AccuRev®

Installation and Release Notes

Version 6.0

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Introduction

Welcome to AccuRev®, unleashing the power of software development teams to deliver superior results.

Highlights of this Release

AccuRev Version 6.0 provides important new functionality and numerous improvements which are summarized here:

Change Package Improvements

Change packages are now easier to use, allowing you to work in a natural manner without the necessity of manual rules and procedures.

AccuRev has always been good at showing you where your files are and how your project is progressing, but with Release 6.0, improvements in the following areas now make it easier to manipulate the elements involved in those projects.

- Issue Dependencies -- AccuRev now automatically keeps track of changes even when the same element has versions from two different issues. It is no longer necessary to ensure that all changes for one issue are complete before promoting changes for a different issue.

- Tracking Issues -- Tracking issues are still available if you wish to use them, but they are no longer required when you patch an issue from one stream to another.

- Incomplete Change Packages and Unaffiliated Changes - AccuRev has always been able to alert you to files that are missing from a change package, but now it is also able to alert you to missing versions of a file. This means that you will see far fewer instances of "Unaffiliated Changes" (versions of files that cannot be associated with an issue in the current stream).

These improvements have been achieved through two technical changes:

- Multiple segments ("multi-segments") -- AccuRev 6.0 treats contiguous versions of a file as a segment. Each segment can be tracked and handled independently. That way, multiple promotes for Issue #1, for example, can be tracked, and having a "gap" caused by an intervening promote of Issue #2 does not cause a problem. You can think of each segment almost as a separate patch (not the AccuRev patch command, but a generic, development patch). AccuRev handles all the record-keeping automatically, and you no longer need to deal with the changes introduced by Issue #2.

- Variants - AccuRev 6.0 replaces the need for a separate tracking issue with a new, automatically generated variant of the existing issue. You do not even need to know that variants exist: AccuRev automatically takes care of these details for you.

Simplified Change Palette

As part of the improvements to change packages, the Change Palette has changed in the following ways:

- You no longer need to use the Change Palette for simple cross-promotes. You can simply drag & drop items from a dynamic stream to the destination stream. If there are no conflicts, the operation

completes immediately. AccuRev only brings up the Change Palette if there is a conflict that requires your intervention.

- There is now an enhanced Change Palette mode for issues. This mode provides functionality for efficiently identifying and dealing with conflicts and issue dependencies, and then promoting the issues into the destination stream.

New File Browser Modes

The File Browser for workspaces and streams benefits from a major revision with new modes that make it easier than ever to quickly focus on those files that are of interest to you with a single click.

- **Explorer mode** - The Explorer Mode displays all the files and directories in the current workspace or stream. You can use the Explorer mode to get a complete picture of your AccuRev workspace or stream, and to set rules about which files and directories you want to make available.

  If you are an existing AccuRev user, the new Explorer mode probably most closely resembles the previous File Browser with one important exception: the Search pane is gone. See *Where Did My Searches Go?* on page 3 for more information.

- **Outgoing Changes mode** - The Outgoing Changes mode displays only those files and directories that have changed in, been added to, or removed from the current workspace or stream. In workspaces, you can use Outgoing Changes Mode to save new work; in workspaces and streams, you can promote changes to the parent stream. Filters let you show files with any combination **(member)**, **(modified)**, **(external)**, **(missing)**, **(overlap)**, or **(stranded)** status. The explorer tree displays an asterisk on any workspace directory containing a change, making your changes even easier to find.

  If you are an existing AccuRev user, the Outgoing Changes mode presents the same files you would have found using Pending, Kept, and Modified searches in the previous File Browser, as well as any files in the workspace with an **(external)** status.

- **Incoming Changes mode** - The Incoming Changes mode provides a preview of any files and directories that will be changed in, added to, or removed from your workspace when you update. The Update operation keeps your workspace current with any changes that have been made to files and directories in the parent stream. In Incoming Changes mode, the explorer tree displays only those directories that will be refreshed when you update your workspace.

  If you are an existing AccuRev user, the Incoming Changes mode presents the same files you would have found using the Update Preview search.

- **Conflicts mode** -- The Conflicts mode displays the files in the current workspace or stream that conflict with another version of the same file in the parent stream or a stream elsewhere in the stream hierarchy. Examples of conflicting files include those with a status of **(overlap)**, deep **(overlap)**, and **(twin)**. You can use the Conflicts mode to resolve these conflicts -- by diffing versions and merging changes when it makes sense to do so, for example. As with the Incoming Changes mode, the explorer tree displays only those directories that contain files whose versions are in conflict.

  If you are an existing AccuRev user, the Conflicts mode presents the same files you would have found using Overlap and Deep Overlap searches in the previous File Browser. Note that, with the exception of files with a status of deep **(overlap)**, files with conflicting versions are displayed with yellow highlighting in all File Browser modes.

Other improvements to the File Browser include:

- An embedded read-only Diff pane lets you quickly compare versions. The Diff pane, which supports image files, is populated each time you select a file in Outgoing Changes, Incoming Changes, and Conflicts modes. You can hide it with a single click.

- The ability to save the File Browser layout and mode settings as a personal preference. AccuRev maintains stream and workspace File Browser layout settings separately.

- The Search Workspace field has been enhanced to include the name of the directory that currently has focus in the Explorer pane so you always know where you are searching.

- Toolbars in each mode have been streamlined to include the most commonly performed actions. Similarly, context menus now display only relevant choices.

- To speed performance, AccuRev searches for files with **(stranded)** and deep **(overlap)** statuses only if you ask it to. The Deep Overlap Optimization feature remains available to help make searches for deep **(overlap)** files as efficient as possible.

- Tooltips, labels, and instructional text have been improved throughout the AccuRev GUI.

Where Did My Searches Go?

If you have already spent some time exploring the AccuRev 6.0 GUI, you might be wondering where we moved the Search pane. In previous releases, the Search pane allowed you to search your workspace for files with different statuses - **(overlap)** or **(missing)**, for example. The set of available Search filters was comprehensive, but using them required understanding sometimes arcane statuses, and they could only be executed one at a time.

In AccuRev 6.0, status filters are built into Outgoing Changes, Incoming Changes, and Conflicts modes (the Explorer mode shows all files in your workspace, including any that have not yet been added to AccuRev). Now, if you want to see all your new work or unsaved changes, simply open the Outgoing Changes mode. Want to see all the files that might prevent you from updating your workspace or promoting your changes, click Conflicts. The AccuRev status associated with each file is displayed, but with File Browser modes you no longer have to hunt and peck through over a dozen filters in order to accomplish everyday software development tasks.

Enhanced Keep and Promote Actions in the AccuRev GUI

Adding new files to a workspace is a common occurrence in daily software development. Prior to AccuRev 6.0, sharing new work with others on your team required separate Add to Depot, Keep, and Promote actions. Now, AccuRev takes care of all the interim actions for you. For example, you can now directly Promote an external file - when you click the Promote button, under the covers AccuRev performs the necessary add and keep actions for you. Similarly, you can Keep an external file, and AccuRev performs the add action for you. And in the Incoming Changes mode, the Actions column spells out the actions AccuRev will perform when you update your workspace. As part of these enhancements, the Add to Depot action is no longer discretely available in the AccuRev GUI (through menus or toolbars, for example); the add command, however, remains available in the AccuRev CLI.

New StreamBrowser Layout Options

The layout of streams in the StreamBrowser used to be horizontal - child streams fanned out to the right of their parents, and the stream boxes were aligned in columns, with the size of the stream boxes determined by the maximum name size within that column. For example, a stream named ac_5.5_build was as wide as

a stream named ac_5.5_dev_workflow_itr4_doc_dfoster. This setting provided a uniform presentation that made viewing the stream hierarchy easy, but it also required a lot of horizontal space that made it easy to "get lost" in larger depots.

AccuRev 6.0 retains the horizontal layout choice, but it now uses a vertical layout by default - child streams appear underneath their parents, and indented. It's a layout that's graphically economical and familiar to anyone who has ever used a common tree control. In vertical layout, the stream boxes are always sized to be the width of individual stream names. You can change this setting on the StreamBrowser tab of the Preferences dialog box (**Tools** > **Preferences**).

New Stream Property Lets You Set Stream Color

A new style property lets you specify the background color for streams using the accurev setproperty command. The style property is specified in XML; colors are set using hex values. Any web-safe color is supported.

In addition to using the style property to manually highlight streams of interest, you might choose to incorporate the accurev setproperty in a script that sets a stream color based on events - you might want to set a build stream to red (#FF0000) if the build fails, and green (#00FF00) when the build passes, for example. Background stream colors are supported in both the AccuRev GUI and the AccuRev Web UI.

Version Browser Enhancements

The Version Browser has been enhanced in several ways, both to support the latest change package improvements, as well as to make it generally easier to use. The simplification of the Version Browser has allowed us to eliminate the "Basic" and "Advanced" modes, leaving a single, easier-to-navigate display. Whenever possible, workgroups with common versions are now collapsed into "workspace groups". This not only makes the display much easier to navigate and understand, it reflects the way traditional version graphs summarize the relationship of different versions.

The Version Browser display now includes both graphical and tabular panes. The table has two tabs (Streams & Workspaces, and Issues) and displays only information that is relevant in the upper, graphical pane. Selecting a row in the table highlights related items in the graphical view.

In the graphical pane, the version boxes for real versions now also display issue boxes, listing any relevant AccuWork issues for that version. Mousing over most GUI elements displays additional information: mousing over a version box now displays both real version and alias version numbers; mousing over a workspace group displays a list of member workspaces.

Finally, a new Purge line type has been added to the existing Ancestor, Alias, Merge, Patch, and Revert lines.

All features are documented in the Version Browser chapter of the on-line help.

New CLI Commands and Options

The AccuRev command line interface (CLI) has a number of new options developed in concert with the enhancements to the File Browser, Version Browser, and change packages.

- **cpkadd -j**

  The new **-j** option can be used to specify the basis version.

- **cpkremove -k -j**

The new **-k** option processes all elements with a **(kept)** status. Use **-j** to specify the basis version of the segment to be removed.

- **stat --outgoing**

  A new option that includes all files and elements in the workspace, except those with a status of **(stranded)**. Use **-i** to include elements with a status of **(stranded)**.

See the CLI documentation (*CLI User's Guide* or CLI help) for more information.

Changes to the Documentation

The user documentation was updated for AccuRev 6.0. In addition to new content to describe new features and functionality, existing users might be interested in changes to the following books. All of these changes are part of an ongoing effort to streamline the user documentation and provide fewer, more meaningful titles to make product information more accessible.

On-Line Help Guide

The *On-Line Help Guide* includes several new chapters:

- Chapter 6, "The Version Browser"
- Chapter 10, "Change Packages"
- Appendix B, "The Schema Editor (Administrators Only)"

In previous releases, material in these chapters was found scattered across several other chapters and other books.

Getting Started with AccuRev

The *Getting Acquainted with AccuRev* guide has been revised to incorporate material from the *Day-to-Day Usage of AccuRev* guide. Part of this revision included focusing the material on the end-user and changing the title to *Getting Started with AccuRev.*

Day-to-Day Usage of AccuRev

The *Day-to-Day Usage of AccuRev* guide is no longer part of the AccuRev documentation set. The material in this book is now part of the new *Getting Started with AccuRev.*

Administrator's Guide

The *Administrator's Guide* includes a preface and a new chapter, Chapter 1, "Setting Up AccuRev". The material in this chapter was in *Getting Acquainted with AccuRev* in previous releases.

Concepts Manual

Chapter 6, "Change Packages" in the *Concepts Manual* has been modified and moved to the *On-Line Help Guide*.

Technical Notes

Chapter 10, "Promote by Issue" and Chapter 11, "Incomplete Change Packages" in the *Technical Notes* have been modified and moved to the *On-Line Help Guide*.

Deprecated Features and Platforms

The following features were deprecated in AccuRev 5.7 and are no longer referenced in the user documentation:

- ACCUREV_IGNORE_ELEMS environment variable. Use the **.acignore** file to specify ignore patterns in AccuRev.

- So called traditional, server-based Timestamp Optimization (TSO). AccuRev now uses local, client-based TSO exclusively. As part of the change to the local, client-based TSO algorithm, the following features were also deprecated:

  - **-O2** option for **anchor**, **co**, **files**, **stat**, and **update** CLI commands.

  - The `stat_mode` variable in the **acserver.cnf** configuration file.

- *Stream* datatype (deprecated in AccuRev 5.5). The *Stream* datatype was introduced to support AccuWorkflow and is no longer needed.

Some deprecated features and platforms are no longer available as of this release. For details about the specific changes introduced in this release, and plans for deprecated features in future releases, see *Deprecated Features* on page 49.

Upgrading from Earlier Versions

If you are upgrading from a release prior to 5.7, make sure to read the release notes chapters to review new features, enhancements, and bug fixes for those releases that occurred since you last installed AccuRev.

To install AccuRev, please see *AccuRev Installation Notes* on page 7.

Note: If you are a user of AccuWorkflow (not to be confused with AccuWork) in earlier versions of AccuRev, please contact AccuRev Support Services (*http://support.accurev.com*).

AccuRev Installation Notes

This chapter describes how to install and upgrade AccuRev 6.0 software at your site. In addition to installation procedures, it provides information about installation package options, considerations for upgrading, and post-installation procedures. AccuRev 6.0 is intended for new customers, and for all existing customers who wish to upgrade to the latest AccuRev release.

This chapter is intended for the AccuRev administrator responsible for installing and upgrading AccuRev. Users responsible for installing or upgrading their individual AccuRev Client installations will probably be most interested in the material discussed in *Installing or Upgrading an AccuRev Client* on page 24.

Compatibility with Previous Versions

AccuRev 6.0 is not compatible with previous versions of AccuRev -- 6.0 AccuRev Clients will only work with the 6.0 AccuRev Server, and the 6.0 AccuRev Server does not support existing (5.7 and earlier) AccuRev Clients.

For a high level summary of new features in Release 6.0, see *Highlights of this Release* on page 1. For a detailed list of changes, see *AccuRev 6.0 Release Notes* on page 49.

Installation Overview

Generally speaking, installing AccuRev involves downloading an installation package from the AccuRev Web site and running it on the target machines at your site. One machine should be designated as the AccuRev Server machine -- the one that runs the AccuRev Server process, the Web UI Server process, and hosts the AccuRev data repository. This machine can also optionally host the AccuRev License Manager (ARLM) Server process. Other machines can access the AccuRev Server after you install the AccuRev Client software on them.

You can also have one or more *replica servers* in your environment. AccuRev replica servers enable you to provide access to remote users spread across multiple geographic sites. Replication can also enable you to distribute the load off a single server.

Installation Packages

AccuRev provides two installation packages: the AccuRev installation package, and the AccuRev Client-only installation package.

- **The AccuRev installation package** lets you install either:
    - The AccuRev Server and Web UI Server. The AccuRev Server and AccuRev Web UI Server installation is the correct choice for a new customer setting up the AccuRev infrastructure for the first time. During the installation of the AccuRev Server and Web UI Server, you can also optionally download AccuRev Client-only installation packages for your desired platforms. These client-only installation packages can then be used by your system's users to upgrade existing clients for AccuRev 5.5 and higher.

- ▪ The AccuRev Web UI Server only. As the name suggests, the AccuRev Web UI Server only installation is appropriate for users who wish to install only the AccuRev Web UI.

Both installation types can be used to install AccuRev components for the first time, or to upgrade existing AccuRev components. They can be run in either graphical (GUI) or text-based (console) interactive modes.

Note: The AccuRev installation package recently added several enhancements and new features. If you are an existing AccuRev customer, you might be interested in the information in *Recent Changes to the Installation Wizards* on page 8.

- ▪ **The AccuRev Client-only installation package** lets you install or upgrade *just* the AccuRev Client. The client-only installation is useful if you just need to perform a simple client installation to use with an existing, up-to-date AccuRev Server. In addition to graphical (GUI) and text-based (console) interactive install modes, the Client-only installation package also supports a "silent" install mode. The "silent" install requires the presence of a *response file*, which contains a record of responses to prompts from an earlier installation. See *Using "Silent" Client Installations* on page 28 for more information.

  If you are installing the AccuRev Client for the first time, or if you are upgrading from AccuRev 5.4.1 or earlier, you must download the AccuRev Client-only installation package for your client's platform from the AccuRev Software Download section of the AccuRev downloads page.

  If you are upgrading an *existing* client from AccuRev 5.5 or higher, however, consider using the Upgrade Client feature. See *Installing or Upgrading an AccuRev Client* on page 24 for more information.

AccuRev and AccuRev Client-only installation packages are available on the AccuRev Software Download section of the AccuRev downloads page (*http://www.accurev.com/customer-support-resources/downloads*).

Installation Wizards

AccuRev Installation Wizards guide you through the AccuRev and AccuRev Client-only installation process. The Installation Wizards can be run in either a graphical (GUI) or text-based (console) mode.

"Silent" Client-only Installations

AccuRev supports a "silent" client-only installation that uses a script with settings you specify to provide the installer with the information it needs. The silent option can be especially useful if you need to deploy many clients across your enterprise. See *Using "Silent" Client Installations* on page 28 for more information.

Recent Changes to the Installation Wizards

If you are upgrading from an older release of AccuRev, you might notice the following new features or changes in the Installation Wizards. These changes were introduced in AccuRev 5.6 and other recent 5.x releases:

- ▪ Support has been discontinued for the traditional named **keys.txt** license manager. As of AccuRev 5.5, you must use a new license, **accurev.lic**, which is managed by the new AccuRev License Manager (ARLM). The ARLM offers the choice of local or remote managers and must be installed on all platforms. See *Get an AccuRev License* on page 9 for more information.

- The AccuRev installation package now provides two installation types: One for all AccuRev components (the AccuRev Server and the AccuRev Web UI Server); and one that installs the AccuRev Web UI Server only.

  As part of this change, you are no longer prompted to choose between a "typical" or "custom" installation, and the "Server/Client" only option is no longer available.

- Client-only installation packages can be downloaded to the AccuRev Server as part of the full AccuRev installation (AccuRev Server and AccuRev Web UI Server installation). These packages can then be downloaded to and installed on individual AccuRev client machines using the Upgrade Client feature introduced in AccuRev 5.5. In addition, AccuRev supports silent (or "unattended") client-only installations.

- You now have the option to install a 64-bit version of AccuRev Server and Client on 64-bit Solaris (x86 and Sparc), Linux (x86), or Windows (x86) system. (See *Table 5* on page 12 for limitations for non-Windows upgrades.)

- Users installing on Windows may notice a "Checking for necessary Microsoft DLLs" message. The installer ensures that you have a current copy of the Microsoft Visual C++ Redistributable Package installed.

- You are no longer prompted to choose a Java Runtime Environment (JRE).

Post-installation Administrative Scripts

AccuRev installation packages provide the ability to invoke a script or executable. To configure this feature you simply set environment variable ACCUREV_POST_INSTALL to the fully-qualified path of the script or executable. The AccuRev installer will execute that script as the last step of the installation process.

Preparing for Installation

This section describes the steps to take to prepare for installing AccuRev 6.0, as summarized in the following table.

Table 1. Preparing to Install AccuRev

Step	Action	Comments
1	*Get an AccuRev License*	You do not need a license to install just the AccuRev Client or the AccuRev Web UI Server.
2	*Determine Configurable Elements*	The installation instructions use generic names. Refer to this section to determine values appropriate for your site prior to installation.
3	*Download the Installation Packages*	If you are installing just the AccuRev Client, check with your AccuRev administrator to see if the Upgrade Client feature is available at your site.

Get an AccuRev License

In order to install AccuRev 6.0, you need an **accurev.lic** license file, which is required by the AccuRev License Manager that is installed with AccuRev. You do not need an **accurev.lic** license file to install the AccuRev Web UI Server or AccuRev Client.

Note that you cannot install AccuRev 6.0 using a **keys.txt** file.

The process for getting an **accurev.lic** license file varies based on several factors, including your current license type and whether or not you are currently under maintenance, as summarized in the following table.

*Table 2. Getting an AccuRev License (**accurev.lic**)*

Type of Installation	Current License Type	Procedure	Comments
New	n/a	Use the License Request form at *http://www.accurev.com/license-request.shtml* to get a license for any new AccuRev installation.	*None*
Upgrade	**keys.txt**	If you are currently under maintenance, use the License Request form at *http://www.accurev.com/license-request.shtml* to get a new AccuRev license. If you are not currently under maintenance, contact AccuRev Sales at sales@accurev.com.	To determine whether or not you are still under maintenance, check the second date in the **keys.txt** file. **Note:** Use the AccuRev CLI command **hostinfo** to obtain the name of the License Manager host machine (Host Name) required by the License Request form.
Upgrade	**accurev.lic**	Determine whether or not your license has expired. If your license is: ▪ Current, you can use it to install AccuRev 6.0 ▪ Expired, contact AccuRev Sales at sales@accurev.com	To determine whether or not your license is expired, check the expiration date on the first line of each license section in the **accurev.lic** file.

Note: As of AccuRev 5.5, separate test licenses are no longer required. For example, if you are installing a trial server on a test machine before upgrading your production servers, you can obtain a license from your AccuRev License Manager (ARLM) server. For more information on this topic, see "Multiple AccuRev Servers" in the *AccuRev Administrator's Guide*.

Determine Configurable Elements

The installation and setup process involves a number of configurable elements. For simplicity and clarity, the instructions consistently use a set of generic names, using *<this font>*. When you see a generic name in a procedure, you must replace that name with the value that is appropriate for your site. For example, you might replace *<ac-install>* with C:\Program Files\AccuRev.

