Web Interface	7
Security Considerations for Web Applications	7
Setting Login Security	7
Changing the Default Tomcat Session Timeout	8
Changing the Default AccuRev Session Timeout	8
Avoiding AccuRev Session Timeouts	9
Setting Access to AccuRev Servers	9
The <serverMap> Element	9
Modifying wui_config.xml	10
Enabling Rich Text Formatting Tools	10
4. Testing the AccuRev® Web Interface Installation	13
Testing the Web UI Installation	13
Troubleshooting Tomcat Issues	13
Troubleshooting Web UI Issues	14
5. Integrating the AccuRev® Web Interface with other Applications	15
Accessing a Third-Party Issue Tracking System	15
Configuring the AccuWork™ Schema	15
Configuring the wui_config.xml	16
Suppressing the AccuRev Toolbar Display	17
POST Method Login Servlet	17

6. Setting Up End Users.....	19
Creating AccuRev Users and Groups	19
Browser Requirements	19
Informing Web UI Users.....	19
7. Installing Apache Tomcat	21
Setting Up the Java Environment	21
Installing Apache Tomcat	21
Considerations for Windows Users.....	21
Running Tomcat Automatically on Startup.....	22
8. Release Notes	23
Changes in this Release.....	23
Known Issues in this Release.....	25
Changes in Version 2011.2	26
Summary of AccuWorkflow™ Changes in Version 2011.2.....	27
Installing and Enabling AccuWorkflow™.....	27
Displaying Issues in the Java GUI	27
Creating a Workflow.....	28
Converting Existing Workflows.....	28
Managing Issues with AccuWorkflow™	28
Changes in Version 2011.1	29

1. Introduction



The AccuRev® Web Interface (Web UI) is a Web application that runs on the Apache Tomcat™ server. The Web UI allows users to access data managed by the AccuRev Server via a browser. This book describes how to install and configure the Web UI, as well as information about new features in the current release.

Highlights of this Release

The 2011.3 release of the Web Interface includes numerous enhancements and bug fixes, including the following:

- **AccuWorkflow support** – AccuWorkflow is currently in beta. Note that AccuWorkflow requires AccuRev Version 5.3.
- **Multiple workflows per depot** – AccuRev now allows you to create, define, and manage multiple workflows for a depot. This allows different groups in an organization to design and create workflows with stages and transitions that are appropriate to them. Workflows are now accessed from a new Admin menu on the AccuRev Web UI toolbar.
- **Conditionally enable workflow transitions** – You can now specify conditions for workflow transitions. Buttons for transitions associated with a given workflow stage are always displayed with the issue, but whether or not a transition is enabled depends on the conditions you have specified for that transition.
- **Filter issues displayed in the Workflow Issues view** – In the previous release, clicking on a stage in the Workflow Issues view displayed all the issues associated with that stage. You can now create a filter to focus the results—to show only issues associated with a certain user, or only issues that occurred within a given time frame, for example.
- **Context-sensitive help** – Context-sensitive help has been added to all the main views in the Web UI. When you press F1 or click the help button on one of these views, the HTML version of the Web UI User's Guide opens to a page related to that view, rather than to the title page as was the case in previous releases.
- **Save Default Query Columns** – The Set Up Columns dialog box now allows you to save any set of columns you choose to use as the default for any new query you create.

For details about the specific changes introduced in this release, see [Chapter 8 Release Notes](#).

To install the AccuRev Web Interface, see [Chapter 2 Installing the AccuRev® Web Interface](#).

2. Installing the AccuRev® Web Interface

This chapter describes how to install and upgrade the AccuRev® Web Interface (Web UI).

Installation Overview

Installing the Web UI involves the following steps:

1. Identify the machine on which you plan to install the Web UI. Make sure that it meets the requirements as described in [System Requirements](#).
2. Download and install a Web UI installation package from the AccuRev Web site. Two installation packages are available, standalone and war. Generally speaking:
 - Choose **standalone** if you are installing the Web UI for the first time, or if you are installing the Web UI on a machine that is not already running Apache Tomcat 5.5 or higher.
 - Choose **war** if you are upgrading an existing Web UI installation, or if you want to install the Web UI for the first time on a machine that is already running Tomcat 5.5 or higher.

See [Choosing an Installation Package](#) on page 4 for more information.

3. Configure Tomcat and Web UI session and security settings. See [Chapter 3 Configuring the AccuRev® Web Interface](#) for more information.
4. Test the Web UI installation. See [Chapter 4 Testing the AccuRev® Web Interface Installation](#) for more information.
5. Optionally, integrate the Web UI with third-party applications. See [Chapter 5 Integrating the AccuRev® Web Interface with other Applications](#) for more information.
6. Make the Web UI available to your end users. See [Chapter 6 Setting Up End Users](#) for more information.

System Requirements

In order to successfully install the Web UI, the following requirements have to be met:

- **Privileges.** You must be the administrator (Windows) or root (Linux) in order to install the Web UI.
- **Tomcat.** The machine on which you are installing the Web UI must have Apache Tomcat 5.5 or higher. Apache Tomcat 6.0 is bundled with the **standalone** installation package available on the AccuRev Web site.

If you prefer, you can install Tomcat 5.5 or higher manually, by downloading the Tomcat installation package from Apache. See [Chapter 7 Installing Apache Tomcat](#) for more information.

Note: Tomcat requires the Java 2 Standard Edition JRE 6 or later. See [Setting Up the Java Environment](#) on page 21 for more information.

- **AccuRev.** AccuRev Web Interface Version 2011.3 requires AccuRev Version 4.7 or later. This can be an AccuRev client or server installation; the server need not be on the same machine on which the Web UI is being installed.

Note:

- AccuRev Version 4.9 is required if you want to display unaffiliated changes.
- AccuRev Version 5.3 is required if you want to use AccuWorkflow. AccuWorkflow is currently in beta.

You can download the latest AccuRev installation package from the AccuRev Web site at <http://www.accurev.com/download.htm>. Installation instructions are also available at that location.

- **Browsers.** Web UI users must have access to one of the following Web browsers:

Browser	Minimum Version	Recommended Version
Microsoft Internet Explorer	IE7	IE9
Mozilla Firefox ^a	3.0	4.0
Google Chrome	5.0	11.0

a. Mac users should use Mozilla Firefox.