Tip: Use the **Name at Your Site** column in the following table to record the names you plan to use.

Table 3. Generic and actual names used during installation

Generic Name	Name at Your Site	Description
<installer-loc>		Location of the downloaded AccuRev installation package.
<ac-install>		Location that AccuRev is installed to. Defaults to: ▪ (Windows) **C:\Program Files\AccuRev** (32-bit) or **C:\Program Files (x86)\AccuRev** (64-bit) ▪ (UNIX/Linux) *<homeDirectory>***/accurev**

Generic Name	Name at Your Site	Description
<ac-storage>		Location of the AccuRev database and container files. Defaults to: • (Windows) **C:\Program Files\AccuRev\storage** (32-bit) or **C:\Program Files (x86)\AccuRev** (64-bit) • (UNIX/Linux) *<homeDirectory>*/**accurev/storage**
<ac-host>		Hostname of the AccuRev Server.
<ac-port>		Port number that the AccuRev Server runs on. Defaults to **5050**.
<ac-user>		Name of the operating-system user that runs the AccuRev Server. Defaults to: **acserver**.
<ac-pass>		Password for *<ac-user>*.
<db-port>		Port number that the database server runs on. Defaults to **5075**.
<db-admin-name>		Name of the database superuser. Defaults to **postgres**. **Note**: AccuRev recommends that you retain the default value, **postgres**. If you create a different value for the database superuser, it must be lowercase.
<db-admin-pass>		Password for *<db-admin-name>*. **Note**: The database password must be lowercase.

Download the Installation Packages

On the AccuRev Software Download section of the AccuRev download page (*http://www.accurev.com/customer-support-resources/downloads*), download the appropriate AccuRev installation package for your operating system to a local directory (referred to as *<installer-loc>* throughout this document).

If you download a compressed package (**.zip** or **.gz** file), first extract the files from the package before continuing. Many extraction tools are freely available. There are links to such tools on the AccuRev download page; and the **unzip** and **gunzip** programs are standard on many UNIX/Linux systems. The Mac OS X operating system does not require any special software for **.zip** files -- just double-click the file to extract its contents.

Tip: Users upgrading from AccuRev 5.5 should check with their AccuRev administrator to see if client-only installation packages have been downloaded for use with the Upgrade Client feature.

What to Do Next

What to do next depends on whether you are installing or upgrading AccuRev, the AccuRev Client, or the AccuRev Web UI Server, as summarized in the following table.

Table 4. Next Steps in the Installation Process

If You Are Installing or Upgrading	Go To
The AccuRev Server	*Installing or Upgrading an AccuRev Server* on page 12
Just the AccuRev Client	*Installing or Upgrading an AccuRev Client* on page 24
Just the AccuRev Web UI Server	*Installing or Updating the AccuRev Web UI Server* on page 30

Installing or Upgrading an AccuRev Server

The procedure for installing AccuRev is largely the same whether you are installing AccuRev for the first time or you are upgrading an existing AccuRev installation. Note, however, that there are several important considerations and prerequisites for users *upgrading* to AccuRev 6.0. See *Upgrade Paths to AccuRev 6.0* on page 20 for more information on this topic.

Before You Begin

Whether you are performing a new AccuRev Server installation or upgrading an existing installation, before installing AccuRev 6.0 you should:

1. Read the *Platform Support Notes* on page 42 for your operating system before proceeding, and follow the instructions there.

2. Check the *Known Issues* on page 109 for any issues that might apply to your site.

3. If you are installing a new AccuRev Server on a UNIX/Linux machine, run the **adduser** command to make an OS-level user (*<ac-user>*). You should set *<ac-install>* as the home directory for this user. The AccuRev Server cannot be installed by root on UNIX/Linux platforms. (This restriction does not apply to the client-only installations.)

4. Acquire an **accurev.lic** license file if you have not already done so. See *Get an AccuRev License* on page 9 for more information.

   Note: You *must* have an **accurev.lic** file in order to install AccuRev 6.0.

5. If you are *upgrading* an existing AccuRev Server:

   - **IMPORTANT: Perform a full backup of your AccuRev data.** This includes backing up any replica servers. For detailed instructions, see the section titled "Backing Up the Repository" in the *AccuRev Administrator's Guide* for your existing release. MAKE SURE TO USE THE CORRECT BACK UP PROCEDURES FOR YOUR EXISTING INSTALLATION. (In other words, do not use the back up procedures documented in the new 6.0 *Administrator's Guide* to back up your 4.x data.)

   - Read through the upgrade information that applies to your current AccuRev installation in *Server and Database Upgrades* on page 20 *before* you start the installation process.

   - Plan a maintenance window for this upgrade and data migration, during which clients will not be able to connect to the server. See the instructions at *Upgrading a Replica Server* on page 24 for running a trial upgrade and estimating the time to complete the process.

   - If you plan to change from 32-bit to 64-bit, or from 64-bit to 32-bit, as part of your upgrade, use the following table to confirm that you can do so:

     Table 5. Changing from 32-bit to 64-bit, or from 64-bit to 32-bit, as part of upgrade

Platform	Supported for Upgrades from 4.x	Supported for Upgrades from 5.x
Windows	Yes	Yes
Solaris/Linux	Yes	NO -- If you wish to change between 32- and 64-bit when performing the upgrade, please contact AccuRev Support Services (*http://support.accurev.com*) for procedures. See *SunOS / Solaris* on page 46 for more information.

6. Before starting the installation on UNIX/Linux, ensure that the LC_ALL environment variable is set to a UTF-8 locale (such as "en_US.UTF-8", NOT "en_US.latin".) Windows installations are not affected, however proceeding with a non UTF-8 locale on UNIX/Linux can lead to a failed, partially-complete installation. Use the **locale** command to determine your current locale setting, and **locale -a** to determine what locales are available. See the documentation for your operating system for details about how to install and change locale settings.

Considerations for AccuRev Replication Servers

Before deciding to install a replica server, see the "Replication of the AccuRev Repository" and "License Management" chapters in the 6.0 *AccuRev Administrator's Guide*. Before proceeding with replica server installation, contact AccuRev Support Services (*http://support.accurev.com*) for more information.

Downloading Client-only Installation Packages

At the conclusion of the AccuRev installation, you are given the option of downloading AccuRev Client-only installation packages. AccuRev Client-only packages are not required to complete the AccuRev installation. However, you might want to download client-only packages as part of the AccuRev installation process if, for example:

▪ You want to enable users to upgrade existing AccuRev Clients using the Upgrade Client feature.

▪ Your users do not have Internet access and are unable to acquire Client-only installation packages from the AccuRev web site.

This procedure is described in *How to Run the AccuRev Installation Wizard* on page 14. AccuRev also provides a utility that allows you to download Client-only installation packages at any time. See the *AccuRev Administrator's Guide* for more information.

Running the AccuRev Installation Wizard

This section describes how to run the AccuRev Installation Wizard. It assumes you have already downloaded the correct installation package for your platform as described in *Download the Installation Packages* on page 11.

Overview

The AccuRev wizard guides you through steps for installing a new AccuRev Server or upgrading an existing server. If the Installation Wizard discovers that an AccuRev server already exists in the location you specify, it will prompt you through the upgrade process.

Upgrading to 6.0 from AccuRev 5.4.1 or earlier requires a database upgrade, independent of the installation process. The complexity of the database upgrade depends on the release from which you are upgrading. See *Server and Database Upgrades* on page 20 for more information.

If the Installation Wizard determines that you have an existing, *nonstandard* 5.x database installation (for example, if you installed your own copy of PostgreSQL, or you have multiple instances running on the same machine), the installer will not continue. Nonstandard database installations are not supported. You need to contact AccuRev Support Services (*http://support.accurev.com*) to continue.

At the end of the installation, make sure that you tune your database parameters as described in *Configuring Database Tuning Parameters* on page 34. You must reboot the database for the tuning parameters to take effect.

Before You Begin

Before running the AccuRev Installation Wizard:

1. **Log in** -- Log in to the machine on which you will be installing AccuRev. Log in as `<ac-user>` (UNIX/Linux) or a user with installation privileges (Windows). (See *Before You Begin* on page 12 to learn about creating `<ac-user>` on UNIX/Linux machines.)

    Note: For security reasons, you CANNOT install the AccuRev server on UNIX/Linux if you are logged in as **root**. (This restriction does not apply to the client-only installer.)

2. **Stop the AccuRev Server and AccuRev DB Server** -- If you are upgrading an existing AccuRev Server, you must stop the AccuRev Server and the AccuRev DB Server before you can install the current version. See *Starting and Stopping AccuRev Servers* on page 40 if you need help with this step.

    Tip: Stopping the AccuRev DB Server also stops the AccuRev Server.

How to Run the AccuRev Installation Wizard

This section describes how to install AccuRev using the AccuRev Installation Wizard.

> **Note:** The specific prompts that you see and the order in which you see them can vary depending on your particular installation and the options that you select. All users will not see all prompts described in the following procedure, which focuses on the graphical version of the Installation Wizard but provides information about console mode in [*brackets*].

To run the AccuRev Installation Wizard:

1. **Start the Installation Wizard** -- Start the AccuRev Installation Wizard you downloaded from the AccuRev web site by double-clicking the installer icon, or by entering the installer name on the command line as summarized in the following table. Note that the installation program can be run with a graphical user interface (GUI) or as a console (text-only) application.:

Table 6. Starting the AccuRev Installation Wizard

Platform	Installation Mode	Run This Procedure
Windows	GUI	**AccuRev_*n_n_n*_Windows.exe** where *_n_n_n* is the AccuRev version number **AccuRev_6_0_0_Windows.exe**, for example
	Console (text-based)	**AccuRev_*n_n_n*_Windows.exe -i console** where *_n_n_n* is the AccuRev version number **AccuRev_6_0_0_Windows.exe -i console**, for example
UNIX/Linux	GUI	**sh AccuRev_*n_n_n_platform_m_m*.bin** where: ▪ *_n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ *_m_m* is the OS version **sh AccuRev_6_0_0_Linux_x86_2_4**, for example
	Console (text-based)	**sh AccuRev_*n_n_n_platform_m_m*.bin - i console** where: ▪ *_n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ *_m_m* is the OS version **sh AccuRev_6_0_0_Linux_x86_2_4 - i console**, for example

Tip: If you are installing AccuRev from the console you can type:

- ▪ "**back**" to return to the previous prompt in the installation program
- ▪ "**quit**" to exit the installation program

2. **License Agreement** -- Before you can proceed, you must click "I accept the terms of the license agreement." and then click **Next** to continue. *[Console: Press **Enter** to scroll through the license agreement, then type "**y**" and press **Enter** to continue.]*

3. **Confirm Administrator Privileges** -- If the installer prompts you for this information:

   - ▪ Windows: Specify whether or not the current user has Administrator privileges on the current machine. Note that Windows requires that you have Administrator privileges.

   - ▪ UNIX/Linux: Specify whether the current user is **root**. Note that for security reasons, you CANNOT install the AccuRev server on UNIX/Linux if you are logged in as **root**. (This restriction does not apply to the client-only installer.)

4. **Choose Install Folder** -- Specify a different directory if you do not want to use the *<ac-install>* defaults: *<homeDirectory>/*accurev on UNIX/Linux, `C:\Program Files\AccuRev` on Windows. See *Determine Configurable Elements* on page 10 if you are not familiar with the values represented by *<ac-install>* and *<homeDirectory>*.

   - ▪ If you are installing software for the first time, and do not wish to use the default location, specify a location where you have write permission.

   - ▪ If you are upgrading and the existing installation is not at the default location, specify your existing AccuRev installation directory.

   Click **Next** to accept the default and continue. *[Console: Press **Enter** to accept the default and continue.]*

5. **Choose Installation Type** -- Select one of the following:

   - ▪ **AccuRev Server and Web UI Server** -- Installs the AccuRev Server, the AccuRev Web UI Server, and a local AccuRev Client. Note that the AccuRev Web UI Server includes an Apache Tomcat web server. *[Console: Press **Enter** to install the AccuRev Server and Web UI Server.]*

   - ▪ **Web UI Server only** -- Installs only the AccuRev Web UI Server and AccuRev Client. If you choose this installation option, click **Next** and go to *Installing or Updating the AccuRev Web UI Server* on page 30 to complete the installation. *[Console: Type "**2**" and press **Enter** to install the Web UI Server only.]*

6. **Install Replication** [*Console: "Choose Replication Type"*] -- Choose **No replication** [*Console: "1" for None*] unless you have already determined (along with AccuRev Support Services) that your site will be implementing one or more replica servers. If you have any questions about AccuRev replication servers, refer to *Considerations for AccuRev Replication Servers* on page 13 before continuing.

   If you know for a fact that your site is implementing replica servers, select either:

   - ▪ "**Yes, this is the master**" for the site that will be sending elements out to the replica [*Console: type "**2**" for Master.*]

   - ▪ "**Yes, this is a replica**" for the site (typically remote) that will be connecting to a master server to receive files [*Console: type "**3**" for Replica.*]

   Proceed through the remainder of the installation program. When prompted for replication options, confirm your choice of master server or replica server as appropriate.

To upgrade an existing replica server, see *Upgrading a Replica Server* on page 24.

Note: Installing the replica software is only part of the process. Before you can use a newly-installed replica server, you need to configure both it and the master server. Configuration and licensing information about replica servers is located in the "Replication of the AccuRev Repository" and "License Management" chapters in the AccuRev *Administrator's Guide*.

7. **Customize: Choose a Folder for AccuRev Server Data Storage** *[Console: "Choose a Folder for AccuRev Server Data Storage".]* -- If you do not want to use the `<ac-storage>` default (`<homeDirectory>/accurev/storage` on Linux/UNIX, `C:\Program Files\AccuRev\storage` on Windows), specify a different directory in the **Please Choose a Folder** field. AccuRev creates the folder you specify if it does not already exist.

    Note: Ensure that the path you specify is LOCAL disk storage (not a network drive) and that it has plenty of space.

    Click **Next** to continue. *[Console: Press **Enter**.]*

8. **Install new AccuRev config files?** -- If the Installation Wizard discovers existing configuration files, it gives you the option of retaining them. Retaining them is generally the right choice, unless you want to reinstall your client or server from scratch or are otherwise making major changes to your existing installation. The AccuRev installer will append any new required fields to your existing configuration files.

9. **Configure Database Port and User** -- Enter the values for the **Database Port** (`<db-port>`) and **Superuser Name** (`<db-admin-name>`) fields. *[Console: Prompts for these values individually.]*

    Unless the default database port "5075" conflicts with something else on your machine, you should not change the value in the **Database Port** field. Likewise, AccuRev recommends that you keep the default value "postgres" for the **Superuser Name** unless you have a specific reason to change it.

    Note: If you create a different value for the database superuser, it must be lowercase.

10. **Configure Database Password** [*Console: "Set Database Superuser Password".*] -- In the **Superuser Password** field, enter the value for `<db-admin-pass>` that you chose in *Table 3* on page 10. Enter it again in the **Confirm Superuser Password** field. Make sure that you record this password in a secure location for later use.

    Note: The database password must be lowercase.

11. **License Server Host** -- Specify whether you are using the machine on which you are installing AccuRev as the host for your AccuRev License Manager (ARLM), or whether you are using an existing ARLM on another machine:

    ▪ **Local AccuRev License Manager** -- Choose this option unless you have an existing AccuRev License Manager (ARLM) on another machine that you want to use. Later in the installation (*Step 14*) you will specify configuration settings for the ARLM. *[Console: Type "1" for Local.]*

    ▪ **Remote AccuRev License Manager** -- If you DO have an existing ARLM on another machine that you want to use, choose this option. [*Console: type "2" for Remote.*] If you choose this option, the Installation Wizard displays an additional page, **AccuRev License Manager Configuration**, which requires that you enter the following:

        ▪ **Hostname** -- Enter the network name of the server where the remote ARLM exists.

        ▪ **Port** -- Keep the default value of 2375, unless you know that the remote ARLM is running on a different port.

    For more information about licensing, see the following:

- The "License Management" chapter in the *AccuRev Administrator's Guide*.

- An example script for automatically starting the ARLM server at boot time on UNIX/Linux systems (automatically done for Windows installations):
  <ac-install>/extras/unix/accurev_rlm

- "The License Server" section of the on-line *Reprise License Manager End-User Guide* at
  http://www.reprisesoftware.com/RLM_Enduser.html

12. **Install New AccuRev License?** -- If the Installation Wizard detects an existing **accurev.lic** license file where you have chosen to install AccuRev, it gives you the choice to continue using that license or to specify a different **accurev.lic** file.

    To use the existing license, choose **No**, click **Next** to continue *[Console: Type "n" and press **Enter** to continue.]*, and go to *Step 14*.

    To use a new license, choose **Yes**, click **Next** to continue *[Console: Type "n" and press **Enter** to continue.]*, and go to *Step 13*.

13. **Specify AccuRev License Location** -- Specify the full path of your **accurev.lic** license file. See *Enabling the AccuRev License Manager (ARLM)* on page 42 for more information.

14. **AccuRev License Manager Configuration** -- Use this page to confirm default settings for the AccuRev License Manager port and web port settings. Click **Next** to continue. *[Console: Press **Enter** to continue; there are separate prompts for ARLM port and ARLM Web port numbers.]*

15. **Configure: Set Host and Port** *[Console: Choose Hostname and Port number]* -- Review the default values for the **Host** and **Port** fields for the AccuRev Server. You should accept the default values chosen by the Installation Wizard unless you have a good reason to change them. *[Console: Review the host name value, then press **Enter** to continue; then review the port value and press **Enter** to continue.]*

    Click **Next** to continue. *[Console: Press **Enter** to continue.]*

16. **Adjust System PATH Variable** -- Responding **Yes** enables the AccuRev Installation Wizard to modify the PATH environment variable on your system so that you do not need to specify a full path on the command line when using AccuRev commands. Click **Install** to continue. *[Console: Type "y" and press **Enter** to continue.]*

    Note: You might need to reboot after installation before changes to the PATH environment variable take effect.

17. **64-bit Hardware Detected** -- If the AccuRev Installation Wizard determines that you are installing on 64-bit x86 hardware running a 64-bit Linux, Solaris, or Windows operating system, it offers you the option of installing either a 32- or 64-bit version of the AccuRev Server. In all other situations, it installs the 32-bit version by default. (**IMPORTANT**: See *Table 5* on page 12 for limitations.) Optionally change the value and click **Next** to continue. *[Console: Type "1" for 32-bit or "2" for 64-bit and press **Enter** to continue.]*

    Note: On 64-bit Linux and Windows, the AccuRev installer ALWAYS installs a 32-bit Java runtime environment (JRE) for use by AccuRev. This means that even if you choose to install 64-bit AccuRev on Linux, the Linux 32-bit compatibility libraries must always be installed. If this is not the case, the AccuRev installation will fail. See *Platform Support Notes*, *Linux* on page 43 for more information.

18. **Installing AccuRev** -- The Installation Wizard displays a splash screen *[Console: displays "Installing" with a progress bar]* while it installs the software on your local machine. It displays a Please Wait message while it performs configuration tasks.

19. **Database Tuning** -- The Installation Wizard reminds you that you can use database tuning parameters to improve performance. See *Configuring Database Tuning Parameters* on page 34 for more information. Click **Next** to continue. *[Console: Press **Enter** to continue.]*

20. **Reminder** -- If you are upgrading from AccuRev 5.4.1 or higher, the Installation Wizard reminds you to run **maintain dbupgrade** to migrate to the current database version installed with AccuRev 6.0. Click **Next** to continue. *[Console: Press **Enter** to continue.]*

21. **Configure: Start AccuRev WebUI Server** -- In a new installation, the Installation Wizard prompts you to start the AccuRev Web UI Server. Accept the default value (**Yes**) unless you want to start it later. Click **Next** to continue. *[Console: Press **Enter** to continue.]*

    Note: See *Installing or Updating the AccuRev Web UI Server* on page 30 for more information on Web UI Server installation and configuration.

22. **Configure: Start AccuRev Server** -- In a new installation, the Installation Wizard prompts you to start the AccuRev Server. Accept the default value (**Yes**) unless you want to start it later. Click **Next** to continue. *[Console: Press **Enter** to continue.]*

    Note: See *Starting and Stopping AccuRev Servers* on page 40 if you choose to start the AccuRev Server at a later time.

23. **Install Complete** -- The Installation Wizard displays a message when the installation is complete. Click **Next** to continue *[Console: Press **Enter** to continue.].*

24. **Download Optional Client-Only Installers** -- The Installation Wizard asks if you want to download AccuRev Client-only installation packages.

    If you want to download Client-only installation packages for one or more platforms now, click **Done** to continue. *[Console: Type "**1**" and press **Enter** to continue.]* AccuRev then starts a second installation program. Go to *Step 25*.

    To skip downloading Client-only installation packages and conclude the AccuRev installation process, choose **No** and click **Done** to continue. *[Console: Type "**2**" and press **Enter** to continue.]* Go to *What to Do Next* on page 19 to learn about post-installation procedures for new and upgrade installations.

    Note: Downloading the Client-only installation packages *does not* install the AccuRev Client on the AccuRev Server or current AccuRev Client machines. It simply places the packages on the AccuRev Server where they can be accessed using the Upgrade Client feature on AccuRev Clients.

25. **Select Client Installers** -- Select the platforms for which you want to download Client-only installation packages and click **Next** to continue. Client-only installation packages for Windows and Linux/x86 are selected by default. *[Console: Press **Enter** to accept the defaults. Otherwise, enter values in a comma-separated list for each desired platform and press **Enter** to continue. To select Mac OS X and AIX, for example you would type "**5,6**" and then press **Enter**.]*

26. **Download Client Installers** -- The Installation Wizard notifies you that any existing Client-only installation packages on the AccuRev Server will be deleted and that users will be unable to upgrade their clients while the Client-only installation packages download.

    To continue with the download process, choose **Download new installers** and click **Install** to continue. *[Console: Type "**1**" and the press **Enter** to download. To exit without downloading press **Enter**.]*

27. **Download Complete** -- The Installation Wizard notifies you when the Client-only installation packages have been downloaded to the AccuRev Server and are ready for use by the Upgrade Client feature.

To exit, click **Done**. *[Console: Press **Enter**.]*

What to Do Next

What to do after a successful AccuRev installation depends on whether you performed a new installation or an upgrade, as summarized in the following table:

Table 7. Upgrading to AccuRev 6.0

Installation Type	Next Steps	For More Information
New	If you chose not to start the AccuRev Server as part of the installation process, you must start it before you can use AccuRev. If you plan to make the AccuRev Web UI available to your users, you must: ■ Start the Web UI Server if you chose not to start it as part of the installation process ■ Configure the Web UI for use with the AccuRev GUI	See *Starting and Stopping AccuRev Servers* on page 40 Go to *Starting, Stopping, and Testing the AccuRev Web UI Server* on page 33 Go to *Configuring the AccuRev Web UI* on page 33
Upgrade	After upgrading to AccuRev 6.0, you need to: ■ Run the **maintain dbupgrade** command to migrate your database to the current version installed with AccuRev ■ Start the AccuRev Server	Go to: ■ *Using the 'maintain dbupgrade' Command* on page 35 ■ *Starting and Stopping AccuRev Servers* on page 40

Server and Database Upgrades

This section contains instructions for upgrading AccuRev databases from previous releases to 6.0. Note that if you have existing replica servers, you must also follow the instructions in *Upgrading a Replica Server* on page 24. AccuRev strongly recommends that you first perform database upgrades in "trial mode" before attempting the actual upgrade on a production server, to determine if you will encounter any issues, and to estimate how long the upgrade is likely to take so that you will know how long your servers will be unavailable to your users.

Upgrade Paths to AccuRev 6.0

This section summarizes the supported upgrade paths to AccuRev 6.0 from previous versions of AccuRev. More detailed information is presented in the following sections.

AccuRev supports upgrades from existing 4.x and 5.x. installations. Since AccuRev 5.0 introduced a third-party database, upgrading from a pre-5.0 version of AccuRev has special requirements and procedures. Upgrades from 5.0.x, 5.1, 5.2, or 5.3 also require a database upgrade, although these are much quicker.

The following table summarizes upgrade requirements.

Table 8. Upgrading to AccuRev 6.0

If you are upgrading from:	You must:	Notes
pre-4.7	1. First perform an upgrade installation to 4.7.x, 4.8.x, or 4.9.x. 2. Upgrade to 6.0 and run **maintain dbupgrade.**	You cannot directly upgrade to any 5.x or 6.x release from a version prior to 4.7.
4.7.x, 4.8.x, 4.9.x	Perform an upgrade installation to 6.0, tune the database, and run **maintain dbupgrade.**	Since 5.0 introduced a new third-party database, plan sufficient time and disk space for the **dbupgrade** process to convert your existing data.
5.0.x (not including 5.0.5)	Perform an upgrade installation to 6.0 and run **maintain dbupgrade.**	5.0.x uses an older version of PostgreSQL than is required by AccuRev 6.0. The AccuRev installer will prompt you through the procedure. **Note:** 5.0.5 is a Japanese-localized version of AccuRev and must be updated to 5.2.1 (not 5.2 or 5.3 or higher).
5.1, 5.2, or 5.3	Perform an upgrade installation to 6.0 and run **maintain dbupgrade.**	Since 5.1, 5.2, and 5.3 are already based on the third-party database, the **dbupgrade** process is relatively quick. **Note:** 5.2.1 is a Japanese-localized version of AccuRev and cannot currently be updated to 6.0.
5.4 or higher	Perform an upgrade installation to 6.0 and run **maintain dbupgrade.**	**Note:** 5.6.1 is a Japanese-localized version of AccuRev and cannot currently be updated to 6.0.

Additional Notes:

- If you are using AccuWorkflow in AccuRev 5.4 or earlier, please contact AccuRev Support Services (*http://support.accurev.com*). This note applies only to *AccuWorkflow*, not AccuWork.

- When upgrading from all previous releases, the 6.0 AccuRev Server will not start until after you have run **maintain dbupgrade**. Customers using change packages may find longer than normal upgrade times due to the migration of the change package data models required by the 6.0 release.

- If you are upgrading an existing installation and plan to change from 32-bit to 64-bit, or from 64-bit to 32-bit, as part of the upgrade, see *Table 5* on page 12 to confirm whether this requires assistance from AccuRev Support Services.

Upgrading an AccuRev Server from pre-4.7

If you have an existing AccuRev server that is older than 4.7, you *must* first upgrade to 4.7.x, 4.8.x, or 4.9.x. Make sure that you have performed the necessary steps from *Before You Begin* on page 12.

Before you begin, make arrangements to upgrade any scripts you have created to back up and restore AccuRev data. Refer to the chapter titled "The AccuRev Repository" in the *AccuRev Administrator's Guide*, and the documentation for the **backup** command in the *AccuRev CLI User's Guide*.

Download one of these releases and follow the upgrade procedures documented in the appropriate *AccuRev Installation and Release Notes* document: 4.7.x, 4.8.x, or 4.9.x.

Once you have done this, proceed to the next section (*Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x*).

Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x

We strongly recommend that you perform a trial upgrade of your production data on a separate test machine before using the procedure in this section to upgrade 'in place'. This extra step will ensure that the production server upgrade goes smoothly.

Plan to have enough disk space available to accommodate the increase in size required by the 6.x database. (See the note under *Performing an Upgrade "In Place"* on page 22 for more details.)

Note: If the test machine hardware is not up to the same specifications as your production server, the trial upgrade procedures may take significantly longer to complete.

Performing a Trial Upgrade on a Test Machine

1. Make sure that you have performed the necessary steps from *Before You Begin* on page 12.

2. If you have not already done so (as specified in *Running the AccuRev Installation Wizard* on page 13), perform an AccuRev back-up of the master or replica machine as described in the "Backing Up the Repository" section of the AccuRev 4.x *Administrator's Guide*.

3. Move the files created during the full backup of AccuRev 4.x to your test machine.

4. On the test machine, log in as *<ac-user>* (UNIX/Linux) or a user with installation privileges (Windows).

   *Important! Do not attempt to install the server as user **root** on UNIX/Linux. The installation will not complete correctly. (This restriction does not apply to the client-only installer.)*

5. Install AccuRev 4.7.x, 4.8.x, or 4.9.x on your test machine. See the *AccuRev Installation and Release Notes* for that release for instructions.

6. Perform a full restore of the backed-up data on the test machine as described in the "Restoring the Repository" section of the AccuRev 4.x *Administrator's Guide*.

7. Start AccuRev on the test machine and ensure that is running correctly.

8. Stop the AccuRev Server process on the test machine according to the instructions in *Starting and Stopping AccuRev Servers* on page 40.

9. Navigate to the `<installer-loc>` directory and locate the downloaded AccuRev 6.0 installer.

10. Double-click the installer's icon to launch it, or enter `<install-cmd>` on the command line. To run the installer in console (i.e., text) mode, add a space and **-i console** to the end of the `<install-cmd>`.

11. Proceed through the upgrade program.

   Caution: The AccuRev 6.0 server does not start automatically after the AccuRev server upgrade. Do not start the server until you have completed the database upgrade as described in the following step.

12. After the AccuRev Server installation is complete, tune your database (see *Configuring Database Tuning Parameters* on page 34) and then go to *Using the 'maintain dbupgrade' Command* on page 35 and run the **maintain dbupgrade** command (first in "trial run" mode and then "for real") to upgrade your AccuRev 4.7.x database to AccuRev 6.0. Return here when done.

13. Ensure that the new **accurev.lic** license file exists in `<ac-install>`/storage/site_slice.

14. Start the AccuRev Server process according to the instructions in *Starting and Stopping AccuRev Servers* on page 40. Test your installation and ensure that all data have been upgraded correctly.

Performing an Upgrade "In Place"

When you have successfully completed the trial upgrade on the test machine, perform the actual upgrade procedure on your existing production installation. Make sure that you choose a sufficient window of "quiet" time to perform the upgrade.

Notes:

- The upgrade process will require additional disk space of up to twice the total used by the 4.x metadata. (Note that metadata is only a fraction of your total AccuRev storage, as it does not include your source files in the `data` directories.) The size of the upgraded 6.0 database may be as much as two times that of the 4.x database.

  Example: Consider an AccuRev 4.7.x installation with 800MB of metadata.

    Disk space needed during the upgrade: up to 2.4 GB
    Size of 5.x metadata: 1GB
    Total metadata size after upgrade: 1.8 GB (1GB – 5.x metadata, 800MB – 4.7.x metadata)

    Note: After a successful upgrade, you should back up your 4.x `*.ndb` files, then remove them along with their corresponding `*.ndx` files from the `<ac-storage>` directory to free up disk space.

- If you have previously installed the AccuRev Server on UNIX/Linux as user **root**, the upgrade will not complete correctly. You will need to first `(sudo) chown -R` `<ac-user>` `<ac-install>` the old directory.

- When upgrading from 4.x to 6.0 all active sessions are lost. All users will have to re-login, including those who have previously done a "**login -n**". Attention needs to be paid to the logins for triggers, continuous integration, or build processes.

Rolling Back After Upgrading from 4.7.x, 4.8.x, or 4.9.x

Important: Rolling back a 6.0 upgrade from 4.7.x, 4.8.x, or 4.9.x will result in the loss of any changes that occurred in the AccuRev repository between the time of the upgrade and time of the rollback.

To roll back a non-trial upgrade and start a fresh upgrade from the original 4.7.x, 4.8.x, or 4.9.x metadata:

1. Make sure that all 4.x `*.ndb` files are still present on the system.

2. Perform the following commands in order:

   ```
   maintain rmsite <db-admin-name>
   maintain dbupgrade <db-admin-name>
   ```

Upgrading an AccuRev Server from 5.0.x

When you upgrade from AccuRev Release 5.0.x to 6.0, the AccuRev Installation Wizard lets you preserve your development data and configuration files, and installs the upgrade in the same place as your existing version.

During the upgrade process, the Installation Wizard will prompt you for a folder that it can use to export/import your current database and upgrade it for the updated version of PostgreSQL. Make sure that you choose a location that has ample disk space to do this: the amount of space required is roughly equivalent to your current AccuRev repository size. Although the default value of `<ac-storage>` may be fine for small databases, you will probably want to change this for larger installations.

> **Important:** When upgrading an existing 5.0.x installation, be sure to specify the same database password (`<db-admin-pass>`) that is used by your existing database.

The upgrade process includes a PostgreSQL update. The data migration must be finalized by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 35) after the installer completes. The AccuRev Installation Wizard prompts you through these steps.

1. Make sure that you have performed the log in and back up steps described in *Before You Begin* on page 12 and *Running the AccuRev Installation Wizard* on page 13.

2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and Stopping AccuRev Servers* on page 40.

3. See the *Running the AccuRev Installation Wizard* on page 13 to proceed through the remainder of the Wizard.

   The update process includes the following steps:

   - Exporting your existing database from `<ac-storage>` to a temporary location.

   - Updating PostgreSQL from Release 8.3 (used by AccuRev Release 5.0.x) to Release 8.4 (used by AccuRev Releases 5.1 and higher).

   - Importing your database from the temporary location back into `<ac-storage>`.

4. After the import has completed successfully, you will be prompted to run the **maintain dbupgrade** command on your database to upgrade the schema. See *Using the 'maintain dbupgrade' Command* on page 35.

5. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and Stopping AccuRev Servers* on page 40.

Upgrading an AccuRev Server from 5.1 or Higher

To upgrade from AccuRev 5.1, 5.2, 5.3, 5.4, 5.4.1, 5.5, 5.6, or 5.7 you must upgrade your database schema by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 35) after the installer completes. Versions 5.1 and higher use the same version of the third-party

database, so the database upgrade is relatively quick. The AccuRev Installation Wizard prompts you through these steps.

> **Important:** When upgrading an existing installation, be sure to specify the same database password (*`<db-admin-pass>`*) that is used by your existing database.

1. Make sure that you have performed the log in and back up steps described in *Before You Begin* on page 12 and *Running the AccuRev Installation Wizard* on page 13.

2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and Stopping AccuRev Servers* on page 40.

3. See *Running the AccuRev Installation Wizard* on page 13 to proceed through the remainder of the Wizard.

   The update process includes converting the metadata to UTF-8 for proper internationalization (I18N) support.

4. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and Stopping AccuRev Servers* on page 40.

Upgrading a Replica Server

Use these instructions to upgrade an existing AccuRev replica server:

1. Perform a full backup and ensure that you have enough disk space as discussed above in *Before You Begin* on page 12.

2. **If your site uses AccuWork:** For every replicated depot that has AccuWork issues, copy the up-to-date issue schema file from the master to the replica server. Issue schema files are found in the following locations:

   `<ac-storage>`/depots/*depot-name*/dispatch/config/schema.xml

   Tip: Run "`accurev show slices`" to see the exact locations of your depots.

3. Proceed with the installation as if the replica server were a master server. Refer to the section appropriate for your current installation:

   - *Upgrading an AccuRev Server from pre-4.7* on page 21

   - *Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x* on page 21

   - *Upgrading an AccuRev Server from 5.0.x* on page 23

   - *Upgrading an AccuRev Server from 5.1 or Higher* on page 23

4. After the upgraded replica server has started, execute the following command against the replica server:

   accurev replica sync

Installing or Upgrading an AccuRev Client

This section describes the methods available to install and upgrade AccuRev Client software and procedures for their use.

Installation Methods

There are two methods for installing or upgrading the AccuRev Client once the installation executable has been downloaded to the client machine:

- An *interactive* AccuRev Client-only installation requires the user to manually run an Installation Wizard and provide information during the installation process. You can run the installation package with a graphical user interface (GUI) or as a console (text-only) application. See *Using the AccuRev Client-only Installation Package* on page 25 for more information.

- A *"silent"* AccuRev Client installation is typically used by the AccuRev administrator to automate the client installation or upgrade process in a distributed or networked environment. "Silent" installations are run from the command line and do not require any interaction by the end-user. See *Using "Silent" Client Installations* on page 28 for more information.

    Tip: Ask your AccuRev administrator if the "silent" client installation method has been implemented at your site.

Before You Begin

Regardless of which installation method you use, review the following steps before installing or upgrading the AccuRev Client:

1. Read the *Platform Support Notes* on page 42 for your operating system before proceeding, and follow the instructions there.

2. Check the *Known Issues* on page 68 for any issues that might apply to your site.

3. (*Mac OS X users only*) If you are installing the AccuRev Client on Mac OS X 10.7.5 or later, make sure the Gatekeeper feature is set to allow applications to be downloaded from **Anywhere**. To access this setting from the Apple menu, go to **System Preferences…** > **Security & Privacy** > **General** tab.

Tip: The AccuRev Client displays a notification message if it requires upgrading. This can happen when the AccuRev Server has been upgraded but the AccuRev Client has not. The notification message gives the user the option of downloading the AccuRev Client-only installation package directly from the AccuRev Server.

Uninstalling Existing AccuRev Clients

If you are upgrading an AccuRev client, you do not need to uninstall any existing software. The AccuRev Installation Wizard lets you preserve your development data and configuration files, and installs the upgrade in the same place as your existing version.

Using the AccuRev Client-only Installation Package

The AccuRev Client-only installation package lets you install a new AccuRev Client or upgrade an existing installation. The installation package must be on the machine on which you plan to install or upgrade the AccuRev Client.

Downloading the Client-only Installation Package

There are primarily two ways to download the installation package to a client machine:

- **Internet.** Any user with Internet access can download a copy of the AccuRev Client-only installation package from the AccuRev download page: *http://www.accurev.com/download.htm*. There are separate packages for all supported platforms.

  If you download a compressed package (**.zip** or **.gz** file), first extract the files from the package before continuing. Many extraction tools are freely available. There are links to such tools on the AccuRev download page; and the **unzip** and **gunzip** programs are standard on many UNIX/Linux systems. The Mac OS X operating system does not require any special software for **.zip** files -- just double-click the file to extract its contents.

- **The Upgrade Client Feature.** If you are upgrading from AccuRev 5.5 or later and the AccuRev administrator has already upgraded the AccuRev Server to version 6.0, you can download the client installation package directly from the AccuRev Server by choosing **Help** > **Upgrade Client** from the AccuRev GUI or by running **accurev upgrade_client** from the command line interface (CLI). When you download the installation package from the AccuRev Server using the Upgrade Client feature, the AccuRev Client-only Installation Wizard starts automatically.

  Tip: You can run the upgrade_client command in silent mode (**accurev upgrade_client -s**). When you do this, AccuRev uses settings from your current AccuRev Client installation to run the installation without user input.

Running the Client-only Installation Package

To run the AccuRev Client-only installation package:

1. Place a copy of the installation package on the machine on which you plan to install or upgrade the AccuRev Client. See *Downloading the Client-only Installation Package* on page 26 if you need help with this step.

2. If necessary, start the AccuRev Client Installation Wizard using the applicable procedure:

Table 9. Starting the AccuRev Client Installation Wizard

Platform	Installation Mode	Run This Procedure
Windows	GUI	**AccuRev_*n_n_n*_WindowsClientOnly.exe** where _*n_n_n* is the AccuRev version number **AccuRev_6_0_0_WindowsClientOnly.exe**, for example
	Console (text-based)	**AccuRev_*n_n_n*_WindowsClientOnly.exe -i console** where _*n_n_n* is the AccuRev version number **AccuRev_6_0_0_WindowsClientOnly.exe -i console**, for example
UNIX/Linux	GUI	**sh AccuRev_*n_n_n_platform_m_m*.bin** where: ▪ _*n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ _*m_m* is the OS version **sh AccuRev_6_0_0_LinuxClientOnly_x86_2_4.bin**, for example

Table 9. Starting the AccuRev Client Installation Wizard

Platform	Installation Mode	Run This Procedure
	Console (text-based)	**sh AccuRev_*n_n_n_platform_m_m*.bin - i console** where: ▪ *_n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ *_m_m* is the OS version **sh AccuRev_6_0_0_LinuxClientOnly_x86_2_4.bin** **- i console**, for example

Tip: If you are installing the AccuRev Client from the console you can type:

▪ "**back**" to return to the previous prompt in the installation program

▪ "**quit**" to exit the installation program

3. **Shutdown Existing AccuRev Apps** -- When you start the AccuRev Client Installation Wizard, it first reminds you to shut down any existing AccuRev applications. Click **Next** to continue. *[Console: Press Enter to continue.]*

4. **License Agreement** -- Before you can proceed, you must click "I accept the terms of the license agreement." and then click **Next** to continue. *[Console: Press Enter to scroll through the license agreement, then type "y" and press Enter to continue.]*

5. **Choose Install Folder** -- Specify a different directory if you do not want to use the *<ac-install>* defaults: *<homeDirectory>*/accurev on Linux/UNIX, C:\Program Files (x86)\AccuRev on 64-bit Windows, C:\Program Files\AccuRev on 32-bit Windows. (See *Determine Configurable Elements* on page 10 if you are not familiar with the values represented by *<ac-install>* and *<homeDirectory>*.)

   ▪ If you are installing software for the first time and do not wish to use the default location, specify a location where you have write permission.

   IMPORTANT: If you are installing the AccuRev Client on a machine running Windows Vista, you must install AccuRev in the \Users folder. If you install to the default Windows directory (C:\Program Files\, for example), you not be able to use the Upgrade Client feature to upgrade your AccuRev Client in the future.

   ▪ If you are upgrading and the existing installation is not at the default location, specify your existing AccuRev installation directory.

   Click **Next** to accept the default and continue. *[Console: Press Enter to accept the default and continue.]*

6. **Configure: Set Host and Port** *[Console: Choose What Server to Connect To]* -- Specify the values for the **Host** and **Port** fields for the AccuRev Server to which this client will connect. You should accept the default value for the server port chosen by the Installation Wizard unless you have a good reason to change it. Click **Next** to continue. *[Console: Prompts for these values individually. Type a value for the host name and press Enter to continue. Review the value for the port number and press Enter again to continue.]*

7. **Adjust System PATH Variable** -- Responding **Yes** enables the AccuRev Client Installation Wizard to modify the PATH environment variable on your system so that you do not need to specify a full path on the command line when using AccuRev commands. Click **Next** to continue. *[Console: Enter "y" and press Enter to continue.]*

Note: You might need to reboot after installation before changes to the PATH environment variable take effect.

8. **Pre-Installation Summary** -- At this point, the Installation Wizard displays a summary of the choices you have made regarding your installation. Click **Install** to continue; otherwise click **Previous** to change a value. *[Console: Press **Enter** to continue; otherwise, type "**back**" and the press **Enter** to return to change a value.]*

9. **Installing AccuRev** -- The Installation Wizard displays a splash screen *[Console: displays "Installing..." and a progress bar]* while it installs the software on your local machine. It displays a Please Wait message while it performs configuration tasks.