The Adobe® Flash® Player plug-in is also required.

See [Chapter 6 Setting Up End Users](#) for more information.

Choosing an Installation Package

AccuRev provides two installation packages that allow you to install the Web UI for the first time or upgrade an existing installation:

Installation Package	Description	Use This Package When
standalone	A compressed file that contains both the Web UI and the Tomcat 6.0 server.	You are installing the Web UI for the first time on a machine that is not already running Tomcat 5.5 or higher. See Installing the Standalone Installation Package .
war	A compressed file that contains only the Web UI.	<ul style="list-style-type: none">▪ You are installing an upgrade to an existing Web UI installation, or▪ You are installing The Web UI for the first time on a machine that is already running Tomcat 5.5 or higher See Installing the War Installation Package .

There are separate installation packages for Windows and Linux operating systems.

Installation Package Locations

All installation packages, as well as these installation instructions, are available on the AccuRev Web site at <http://www.accurev.com/download.htm>.

Installing the Standalone Installation Package

Use this procedure if Apache Tomcat 5.5 or higher is not installed on the target machine.

Note: The **standalone** installation package includes Tomcat 6.0. If the machine on which you plan to install the Web UI already has Tomcat 5.5 or higher running, use the **war** installation package. See [Installing the War Installation Package](#) for more information.

How to Install

To install the **standalone** installation package:

1. Download the **standalone** installation package from the AccuRev Web site:
<http://www.accurev.com/download.htm>.
2. Unpack the downloaded file (**AccuRevWebGUI_<version>_standalone.zip**, where *<version>* is the current version, such as 2011_2) into the directory on the target machine you want to use as the installation directory. This directory, which contains **bin**, **common**, **logs**, and other directories after you unpack the **standalone** installation package, is referred to as *<CATALINA_HOME>*.
3. (*Windows users*) From a command prompt, run the following commands to install the Tomcat service:

```
cd <CATALINA_HOME>\bin
service.bat install
tomcat6w //MS//
```

(*Linux users*) Verify that the executables in *<CATALINA_HOME>/bin* have read, write, and execute permissions set correctly.

4. Start Tomcat:
 - (*Windows users*) Right-click the Tomcat icon in the Windows taskbar, and choose **Start service** from the menu.
 - (*Linux users*) Run *<CATALINA_HOME>/bin/startup.sh*. You can also configure Tomcat to run as a daemon. See <http://tomcat.apache.org/tomcat-6.0-doc/setup.html> for more information.
5. Navigate to http://<tomcat_server_host>:8080/accurev to verify access to the Web UI. You should see the Login to AccuRev Server dialog box.

Installing the War Installation Package

Use this procedure to:

- Upgrade an existing Web UI installation on a machine that is running Tomcat 5.5 or higher
- Install a new Web UI on a machine that is running Tomcat 5.5 or higher

How to Install

To install the **war** installation package:

1. Download the **war** installation package from the AccuRev Web site:
<http://www.accurev.com/download.htm>.
2. Shut down Tomcat:
 - *(Windows users)* Right-click the Tomcat icon in the Windows taskbar, and choose **Stop service** from the menu.
 - *(Linux users)* Run `<CATALINA_HOME>/bin/shutdown.sh`.
3. Delete the **accurev** directory in `<CATALINA_HOME>/webapps` from the previously installed Web UI release.
Note: For Web UI versions prior to 2009.1, the directory name is **accurev-gui**.
4. Unpack the downloaded file (**AccuRevWebGUI_2011_2_war.zip**, for example) into the **webapps** directory.
5. Start up 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`.
6. Navigate to `http://<tomcat_server_host>:8080/accurev` to verify access to the Web UI. You should see the Login to AccuRev Server dialog box.

3. Configuring the AccuRev® Web Interface

This chapter describes security, session, and access settings you can use to configure the AccuRev® Web Interface (Web UI).

Security Considerations for Web Applications

Like other client/server applications, AccuRev takes advantage of two layers of security – the organization’s network security measures, and AccuRev’s own security settings.

Network and application security measures are typical for applications accessing data within an organization’s LAN, or over a VPN or similar secure connection, but Web applications, like the AccuRev Web Interface, present a unique set of security issues common to applications accessing data directly over the Internet.

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

- Install an SSL certificate on the machine running Tomcat to encrypt Web traffic. See <http://tomcat.apache.org/tomcat-5.5-doc/ssl-howto.html> for information on installing and configuring SSL certificates on Tomcat. If you are using Tomcat 6.0, see <http://tomcat.apache.org/tomcat-6.0-doc/ssl-howto.html>.
- Implement password strength checking for the Web UI. See *Setting Login Security* for more information.
- Review your existing AccuRev security measures. Consider the implications of an outsider gaining access to data stored in AccuRev. Set strong passwords for all AccuRev users, regardless of how they log in to AccuRev. Take advantage of AccuRev user and group permissions, and 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.

Setting Login Security

AccuRev recommends that you implement user name and password strength checking for users logging in to the AccuRev Server using the Web UI. Using the **wui_config.xml** configuration file, you can specify the following for both user name and password:

- Minimum length
- Minimum number of digits
- Minimum number of letters

Note: AccuRev uses a single user/password combination for all interfaces, so any password change made to conform to WebUI security parameters specified in the **wui_config.xml** also affects your password for the Java GUI and the CLI.

To change Web UI login settings:

1. Stop the Tomcat server.
2. Navigate to the **.accurev** subdirectory under the home directory of the user running Tomcat:
 - (Windows users) **C:\Documents and Settings\<user name>**, or **C:\Users\<user name>**, for example
 - (Linux users) The user's login directory
3. Check the **.accurev** subdirectory for a customized version of **wui_config.xml**. If there is no file by that name, copy **<CATALINA_HOME>\webapps\accurev\wui_config.xml**, where **<CATALINA_HOME>** is the Tomcat installation directory, to the **.accurev** subdirectory.
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 **wui_config.xml** file.
6. Restart the Tomcat server.