10. **Installation Complete** -- The Installation Wizard displays a message when the installation is complete. Click **Next** to exit the program. *[Console: Press **Enter** to exit the program.]*

Note: If you are using the GUI installation wizard, when the installation is complete you are given the opportunity to start the AccuRev user interface. To start the AccuRev user interface, accept the default value of **Yes** and click **Done**. Otherwise, select **No** and click **Done**.

Using "Silent" Client Installations

So-called "silent" client installations allow the AccuRev Client software to be installed or upgraded in an automated fashion, without requiring any interaction or input by the user on whose machine the AccuRev Client is being installed. "Silent" client installations are particularly useful when AccuRev Client installations or upgrades can be performed by a centralized software distribution mechanism. "Silent" client installations provide a highly efficient mechanism for large AccuRev deployments to keep pace with current versions of AccuRev.

Note: The "silent" upgrade is not supported for Mac OS X clients.

Overview

In a "silent" client installation, the Client-only installation package is pushed to each client machine. Then, an AccuRev Client is installed manually on a single machine using a command line option to create a *response file*. The response file records choices made during installation of the AccuRev Client, including:

▪ Installation directory

▪ The host (or IP address) and port number associated with the AccuRev Server

▪ Whether or not "*<ac_install>*/bin" should be added to the user's path. See *Determine Configurable Elements* on page 10 if you are not familiar with the value represented by *<ac-install>*.

The response file resulting from the manual installation can then be used as input by the "silent" client installer to automate the installation process on your system's clients. Note that if you have clients on multiple platforms (Windows and Linux, for example), you must perform one manual client installation on each of them to create platform-specific response files.

Sample Response File. An example response file for a Windows installation is shown here:

```
# Wed Aug 01 17:50:06 EDT 2012
# Replay feature output
# --------------------
# This file was built by the Replay feature of InstallAnywhere.
# It contains variables that were set by Panels, Consoles or Custom Code.
```

```
#Choose Install Folder
#--------------------
USER_INSTALL_DIR=C:\\Program Files\\myAccuRev


#Configure: Set Host and Port
#---------------------------
HOST_NAME_INPUT=localhost
HOST_PORT_INPUT=5050


#Adjust System PATH Variable
#--------------------------
ADD_TO_PATH_INPUT_RESULTS=\"Yes\",\"\"
ADD_TO_PATH_INPUT_RESULTS_1=Yes
ADD_TO_PATH_INPUT_RESULTS_2=
ADD_TO_PATH_INPUT_RESULTS_BOOLEAN_1=1
ADD_TO_PATH_INPUT_RESULTS_BOOLEAN_2=0


#Install
#-------
-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\UninstallerData\\Uninstall\
AccuRev.lax=Yes

-fileOverwrite_C:\\Program\
Files\\myAccuRev\\bin\\UninstallerData\\resource\\iawin32.dll=Yes

-fileOverwrite_C:\\Program\
Files\\myAccuRev\\bin\\UninstallerData\\resource\\win64_32_x64.exe=Yes

-fileOverwrite_C:\\Program\
Files\\myAccuRev\\bin\\UninstallerData\\resource\\remove.exe=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\vcredist_x86_2010.exe=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\vcredist_x64_2010.exe=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\acgui.lax=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\acdiffgui.lax=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\bin\\acclient.cnf=Yes

-fileOverwrite_C:\\Program\ Files\\myAccuRev\\LICENSE.TXT=Yes


#Start AccuRev User Interface
#---------------------------
START_UI_INPUT_RESULTS=\"\",\"No\"
START_UI_INPUT_RESULTS_1=
START_UI_INPUT_RESULTS_2=No
START_UI_INPUT_RESULTS_BOOLEAN_1=0
START_UI_INPUT_RESULTS_BOOLEAN_2=1
```

Creating the Response File

To create the response file, run the AccuRev Client-only installer from the command line. Use the **-r** *<filename>* option to specify the full path of the response file. Note that if you have clients on multiple platforms (Windows and Linux, for example), you must run the client installation procedure on one machine on each platform in order to create platform-specific response files.

Windows example

```
<installer_loc>\AccuRev_6_0_0_WindowsClientOnly.exe –r c:\tmp\ac_win_install.out
```

UNIX/Linux example

```
<installer_loc>/AccuRev_6_0_0_LinuxClientOnly_x86_2_4.bin
–r /tmp/ac_linux_install.out
```

Running a "Silent" Installation

Once you have created the response file for a given platform, you can use it to perform automated "silent" installations on other clients for that platform. To run a "silent" installation, invoke the AccuRev Client-only installation package from the command line. Use the **-i silent** option to specify the installation type, and the **-f** *<filename>* option to specify the full path of the response file to use as input.

Windows example

```
<installer_loc>\AccuRev_6_0_0_WindowsClientOnly.exe -i silent
–f c:\tmp\ac_win_install.out
```

UNIX/Linux example

```
<installer_loc>/AccuRev_6_0_0_LinuxClientOnly_x86_2_4.bin -i silent
–f /tmp/ac_linux_install.out
```

Installing or Updating the AccuRev Web UI Server

This section provides background information and procedures for installing or upgrading the AccuRev Web UI Server as a standalone installation using the AccuRev Installation Wizard.

This section is intended for the AccuRev administrator. If you are an end user and want to use the Web UI *client*, you simply need to open a supported Web browser and point it to an existing Web UI Server using URL information provided to you by your administrator.

Note: If you have already installed AccuRev as described in *Step 5* of *Running the AccuRev Installation Wizard* on page 13, the AccuRev Web UI Server is already installed. Go to *What to Do Next* on page 32.

Before You Begin

Before running the AccuRev Installation Wizard, log in to the machine on which you will be installing the AccuRev Web UI Server. Log in as *<ac-user>* (UNIX/Linux) or a user with installation privileges (Windows). (See *Before You Begin* on page 12 to learn about creating *<ac-user>* on UNIX/Linux machines.)

Notes for UNIX/Linux Installations

▪ For security reasons, you CANNOT install the AccuRev server on UNIX/Linux if you are logged in as **root**. (This restriction does not apply to the client-only installer.)

▪ See *Known Issues* on page 100.

How to Run the AccuRev Installation Wizard

This section describes how to install the AccuRev Web UI Server using the AccuRev Installation Wizard. If you are running the Installation Wizard in console mode, instructions are displayed in italicized brackets, *[Like this.]*

To run the AccuRev Installation Wizard:

1. **Start the Installation Wizard** -- Start the AccuRev Installation Wizard you downloaded from the AccuRev web site by double-clicking the installer icon, or by entering the installer name on the command line as summarized in the following table. Note that the installation program can be run with a graphical user interface (GUI) or as a console (text-only) application.:

Table 10. Starting the AccuRev Installation Wizard

Platform	Installation Mode	Run This Procedure
Windows	GUI	**AccuRev_*n_n_n*_Windows.exe** where _*n_n_n* is the AccuRev version number **AccuRev_6_0_0_Windows.exe**, for example
	Console (text-based)	**AccuRev_*n_n_n*_Windows.exe -i console** where _*n_n_n* is the AccuRev version number **AccuRev_6_0_0_Windows.exe -i console**, for example
UNIX/Linux	GUI	**sh AccuRev_*n_n_n_platform_m_m*.bin** where: ▪ _*n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ _*m_m* is the OS version **sh AccuRev_6_0_0_Linux_x86_2_4**, for example
	Console (text-based)	**sh AccuRev_*n_n_n_platform_m_m*.bin - i console** where: ▪ _*n_n_n* is the AccuRev version number ▪ *platform* is the UNIX/Linux platform name ▪ _*m_m* is the OS version **sh AccuRev_6_0_0_Linux_x86_2_4 - i console**, for example

   Tip: If you are installing AccuRev from the console you can type:

   - "**back**" to return to the previous prompt in the installation program

   - "**quit**" to exit the installation program

2. **License Agreement** -- Before you can proceed, you must click "I accept the terms of the license agreement." and then click **Next** to continue. *[Console: Press **Enter** to scroll through the license agreement, then type "y" and press **Enter** to continue.]*

3. **Choose Install Folder** -- Specify a different directory if you do not want to use the `<ac-install>` defaults: `<homeDirectory>/`accurev on Linux/UNIX, `C:\Program Files\AccuRev` on Windows. (See *Determine Configurable Elements* on page 10 if you are not familiar with the values represented by `<ac-install>` and `<homeDirectory>`.)

   - If you are installing software for the first time, and do not wish to use the default location, specify a location where you have write permission.

   - If you are upgrading and the existing installation is not at the default location, specify your existing AccuRev installation directory.

Click **Next** to accept the default and continue. *[Console: Press **Enter** to accept the default and continue.]*

4. **Choose Installation Type** -- Select **Web UI Server only** and then click **Next** to continue. *[Console: Type "2" and press **Enter** to continue.]*

5. **Configure: Set Host and Port** -- In the **Host** and **Port** fields, set values for the AccuRev Server that the Web UI will use and click **Next** to continue. *[Console: Prompts for these values individually. Type a value and press **Enter** to continue.]*

6. **Adjust System PATH Variable** -- Responding **Yes** enables the AccuRev Installation Wizard to modify the PATH environment variable on your system so that you do not need to specify a full path on the command line when using AccuRev commands. Click **Install** to continue. *[Console: Type "y" and press **Enter** to continue.]*

   Note: You may need to reboot after installation before changes to the PATH environment variable take effect.

7. **64-bit Hardware Detected** -- If the AccuRev Installation Wizard determines that you are installing on 64-bit x86 hardware running a 64-bit Linux or Windows operating system, it offers you the option of installing either a 32- or 64-bit version of the AccuRev Client. In all other situations, it installs the 32-bit version by default. (**IMPORTANT**: See *Table 5* on page 12 for limitations.) Optionally change the value and click **Next** to continue. *[Console: type "1" for 32-bit or "2" for 64-bit and press **Enter** to continue.]*

   Note: On 64-bit Linux and Windows, the AccuRev installer ALWAYS installs a 32-bit Java runtime environment (JRE) for use by AccuRev. This means that even if you choose to install 64-bit AccuRev on Linux, the Linux 32-bit compatibility libraries must always be installed. If this is not the case, the AccuRev installation will fail. See *Platform Support Notes*, *Linux* on page 43 for more information.

8. **Installing AccuRev** -- The Installation Wizard displays a splash screen *[Console: displays "Installing" with a progress bar]* while it installs the software on your local machine. It displays a Please Wait message while it performs configuration tasks.

9. **Configure: Start AccuRev WebUI Server** -- In a new installation, the Installation Wizard prompts you to start the AccuRev Web UI Server. Accept the default value (**Yes**) unless you want to start it later. Click **Next** to continue. *[Console: Press **Enter** to continue.]*

10. **Install Complete** -- The Installation Wizard displays a message when the installation is complete. Click **Done** to exit. *[Console: Press **Enter** to exit.]*

What to Do Next

The following table summarizes tasks you should consider performing after installing the AccuRev Web UI Server.

Table 11. After Installing the AccuRev Web UI Server

Task	Comments
Start the Web UI Server.	You need to start the Web UI Server to make the AccuRev Web UI available to your users. If you did not start the AccuRev Web UI Server during the installation process, see *Starting, Stopping, and Testing the AccuRev Web UI Server* on page 33.

Task	Comments
Test the Web UI	Before informing your users that the AccuRev Web UI is available, perform a simple test to make sure that it is working as you expect. See *Testing the AccuRev Web UI* on page 33.
Configure the Web UI Server to make it accessible by IDE plug-ins for AccuRev.	AccuRev has plug-ins for numerous IDEs like Eclipse and Visual Studio. To be able to access the AccuRev Web UI in these IDEs, you need to create a configuration file on the AccuRev Web UI Server. See *Configuring the AccuRev Web UI* on page 33.
Review advanced configuration settings.	You can use a configuration file to change the default session timeout, provide access to multiple AccuRev Servers, and more. These and other advance topics are described in the *AccuRev Web Interface Administrator's Guide*. See *Web UI Release Notes* on page 34.

Starting, Stopping, and Testing the AccuRev Web UI Server

Linux shell (**.sh**) and Windows batch (**.bat**) scripts are provided for stopping and starting the Tomcat web server for the AccuRev Web UI:

```
<ac-install>/WebUI/tomcat/bin/[ startup | shutdown ].[ sh | bat ]
```

Testing the AccuRev Web UI

To test the AccuRev Web UI, open a browser and enter the following URL:

```
http://<webui-host>:8080/accurev
```

If this does not display an AccuRev login window, try restarting the AccuRev Web UI Tomcat server. See *Starting, Stopping, and Testing the AccuRev Web UI Server* on page 33. If the Web UI appears as expected, you can make this URL available to users to whom you want to provide access to the AccuRev Web UI.

Also, if you want to make the Web UI accessible through your users' AccuRev GUI, you should ensure that the AccuRev installation is included in their PATH setting. If they try to open the Web UI from the AccuRev GUI (using the **View** > **Open in Web** choice on the AccuRev GUI menu, for example) and the Web UI login screen appears but does not display a valid server to connect to, the PATH is probably not set correctly.

Configuring the AccuRev Web UI

This section describes how to configure the AccuRev Web UI to make it available to:

- The AccuRev GUI (some features in the AccuRev GUI make use of the Web UI)
- AccuRev IDE integrations (like the Eclipse plug-in for AccuRev, for example)

You do this by creating a **settings.xml** file on the AccuRev Server as described in the following procedure.

Creating the settings.xml file

Instructions for creating this file are found in the AccuRev *Installation and Release Notes* for each integration, but in summary:

1. Shut down any third-party packages.

2. Create a file called `settings.xml` in the `<ac-install>/storage/site_slice/dispatch/config` directory.

3. Edit the file to add the lines shown below (replacing `<webui-host>` with the actual name of the host providing access to the AccuRev Web UI), and save it.

```
<settings>
    <webui url="https://<webui-host>:8080/accurev"/>
</settings>
```

(If necessary, change the port from "8080" to the value in use at your site.)

Note: Refer to the installation and release notes for specific AccuRev integrations (Eclipse and Visual Studio plug-ins, for example) for additional information specific to your third-party IDE.

4. Restart any third-party packages shut down in Step 1.

Web UI Release Notes

Release notes for the AccuRev Web UI are in *Changes in AccuRev Web UI Release 5.7* on page 68. See the AccuRev *Web Interface Administrator's Guide* for post-installation configuration information.

Configuring Database Tuning Parameters

Use these instructions to set the database tuning parameters to allow the database to make the best use of your system resources. You should do this after installing AccuRev but before starting the server or before running the **maintain dbupgrade** command.

1. Log in as `<ac-user>`.

2. Ensure that the database server is stopped using the procedures described in *Starting and Stopping AccuRev Servers* on page 40.

3. To improve database performance you may elect to increase the amount of memory allocated exclusively to PostgreSQL by editing `<ac-storage>`**/db/postgresql.conf**.

   - *(non-Windows platforms)* Note that editing **postgresql.conf** could also require you to alter part of your operating system's kernel configuration and possibly reboot your system. Read the section applicable to your operating system at *http://www.postgresql.org/docs/8.4/static/kernel-resources.html* for more information.

   - `shared_buffers` – Change to 512MB or 25% of total physical memory installed on the machine running AccuRev, whichever is less.

   - `effective_cache_size` – Set to 75% of free physical memory reported by the operating system when both AccuRev and the database are stopped (see *Starting and Stopping AccuRev Servers* on page 40).

     Free physical memory can be estimated as follows:

     - UNIX/Linux (expressed in MB):

       ```
       free -m | awk '/buffers.cache/{print $4}'
       ```

- Windows Server 2008/Windows 7 or later (expressed in MB): Access the Performance tab on the Windows Task Manager. Use only the Available value under "Physical Memory".

- Other operating systems: You may be able to use the **top** command; refer to your operating system vendor's documentation.

Note: On 64-bit operating systems with more than 4GB of memory, the `effective_cache_size` is not limited to 4GB, as it does not reflect memory allocated by PostgreSQL. This setting is an estimate of the amount of memory available to the operating system for filesystem caching.

4. Start the AccuRev Database Server process according to the instructions in *Starting and Stopping AccuRev Servers* on page 40.

Using the 'maintain dbupgrade' Command

This section details the use of the **maintain dbupgrade** command to upgrade your existing AccuRev database to 6.0.

For 4.x databases (4.7 or higher), **dbupgrade** performs these tasks:

- Performs validation and cleanup of 4.x metadata records.
- Converts the metadata to UTF-8 for proper internationalization support.
- Imports the metadata to the third-party database used with AccuRev 5.x.

For 5.0.1 and 5.1.x databases, **dbupgrade** upgrades the AccuRev database schema. (5.0.5 and 5.2 databases are already internationalized, so they do not require UTF-8 conversion.)

IMPORTANT: Before performing the **dbupgrade** operation, ensure that you have tuned your database as described in *Configuring Database Tuning Parameters* on page 34, and have restarted your database so that the tuning parameters take effect. Also ensure that you have left yourself an adequate window of time: each **dbupgrade** run can take several hours, particularly if you are performing trial runs and upgrades on a test machine that is not particularly fast.

You will be prompted to perform the **dbupgrade** process in two steps:

1. In "trial run" mode, to evaluate how the upgrade process will succeed.

2. In "force" mode, where your database will actually be converted.

See the "The 'maintain' Utility" chapter of the AccuRev 6.0 *Administrator's Guide* for more details about this utility.

Performing a "Trial Run" Upgrade

To begin the upgrade process, change to the *<ac-install>*/bin directory and enter the following at the command line:

```
maintain dbupgrade <db-admin-name>
```

You will be prompted for *<db-admin-pass>*, and then asked whether you want to run the upgrade as a "trial run", using a default codepage of "CP1252" (a superset of ISO-8859-1). Performing the conversion as a trial run means that your database will not be changed, but you will be notified of any issues so you can determine whether or not to repeat the upgrade in non-trial mode (and actually convert your database).

The codepage specification allows **dbupgrade** to attempt a reasonable conversion of your existing data to UTF-8. The default CP1252 codepage ("Western European"), although considered as "Windows" codepage, is a superset of ISO-8859-1 and is a reasonable starting point for both Windows and Linux servers, especially in mixed environments. Only specify a different codepage if you know for certain that you use a different one at your site.

When prompted whether or not you wish to proceed with a trial run, answer **Y** to perform the trial upgrade. (**N** *performs a real upgrade that will modify your data*.)

The upgrade process can take several hours, depending on factors such as your hardware, the size of your database, system load, etc. All information is captured in the following log files:

- *<ac-storage>*/site_slice/logs/dbupgrade.log
- *<ac-storage>*/site_slice/logs/dbupgrade_i18n_report.html

If you make multiple **dbupgrade** runs, any existing log files are backed up with time-stamp names. It is critical that you get a successful trial run, and review the logs for any problems prior to performing an actual database upgrade. If you have any questions about the results, you should contact AccuRev Support Services (*http://support.accurev.com*).

See *Understanding maintain dbupgrade Messages* on page 36 for descriptions of messages that appear during the upgrade.

Understanding maintain dbupgrade Messages

During the data migration, several AccuRev tables will be altered, resulting in some or all of the messages described in this section.

Messages from maintain dbupgrade

When the upgrade completes successfully, a message like the following appears at the end of the output:

```
AccuRev 4.x to 5.x metadata migration completed without errors in 0.11
minutes.


*** The AccuRev database has been upgraded.

    The AccuRev Server is ready to be started.
```

If errors are detected during the migration, a message similar to the one shown below will appear at the end of the output:

```
AccuRev 4.x to 5.x metadata migration completed with errors in 0.11 minutes.


*** Errors were detected during the 4.x to 5.x metadata migration
processing.

    See /opt/accurev/storage/site_slice/logs/dbupgrade.log for details.

    The AccuRev Server WILL NOT start until the upgrade is successful.

    Please contact AccuRev Service for assistance.
```

Additional details are available in the file *<ac-storage>*/site_slice/logs/dbupgrade.log.

See the following section, *Messages from the dbupgrade.log File*, for details on locating and interpreting the reasons for any failures.

Messages from the dbupgrade.log File

Note: Please store the *<ac-storage>*/site_slice/logs/dbupgrade.log file in a safe place. It contains information that could assist AccuRev Support Services with troubleshooting any data migration or database upgrade issues.

The dbupgrade.log file consists of log entries of the following severity levels, in ascending order:

- **INFO** -- Status messages indicating what the **dbupgrade** utility is doing at a particular point in time. The intended audience for this category of messages is primarily AccuRev Support Services.

- **NOTICE** -- Messages that record information about the **dbupgrade** operation that might be of interest to the user. Example: Translations of non-ASCII characters from CP1252 to UTF-8 will be reported in C:/Program Files/AccuRev/storage/site_slice/logs/dbupgrade_i18n_report.html

- **WARNING** -- These messages indicate that **maintain dbupgrade** encountered an issue that may require your attention but does not necessarily constitute a reason to fail the data migration/upgrade. You must evaluate any WARNING messages and determine if you can proceed with the results of the **dbupgrade** operation. See the examples and additional information in *Warning Messages* on page 37.

- **FATAL** -- These messages indicate that **maintain dbupgrade** encountered a serious problem that prevented it from completing. You must address any FATAL issue (usually with the help of AccuRev Support Services) and rerun **dbupgrade** before proceeding.

As an end-user, you should only be concerned with WARNING and FATAL entries.