Changing the Default Tomcat Session Timeout

By default, the Tomcat session times out after 30 minutes. You can change the session timeout by editing the value of the **<session-timeout>** element in the **web.xml** file:

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

The **web.xml** file is located in **<CATALINA_HOME>\conf**, where **<CATALINA_HOME>** is the Tomcat installation directory.

Note: Restart the Tomcat server after saving changes to the **web.xml** file.

Changing the Default AccuRev Session Timeout

By default, the AccuRev session times out after 4 hours (240 minutes), measured from the time of the last AccuRev command execution. You can change session timeout by creating or modifying the **SESSION_TIMEOUT** setting in **acserver.cnf**. Set this value to 0 to prevent expiration.

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

The **acserver.cnf** file is located in the **\bin** directory where you installed the Web UI, **C:\Program Files\MyAccuRev\bin**, for example.

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
```

Note: Restart the AccuRev Server after saving changes to the `acserver.cnf` file.

Avoiding AccuRev Session Timeouts

Web UI users can avoid default session timeouts established in the `acserver.cnf` file by checking the **Remember my login on this computer** checkbox in the Login to AccuRev Server dialog box. Checking this box stores a session ID in the browser.

Setting Access to AccuRev Servers

By default, the host machine running the Tomcat Server maps to a single machine running the AccuRev Server. You provide users with access to AccuRev by providing them with the URL to the Tomcat Server. See [Setting Up End Users](#) on page 19 for more information on this topic.

If you want, you can specify additional host machine-AccuRev Server mappings to provide access to AccuRev from the Web UI. This allows you to:

- Map multiple host names to the same AccuRev Server
- Map multiple host names to different AccuRev Servers

You might want to specify alternate mappings to allow for the use of domain names for the host server URL, for example.

The `<serverMap>` Element

AccuRev Server mappings are specified using the `<serverMap>` element in the `wui_config.xml` file:

```
<serverMap>
  <serverMapEntry host = "host_name:port" accurevServer = "server:port"/>
</serverMap>
```

where:

- `host_name:port` is the URL used to access the machine on which the Tomcat Server is running, and the port on which Tomcat is listening. The default Tomcat Server port is 8080.
- `server:port` is the URL of the machine on which the AccuRev Server is running, and the port on which AccuRev is listening. The default AccuRev Server port is 5050.

Examples of `host_name` values include:

- The DNS for the server
- `localhost`
- The machine name

Example

The following example shows how the `<serverMap>` element in the `wui_config.xml` file is used to specify alternate host mappings to the same AccuRev Server:

```
<serverMap>
  <serverMapEntry host = "accurev-web: 8080" accurevServer =
    "accurev.ent.org: 5050"/>
  <serverMapEntry host = "accurev-web.ent.org: 8080" accurevServer =
    "accurev.ent.org: 5050"/>
</serverMap>
```

Modifying wui_config.xml

To modify the `wui_config.xml` file to specify one or more host machine-AccuRev Server mappings:

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

```
<serverMap>
  <serverMapEntry host = "host_name: port" accurevServer = "server: port" />
</serverMap>
```

Note that you can specify as many `<serverMapEntry>` elements as needed for your environment.

5. Save the `wui_config.xml` file.
6. Restart the Tomcat server.

Enabling Rich Text Formatting Tools

AccuRev supports rich text formatting for text and log fields. When this feature is enabled, a toolbar appears with these fields providing you with the ability to create bold and italic text, create bulleted and numbered lists, and so on.

Rich text formatting is disabled by default. You can enable rich text formatting by adding the following element to the `wui_config.xml` file:

```
<useRichText value="yes"/>
```

When the `value` attribute is set to no (`value="yes"`), the rich text formatting toolbar appears in text and log fields. If you later change the `value` attribute to no (`value="no"`):

- The rich formatting is removed from text and log fields
- Previously formatted text is displayed as plain text, including all tags used to format it (`<italic>`, for example)

To modify the **wui_config.xml** file to enable rich text formatting tools:

1. Stop the Tomcat server.
2. Navigate to the **.accurev** subdirectory under the home directory of the user running Tomcat:
 - (*Windows users*) **C:\Documents and Settings\<user name>**, or **C:\Users\<user name>**, for example
 - (*Linux users*) The user's login directory
3. Check the **.accurev** subdirectory for a customized version of **wui_config.xml**. If there is no file by that name, copy **<CATALINA_HOME>\webapps\accurev\wui_config.xml**, where **<CATALINA_HOME>** is the Tomcat installation directory, to the **.accurev** subdirectory.
4. Create the **<useRichText>** element:

```
<useRichText value="yes"/>
```

Note: If the **<useRichText>** element is already present in the **wui_config.xml** file, you can change the value of the **value** attribute to enable or disable rich text formatting as desired.
5. Save the **wui_config.xml** file.
6. Restart the Tomcat server.

4. Testing the AccuRev® Web Interface Installation

This chapter describes how to test the AccuRev® Web Interface (Web UI) installation and how to troubleshoot issues that you might encounter.

Note: Throughout this chapter, `<CATALINA_HOME>` refers to the Tomcat installation directory.

Testing the Web UI Installation

Use the following simple procedure to test the Web UI installation. You should test the installation before making the Web UI available to your end users. (See [Chapter 6 Setting Up End Users](#) for more information about notifying end users.)

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

1. Obtain a user name and password for the AccuRev Server that the Web UI will access.
2. Test browser access to the AccuRev Web UI from these locations:
 - The machine on which you installed Tomcat
 - Another machine in your organization's internal network
 - An Internet-connected machine outside your organization's internal network.

To do this, open a browser and navigate to the URL used to access the Web UI (`http://<tomcat_server_host>:8080/accurev`, for example).

If the installation was successful, a dialog box prompting you to log in to the AccuRev Server should appear. If it does not, use the following sections, [Troubleshooting Tomcat Issues](#) and [Troubleshooting Web UI Issues](#), to resolve any issues.

Troubleshooting Tomcat Issues

The following issues might arise during the Web UI installation and testing process.

- *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 is not 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 a separate port. The details of configuring multiple Tomcat server instances are beyond the scope of this document.

Note: If other applications are already running on Tomcat, we recommend using the **war** file to install the Web UI. See [Chapter 2 Installing the AccuRev® Web Interface](#).

- *The Tomcat application tries to use the wrong JRE/JDK.*

(Windows users) Follow these instructions to set the default JRE or JDK:

1. Right-click the Tomcat icon in the taskbar, and choose **Configure** from the menu.
The Configuration dialog box appears.
2. Navigate to the Java tab on the Configuration dialog box, and select the **Use default** checkbox.
3. Click **OK** to save the change.

(Linux users) Check that the JRE_HOME (if using the JRE) or JAVA_HOME (if using the full JDK) environment variable indicates the version specified in [Setting Up the Java Environment](#) on page 21.

Troubleshooting Web UI Issues

The following issues might arise when first starting the Web UI after installation:

- *My changes to the Web UI **wui_config.xml** configuration file are not being recognized.*

You must save the edited **wui_config.xml** configuration file to an **.accurev** subdirectory under the home directory of the user who started Tomcat; this might not be the current user. If you are running the Tomcat Windows service as the “Local System account” user, this file should be placed in **C:\.accurev**.

- *The Login dialog box does not respond after I enter a user name and password.*

This can happen if the AccuRev Server is not responding or running. Verify that the AccuRev Server is responding by logging in using either the Java GUI or the command line interface (CLI).

- *No server appears in the Login dialog box.*

This can happen if the AccuRev Server has not been identified:

- Verify that the AccuRev **bin** directory has been appended to the PATH environment variable.
- Verify that a **<serverMap>** element has been fully described in the **wui_config.xml** configuration file.

- *When attempting to access the Web UI, I get a message stating that the 'localhost' machine could not be found.*

This can happen if your machine uses a proxy for network access. If it does, change the proxy configuration options for your browser so that it does now use the proxy to access 'localhost'. The location for proxy configuration options varies by browser. For example:

- In Firefox, choose **Tools > Options > Advanced**, and then click the **Network** tab.
- In Internet Explorer, choose **Tools > Internet Options > Connections**, and then click the **LAN Settings** button.
- In Google Chrome, choose **Customize and Control Google Chrome > Options > Under the Hood**, then click the **Change proxy settings** button. On the Internet Properties dialog box that appears, click **LAN settings**.

5. Integrating the AccuRev® Web Interface with other Applications



This chapter describes features for integrating the AccuRev® Web Interface (Web UI) with other applications.

Accessing a Third-Party Issue Tracking System

The AccuRev Web UI allows click-through access to a third-party issue tracking system (ITS) such as JIRA. In order to do this, you need to:

- Configure the AccuWork™ schema
- Configure the Web UI **wui_config.xml** file

Each of these steps is described in the following sections.

Configuring the AccuWork™ Schema

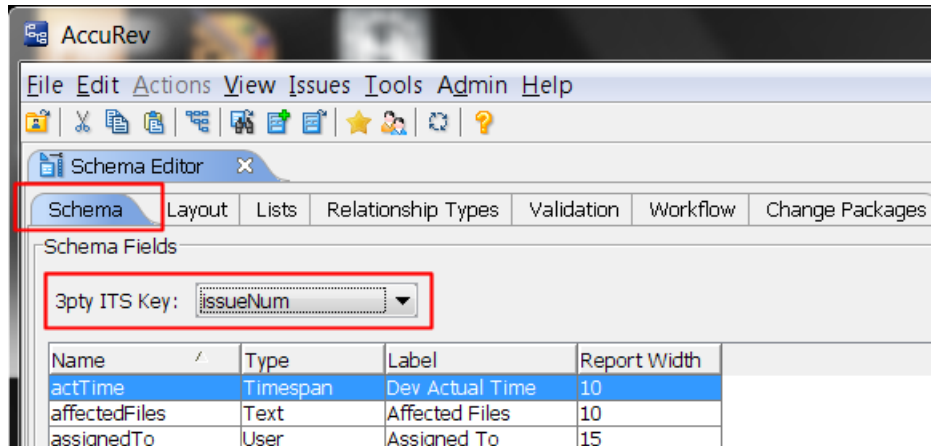
During configuration of the AccuBridge™ product for your ITS, you modify the AccuWork issue database schema by adding a field to store the unique key for each issue record. This field is referred to as the *issue identifier*. You might name the issue identifier field **issueKey**, for example. See your AccuBridge documentation for more information on this topic.

Once the issue identifier has been specified in AccuBridge, you must set the AccuWork schema 3pty ITS Key property to that value, as described here.

To set the AccuWork schema 3pty ITS Key property:

1. As the Admin user, start the AccuRev Java GUI.
2. Select **Admin** > **Schema Editor** from the AccuRev Java GUI toolbar.

The Schema Editor tab appears. The Schema subtab should be open by default, as shown in the following illustration. If it is not, click the Schema subtab to open it.



3. In the **3pty ITS Key** drop-down list, choose the issue identifier you created when configuring AccuBridge (**issueKey**, for example).
4. Click the **Save** button on the bottom right of the Schema subtab.

Configuring the wui_config.xml

Use the procedure described in this section to modify the AccuRev Web UI **wui_config.xml** file. Specifically, you edit the **<issueURLMap>** element to specify:

- An AccuRev Server
 - Depot name
 - URL of the issue tracking system you want to access
1. Stop the Tomcat server.
 2. Navigate to the **.accurev** subdirectory under the home directory of the user running Tomcat:
 - (Windows users) **C:\Documents and Settings\<user name>**, or **C:\Users\<user name>**, for example
 - (Linux users) The user's login directory
 3. Check the **.accurev** subdirectory for a customized version of **wui_config.xml**. If there is no file by that name, copy **<CATALINA_HOME>\webapps\accurev\wui_config.xml**, where **<CATALINA_HOME>** is the Tomcat installation directory, to the **.accurev** subdirectory.

4. Edit the `<issueURLMap>` element.