Warning Messages

Warning message example #1:

```
0 Unable to find storage location for depot: depot_name: /path-to-storage/depots/
depot_name

-Error- 1 - prj.c:211 - Unable to initialize depot - System Error: 2 No such file or
directory
```

```
    WARNING: Depot 'depot_name' skipped: Unable to initialize: No such file or
    directory: OS error: see above
```

Explanation:

Ensure that the depot is supposed to still be active, and that the data for the depot is actually present on the system. You may need to use either the **chslice** or **rmdepot** AccuRev commands to remedy the problem. This condition is most likely to occur during a trial run on a test machine (as opposed to "in-place" -- see *Performing a Trial Upgrade on a Test Machine* on page 21.)

Warning message example #2:

```
    WARNING: Would migrate site... FAILED
    WARNING: Would migrate depot 'depot_name'... FAILED
    WARNING: Migrating site... FAILED
    WARNING: Migrating depot 'depot_name'... FAILED
    WARNING: Would upgrade site... FAILED
    WARNING: Would upgrade depot 'depot_name'... FAILED
    WARNING: Upgrading site... FAILED
    WARNING: Upgrading depot 'depot_name'... FAILED
```

Explanation:

One or more errors have occurred which prevented the site **slice/depot** in question from being migrated or upgraded. One or more corresponding log entries with severity FATAL should be present in dbupgrade.log prior to this WARNING entry, with the specific reasons for the errors.

Warning message example #3:

```
    WARNING: AccuRev 4.x to 5.x metadata migration trial run completed without errors in
    X minutes.  *** The AccuRev Server WILL NOT start after the migration trial run.
```

Explanation:

You have successfully completed a trial migration from AccuRev 4.x to 5.x, but you must analyze the results and re-run the migration "for real" in order for the AccuRev Server to start. You must now review the dbupgrade_i18n_report.html file for correctness (see the "*Messages from dbupgrade_i18n_report.html* on page 39"). Then, if all highlighted characters in dbupgrade_i18n_report.html are correct, proceed to perform the actual migration as described in *Performing the Actual Database Upgrade* on page 40. Test your installation. If you were doing the upgrade on a test machine, return to *Performing an Upgrade "In Place"* on page 22 to complete the upgrade on your production machine.

Warning message example #4:

```
    WARNING: Would change database encoding to UTF-8: cannot proceed any further without
    making changes to the database, stopping
    WARNING: Would create a UTF-8 case-insensitive index: cannot proceed any further
    without a UTF-8 database, stopping
    WARNING: AccuRev database upgrade trial run completed without errors in X minutes.
    *** No changes were made to the database during the upgrade trial run.
```

Explanation:

You are performing a trial upgrade from 5.0.x/5.1 to 6.0, which adds internationalization (I18N) support. Everything up to the point where the database is switched to UTF-8 has completed successfully, but the actual switch cannot occur during a "trial" run. You must now review the dbupgrade_i18n_report.html file for correctness (see *Messages from dbupgrade_i18n_report.html* on page 39). Then, if all highlighted characters in dbupgrade_i18n_report.html are valid, proceed to perform the migration "for real" (see *Performing the Actual Database Upgrade* on page 40, and *Upgrading an AccuRev Server from 5.0.x* on page 23 or *Upgrading an AccuRev Server from 5.1 or Higher* on page 23.)

Fatal Messages

Fatal message example #1:

```
FATAL: AccuRev 4.x to 5.x metadata migration completed with errors in X minutes. ***
Errors were detected during the 4.x to 5.x metadata migration processing. See /path-
to-/dbupgrade.log for details. The AccuRev Server WILL NOT start until the upgrade
is successful. Please contact AccuRev Service for assistance.

FATAL: AccuRev database upgrade completed with errors in X minutes. *** Errors were
detected during the database upgrade processing. See %s/%s for details. No changes
were made to the database. Please contact AccuRev Service for assistance.
```

Explanation:

One or more errors have occurred which prevented the migration or upgrade from completing. Additional log entries with severity FATAL should be present in dbupgrade.log with the specific reasons for the errors.

Fatal message example #2:

```
FATAL: File not found - /path-to-storage/depots/depot-name/table-name.ndb
```

Explanation:

You are migrating from 4.x to 6.0 and the 4.x ndb file in question cannot be found. If the file is part of a depot that is no longer active, you may want to first **rmdepot** *depot-name* in 4.x, then retry the migration.

Fatal message example #3:

```
FATAL: Depot contains AccuWork issues, but the corresponding schema.xml definition
could not be found or loaded
```

Explanation:

The AccuWork schema.xml file is missing from the
<ac-storage>/depots/*depot-name*/dispatch/config directory.

Fatal message example #4:

```
FATAL: Database error: ...

FATAL: Retrieving list of depots from database: Database error: ...

FATAL: table 'X' rowcount mismatch: expected Y, got Z

FATAL: LOC width X not supported!
```

Explanation:

If you receive any of these errors, contact AccuRev Support Services (*http://support.accurev.com*).

Messages from dbupgrade_i18n_report.html

Note: Store the *<ac-storage>*/site_slice/logs/dbupgrade_i18n_report.html file in a safe place. It contains information that could assist AccuRev Support Services with troubleshooting any data migration or database upgrade issues.

The information in dbupgrade_i18n_report.htm contains the results of the UTF-8 conversion based on the code page that you specified. Open this report in a web browser and look for any highlighted characters -- these represent non-ASCII characters found during the conversion.

Some highlighted characters can be ignored. For example, accents and umlauts may have been introduced when adding a foreign document to the depot. Likewise, some highlighted characters may be simple non-ASCII punctuation characters like em dashes ("—"). However, if a highlighted character does not look valid, it probably needs to be corrected.

To research the origin of suspect entries, use the information in the report to find the characters in your existing, running AccuRev installation (4.x, 5.0.x, or 5.1):

1. Click on the triangular handle next to any highlighted entry to see where it is being referenced (depot, stream, etc.). For example, in the illustration below, clicking on the handle next to "Stream name" reveals that two non-ASCII characters appear in the stream name that begins "LINE tests bld". Clicking on the handle for this entry narrows down the location to depot_id 13 and stream_id 2802.

2. Use the displayed information (depot_id, stream_id, issue_num, etc.) to navigate to the suspect entry in your existing (4.9, 5.0.x, or 5.1) AccuRev UI.

3. Compare the appearance of the suspect entry in the report against how it appears in your existing AccuRev installation.

Here are some general rules for interpreting these results:

▪ **All highlighted characters are correct.** Your data will convert cleanly, and you can proceed to perform the actual upgrade without a trial run:

```
maintain dbupgrade -f -E CP1252 <db-admin-name>
```

(**Note:** Use the exact same maintain **dbupgrade** command on the replica servers, if any.)

▪ **Some highlighted characters are incorrect.** Determine whether or not these characters are acceptable, or if you can fix them after the upgrade. For example, you might be able to rename a stream or a file. **Note:** Because of AccuRev's TimeSafe® feature, snapshots and time-based streams will preserve the pre-rename, incorrect information.) If in doubt about how to proceed, please contact AccuRev Support Services (*http://support.accurev.com*).

▪ **There are many incorrect highlighted characters and the problem seems to be consistent.** If you can identify a recurring, common problem, you probably need to use a different code page. For more information about code pages, start with *http://en.wikipedia.org/wiki/Character_encoding*.

Performing the Actual Database Upgrade

Once you have fixed any issues reported by the "trial run" upgrade, you can perform the actual database upgrade by re-running the **maintain dbupgrade** command as described in the previous section, but responding **N** when prompted whether or not you wish to run in trial mode, and confirm your choice.

Starting and Stopping AccuRev Servers

This section describes the procedures you can use to start and stop the AccuRev Server and the AccuRev Database Server.

Starting and Stopping the AccuRev Server

Use the procedures below to start and stop the AccuRev Server. (The Windows operations can also be performed from the GUI Services Control Panel.)

Start	Stop

Windows:
 	
   `net start accurev`
UNIX/Linux:
 	
   `cd <ac-install>/bin`
   `./acserverctl start`
	Windows:
	
	   `net stop accurev`
	UNIX/Linux:
	
	   `cd <ac-install>/bin`
	   `./acserverctl stop`

When you start the AccuRev Server, the database is automatically started first.

Starting and Stopping the AccuRev Database Server

Use the procedures below to start and stop the AccuRev Database Server.

Start	Stop

Windows:
 	
   `net start "accurev db server"`
UNIX/Linux:
 	
   `cd <ac-install>/bin`
   `./acserverctl dbstart`
	Windows:
	
	   `net stop "accurev db server"`
	UNIX/Linux:
	
	   `cd <ac-install>/bin`
	   `./acserverctl dbstop`

When you stop the AccuRev Database, the AccuRev Server is automatically shut down first.

Summary of Start and Stop Operations

In summary:

- Starting the AccuRev Server will automatically start the AccuRev Database if it is not already running.

- Stopping the AccuRev Server will NOT automatically stop the AccuRev Database.

- Starting the AccuRev Database will NOT automatically start the AccuRev Server.

- Stopping the AccuRev Database will also stop the AccuRev Server, but only if you say "**Y**" to the prompt. Otherwise, neither will be stopped.

See "Controlling Server Operations" in the AccuRev 6.0 *Administrator's Guide* for more information, and for setting up your system to automatically start the AccuRev processes at boot time.

Enabling the AccuRev License Manager (ARLM)

Previous AccuRev releases installed both the now-deprecated named "keys.txt" license manager, as well as the newer ARLM, which supports 24-hour flexible licenses and 7-day standard licenses using the **accurev.lic** license file.

The AccuRev 6.0 installation process should automatically configure your system correctly, assuming you have a valid **accurev.lic** file, even if you installed the named "keys.txt" manager in a previous release. See the "License Management" chapter of the AccuRev 6.0 *Administrator's Guide* for more details.

To start the ARLM server:

1. Go to the **\bin** directory where you installed AccuRev Server.
   c:\Program Files (x86)\AccuRev\bin, for example.

2. Run `rlm -c <path to accurev.lic>`.
   `rlm -c C:\Program Files (x86)\AccuRev\storage\site_slice\accurev.lic`, for example.

Platform Support Notes

The following sections contain important information about installing AccuRev software on specific hardware/software platforms.

Platform Support Matrix

For the most up-to-date list of supported platforms, go to the Customer Downloads section of the AccuRev web site at *http://www.accurev.com/customer-support-resources/downloads* and click on the Platform Support Matrix link.

Important Notes:

1. The Platform Support Matrix lists the platforms that have been tested for the AccuRev 6.0 server and client. We will investigate and attempt to address issues reported on other platforms, but we reserve the right to request that you reproduce the problem on a supported platform.

2. Virtualization environment support: We will investigate and attempt to address issues reported on virtualization platforms not supported by AccuRev, but we reserve the right to request that you reproduce the problem on one of the supported OS platforms listed in the Platform Support Matrix, running in a non-virtualization environment.

3. See *Deprecated Features* on page 103 for platforms that are no longer be supported.

Java Compatibility

AccuRev 6.0 is compatible with the Java 2 Runtime Environment (JRE), Versions 1.6.x and higher. These Java versions are also labeled "J2SE Version 6" and higher.

(UNIX/Linux only) Workaround for Java Runtime Library Problems

The AccuRev Installation Wizard and the AccuRev GUI fail on some UNIX/Linux platforms because of Java library problems. Use this procedure to work around these problems:

1. Run the Installation Wizard with environment variable LIBXCB_ALLOW_SLOPPY_LOCK set to the value 1.

2. Fix the runtime library file in the new AccuRev installation area:

```
> cd ac-install/jre/lib/i386/xawt
> sed -i 's/XINERAMA/FAKEEXTN/g' ./libmawt.so
```

Linux

- PostgreSQL may fail to function properly when SELinux mode is set to "Enforcing". See *http://docs.fedoraproject.org/en-US/Fedora/13/html/SELinux_FAQ/#id2963608* for more information. To find out the current SELinux mode run **getenforce** (as **root**). To set SELinux mode to "Permissive", run **setenforce PermissiveEdit**.

- Linux systems require glibc version 2.3.4 or higher. To determine your glibc version, run **rpm -qi glibc** in a command shell. Ubuntu systems require libc6-i386.

- The AccuRev Installation program and the AccuRev GUI fail on some older UNIX/Linux platforms because of Java library problems. Use this procedure to work around these problems:

  - Set the environment variable LIBXCB_ALLOW_SLOPPY_LOCK to the value 1.

  - Run the installation program.

  - Fix the runtime library file in the new AccuRev installation area:

    ```
    > cd <ac-install>/jre/lib/i386/xawt
    > sed -i 's/XINERAMA/FAKEEXTN/g' ./libmawt.so
    ```

- *(64-bit Linux)* If the 32-bit versions of the packages listed below are not present on your system, download and install them (and their dependencies) prior to running the installer.

  Note: You must have these 32-bit package versions installed even if you are installing the 64-bit version of AccuRev.

  For Red Hat, SUSE, and Fedora only:

  - glibc.i386 (version 2.3.4 or higher)

  - Any one of the following (depending on what is available with your Linux distribution):

    - compat-libs.i386.rpm

    - libX11.i386.rpm

    - libX11.i586.rpm

    - libX11.i686.rpm

    - XFree86.i386.rpm

    - xorg-x11-libX11.i586.rpm

  For Ubuntu:

  - libc6-i386

  - libxtst6

  - ia32-libs

- *(64-bit Linux)* If you are installing a 32-bit version of AccuRev, and if you are using NSS or PAM authentication modules (e.g. for LDAP, NIS, etc.), you must ensure that the corresponding 32-bit versions of those authentication modules are also installed.

  For example:

  ```
  > arch
  x86_64

  > rpm -q --queryformat "%{n}-%{arch}\n" nss_ldap
  nss_ldap-x86_64
  nss_ldap-i386
  ```

  If only the **x86_64** architecture is installed on your system, please update to a "biarch" version of the package, or download and install the 32-bit version of the package (in addition to the 64-bit version already installed on your system).

AIX

- Only the AccuRev client software is supported on this platform.

- You cannot upgrade the AccuRev Client using the **Help** > **Upgrade Client** menu choice.

- If you use the console method to upgrade your AccuRev Client, the response file is not read; you must provide values for host, port, and path when prompted.

- The following shared libraries must be accessible, both by the AccuRev Installation Wizard and by the installed AccuRev executables. The pathnames below show typical locations for these shared libraries.

  ```
  /usr/freeware/lib/libcrypto.a
  /usr/freeware/lib/libintl.a
  /usr/lib/libc.a
  /usr/lib/libcrypt.a
  /usr/lib/libdl.a
  /usr/lib/libpthread.a
  /usr/lib/libpthreads.a
  ```

  Note: It is recommended that the LIBPATH environment variable *not* be set, as it can interfere with the loading of libraries from `/opt/accurev/bin`.

  The libraries above are typically part of the following AIX filesets and/or open-source RPM packages:

  - bos.loc.utf.EN_US (or any other non-EN_US UTF locales)

  - bos.rte.bind_cmds

  - bos.rte.libc

  - bos.rte.libpthreads

  - bos.rte.security

  - openssl-0.9.7X

  - gettext-0.17-1 (or later)

  - AIX 5.3: fix pack 5300-07 or newer required

  - AIX 6.1: fix pack 6100-GOLD or newer required

  - AIX 7.1: fix pack 7100-GOLD or newer required

- The installer mistakenly warns you that you have not chosen the bundled JRE. Complete the installation, then change this setting in **/opt/accurev/bin/acgui.lax**:

```
lax.nl.current.vm=../jre/bin/java
```

HP-UX

- Only the AccuRev client software is supported on this platform.

- If you upgrade the AccuRev Client using the console mode, you are not prompted to provide values for host, port, and path. AccuRev uses values from your existing AccuRev Client installation to perform the upgrade.

- The value of the tunable system parameter **maxssiz** (maximum stack size) for the HP-UX kernel must be at least 0x2000000, rather than the default of 0x800000.

  Use this command to determine the current setting:

  ```
  grep maxssiz /stand/system
  ```

  If you must increase the value, use the SAM utility, as described on the "Reconfiguring the Kernel" page at:

  ```
  http://docs.hp.com/en/5185-6559/ch01s01.html#cihehjcc
  ```

- The following shared libraries must be accessible, both by the AccuRev Installation Wizard and by the installed AccuRev executables:

  ```
  /usr/lib/libpthread.1
  /usr/local/lib/libintl.sl
  /usr/local/lib/libiconv.sl
  /usr/local/lib/libcrypto.sl
  ```

  The pathnames above show the typical locations for these shared libraries.

  Note: It is recommended that the SHLIB_PATH environment variable *not* be set, as it can interfere with the loading of libraries from *<ac-install>*/bin.

  The libraries above are typically part of the OS core, or of the following HP-UX packages:

  - gettext

  - libiconv

  - openssl

SunOS / Solaris

- The AccuRev Server and Client are supported on both Solaris Sparc and Solaris x86.

- As of AccuRev 5.6, the AccuRev Server is available only as a 64-bit application; it cannot be installed on 32-bit Solaris machines. The following table summarizes considerations for upgrading existing AccuRev Server installations:

Table 12. Upgrading to AccuRev Server 5.6 on Solaris

Existing AccuRev Server Version	Comments
4.x	AccuRev 4.x required you to install as root. In AccuRev 5.6, you cannot install as root. In order to successfully upgrade to AccuRev 5.6, you must first run the following command on your existing AccuRev installation: (sudo) chown -R *<ac-user> <ac-install>*
5.x (5.5 and earlier)	AccuRev 5.x (5.5 and earlier) used a 32-bit version of the PostgreSQL database which is not compatible with the 64-bit version of the PostgreSQL database used by AccuRev 5.6. If you are upgrading from AccuRev 5.x, contact AccuRev support for assistance migrating your 32-bit PostgreSQL database: ■ Go to *http://support.accurev.com/* ■ Or write AccuRev technical support at *support@accurev.com*

- If you upgrade the AccuRev Client using the console mode, you are not prompted to provide values for host, port, and path. AccuRev uses values from your existing AccuRev Client installation to perform the upgrade.

- The following shared library must be accessible, both by the AccuRev Installation Wizard and by the installed AccuRev executables. The pathname below shows the typical location for this shared library.

  /usr/sfw/lib/libgcc_s.so.1

  Note: It is recommended that the LD_LIBRARY_PATH environment variable *not* be set, as it can interfere with the loading of libraries from *<ac-install>*/bin.

  The library above is typically part of the following SUN package:

  - SUNWgccruntime

Restrictions on the Use of AccuRev Clients in Solaris Zones

The following restrictions apply to the use of AccuRev clients in Solaris zones:

- The AccuRev Server should be run from a global zone. If you want to run an AccuRev Server from a non-global zone, you should give that zone a private disk volume and not use a loopback mount to the global zone for any of the AccuRev Server metadata or storage files.

- Workspaces can only be created on zones with private host names.

- Workspaces in the non-global zone cannot be used from the global zone.

- Workspaces on NFS mounts (not recommended) must be NFS-mounted directly from the non-global zone, not through a loopback mount in the non-global zone to an NFS mount in the global zone.

- Solaris requires operating system patches, as described on the Oracle Technology Network (http://www.oracle.com/technetwork/systems/patches/index.html).

Windows

- Disable anti-virus checking for the *<ac-storage>* directory and all directories beneath it to avoid performance problems associated with anti-virus checks.

- Machines running Windows 7 should be upgraded to SP1 if you will be using mounted workspaces. For example, assume that you have the logical drive **P:** mapped to a path similar to \\raid\public, and your workspace is in p:\myuser\myworkspace. If you try to issue an **accurev info** command in that directory, you may see an exception from "aos.c" that displays the error message - "no mounted filesystem matched path ... ".

Mac OS X

- AccuRev Release 6.0 supports only the AccuRev client software on the Mac OS X platform.

- Be sure you have JRE 1.6 or higher installed. AccuRev does not install its own JRE on OS X, because Java is included with the OS X installation.

- To install the server, you must be a non-**root** user. This restriction does not apply to installations performed with the client-only installer.

- The following is a recommended method for getting all required executables into the PATH for Mac OS X:

  Create the following three files using "sudo":

  ```
  sudo echo "/Applications/AccuRev/bin" > /etc/paths.d/AccuRev
  ```

  ```
  sudo echo "/Applications/AccuRev/bin/acdiffgui.app/Contents/MacOS" >
      /etc/paths.d/Acdiffgui
  ```

  ```
  sudo echo "/Applications/AccuRev/bin/acgui.app/Contents/MacOS" >
      /etc/paths.d/Acgui
  ```

- To enable the AccuRev **diff** GUI tool (acdiffgui) to work stand-alone as well as from an IDE integration such as Eclipse, do the following:

  1. Make a backup copy of acdiffgui:

  ```
  cd /Applications/AccuRev/bin/acdiffgui.app/Contents/MacOS
  ```

  ```
  mv acdiffgui acdiffgui.orig
  ```

  2. Create a new acdiffgui file with the following content:

  ```
  #!/usr/bin/perl
  my $acbin = '/Applications/AccuRev/bin';
  my @jars = qw(oro.jar xercesImpl.jar xml-apis.jar fw.jar werken.opt.jar diff.jar);
  my $cp = join(':', map {"$acbin/$_"} @jars);
  my @args = ('java', "-Duser.dir=$acbin", '-Xms32M', '-Xmx512M', '-classpath', $cp,
  'diff.DiffApp', @ARGV);
  system (@args);
  ```

  3. Create the following link:

  ```
  ln -s /Applications/AccuRev/bin/acdiffgui.app/Contents/MacOS/acdiffgui
      /Applications/AccuRev/bin/acdiffgui
  ```

  4. Close any shells.

  5. Open a new shell.

  Running acdiffgui should now bring up the AccuRev graphical **diff** tool, and it should also work from within any integrated IDE.

Uninstalling AccuRev

On Windows, we recommend that you run `<ac-install>\bin\UninstallerData\Uninstall AccuRev.exe` to ensure that the AccuRev services and registry entries are removed cleanly. Back up and remove any folders and files left under `<ac-install>`.

On UNIX/Linux, simply halt and remove any AccuRev services, and back up and remove any folders and files left under `<ac-install>`.

AccuRev 6.0 Release Notes

This chapter describes changes and other information related to AccuRev Release 6.0. Changes to the AccuRev Web User Interface (Web UI) are described in a separate section in this chapter.

Deprecated Features

This section describes features that are deprecated in AccuRev 6.0. These features will not be supported in a future release. See the Deprecated Features sections for previous AccuRev releases for information on other deprecated features.

The following features are deprecated in AccuRev 6.0 and will not be supported in a future release:

- **Transaction-level integration**. This has been one of two integrations available between AccuRev SCM and the AccuWork issue tracking system. Transaction-level integration (as described in Chapter 10, AccuRev Triggers in the *AccuRev Administrator's Guide*) will not be supported after this release. Please use change package-level integration, as described in the Schema Editor chapter of the On-Line Help Guide. Any scripts that make use of transaction-level integration should be updated so they will not break when support for transaction-level integration is removed.

- **The ":<issue-number>" argument** for the **revert** command. Due to the introduction of multi-segments in AccuRev 6.0, this argument is no longer necessary and is ignored if invoked. Please update any scripts that use this argument so they will not break when it is removed.

Changes in Release 6.0.2

AccuRev Release 6.0.2 is a patch release for Version 6.0 that is fully compatible with all 6.x versions. However, AccuRev recommends that users on Windows platforms with workspaces located in a path that was mounted using a **net use**, **net share**, or **subst** command upgrade both the AccuRev server and clients to Version 6.0.2.

AccuRev Release 6.0.2 addresses the following issues:

29918 -- Problems using file shares or substituted drives on Windows platforms

In previous releases, users encountered problems when using file shares or substituted drives on Windows platforms. These problems have been corrected in Release 6.0.2.

31023, 31581, 31700 -- Remove (red X) is enabled erroneously for Closed issues in AccuWork

In previous releases, the **Remove** (red X) option was active when a user opened an AccuWork issue with a status of **Closed**, even if the schema editor specified that the Changes tab was set to **read-only**. This problem has been corrected in Release 6.0.2.

31519 -- Promote to an issue fails after another user has merged and promoted to a different issue

In previous releases, when a user attempted to promote against an AccuWork issue that was previously used for a promote from the same workspace, but another user had performed a file merge and then

promoted to a different issue in the interim, the change package could not be merged and the promote operation failed. This problem has been corrected in Release 6.0.2.

31570 -- A replica sync fails after upgrading a replica to 6.x

In previous releases, upgrading a replica to 6.0 or 6.0.1 and then running a **replica sync** command produced the following error:

```
"network error - Connection lost while receiving data. Error 6 - acp.c:84 - Communi-
cations failure".
```

This problem has been corrected in Release 6.0.2.

31717 -- Performance improvements implemented for the archive command

In previous releases, running an **accurev archive** command was a time-consuming process. The performance of the **archive** command has been significantly improved in Release 6.0.2.

31954 -- Upgrading from any AccuRev version between 4.x and 5.5 to version 6.x loses change package information

If you used change packages in AccuRev version 4.x through version 5.5, upgrading directly to AccuRev 6.0 or 6.0.1 resulted in the loss of change package information. This problem has been corrected in Release 6.0.2.

31988 -- The performance of the keep command degrades if issue 0 contains a large number of files

In previous releases, the performance of the **keep** command degraded when issue 0 contained a large number (thousands) of files. The performance of the **keep** command under these circumstances has been significantly improved in Release 6.0.2.

31990 -- Upgrade process degrades when the installation contains a large number of depots

In previous releases, the performance of the **maintain dbupgrade** command degraded and produced an "**out of shared memory**" error when an installation contained a large number of depots. To address this issue, a new **maintain dbupgrade** option, called "**--auto_commit**", has been added.

When this option is off, maintain dbupgrade does not commit changes to depots until all depots have been upgraded. If a depot reports an error, the entire transaction is rolled back and no depots are upgraded.

When this option is on, maintain dbupgrade commits the changes to each depot immediately and if a depot reports an error, only changes to that depot are rolled back.

By default, the **--auto_commit** option is off.

Changes in Release 6.0.1

AccuRev Release 6.0.1 is a patch release for Version 6.0 that addresses the following issues:

28831 -- Support for non-XML characters in AccuWork schema

In previous releases, the AccuWork schema did not support non-XML characters such as ampersand (&) and forward slash (/) as values for fields with type Choose. This problem has been corrected in Release 6.0.1.

31104 -- required jar file included in AccuRev Diff tool

In previous releases, the executable for the AccuRev Diff tool, **acdiffgui.exe**, did not list all of the jar files needed to run the AccuRev Diff tool from within AccuRev Plug-In for Visual Studio PE. This prevented users of AccuRev Plug-In from using the AccuRev Diff and Merge tools. This problem has been corrected in Release 6.0.1.

31130 -- Version Browser can hang when switching tabs

In the previous release, switching between the **Streams & Workspaces** and **Issues** tabs in the Version Browser could cause AccuRev to hang if an object (a stream, workspace, or issue) was selected in the tab. This problem has been corrected in Release 6.0.1.

31149 -- Issue display in Version Browser corrected

In the previous release, the issues displayed on version boxes in the Version Browser were not always correct. This problem has been corrected in Release 6.0.1.

31150 -- Performance improved for cpkdescribe and issuelist commands

In the previous release, the performance of the **cpkdescribe** and **issuelist** commands suffered when they encountered a file version whose history contained numerous patches, each of which contained additional patches. AccuRev has changed the way such nested patches are managed, correcting this issue in Release 6.0.1.

31174 -- Legacy data from AccuRev 3.x migrates correctly

In AccuRev 3.x, directory elements were not created with a real version. That issue, which was addressed in a previous release, prevented the successful migration of AccuRev 3.x data to AccuRev 6.0. This problem has been corrected in Release 6.0.1.

31175 -- Unaffiliated changes now listed in transaction order

The **issuelist** command XML output now lists unaffiliated version segments in ascending transactional order, by head version of the unaffiliated segment. This allows for proper grouping of changes in the AccuRev GUI.

Changes in AccuRev Release 6.0

AccuRev Release 6.0 includes the following new features and bug fixes:

17640, 19144, 19723 -- Enhancements to Show Diff by Files

There have been several enhancements and fixes to the Show Diff by Files feature and the Stream Diff (Files) tab:

- In previous releases, right-clicking the destination stream version displayed the context menu for the source stream version, and vice versa; in addition, actions selected from the context menu were performed on the opposite version of the one you selected (on the source if you selected the destination, for example). The context menus and actions are now performed on the selected version.

- You can now open a file that is in only one of the streams that you are diffing. In previous releases, the **Open** menu choice was unavailable in this situation.

- The value in the **Version #1/Version #2** column used to be blank for those files that were in only one of the streams that you were diffing. The value in the **Version #1/Version #2** field now displays a value in this situation.

18924 -- Enhanced message when twin elements are encountered

In previous releases, AccuRev displayed an error message like the following when it encountered a twin during a cross-promote operation:

```
Another element with the same name already exists in parent stream: eid 123456
```

This message has been enhanced to include the full element name instead of its EID, and the reference to the *parent stream* has been replaced with *destination stream*. In addition, the Change Palette now includes an **Id** column for the display of the source file's EID.

19304 -- ACCUREV_USE_MOD_TIME environment variable does not preserve the timestamp for cross-linked elements

(*Windows only*) In previous releases, setting `ACCUREV_USE_MODE_TIME=1` did not preserve the timestamps for cross-linked elements. This problem has been corrected in the current release.

21661 -- ACCUREV_IGNORE_ELEMS treating (modified) elements as external

In previous releases, the ACCUREV_IGNORE_ELEMS environment variable treated elements with a **(modified)** status as external, causing them to be ignored. This occurred when the workspace directory associated with the elements was specified in an ignore pattern (`*/my_files`, for example) and the file (`/my_files/readme.txt`, for example) was modified but not kept. This problem has been corrected in the current release.

Note: The ACCUREV_IGNORE_ELEMS environment variable was deprecated in AccuRev 5.7 and will not be supported in a future release.

23353 -- Changes to file type were not reflected by update

In previous releases, AccuRev did not update files when the only change to a file was its type. For example, if UserA changed a file type from **text** to **ptext** and promoted the file, the file's type would still be **text** after UserB updated her workspace.

27829 -- SAException(7): ERROR thrown on replica servers

In previous releases, multiple simultaneous login requests on the AccuRev replica server could create a race condition, resulting in AccuRev throwing the following error:

```
SAException(7): ERROR:  duplicate key value violates unique constraint
"user_session_pkey"
```

This problem has been corrected in the current release.

28001 -- Group names are repeated by show -u *<username>* groups command

In previous releases, AccuRev repeated group names for users in nested groups when executing the `show -u <username> groups` command. For example, if you created a groupA with userA, created groupB, and then added both groupB *and* userA to groupA, AccuRev would return groupA twice when running `show -u userA groups`. This problem has been corrected in the current release.

28086 -- change package improvements

Change packages are now easier to use, allowing you to work in a natural manner without the necessity of manual rules and procedures. AccuRev has always been good at showing you where your files are and how your project is progressing, but with Release 6.0, improvements in the following areas now make it easier to manipulate the elements involved in those projects.

- Issue Dependencies -- AccuRev now automatically keeps track of changes even when the same element has versions from two different issues. It is no longer necessary to ensure that all changes for one issue are complete before promoting changes for a different issue.

- Tracking Issues -- Tracking issues are still available if you wish to use them, but they are no longer required when you patch an issue from one stream to another (see "Enhanced Change Palette Behavior" below).

- Incomplete Change Packages and Unaffiliated Changes – AccuRev has always been able to alert you to files that are missing from a change package, but now it is also able to alert you to missing versions of a file. This means that you will see far fewer instances of "Unaffiliated Changes" (versions of files that cannot be associated with an issue in the current stream). Also, you can now send all Unaffiliated Changes to an issue with a single mouse click, making it easier to clean up your streams.

As part of the improvements to change packages, the Change Palette has changed in the following ways:

- You no longer need to use the Change Palette for simple cross-promotes. You can simply drag & drop items from a dynamic stream to the destination stream. If there are no conflicts, the operation completes immediately. AccuRev only brings up the Change Palette if there is a conflict that requires your intervention.

- There is now an enhanced Change Palette mode for issues. This mode provides functionality for efficiently identifying and dealing with conflicts and issue dependencies, and then promoting the issues into the destination stream.

28177 -- Merging large ptext files hangs AccuRev

(*Windows only*) In previous releases, merging a large ptext file (62kb or larger) could hang AccuRev when the file was being read from the AccuRev repository (not the workspace). This hang occurred during execution of the **cat** command, which AccuRev calls during the merge process. This issue has been corrected in the current release.

28324 -- New: set stream background color

You can use a new *style* property for the **setproperty** command to set the background color for streams and workspaces using the hex value for any web-safe color. For example, this command sets the background color of the *nightly* stream to red:

```
accurev setproperty -s nightly -r style "<style><color><background-color>#FF0000</background-color></color></style>"
```

Note that the value for the *style* property is expressed as XML, which must be escaped using quotation marks. See the *CLI User's Guide* or command line help for more information.

28326 -- New: Vertical stream layout

In previous releases, streams in the AccuRev GUI were displayed using a horizontal layout, with the root stream on the left and the child streams laid out in single rows from left to right. In AccuRev 6.0, you can now display streams vertically. The vertical layout can make many stream displays more compact and easier to navigate. Vertical layout is now the AccuRev default, but you can change this setting on the StreamBrowser tab of the Preferences dialog box (**Tools** > **Preferences**).

28328 -- New: File Browser enhancements

The File Browser for both streams and workspaces has benefited from numerous enhancements, most notably new Explorer, Outgoing Changes, Incoming Changes, and Conflicts modes that make it easy to see your changes, and the changes of others, at a glance. See *New File Browser Modes* on page 2 for more information.

28364 -- Specifying invalid stream name in show stream_rules crashes the server

In previous releases, the **show stream_rules** command crashed the AccuRev Server if you

- Specified a non-existent stream name

- Specified a stream number (using the **-p** *<depot>* option)

This problem has been corrected in the current release, and AccuRev now displays a message informing you that the stream name is invalid.

28378 -- maintain dbupgrade no longer fails when encountering errors in encoded fields

In previous releases, the **maintain dbupgrade** command would sometimes fail when it encountered errors in text fields that were the result of saving a given issue record in different locales. AccuRev added a UTF-8 character type encoding header for the current locale to every text field each time the record was saved, which ultimately caused the field to exceed limits that could be managed by the **maintain dbupgrade** command. This problem has been addressed in the current release, and maintain dbupgrade no longer fails in this situation. (The problem of adding a new UTF-8 encoding header each time a record is saved was addressed in a previous release.)

28437 -- Improved error message for invalid diff -v -v command

AccuRev now displays an error message informing you that using two lowercase **-v** options with the **diff** command (`accurev diff -v 33/16 -v 1/6 readme.txt`, for example) is invalid.

28458 -- Revert and purge operations clear execute bit

(*Mac OS X and Linux only*) In previous releases, revert and purge operations incorrectly cleared the file's execute bit. This problem has been corrected in the current release.

28875 -- New: Version Browser enhancements

The Version Browser has been enhanced in several ways, both to support the latest change package improvements, as well as to make it generally easier to use. See *Version Browser Enhancements* on page 4 for more information.

28888 -- New: Show Current Change Package control in History Browser

A new control, the **Show Current Change Package** check box, has been added to the Active Transactions tab in the History Browser. When unchecked (the default), the lower pane shows the state of the change package as it was *at the time of the selected transaction*. However, when the **Show Current Change Package** check box is checked, AccuRev displays the current state of the change package, regardless of the time of the selected transaction. This feature allows you to easily see any changes that occurred after a given transaction.

29059 -- hist command can fail when closing stdin

In previous releases, the **hist** command could sometimes fail with the following error when closing stdin:

`Error 1 - sys.c:185 - failure closing 0 - System Error: 6 The handle is invalid`

This could occur only in frameworks that allow a created process to be reused, as is the case with the .NetProcess class, for example. This problem has been corrected in the current release.

29194 -- Improved error message for client/server mismatches

In previous releases, if the versions of the AccuRev Client and AccuRev Server were incompatible, AccuRev displayed a message telling you that the client was running the "wrong" version of AccuRev.

The message now tells you whether the incompatible Client is running a version of AccuRev that is older or newer than that of the Server.

29267 -- files command returns a non-zero value when file is not found

In previous releases, if the **files** command (`files foo.txt`, for example) did not find a file, it returned a 0. It now returns a 1.

29325 -- Typographical errors in the AccuRev installer

Typographical errors in the AccuRev installer were fixed in the current release.

29352 -- Creating public stream favorites are unavailable

In previous releases, stream favorites created as public stream favorites could not be displayed by other users of the same depot. This problem has been corrected in the current release.

29884 -- Stream Explorer and Workspace Explorer sort in case-insensitive order

In previous releases, the Stream Explorer and Workspace Explorer sorted in a case-sensitive order (uppercase names appeared before lowercase names, so *Phoenix* would appear before *nimbus*, for example), while the display in the Details pane was sorted in case-insensitive order (*Phoenix* appeared after *nimbus*, for example). This problem has been corrected in the current release, and both the Explorer and Details panes sort in case-insensitive order.

30280 -- mergelist command performance

In AccuRev 5.7, the performance of the **mergelist** command degraded significantly. This problem has been corrected in the current release, and performance now exceeds that of AccuRev 5.6.2 and earlier.

Corrections and Changes to the Documentation

Please note the following corrections and changes to the AccuRev 6.0 documentation.

25505 -- include cpkadd and cpkremove in description of server_preop_trig

The table identifying commands fired by the **server_preop_trig** trigger now includes **cpkadd** and **cpkremove**.

28619 -- Document getproperty and rmproperty for server_admin_trig

The **getproperty** and **rmproperty** commands were not included in the list of commands that are fired by the **server_admin_trig** trigger. This problem has been corrected in the current release.

29430 -- "rule" added to excl, incl, and incldo command descriptions

The word "rule" was added to exlc, incl, and incldo command descriptions in the *CLI User's Guide* to make them easier to locate in searches of the documentation.

29469 -- Bookmarks missing in the *Installation and Release Notes*

The PDF for the 5.7 *Installation and Release Notes* was missing bookmarks. This problem has been corrected for the current release.

29488 -- Clarification for CLI eacl command

The usage notes for the **eacl** command clarify what information is returned if no privilege changes are specified.

29591, 28080 -- Typographical errors in the *On-Line Help Guide, CLI User's Guide*

Reported typographical errors in the *On-Line Help Guide* and the *CLI User's Guide* were corrected.

29764 -- Incorrect page numbers in some cross-references

The previous release of the *Installation and Release Notes* included some cross-references with incorrect page numbers; the hyperlinks behaved correctly even though the page number itself failed to update when the book was generated. This problem has been corrected in the current release.

29832 -- Clarification in dragging and dropping a default group

In previous releases, the documentation stated that dragging a default group to a workspace performed a Send to Workspace operation. In fact, this action performs a Send to Change Palette operation. The documentation has been updated to correct this error.

29859 -- Remove references to (pending) status

Previous releases of the documentation made reference to a **(pending)** status instead of speaking more generally about modified elements in the workspace that were waiting for, or *pending*, promotion. This problem has been corrrected in the current release.

29870 -- Byte Order Mark (BOM) field documented

The Merge view toolbar includes a conditional **BOM** field that appears when the **Character Encoding** field is set to Unicode (UTF-8). This field was not documented in previous releases; this problem has been corrected in the current release.

29978 -- Document -fv -fvx for show wspaces

In previous releases, the **-v** option for the **show wspaces** command was not documented. The documentation now notes that this option adds a Loc (location) column to output.

30265 -- MAC OS security setting required to install AccuRev

The *Installation and Release Notes* now note that if you are installing the AccuRev Client on Mac OS X 10.7.5 or later, you must set the Gatekeeper feature to allow applications to be downloaded from **Anywhere**.

Changes in AccuRev Web UI Release 6.0

AccuRev Web UI Release 6.0 includes the following:

Stream colors supported in the Web UI StreamBrowser

Stream background colors created using the new *style* property for the **setproperty** command are supported in the AccuRev Web UI. See for more information.

Known Issues

This section describes known issues in AccuRev and in the AccuRev Web UI. Refer to the Known Issues sections from previous releases for other known problems and workarounds.

Known Issues in AccuRev

29960 -- Viewing PDF through the online help disables help viewing controls

If you load the online help and click on the PDF button, you can no longer browse HTML content using the Contents, Index, or Search tabs in the left hand pane. You need to close and re-open the online help. This problem affects the online help when viewed using Firefox and Internet Explorer.

To work around this issue, configure PDFs to open in a separate Adobe reader window:

1. Open Adobe Reader.

2. Navigate to **Edit** > **Preferences** > **Internet**.

3. Uncheck "Display PDF in browser".

4. Click OK and exit Adobe Reader.

For Firefox, you also need to perform the following procedure:

1. Open Firefox and navigate to **Tools** > **Options** > **Applications**.

2. Scroll down to "Portable Document Format (PDF)".

3. Ensure that "Preview in Firefox" is NOT selected. Any other option of your choosing is acceptable.

4. Click **OK** and exit all instances of Firefox.

After performing these procedures, clicking the PDF button in the AccuRev Help browser should either display the PDF in a different window, or display a dialog asking how you want to display the file.

30567 -- Changes to 6.0 XML to accommodate issue variants and multiple segments

The XML generated by AccuRev changed to support issue variants and elements with multiple segments as part of the improvements to change packages. If you are using change packages, or if you have issue variants or elements with multiple segments, you should be aware of the possible impact the XML can have on AccuRev Bridges, scripts, and triggers.

- **XML input for cpkdescribe and cpkelems.** In previous releases, the `<stream1>` tag provided the depot context for the **cpkdescribe** and **cpkelems** commands (even if the proper way to specify the depot was to use the `<depot>` tag) . In AccuRev 6.0, the `<stream1>` tag will provide the these commands with the `--from_stream` context.

  Even though neither the `<stream1>` tag nor `--from_stream` option is required to run the **cpkdescribe** and **cpkelems** commands, they are required in order to get accurate element versions for an issue or set of issues in a stream. These commands will return information for all issue variants when the `--from_stream` option is not present. See the CLI documentation for more information on the `--from_stream` option.

- **XML output for cpkdescribe.** The XML output for the **cpkdescribe** command now includes `variant_num=` attributes in the `<issue_num>` tag. This attribute provides grouping among element versions that span multiple issue variants. Scripts or the XML parser do not need to parse this attribute as long as a) either the `<stream1>` tag or `--from_stream` option is provided and b) the script or XML parser has the ability to parse multiple `<issue_num>` tags in the output.