```
<i ssueURLMap>
  <i ssueURLMapEntry
    accurevServer = "accu3: 5050"
    depotName = "accurev"
    i ssueURL = "http: //<i ts_server>: <port>/browse/*ISSUE_KEY*" />
  </i ssueURLMapEntry
</i ssueURLMap>
```

Note: Set the `*ISSUE_KEY*` parameter to the value of the issue identifier you used to configure the AccuWork schema (`issueKey`, for example). See *Configuring the wui_config.xml* for more information.

5. Save the `wui_config.xml` file.
6. Restart the Tomcat server.

Suppressing the AccuRev Toolbar Display

You can turn off the display of the AccuRev toolbar when integrating the Web UI with another application.

To turn off the AccuRev toolbar, append the `embedded` argument with a value of `yes` to the Web UI URL. For example:

```
http: //<server: port>/accurev?embedded=yes
```

Remember that the question mark (?) must precede the first argument in the URL.

POST Method Login Servlet

The Web UI provides a login servlet you can use to pass login credentials via the POST method. This gives you the ability to create your own customized Web UI login dialog box, or to log in programmatically using, for example, an Apache HttpClient PostMethod routine.

Here is an example of an HTML form implementing this login POST method:

```
<FORM ACTION="/accurev/login"
  METHOD="POST">
  User ID:
  <INPUT TYPE="TEXT" NAME="userid"><BR>
  Password:
  <INPUT TYPE="PASSWORD" NAME="password"><BR>
  Server:
  <INPUT TYPE="TEXT" NAME="server" VALUE="server:port"><BR>
  <INPUT TYPE="CHECKBOX" NAME="remember_session">Pass Cookie
  <HR>
  <INPUT TYPE="SUBMIT" VALUE="Login">
</FORM>
```


6. Setting Up End Users

This chapter describes the process for setting up end users of the AccuRev® Web Interface (Web UI) after you have successfully installed the Web UI. See [Chapter 4 Testing the AccuRev® Web Interface Installation](#) for information about testing Web UI installations.

Creating AccuRev Users and Groups

Each Web UI end user needs to be created as an AccuRev user in order to access AccuRev. An AccuRev user is defined by a user name, password, and a set of permissions. You create users (and, optionally, groups) on the AccuRev Server using either the Java GUI or the command line interface (CLI).

See the *AccuRev® Administrator's Guide* for more information on creating users and groups.

Note: You can specify user name and password settings (minimum length, whether or not a numeric value is required, and so on) that conform to your site's security requirements. See [Setting Login Security](#) on page 7 for more information.

Browser Requirements

Web UI end users need access to one of the following Web browsers:

Browser	Minimum Version	Recommended Version
Microsoft Internet Explorer	IE7	IE9
Mozilla Firefox ^a	3.0	4.0
Google Chrome	5.0	11.0

a. Mac users should use Mozilla Firefox.

The Adobe® Flash® Player plug-in is also required.

Informing Web UI Users

When the Web UI has been installed, configured, and tested, you should:

- Inform each user of his or her user name and password. (End users can modify their passwords using the Web UI if they choose.)
- Distribute the URL used to access the Web UI (*http://<tomcat_server_host>:8080/accurev*, for example) to your users. Remember to use the new port assignment if you changed it from the default of **8080** as described in [Troubleshooting Tomcat Issues](#) on page 13.
- Consider making the information in [Chapter 8 Release Notes](#) available to them.

7. Installing Apache Tomcat

The AccuRev® Web Interface (Web UI) requires Apache Tomcat version 5.5 or higher to be installed on the same machine as the Web UI. Tomcat version 6.0 is installed as part of the standalone installation package.

Use the procedures described in this chapter to install Tomcat version 5.5 manually. See [Chapter 2 Installing the AccuRev® Web Interface](#) for more information about the standalone package.

Setting Up the Java Environment

Tomcat requires a Java Runtime Environment (JRE) from J2SE version 6 or later.

To install and set up a JRE on the target machine:

1. Download the Java 2 Standard Edition JRE 6, from <http://www.oracle.com/technetwork/java/javase/downloads/index.html>.
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 users) `C:\Program Files\Java\<JRE_version>`, for example
 - (Linux users) `<JRE_version>` in the directory where the JRE self-extracting binary was run.
4. Append `JRE_HOME/bin` to the `PATH` environment variable.

Note: You can use the full Java Development Kit (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

To install Tomcat, download an Apache Tomcat 5.5 installer from <http://tomcat.apache.org/download-55.cgi>. Follow the instructions in <http://tomcat.apache.org/tomcat-5.5-doc/setup.html> to complete the installation.

Considerations for Windows Users

If you are installing Tomcat on a Windows machine, consider the following:

- **Installing a Windows service.** During Tomcat installation, select the **Service Startup** box under Tomcat on the Choose Components pane. This option automatically installs and runs the Windows service to control Tomcat.
- **Running the Tomcat service.** 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.

Running Tomcat Automatically on Startup

Because the Web UI requires Tomcat, consider setting Tomcat to run automatically on startup:

- *(Windows users)* Configure the Tomcat service to start automatically using the Services control panel. You can access the Services control panel from the **Start** menu by choosing **Settings > Control Panel > Administrative Tools > Services**, for example. (Specific procedures vary based on Windows operating system.)

- *(Linux users)* Add the following line to **/etc/rc.d/rc.local**:

```
<CATALINA_HOME>/bin/startup.sh &
```

where **<CATALINA_HOME>** is the Tomcat installation directory.

8. Release Notes



This chapter describes the changes to the AccuRev® Web Interface (Web UI) in Version 2011.3, as well as the two previous AccuRev Web UI releases.

Changes in this Release

The 2011.3 release of the Web UI includes the following changes:

AccuWorkflow support

AccuWorkflow is currently in beta. Note also that AccuWorkflow requires AccuRev Version 5.3.

18990 – save query result columns as default

The Set Up Columns dialog box now allows you to save any set of columns you choose to use as the default for any new query you create.

22123 – empty URL attachments made the Web UI unresponsive

(Internet Explorer only) Previously, if you entered an empty URL on the Attachments tab and later tried to open that attachment, the Web UI would become unresponsive. This problem has been corrected in the current release.

22440 – context-sensitive online help

Context-sensitive help has been added to all the main views in the Web UI interface. When you press F1 or click the help button on one of these views, the HTML version of the Web UI User's Guide opens to an appropriate page, rather than to the title page as was the case in previous releases.

22540 – create multiple workflows for a depot

AccuRev now allows you to create, define, and manage multiple workflows for a depot.

22664 – root stream cannot be associated with a transition

In previous releases, you could associate the root stream in a depot with a transition. This has been corrected in the current release.

22693 – adding calculated column could throw an exception

In the previous release, AccuRev would throw an exception if you performed a Query Diff from the Issue Queries view and then tried to add a calculated column after using the Group By feature to sort the query results. This problem has been corrected in the current release.

22757 – StreamBrowser™ search options always used

In the previous release, AccuRev did not always display the StreamBrowser using the settings specified in the search options panel (when using the Look Up Stream feature, for example). This problem has been corrected in the current release.

22828 – transitions indicate Promote action

In the previous release, transitions in the Workflow Issues view did not indicate whether or not executing the transition also triggered a Promote action. Transitions that result in a Promote action now include an icon to indicate this behavior.

22848 – conditions supported for workflow transitions

You can now specify conditions for workflow transitions.

22875 – workflow context menus

You can now specify conditions for workflow transitions. Buttons for transitions associated with a given workflow stage are always displayed with the issue, but whether or not a transition is enabled depends on the conditions you have specified for that transition.

22939 – changes to StreamBrowser™ search options panel open/close

The button used to display the StreamBrowser search options panel now has a label: **Show search options**. This label changes to **Hide search options** when the panel is displayed. You can now also close the StreamBrowser search filter panel by clicking a close button located on the panel itself.

22954 – new Admin menu in AccuRev toolbar

An Admin drop-down has been added to the AccuRev toolbar. This menu provides access to the optional Workflow Editor.

Note: The Admin drop-down menu is displayed only if you are using the AccuRev Web UI with AccuRev Version 5.3.

22958 – rich text formatting tools disabled by default

In previous releases, rich text formatting tools (bold, italic, bulleted and numbered lists, for example) for AccuRev text and fields were enabled by default. An option in the **wui_config.xml** file let you disable them if desired. In response to AccuRev Web UI users, this option has been disabled by default.

If you choose, you can enable rich text formatting by adding the following element to the **wui_config.xml** file:

```
<useRichText value="yes"/>
```

When the **value** attribute is set to no (**value="yes"**), the rich text formatting toolbar appears in text and log fields. If you later change the **value** attribute to no (**value="no"**):

- The rich formatting is removed from text and log fields
- Previously formatted text is displayed as plain text, including all tags used to format it (**<italic>**, for example)

See [Enabling Rich Text Formatting Tools](#) on page 10 for more information.

23028 – support for a single schema field with type Stream

In the previous release, you could specify multiple fields in the AccuWork schema with a type of Stream. In the current release, AccuWorkflow supports only a single schema field with a type of Stream. If your current AccuWork schema has multiple fields with a type of Stream, AccuWorkflow displays a warning message when you try to open the Workflow Issues view or the Issue Edit form.

23029 – promote transitions consider issue’s project stream

In the previous release, transitions that were associated with the Promote operation always displayed the streams icon to indicate that executing the transition also performed the Promote, regardless of whether the issue’s project stream field value matched the proper workflow stream link. This problem has been corrected in the current release.

23092 – filter issues displayed in the Workflow Issues view

In the previous release, clicking on a stage in the Workflow Issues view displayed all the issues associated with that stage. You can now create a filter that lets you tailor the results to show only issues associated with a certain user or that occurred within a given time frame, for example.

23179 – improved handling of issue records with missing third-party key

In the previous release, AccuRev displayed a message if you tried to open an issue record that did not have a third-party key if AccuRev had been configured to use a third-party issue tracking system (ITS). In the current release, AccuRev opens such issue records in AccuWork until a third-party key is provided; AccuRev opens the issue record in the appropriate tool thereafter.

23193 – StreamBrowser™ refreshed after setting a stream as a project stream

In the previous release, streams set as project streams were not correctly identified unless the web browser cache was refreshed, usually by logging out of AccuRev and then logging in again. This problem has been corrected in the current release.

Known Issues in this Release

The 2011.3 release of the Web UI has the following known issues:

- *(Firefox on Linux only)* If multiple objects are selected in the workflow diagram, right-clicking one of the objects to display its shortcut menu does not properly reset the selection to that object. As a result, the **Edit** choice is disabled when the shortcut menu appears. To work around this issue, clear the group selection by clicking the diagram background. Shortcut menus for any object you select will then appear as expected.
- 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 number.
- *(Internet Explorer only)* Text and log fields might exhibit some of the following issues:
 - Formatting for bulleted and ordered lists is not always preserved.
 - The Enter key creates two lines. (**Tip:** Use Shift+Enter to create single line spacing.)
 - If a text or log field has been defined in the AccuRev Schema as read-only based on certain conditions (setting an issue’s status to Closed, for example), it is sometimes possible to edit the field and save the changes.

These issues will be addressed once the next Google Web Toolkit is available.

22670 – Opening Web UI on Mac OS X in Firefox or Chrome

If you are using the AccuRev Java GUI running on Mac OS X and start AccuWorkflow and your browser is Firefox or Chrome:

- If the web browser is running, it displays an error message indicating that it cannot open another browser instance; the AccuRev Web UI is not displayed
- If the web browser is not running, your default browser opens; the AccuRev Web UI is displayed on a new tab in that browser session

19549

Due to Web UI performance issues, we do not recommend using the History Browser to view the details of a transaction involving more than 2000 elements and versions.

17346

(Chrome only) When the user scrolls down in a list of items, then switches to another tab and back to the list, the scroll bar will return to the top of the list.

(Chrome only) When the user navigates through a drop-down list box via keystrokes, then chooses an item by mouse click, the original value shown in the list box will not be replaced by the chosen value.

1673

(Ubuntu Linux only) The right-click menus available in the Web UI 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 UI menu.

Changes in Version 2011.2

The 2011.2 release of the Web UI includes the following changes:

21033 – Workflow Editor comes to the Web UI

The AccuWorkflow™ Workflow Editor has been moved from the Java GUI to the Web UI. New features like the Stage Generator let you automatically create workflow stages and associated transitions with the click of a button. AccuRev users can display issues for any stage by clicking that stage in the workflow diagram. In addition, issues opened in the AccuRev Java GUI are automatically displayed in the Web UI. See [Summary of AccuWorkflow™ Changes in Version 2011.2](#) on page 27 for more information.

21474 – Default width for text field in Web UI too large

In previous releases, the Web UI used a default value for text field width that was larger than the value used by the Java GUI (10). This resulted in formatting inconsistencies when viewing the Issue Edit form in the Web UI, including misaligned fields and fields that were not displayed. This problem has been corrected in the current release.

21995 – Copy/paste can be used to build queries

You can now use familiar copy/paste operations to build queries in the Query Editor and New Query tab. Copy/paste allows you to build queries by reusing existing clauses by copying them, pasting them to a new parent node, and modifying the details as needed. This process can be much more efficient than redefining query clauses manually.

22174 – Diff Against Backed runs in infinite loop

In previous releases, users could run the Diff Against Backed operation on the root stream, resulting in AccuRev running in an infinite loop. AccuRev now checks the stream on which the Diff Against Backed is being performed and displays an error message if no backing stream exists.

22181 – Layout of Issue Edit form in Web UI does not match Java GUI

In previous releases, the internal grid used to determine the relative placement of fields displayed on the Issue Edit form in the Web UI resulted in misaligned fields and other formatting inconsistencies when viewing the Issue Edit form in the Web UI. This problem has been corrected in the current release.

22335 – Locks refreshed only after logging out and logging in

In previous releases, if a lock was added or removed from a stream, the display in the Web UI was updated only after the user logged out of and then logged in to the Web UI. Lock symbols for changed locks are now displayed when the StreamBrowser display is refreshed - either explicitly (by pressing F5) or as the result of executing a new search.

22543 – Stream flow direction indicated in StreamBrowser™

The stream flow direction is now displayed using arrowheads on the lines that join streams and workspaces displayed in the StreamBrowser. Arrowheads change direction when you change the flow direction.

22686 – StreamBrowser filtering and display simplified

The fields and controls used to filter the StreamBrowser display (**Include hidden**, **Only paths to workspaces**, and so on) have been moved to a panel that can be easily displayed and then hidden. In addition, by default, clicking the StreamBrowser display buttons (**Display results as table** and **Display results as stream**) now displays all streams that lead to workspaces associated with the current user by default.

Summary of AccuWorkflow™ Changes in Version 2011.2

As of AccuRev Version 5.2/Web UI Version 2011.2, all AccuWorkflow functionality—from workflow creation to issue management—has moved from the Java GUI to the Web UI. This section describes how this change affects current AccuWorkflow users and where to find more information.

Installing and Enabling AccuWorkflow™

AccuWorkflow is installed with AccuRev; however, you need an AccuWorkflow license in order to enable AccuWorkflow features and functionality. The license installation process is described in the *AccuRev Installation and Release Notes* for Version 5.2.

Contact sales at AccuRev if you have questions about your AccuRev license: sales@accurev.com

Displaying Issues in the Java GUI

Once AccuWorkflow is enabled, any time an AccuRev user opens an issue from the Java GUI the issue is automatically displayed in the Web UI. In addition, the Enable Issue Preview preference is disabled: all AccuWork issues are displayed in the Web UI if AccuWorkflow is enabled.

If AccuWorkflow is not installed, Java GUI users can still use the Web UI to display issues. This can occur in one of two ways:

- The AccuRev administrator can set the `useWebForIssues` element in the **settings.xml** file on the AccuRev server to “true” (`<useWebForIssues value="true" />`). Once this property is set, issues in the Java GUI are automatically displayed in the Web UI when they are opened, and the Enable Issue Preview preference in the Java GUI AccuRev Preferences dialog box is disabled.
- If the AccuRev administrator has not set the `useWebForIssues` element in the **settings.xml** file, AccuRev users can set the **Open Issues in Web Only** preference on the Java GUI AccuRev Preferences dialog box.

See the *AccuRev Installation and Release Notes for Version 5.2* for more information on enabling AccuWorkflow and the Web UI for displaying issues.

Creating a Workflow

In previous releases, you created a workflow in the Java GUI by defining conditions and actions textually on the Schema Editor Validation tab, and then manually configuring the stages and transitions that implement those conditions and actions on the Workflow tab.