  In addition, the XML output for the **cpkdescribe** may describe multiple version segments for the same element when multi-segment change packages are present. The script or XML parser needs to be able to parse multiple `<element>` tags with the same `id=` attributes within the `<elements>` tag.

- **XML output for issuelist.** The XML output for the **issuelist** command now includes a `multiple_variants=` attribute on the `<issue>` tag with values of `true` or `false`. This attribute will be present in the XML only when it is `true`; that is, when the stream contains more than one variant for the same issue. Because of this, the script or XML parser needs to be able to parse or ignore this attribute.

30697 -- Install issues on Mac OS X running Java 1.7

The third-party installation software used by AccuRev does not support installations on Mac OS X running Java 1.7. This issue causes the AccuRev client installation to fail in this environment.

To work around this problem, on the Mac on which you wish to install the AccuRev client:

1. Uninstall Java 1.7.

2. Install Java 1.6.

3. Install AccuRev.

4. Install Java 1.7.

30715 -- Some screen shots are out of date

Some of the screen shots of the AccuRev GUI were not updated for the current release. In particular, you might notice that the color of the folders and issues displayed in Version Browser screen shots do not match the colors in the AccuRev GUI.

Known Issues in the AccuRev Web UI

The 6.0 release of the AccuRev 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.

Issues with text and log fields will be addressed once the next Google Web Toolkit is available.

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.

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.

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.

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

If you are using the AccuRev GUI running on Mac OS X and you open an issue in the Web UI, you might experience the following if 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

25851 -- Web UI Tomcat server must be restarted on UNIX/Linux servers

After installing the AccuRev Web UI server on a Linux or UNIX host, you must manually restart the Tomcat server even if the AccuRev installer starts it automatically. (Tomcat must be restarted by the same user that performed the installation.)

Source Code Availability

AccuRev uses third-party code in the development of some of its features. In accordance with open-source policy, this section describes what code is used. Third-party source code used by AccuRev is available here:

http://www.accurev.com/downloads/gpl-lgpl-source-code

Diff and Merge

AccuRev acdiff and acdiff3 programs implement text-file comparison and merging operations. To download the source code used by acdiff and acdiff3, click this link:

http://www.accurev.com/download/open-source/acdiff_source.zip

Character Set Encoding Conversions

AccuRev uses GNU libiconv for character set encoding conversions. To download the libiconv source code, click this link:

http://www.accurev.com/download/open-source/accurev_gettext_iconv.zip

Rich Text Formatting

AccuRev uses SHEF for rich text formatting. To download the SHEF source code, click this link:

http://www.accurev.com/download/open-source/shef_accurev_source.zip

Reports

The AccuRev Web UI uses Open Flash Chart 2 for reports. To download the Open Flash Chart 2 source code, click this link:

http://www.accurev.com/download/open-source/open-flash-chart-2-Lug-Wyrm-Charmer.zip

Version Browser

AccuRev uses JGraphT to create graphs in the Version Browser. To download the JGraphT source code, click this link:

`http://www.accurev.com/download/open-source/jgrapht-0.8.3.zip`

AccuRev 5.7 Release Notes

This chapter describes changes and other information related to AccuRev Release 5.7. Changes to the AccuRev Web User Interface (Web UI) are described in a separate section in this chapter.

Deprecated Features

This section describes features that are deprecated in AccuRev 5.7. These features will not be supported in a future release. See the Deprecated Features sections for previous 5.x releases for information on other deprecated features.

The following features are deprecated in AccuRev 5.7 and will not be supported in a future release:

- **Traditional, server-based Timestamp Optimization.** Traditional, server-based Timestamp Optimization (TSO) is deprecated and will not be supported in a future release. Starting with AccuRev 5.7, the new default is the local, client-based Timestamp Optimization introduced in AccuRev 5.4.

  As part of the deprecation of traditional, server-based TSO, the following features are also deprecated:

  - The `stat_mode` variable in the **acserver.cnf** configuration file.

  - The **-O2** option for theses commands: **anchor**, **co**, **files**, **stat**, and **update**.

  See "Timestamp Optimization (TSO)" in the *AccuRev Administrator's Guide* for more information on Timestamp Optimization settings.

- **ACCUREV_IGNORE_ELEMS environment variable.** The ACCUREV_IGNORE_ELEMS environment variable is deprecated and will not be supported in a future release. Starting with AccuRev 5.7, the functionality provided by ACCUREV_IGNORE_ELEMS is being replaced by the **.acignore** file, which now allows you to specify patterns and files to ignore on both a per workspace and per user basis.

Changes in AccuRev Release 5.7

AccuRev Release 5.7 includes the following new features and bug fixes:

6893 -- Copy file names, paths in Properties dialog box, History Browser, other views

You can now copy field values in the Properties dialog box, and in the History Browser, Version Browser, Diff, and other views. For example, to copy the value of the Pathname field in the Properties dialog box, press and hold mouse button 1 and drag the pointer over the value you want to copy.

8468 -- Wildcards supported in keep -c command

In previous releases, the AccuRev **keep** command would fail if you used wildcards to specify elements on which to execute the command. For example:

```
"accurev keep -c "Process *.mpg files" \.\onetest.txt
No elements selected
```

This problem was corrected in AccuRev 5.5.

13784 -- USE_IGNORE_ELEMS_OPTIMIZATION is no longer supported

The USE_IGNORE_ELEMS_OPTIMIZATION environment variable is no longer supported. In previous releases, it was used to cause the **update** command to use the ACCUREV_IGNORE_ELEMS environment variable when searching the workspace for modified files. The USE_IGNORE_ELEMS_OPTIMIZATION environment variable is no longer needed to support this functionality and is safely ignored by AccuRev.

20092 -- New: Option to fit stream widths to stream name length in StreamBrowser

In previous releases of AccuRev, the width of all streams in a column was as wide as the longest stream name in that column. For example, stream **ac_5.5_build** would be as wide as stream **ac_5.5_dev_workflow_itr4_doc_dfoster**. Starting with AccuRev 5.7, you can set a preference on the StreamBrowser tab of the AccuRev Preferences dialog box that makes each stream only as wide as its name.

23809 -- New: Filters added to ACL, Depots, Reference Trees, Slices, and Workspaces views

Table filtering, which was enhanced in AccuRev 5.5, has been added to several other views in the AccuRev GUI, as summarized in the following table:

Table 1. New Table Filters in AccuRev 5.7

View	Filters By This Column
ACL tab (Security)	Resource
Depot	Name
Reference Trees	Name
Slices	Location
Workspaces	Name

24648 -- Network error when reverting two elements with the same pathname/filename

In AccuRev 4.9.1, AccuRev would display the following error when trying to revert two elements with the same pathname or filename:

```
network error - Connection lost while  receiving data
```

This problem is resolved by upgrading to AccuRev 5.x, which uses a different database.

25556 -- Cannot resize In Folder column in default group window

In previous releases, the In Folder column in the default group window could not be resized when the default group was displaying active files. This problem has been corrected in the current release.

25891 -- Text overlaps Filter field

(*Linux only*) In previous releases, text in the Filter field would overlap the field's border, making the filter term difficult to read. This problem has been corrected in the current release.

26208 -- History Browser does not show correct number of transactions

In the previous release, the History Browser view would show only 10 transactions by default, even if the transactions drop-down displayed **20 transactions**. The correct number of transactions (20, 50, or 100, for example) was displayed only if the user explicitly selected it from the transactions drop-down. This problem has been corrected in the current release, and the History Browser shows up to 20 transactions in the initial display.

26330 -- stat * command returned confusing message

In previous releases, running the **stat *** command on an empty folder returned the following:

```
Use * to stat all files in the current directory.
Alternatively, you can use the "accurev files" command.
```

The output has been modified to clearly indicate when the directory is empty:

```
\* (no such elem)
```

Note that hidden files are skipped by the **stat** command.

27239 -- New: AccuRev GUI look and feel

The AccuRev GUI look and feel has changed to enhance both usability and the overall user experience. Some of the highlights of the new GUI look and feel include:

- Larger toolbar buttons
- Enhanced tooltips
- Scrolling tabs
- Alternate-row coloration (so called *zebra* or *candy striping*) in tables
- Crisper, cleaner fonts throughout

27418 -- New: Installer supports Windows 8

AccuRev can now be installed on machines running the Windows 8 operating system.

27704 -- Some missing AccuRev 4.x database files silently ignored during upgrade

In previous 5.x releases, when upgrading from AccuRev 4.x to any 5.x version, the database migration would continue even if any of the following required files was missing:

- **wspaces.ndb** (located in the site_slice folder)
- Any of the following, all located in individual named depot directories:
    - **issue.ndb**
    - **issue0.ndb**
    - **trans.ndb**
    - **trans_entry.ndb**
    - **history.ndb**

This problem has been corrected in the current release, and AccuRev now issues an error if any of these files is missing.

Note: If you have already upgraded to 5.x and have not encountered problems opening a workspace, viewing transaction history, or opening issue records then your database migration succeeded.

27717 -- New: Diff Against File in Other Stream

AccuRev 5.7 introduces a new Diff operation, Diff Against File in Other Stream, which allows you to diff one file against the same file (or any other file you choose) in another stream.

27726 -- Workflow message incorrectly displayed during promote operation

In previous releases, AccuRev would display the following message during a promote operation even if no stream rules had been specified:

```
Unable to open file: /opt/accurev/storage/depots/kando/dispatch/config/workflow-
links.xml
```

This problem has been corrected in the current release; AccuRev no longer attempts to parse workflow rules unless they have been created, regardless of whether or not workflow has been enabled for a given depot.

27775 -- Enhancements to .acignore

The **.acignore** file has benefitted from several enhancements in the current AccuRev release, including:

- The ability to use **.acignore** to specify global patterns; previously, **.acignore** could be used only on a per-directory basis.

- The ability to specify patterns that are recursive

- The ability to use curly braces ({ and }) as wildcards

- Enhanced system messages when an ignore pattern is affecting an operation

See story 28209 for other changes related to specifying ignore patterns in AccuRev.

27802 -- Replica server can crash during client_replica_shutdown

In previous releases, the AccuRev replica server could crash if an exception was thrown at the end of the replica/master communication during execution of the **client_replica_shutdown** command. This problem has been corrected in the current release.

27866 -- Editing multiple files

In AccuRev 5.5, selecting **Edit** on the shortcut menu for an element opened that file in an editor. If this same operation was performed on a second element, AccuRev failed to either open a second editor or refresh the editor's contents with the second element. Upon closing the editor, AccuRev would open an editor with the second element's contents displayed.

This problem has been corrected in the current release: AccuRev now opens a unique editor for each element for which the **Edit** operation has been selected.

27873 -- Inconsistent behavior using Find with streams

In previous releases, choosing **Find** from a stream's shortcut menu caused AccuRev to search in and below that stream; choosing **Find** from the toolbar, on the other hand, started the search at the root stream, regardless of whether or not a stream was selected.

This inconsistency has been corrected in the current release, and AccuRev always starts the search from the selected stream, regardless of whether you choose **Find** from the shortcut menu or the toolbar.

27902 -- New option for Kando license in mkuser and chuser commands

A new **-kk** option for the **mkuser** and **chuser** AccuRev CLI commands allows you to specify a user licensed for both Kando and AccuWork. (The existing **-kf** option has been expanded to include Kando.) A new **License Type** field has been added to the AccuRev GUI for creating and editing users. See story 28370 for more information.

27931 -- Message when trying to open local files from the Web UI clarified

In previous releases, if you selected **View** > **Open in Web** after running Diff Against Backed, AccuRev displayed the following message:

```
Web UI URL Not Found
The AccuRev Web UI is available only after the settings.xml file is configured on
```

```
the AccuRev Server. See the AccuRev(tm) Installation and Release Notes for more
information.
```

This message was misleading, as local files cannot be opened using the Web UI. This problem has been corrected in the current release, and AccuRev now displays the following:

```
Web UI Not Available
This diff operation uses a local file and cannot be shown in the Web UI.
```

27998 -- AccuRev Client documentation now installed as part of the AccuRev Web UI Server Only installation option

The AccuRev Web UI Server Only installation option relies on some AccuRev Client functionality; because of this, it installs the AccuRev Client. In the previous release, however, the AccuRev Client user documentation was not installed as part of the Web UI Server Only option. This problem has been corrected in the current release.

28010 -- New: Preference to control tab layout

One of the features of the new AccuRev GUI look and feel is scrolling tabs -- when you open more tabs than can be displayed in the AccuRev window, a scroll button appears to provide access to tabs that are not currently visible. If you prefer to have all tabs visible at the same time, you can set a preference that displays tabs in as many rows as needed. The default is to display tabs on a single row and add scrolling as needed.

Tip: Press Ctrl+F6 to display a dialog box that lists all open tabs.

28015 -- New: Enhanced search tool in the History Browser

The search tool in the History Browser provides enhanced search capabilities in AccuRev 5.7:

- A **Comments only** check box allows you to restrict your search to the contents of the Comment column.

- If you enter only integers in the **Search** field and the **Comments only** check box is cleared, AccuRev searches the **Trans. Num** column for the value you entered.

The **Comments only** check box is cleared by default. Searches are performed on all transactions associated with the currently selected element, regardless of whether or not they are currently displayed.

28023 -- Server crashes when the name lookup failure involves cross-links

In previous releases, AccuRev Server would crash when a name lookup failure involved a cross-link. This problem has been corrected in the current release.

28057 -- New: View to help resolve elements with (twin) status

AccuRev 5.7 introduces a new feature to help you resolve elements (directories and files) with a (twin) status. The new Twin Resolution wizard guides you through twin resolution using options that allow you to:

- Keep one of the elements in conflict (the other is automatically defuncted), and optionally merge the contents

- Keep both of the elements in conflict (by renaming one element or the other)

The Twin Resolution Wizard is available from the File Browser, Change Palette, and the default group by choosing **Resolve Twin Status** > **Use Wizard** from the shortcut menu of any file with a (twin)

status. Options that simply defunct one of the versions in conflict are directly accessible from the **Resolve Twin Status** menu.

AccuRev 5.7 includes other changes to help you work with elements with a **(twin)** status:

- The Overlap and Deep Overlap search filter includes elements with a **(twin)** status

- The **(twin)** status is listed first in the Status column

28091 -- AccuRev GUI menu can be difficult to read

(*Ubuntu 12.04 only*) Users running AccuRev on Ubuntu 12.04 experienced difficulty reading the main menu in the AccuRev GUI when using the Ambiance theme. This issue is not a problem when using AccuRev 5.7; to avoid this difficulty in earlier AccuRev releases, use a different Ubuntu theme.

28105 -- New: (twin) status is now highlighted

AccuRev 5.7 introduces a new feature to help you resolve elements that have a **(twin)** status (see story 28057). As part of this new functionality, elements that have a **(twin)** status are now highlighted in the places in the AccuRev GUI where element status is displayed, including the File Browser, Change Palette, default group, and elsewhere.

28131 -- New: Enhancements to Annotate search

The following enhancements have been made to the search feature in the Annotate view:

- Ctrl+F places the focus in the search field, allowing you to enter a search term using only the keyboard.

- The F3 and Enter keys move the focus to the next occurrence of the search term you enter.

- The search field has Previous and Next buttons that let you move from one occurrence of the search term to the next.

28174 -- Update log erroneously reported "- failed"

During **update**, if AccuRev encountered a cyclic redundancy check (CRC) mismatch, the update log would erroneously report "- failed" for all subsequent files, even when no further CRC mismatches were detected. This was a reporting error and did not affect the **update** operation. This problem has been corrected in the current release.

28209 -- New: CLI options for add, files, and stat commands

AccuRev 5.7 introduces new options for the **add**, **stat**, and **files** commands to help you work with files that are explicitly ignored by AccuRev:

- **-fi** -- Include all files in the command, regardless of whether or not a file or directory matches a pattern in the **.acignore** file.

- **-fI** -- Include *only* those files and directories that match the patterns specified in the **.acignore** file.

- **--ignore** -- Specify a pattern of elements; external elements matching this pattern are ignored by the command.

These options also respect any patterns specified using the ACCUREV_IGNORE_ELEMS environment variable. Note that ACCUREV_IGNORE_ELEMS is deprecated in AccuRev 5.7 and will not be supported in a future release.

A new **(ignored)** status is displayed for files and directories that match the patterns specified in the ACCUREV_IGNORE_ELEMS environment variable, **.acignore** file, or the **--ignore** option.

28250 -- New: Include Ignored Objects preference

As part of the enhancements to specifying ignore patterns in AccuRev (see stories 28209 and 27775), the **General** tab of the AccuRev Preferences dialog box includes a new preference, **Include Ignored Objects**. This preference, when used with the renamed **Show External Objects** preference, the File Browser displays *all* external objects, including any that AccuRev would otherwise filter out because they match a user-specified ignore pattern. Objects that match an ignore pattern are displayed with a status of **(external)(ignored)**.

28262 -- Send to Change Palette unavailable in History Browser

In AccuRev 5.6, the Send to Change Palette choice was not available from the History Browser shortcut menu. This problem has been corrected in the current release.

28370 -- New: License Type for users

You can now specify a user's license type in the AccuRev GUI. Valid values are Full (AccuRev, AccuWork, and Kando), AccuWork, and Kando Only. Note that options for the related **mkuser** and **chuser** CLI commands have changed accordingly. See story 27902 for more information.

28397 -- New lines removed when pasted in text fields with rich text

In the previous release, if you pasted text from another source into an AccuWork text field for which rich text support had been enabled, any new lines in the pasted text were removed when the issue was saved. This problem has been corrected in the current release.

28679 -- AccuRev GUI terminates when system clock discrepancy is detected

In the previous release, when AccuRev detected a discrepancy between the system clocks on a client machine and a server machine beyond the allowable tolerance of 5 seconds, the AccuRev GUI would shut down. This problem has been corrected in the current release, and AccuRev now displays an informational message alerting you to the discrepancy.

28791 -- Welcome page can delay opening of the AccuRev GUI

In previous releases, AccuRev would wait for the version of the Welcome page hosted on the AccuRev web site to load before making the AccuRev GUI generally accessible. Users would experience this delay if the Internet connection was slow or unavailable (if the AccuRev Client was installed behind a firewall, for example).

This problem has been corrected in the current release, and you can now use the rest of the AccuRev GUI while AccuRev attempts to load the web-based Welcome page. If the web-based version remains unavailable, AccuRev uses the version of the Welcome page that is installed with the AccuRev Client.

Corrections and Changes to the Documentation

Please note the following corrections and changes to the AccuRev 5.7 documentation.

27924 -- Installation instructions refer to "- console" to run a silent installation

The AccuRev 5.6 installation instructions incorrectly referred to "- console" as the syntax used to run a silent installation. The correct syntax is "-i console". This problem has been corrected in the documentation for the current release.

28102 -- Database superuser name and password must be lowercase

The *AccuRev Installation and Release Notes* clarifies the requirement that the database superuser name and password must be lowercase.

28171 -- Documentation for an unsupported feature

The AccuRev 5.6 documentation contained references to a feature that enabled users to edit comments. This feature was not released and should not have been included in the documentation.

28459 -- New section in *AccuRev On-Line Help Guide*

A new section, Resolving (twin) Status in the *AccuRev On-Line Help Guide* describes how to use new features that help identify and resolve elements with a **(twin)** status.

28701 -- New chapter in the *AccuRev Technical Notes*

Chapter 3, "Pathname Optimization: ACCUREV_IGNORE_ELEMS and .acignore" in the *AccuRev Technical Notes* has been substantially revised to reflect improved support for ignore patterns and the deprecation of the ACCUREV_IGNORE_ELEMS environment variable. The chapter has been renamed, "Specifying Ignore Patterns for External Objects". In addition, the largely redundant section in the *AccuRev On-Line Help Guide* titled "Pathname Optimization: Selective Processing of External Objects" has been removed.

Changes in AccuRev Web UI Release 5.7

AccuRev Web UI Release 5.7 includes the following new feature:

25094 -- Elements with (twin) status are highlighted

AccuRev 5.7 introduces a new feature to help you resolve elements that have a **(twin)** status (see story 28057). As part of this new functionality, elements that have a **(twin)** status are now highlighted in the places in the AccuRev Web UI where element status is displayed, including the File Browser, Change Palette, default group, and elsewhere.

Known Issues

This section describes known issues in AccuRev and in the AccuRev Web UI.

Known Issues in AccuRev

See *Known Issues* on page 81 of *AccuRev 5.6 Release Notes*.

Known Issues in the AccuRev Web UI

The 5.7 release of the AccuRev 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.

  Issues with text and log fields will be addressed once the next Google Web Toolkit is available.

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.

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.

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.

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

If you are using the AccuRev GUI running on Mac OS X and you open an issue in the Web UI, you might experience the following if 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

25851 -- Web UI Tomcat server must be restarted on UNIX/Linux servers

After installing the AccuRev Web UI server on a Linux or UNIX host, you must manually restart the Tomcat server even if the AccuRev installer starts it automatically. (Tomcat must be restarted by the same user that performed the installation.)

28895 -- Web UI online help title page not updated for 5.7

The title page for the AccuRev Web UI online help was not updated for AccuRev 5.7. The content is otherwise correct, and the PDF version of the online help shows the correct AccuRev version and release date.