In AccuRev Web UI Version 2011.2, creation of stages and transitions, and the conditions and actions that define them, is now completely automated—the Stage Generator creates fully defined stages and transitions based on the values for any AccuWork schema field you choose, like *status* or *state*, for example. A full set of tools allows you to create custom stages and transitions as needed.

The Workflow Editor now has a more robust and full-featured graphical user interface, allowing you to easily link stages after selecting them from the workflow diagram. Indeed, all workflow operations can now be performed on the Workflow Editor GUI. Stages and transitions retain their distinctive colors (green for stages, orange for transitions), and features like group select and group move make the workflow diagram easy and intuitive to use.

See Chapter 4, Configuring AccuWorkflow™ in the *AccuRev® Web UI User's Guide* to learn how to create, configure, and manage workflows using AccuWorkflow.

Converting Existing Workflows

Existing workflows must be recreated using the Workflow Editor in the AccuRev Web UI. There is no conversion utility at this time. See Chapter 4, Configuring AccuWorkflow™ in the *AccuRev® Web UI User's Guide* to learn how to use the Stage Generator to automatically create workflow stages and transitions based on your AccuWork schema.

Managing Issues with AccuWorkflow™

Once you have defined a workflow, associating workflow transitions with your depot's streams gives AccuRev users the ability to automatically promote changes based on transitions they apply to issues. As in previous releases, buttons for transitions that are applicable to an issue based on its current stage are displayed on the Issue Edit form and elsewhere in the Web UI.

Similarly, setting a stream as a workflow project lets AccuRev users quickly display all issues for any stage in the workflow with a single click. And a read-only version of the workflow diagram is always just a click away for easy reference for users who might have questions about which transition to apply to an issue.

See Chapter 3, Using AccuWork™ and AccuWorkflow™ in the *AccuRev® Web UI User's Guide* to learn how to manage issues in AccuRev when AccuWorkflow has been implemented.

Changes in Version 2011.1

The 2011.1 release of the Web UI includes the following changes:

19361 – change StreamBrowser™ direction

By default, the streams in the StreamBrowser flow from right to left (from a workspace to the root, for example). A new option, **Streams flow**, allows you to toggle the direction of the flow display from left to right.

20163 – tagged text now displayed for issue query results

In previous releases, text that was bracketed with left and right angle brackets, *<like this>*, in the Issue Edit Form was not displayed in the Query Results pane. For example, if an issue's **Short Description** was *Some values are missing their <xml> tags*, the **Short Description** for that issue in the Query Results pane would be displayed as *Some values are missing their tags*. This has been corrected in the current release.

20455 – Delete key enabled

The keyboard Delete key is now enabled in most places in the Web UI where a remove operation is available. For example, instead of clicking the **Remove** button in the StreamBrowser™ tabular view to remove a stream, you can now press the Delete key on your keyboard. Note that the Delete key is not enabled in the StreamBrowser graphical view.

20684, 21034 – unaffiliated changes displayed with issues

Issue lists in the Web UI now display *unaffiliated changes*, that is, changes that are not associated with any change package. Unaffiliated changes are also included in query diff results.

20685, 21215 – expanded Send files to Issue functionality

The **Send files to Issues** command is now available in more places in the Web UI, including the History Browser, the Issue Diff tab, and other places in the Web UI where issues are listed.

20862 – Issue Diff tab displays incomplete issues

Incomplete issues are now shown by default in the Issue Diff tab. You can exclude them from display by clearing the **Include Incomplete Issues** checkbox.

20864 – XML output improved

In previous releases, the XML exported for active issues in a stream included a *<_flag>* tag with a value of Yes or No to indicate whether or not the issue was complete. This tag has been changed to *<_complete>*.

21211 – dates can be subtracted

The **Calculate Columns** command now supports subtracting one date from another.

21216 – Crucible only: more locations for creating code reviews

You can now create code reviews from most places in the Web UI from which you can diff files. Where you have the choice of diffing against backed or diffing against basis, you can similarly choose to create the code review using the backed or basis version of the file. You cannot create code reviews from the Version Browser at this time.

21255 – bulk update respects schema restrictions

The **Bulk Update** command no longer allows users to update values for fields that have been set to read-only in the AccuRev Schema.

21476 – required fields are now displayed correctly

Fields that were defined as required in the AccuRev Schema ([setRequired](#)) were not always displayed correctly in the Web UI. Other field and layout discrepancies between the Java GUI and the Web UI have also been addressed.

21485 – Crucible only: specify file extensions to identify text files

Crucible interprets any file with an extension that it does not recognize as a binary type; the content of binary files cannot be displayed in Crucible. In order to ensure that files used by your organization are interpreted correctly as text files, if appropriate, add those file extensions to the Crucible raw-mime.types file. See Setting Up File Mappings in Crucible in the *AccuRev® Web Interface User's Guide* for more information.

21590 – new icons for Diff vs. Query

Left- and right-pointing triangles were used in previous releases to identify whether an issue displayed as a result of performing Diff vs. Query was present in a query, a stream, or both. These icons have been replaced with query and stream icons, respectively.

21644 – support for fields of type Stream

Previously, the Issue Edit form did not display values for fields defined with a type of Stream in the AccuRev Schema. This prevented streams set as the project stream in the Java GUI StreamBrowser (**Stream as Project**) from appearing in certain drop-down fields in the Web UI.

21653 – Crucible only: secure password entry

The field type for passwords has been changed so that passwords are no longer visible as they are typed.

21676 – displaying removed columns for queries

The Set Up Columns dialog box, used to choose columns to display in query results, displayed columns that had been removed from the AccuRev Schema using the Schema Editor. Such columns are no longer displayed in the Set Up Columns dialog box.

21677 – Promote button for active issues

The **Promote** button has been added to the Issue pane toolbar on the Issues tab, simplifying the process of promoting files.

21679 – Complete issue status displayed in Diff vs. Query

A **Complete** column has been added to the Diff vs. Query tab, which allows you to see whether an issue is complete (Yes) or incomplete (No).

21698 – Web UI updated after using Send to Issue, Remove

In previous releases, certain pages in the Web UI were not updated appropriately after using Send to Issue or Remove to manage elements associated with an issue. For example, the Issues column in the Versions pane of the History Browser would display the issue number following the Send to Issue operation only if you manually refreshed the Web UI. Other pages with similar behavior included the Issues tab and Issue Diff tab. This issue has been corrected in the current release.

21820 – typo on Issue History tab

In previous releases, the transaction number column on the Issue History tab of the Issue Edit Form appeared as Tras. Num. This column heading is now Trans. Num.

21823 – XML header tags for exported tables

In the previous release, the XML for exported tables included two XML header tags (`<?xml version="1.0"?>`, for example) when the AccuRev Server was installed on a machine using UTF-8 encoding. This problem has been corrected in the current release.

21888 – improved error message

The error message displayed when trying to promote an unaffiliated issue has been improved.

21942 – Streams pane in File Browser

In the previous release, the Streams pane in the File Browser did not always render correctly when the AccuRev Web UI was run on Internet Explorer 8. This problem has been corrected in the current release.

22089 – rich text formatting can be turned off

The previous Web UI release introduced a rich text formatting toolbar in text and log fields. These tools allow you to format text (bolding and creating bulleted lists, for example) in text and log fields, and they preserve rich text formatting during copy/paste operations.

If you choose, you can turn off rich text formatting by adding the following element to the **wui_config.xml** file:

```
<useRichText value="no"/>
```

When the **value** attribute is set to no (**value="no"**):

- The rich text formatting toolbar is no longer displayed in text and log fields
- Previously formatted text is displayed as plain text, including all tags used to format it (`<italic>`, for example)

If the **value** attribute is set to yes (**value="yes"**), or if the **useRichText** element is not present in the **wui_config.xml** file, the rich text formatting toolbar is available.

See *Modifying wui_config.xml* on page 10 in *Configuring the AccuRev® Web Interface* for details about working with the **wui_config.xml** file.

22124 – History Browser toolbar duplicated when switching from Version Browser

Switching back and forth between the Version Browser and the element History Browser duplicated the toolbar in the History Browser's Versions pane. This problem has been corrected in the current release.