Source Code Availability

AccuRev uses third-party code in the development of some of its features. In accordance with open-source policy, this section describes what code is used. Third-party source code used by AccuRev is available here:

`http://www.accurev.com/downloads/gpl-lgpl-source-code`

Diff and Merge

AccuRev acdiff and acdiff3 programs implement text-file comparison and merging operations. To download the source code used by acdiff and acdiff3, click this link:

`http://www.accurev.com/download/open-source/acdiff_source.zip`

Character Set Encoding Conversions

AccuRev uses GNU libiconv for character set encoding conversions. To download the libiconv source code, click this link:

`http://www.accurev.com/download/open-source/accurev_gettext_iconv.zip`

Rich Text Formatting

AccuRev uses SHEF for rich text formatting. To download the SHEF source code, click this link:

`http://www.accurev.com/download/open-source/shef_accurev_source.zip`

Reports

The AccuRev Web UI uses Open Flash Chart 2 for reports. To download the Open Flash Chart 2 source code, click this link:

`http://www.accurev.com/download/open-source/open-flash-chart-2-Lug-Wyrm-Charmer.zip`

AccuRev 5.6 Release Notes

This chapter describes changes and other information related to AccuRev Release 5.6. Changes to the AccuRev Web User Interface (Web UI) are described in a separate section in this chapter.

Deprecated Features

This section describes deprecated features in AccuRev 5.6.

- The AccuRev *Server* is no longer supported on the 32-bit Solaris Operating System on either Sparc or Intel platforms. The AccuRev Server is only supported on the 64-bit Solaris Operating System, version 10 or higher. Note that the AccuRev C*lient* continues to be supported on both 32-bit and 64-bit Solaris operating systems, version 10 or higher, on both Sparc and Intel platforms.

    Note: If you are upgrading a 5.x 32-bit AccuRev Server running on Solaris, contact AccuRev technical support at *support@accurev.com* for assistance migrating to 64-bit AccuRev Server.

- The traditional AccuRev "named" license manager (keys.txt) is no longer supported.

- The AccuRev Server is no longer supported on the following platforms:

    - 32-bit: XP, Vista, Windows server 2003, RedHat 4

    - 64-bit: XP, Vista, Windows server 2003, RedHat 4

- In the Schema Editor, the "Stream" datatype was deprecated as of AccuRev Release 5.4.1.

- The AccuRev Web User Interface (Web UI) can now be installed exclusively using the AccuRev installation package.

Changes in AccuRev Release 5.6

AccuRev Release 5.6 includes the following features and bug fixes:

5836 -- New: Accelerator keys for frequently performed operations

Accelerator keys for frequently performed operations have been added to the AccuRev GUI. Examples include **Ctrl**+**Shift**+**P** for promote and **Ctrl**+**U** for update. A table of supported accelerator keys has been added to the AccuRev Online Help.

17727 -- diff -b no longer stops when it encounters an error with a file

In previous releases, the **diff -b** command would stop processing if it encountered an error with one of the files being diffed. This problem has been corrected in the current release, and AccuRev continues the diff process with the remaining files.

20204 -- diff -j -a caused the AccuRev Server to restart

In previous releases, using the **-j -a** options with the **diff** command caused the AccuRev Server to restart. This problem has been corrected in the current release. Now, when these options are used, AccuRev displays the following error message:

```
The -j option is not valid with -a.
```

22247 -- File not found after Diff Against Previous Transaction

In previous releases, AccuRev would display the error "File Not Found" if you performed a Diff Against Transaction on a file in a directory that was renamed after the file you were diffing had been promoted. This problem has been corrected in the current release.

22798 -- Unable to sort issue lists containing unaffiliated changes

In previous releases, when the Active Issues list contained unaffiliated changes, you could sort the list only by the AccuWork issue number or the third-party issue key (if third-party keys had been implemented for your installation). This problem was corrected in a previous release but is only being noted now.

24459, 26101-- New: GUI support for EACLs

In previous releases, element-level privileges could be set only through the AccuRev CLI. You can now set element-level privileges using the AccuRev GUI.

24668 -- The merge -O command did not correctly set overlap status

In previous releases, the **merge -O** (use workspace version) command did not correctly resolve an element's overlap status. This problems has been corrected in the current release.

25419 -- diff and diffb commands throw errors after executing patch or merge

In previous releases, upon successful completion of **patch** or **merge** command AccuRev would display a list of available actions such as **diff**, **diffb**, **keep**, and so on. If you chose **diff** or **diffb**, and then **diff** or **diffb** again, AccuRev would display an error. This problem has been corrected in the current release.

25522 -- Excluded elements get updated in the workspace

In the previous release, elements in the workspace would get updated with a status of **(external)** after they had been marked as "excluded" using the workspace Include/Exclude rules. This problem has been corrected in the current release.

25879 -- AccuRev Server and Client supported on 64-bit Solaris

AccuRev Server and AccuRev Client are now supported on 64-bit Solaris operating systems on both Sparc and x86-64 platforms.

25927 -- Cross-link in time-basis stream shows wrong version of target file

In previous releases, the version displayed for a cross-linked file in two time-basis streams would be incorrect after changes made to that file were promoted -- AccuRev should have kept the versions of the cross-linked files the same, but did not. This problem was corrected in a previous release but is only being noted now.

26115 -- Unable to add new files to AccuRev after moving the server/site_slice

In previous releases, AccuRev would prevent you from performing certain file operations after moving the AccuRev installation directory, displaying an error in the acserver log file such as:

```
2012/08/31 13:48:02.911-04:00  1013 SAException(7): ERROR:  could not access file
"/opt/accurev/bin/fs_toupper_pg.so": No such file or directory

 58P01
```

AccuRev now displays a message at server startup that instructs you to run the **maintain server_properties update** command in order to prevent the error condition from occurring.

26132 -- Tomcat Server settings saved during upgrade installations

In previous releases, the Installation Wizard would overwrite settings in the Tomcat Server **settings.xml** file (**c:\Program Files (x86)\AccuRev\WebUI\tomcat\conf\server.xml**, for example). This problem has been corrected in the current release; the **settings.xml** file is preserved during an AccuRev upgrade.

26252 -- Bad XML crashes the AccuRev Server

In previous releases, if the XML file referenced using the **-l** option of the **mkrules** command was invalid, the AccuRev Server would crash. This problem has been corrected in the current release.

26345 -- Spurious message written to console and acserver.log during promote

In AccuRev 5.4.1, executing the **promote** would cause AccuRev to write the following message to the console and the **acserver.log**:

```
Unable to open file: /opt/accurev/storage/depots/kando/dispatch/config/
workflowlinks.xml
```

This problem has been corrected in the current release.

26381 -- revert -G now displays the graphical Merge tool

In previous releases, the **revert -G** command returned XML to the command line instead of displaying the information in the defined graphical Merge tool. This problem has been corrected in the current release.

26400 -- Reference to AccuRev installation log in error message clarified

In previous releases, if an error occurred during AccuRev installation, the Installation Wizard displayed a message like the following:

```
Please see the installation log for details (file is written after installer
exits):
/opt/accurev/AccuRev_InstallLog.log
```

The name of the installation log now includes a timestamp, and the message has been changed to reflect this.

26618 -- Diff tool improvements

Starting in AccuRev 5.6:

- The Diff operation is no longer disabled when you have multiple files selected in the History Browser, Change Palette, or Issue Changes views.

- You can use third-party diff tools to diff binary files.

In addition, in previous releases the AccuRev diff tool would allow you to attempt to diff directories that used binary type file names as the name directory name (**allure.gif**, for example). This problem has been corrected in the current release.

26661 -- Installation fails if permissions are not appropriate for installation drive -- Windows only

In previous releases, the AccuRev installation would fail during PostgreSQL database initialization if the user permissions were not appropriate for the drive on which AccuRev was being installed. AccuRev would display a message like the following and then quit:

```
The database initialization failed. The installer will now exit.
```

```
initdb: could not create directory "d:/AccuRev/storage": File exists
initdb: removing contents of data directory "d:/AccuRev/storage/db"
```

This problem has been corrected in the current release. Now, if the PostgreSQL database initialization fails due to permissions, AccuRev displays a message alerting the user to modify the permissions on the target drive and retry the `initdb` without terminating the current installation procedure.

26673 -- Installer checks for ARLM port use

In previous releases, the Installation Wizard allowed you to specify ports that were already in use when specifying settings for the AccuRev License Manager (ARLM). This problem has been corrected in the current release: If you choose a Local ARLM, the Installation Wizard checks to make sure that the port you specify is not already in use; if you choose a Remote ARLM, the Installation Wizard now checks that it can connect to the ARLM with the port you specify.

26824 -- Include/exclude rules ignored on reparented cross-linked directories

In the previous release, if you created a workspace and used include/exclude rules to exclude a directory, and then reparented that workspace to another stream with the same directory, AccuRev would write the contents of that directory to your local disk when you updated the workspace, marking the files as (external), if the directory on the target stream had been cross-linked. This problem has been corrected in the current release.

26928 -- Installation Wizard no longer prompts for license information for Replica Server

In previous releases, the Installation Wizard prompted you to provide license information, even though all license requests were managed by the Master Server. This problem has been corrected in the current release.

26936 -- Misleading warning message when installing a Replica Server in console mode

In previous releases, if you were installing an AccuRev Replica Server in console mode (**AccuRevInstall.exe -i console**, for example), the Installation Wizard could display misleading messages if it was unable to connect to the AccuRev Server you specified as the Master. In addition, the GUI Installation Wizard displayed a different message. These problems have been corrected in the current release.

26984 -- New: GUI support for stream properties

Support in the CLI for stream properties (name/value pairs associated with a stream) was introduced in the previous release. You can now set and manage stream properties using the AccuRev GUI. In addition, the **getproperty** command now returns the filename for properties whose value was specified as a file.

26987 -- New: Client-side logging

In addition to logging on the AccuRev Server, AccuRev now supports logging on the AccuRev client for operations performed using the AccuRev AccuRev GUI. See "Logging" in the *AccuRev On-line Help Guide* for more information.

27009 -- patch -l command does not require -Fx

In the previous release, AccuRev returned an error stating that the **-Fx** option if you executed the **patch** command with the **-l** option. This problem has been corrected in the current release.

27031 -- New: -u option for show ... groups command

A new option for the **show ... groups** command, **-u** *<principal>*, shows the groups to which the specified user belongs. See the CLI help or *AccuRev CLI User's Guide* for more information.

27055 -- New: Installer enhancements for client upgrades

The AccuRev Server installation now includes an option that lets you download client-only installers. This reduces the size of the AccuRev Server installation package, and allows you to download installers for only the platforms that you require.

27056 -- New: Installation Wizard warns about installing on unsupported platforms

In previous releases, the Installation Wizard would not warn you about installing AccuRev Server on unsupported platforms. This problem has been corrected in the current release.

27106 -- New: Streams and workspaces have rounded corners

The corners of the stream and workspace icons in the StreamBrowser and Version Browser have been rounded to give them a more contemporary appearance.

27113 -- Updated files appear in purged cross-linked directories

In previous releases, AccuRev mistakenly updated purged cross-linked directories when new elements were added to the directory in the sibling stream. This problem has been corrected in the current release.

27140 -- New: No longer need to scroll through License Agreement

In previous releases, the Installation Wizard required you to scroll to the end of the License Agreement before you were allowed to accept it and proceed with the installation. Scrolling to the end of the License Agreement is no longer required in order to accept it.

27147, 27427 -- Temporary conflict resolution files saved for merge, patch, and revert -G

In previous releases, AccuRev deleted the temporary resolution file created using the **merge**, **patch**, or **revert** commands with the **-G** option if the graphical merge tool was closed before all merge conflicts were resolved and saved. This problem has been corrected in the current release, and the temporary file is saved even if the graphical merge tool is closed.

27149 -- Enhancement to the acfiles.log

AccuRev 5.5 introduced a new setting in the **acserver.cnf** file, `LOG_FILE_READS = true`, which logs all read operations to **site_slice/logs/acfiles.log**. Information for each read operation includes the user name, the client machine's IP address, time of the operation, ID of the affected element, version, and path name. New for AccuRev 5.6 is the inclusion of the depot ID and name, in this format: `depot(id): name`.

27150 -- Enhancement to diff command error handling

In previous releases, the **diff** would silently fail if AccuRev could not locate the file you were trying to diff in your workspace. This problem has been corrected in the current release, and AccuRev now displays an error message alerting you to this situation.

27152 -- Limitations on path length in Windows

In previous releases, AccuRev could not accommodate file paths that used the maximum number of characters (260) supported by Windows. This problem has been corrected in the current release.

27179 -- Labels, file name displayed when using -G with diff, merge, patch, and revert

In previous releases, the graphical tool displayed when using the **-G** option with **diff**, **merge**, **patch**, and **revert** commands displayed the names of internal .tmp files used for the purposes of resolving the conflict. This problem has been corrected in the current release, and AccuRev now displays the more

informative labels (Backing Version and Common Ancestor Version), and the path to the file in the workspace.

27206 -- AccuRev GUI no longer sets library path environment variable when invoking CLI

In previous releases on AIX, HP-UX, and Solaris, when invoking the CLI through the AccuRev GUI, Java would mistakenly set the library path environment variable (LIBPATH, SHLIB_PATH, or LD_LIBRARY_PATH, respectively) to a value that was incompatible with AccuRev which would interfere with the loading of libraries installed to AccuRev's `/bin` directory. This problem has been corrected in the current release, and AccuRev now clears the CLI environment prior to invoking the CLI from the AccuRev GUI.

27244 -- Select All (Ctrl+A) not working for tables

In previous releases, the **Edit** > **Select All** menu choice and **Ctrl**+**A** accelerator key did not work in tables that allowed you to select multiple rows. This problem has been corrected in the current release.

27263 -- Temp files created during Diff operation now created in user's temp folder

In previous releases, temp files created during the Diff operation were written to the user's workspace; this could result in the Diff operation failing if one of the versions being diffed was in another user's workspace to which access was restricted. This problem has been corrected in the current release; temp files are now written to the user's local temp folder.

27264 -- New: filters added to Users and Groups tabs in the Security view

Filters have been added to the Users and Groups tabs in the security view. Now, in addition to being able to sort the user and group lists by name or number, you can use the filter to refine the display. The filter uses "includes" logic -- the user or group list will display names that include any value you enter in the **Name** field -- and supports * and ? wildcards.

27268 -- Reading from named pipes support

In releases prior to AccuRev 5.5, AccuRev supported reading from named pipes when executing commands using a Linux bash shell. For example:

```
accurev keep -c 'test' -l <(accurev stat -R workdir -fl -m)
```

Reading from named pipes stopped working in AccuRev 5.5: executing a command like the one shown in the example would cause AccuRev to hang. This problem has been corrected in the current release.

27283 -- New: Rich text editing support in AccuRev GUI

Text fields in AccuRev GUI can now be optionally configured to support rich text (bold and italic fonts, bulleted and ordered lists, and so on). This means, for example, that ordered lists created in an issue description in the AccuRev Web UI will be correctly rendered in the AccuRev GUI, instead of showing the HTML tags as was the case previously.

In addition to properly rendering content formatted in HTML, when this feature is enabled a toolbar is added to the text field, providing tools for working with:

- Bold, italic, underlined, and colored text
- Ordered and bulleted lists
- Paragraph formatting
- Images
- Links

Rich text editing can be enabled on a per-field basis. If you add a new text field to your schema, rich text editing support is enabled by default. Pre-existing fields have rich text turned off by default.

27286/27367 -- Error when running accurev info from the Windows root drive

In the previous release, AccuRev would display an error like the following when running **accurev info** from the root directory (c:\, for example):

```
-Error- 1 - aos.c:532 - no mounted filesystem matched path 'C:' (C:)
```

This problem has been corrected in the current release.

27305 -- New: Diff Against options for overlapped elements

AccuRev 5.6 introduces new Diff Against options to help you identify and resolve conflicts that result in an (overlap) status. The **Diff Against** menu has a new submenu, **Overlapping Changes**, which provides two options:

- **Mine** - This **Overlapping Changes** option diffs the workspace or stream version against the common ancestor in the backing stream. This option identifies the changes in the workspace or stream that did not come from the backing stream; this option is the equivalent of diffing against the last version that you merged with.

- **Theirs** - This **Overlapping Changes** option allows you to see only the changes added to the backing stream since the last time you merged with the backing stream. This option is useful for identifying the changes to the backing stream that caused the overlap condition.

The Overlapping Changes options are available only for elements with an (overlap) status.

27335 -- Java heap size set correctly in AccuRev Client-only installation packages

In previous releases, the Java heap size was not specified in the **acgui.lax** file which meant that the AccuRev Client relied on the default Java heap size. This problem has corrected in the current release; the Java heap size is specified as 0.5GB.

27342 -- AccuRev Installation Wizard validates required fields

In previous releases, the AccuRev Installation Wizard did not validate fields for the license manager port, database port, or superuser name. You could proceed through the installation, but it would ultimately fail if these values were not provided. This problem has been corrected in the current release, and the Installation Wizard now warns you if you have not specified a value for a required field.

27379 -- Entry field on the Look Up Issue dialog box has a label

In previous releases, the Look Up Issue dialog box displayed only an entry field unless you had enabled support for a third-party issue tracking system. This problem has been corrected in the current release, and the entry field now has a label.

27404 -- AC_DIFF_CLI and AC_MERGE_CLI user preferences accept double quotes

In the previous release, using double quotes in the **AC_DIFF_CLI** and **AC_MERGE_CLI** user preferences caused **diff** and **merge** operations to fail. This problem has been corrected in the current release.

27414 -- diff -a -v shows elements that do not exist in the workspace

In the previous release, when executing the **diff -a -v** command AccuRev generated the list of files for diffing from the backing stream instead of from the workspace. This problem has been corrected in the current release.

27424 -- Client crashes during purge command with transaction-level integration triggers

In the previous release, the AccuRev Client would crash during execution of the **purge** command if you were using transaction-level integration triggers. This problem has been corrected in the current release.

27433 -- New: filters for Members/Not Members lists on New Group, Change Group dialog boxes

Filters have been added to the **Members** and **Not Members** lists in the New Group and Change Group dialog boxes. These filters use an "includes" logic to display only those principal names that include the characters you enter; they accept * and ? wildcards.

27452 -- patch -l displays 'Merge file not found' instead of 'Patch file not found'

In the previous release, if you executed the **patch -l** command without the **-Fx** option, AccuRev returned `Merge file not found:  /<filename>` instead of `Patch file not found: /<filename>`. This problem has been corrected in the current release.

27759 -- Diff Against actions invalid for elements with a (missing) status

In the previous release, the AccuRev GUI did not disable Diff Against actions for elements with a (missing) status. This problem has been corrected in the current release.

27763 -- AccuRev Client cannot access workspaces on local Windows shared directories

(*Windows only*) In previous releases, AccuRev could not resolve paths to workspaces on shared directories located on the same machine as the workspace. This problem has been corrected in the current release.

Corrections and changes to the documentation

- **15160** -- The material on environment variables from the *AccuRev CLI User's Guide* is now available in the CLI help. To view environment variables CLI help, type "`accurev help ENV_VARS | more`".

- **24529** -- The "Notes on Promote By Issue" chapter in the *AccuRev Technical Notes* now includes a cross-reference to the material on the AccuWork schema in the *AccuRev On-Line Help Guide* to assist in the discussion of Relationship fields.

- **24594** -- A new section, "Notes on Triggers in Multiple-Depot Environments" has been added to the AccuRev Triggers chapter in the *AccuRev Administrator's Guide*. In addition, recommendations for including pathnames in client-side and server-side triggers has been clarified.

- **25115** -- The material on understanding merge results as displayed in the Version Browser in the *AccuRev On-line Help Guide* was improved, including additional explanation and enhanced illustrations.

- **25162** -- The requirement for using quotation marks with the **-t** option to specify time in YYYY/MM/DD HH:MM:SS format has been clarified in the CLI documentation.

- **25505** -- The **cpkadd** and **cpkremove** commands were added to the table of commands associated with the **server_prep_trig** trigger in the *AccuRev Administrator's Guide*.

- **25773** -- The CLI documentation for usage of the **-f** option has been clarified and now illustrates that to use multiple **-f** options (**-fx** and **-fi**, for example) you must combine them into a single option (**-fxi**, for example).

- **25944** -- The CLI documentation for the **annotate** command now includes the **-E** option, which allows you to specify the encoding of the element against which you are running the **annotate** command. See the "Code Page Support" appendix in the *AccuRev Administrator's Guide* for a complete list of supported encodings

- **25959** -- The documentation for the CLI **cat** command used to incorrectly state that the **-v** option is ignored when using **-e** option. This error has been corrected in the current release.

- **26489** -- The headings in PDF versions of some books in the AccuRev documentation set contained extraneous spaces in words making the heading difficult to read. This was corrected in AccuRev 5.5.

- **26926** -- The description of story 24520 in the AccuRev 5.5 *Installation and Release Notes* incorrectly used an example of performing **stat -a** on a depot with 400,000 streams. It should have referred to performing **stat -a** on a stream with 400,000 elements. This problem has been corrected in this version of the Release Notes.

- **26929** -- New: quick reference sheets summarizing important AccuRev concepts and AccuRev CLI commands have been added to the AccuRev documentation set.

- **26937** -- The material on supported platforms and operating systems for the 64-bit versions of the AccuRev Server and AccuRev Client in the *AccuRev Installation and Release Notes* has been clarified.

- **27010** -- The material on 32-bit packages required for 64-bit Linux installations in the *AccuRev Installation and Release Notes* has been clarified. See *Linux* on page 43 for more information.

- **27419** -- The section "Installing AccuRev with Element Security for the First Time" in the *AccuRev Administrator's Guide* included an erroneous statement about being prompted to create a *superuser* during AccuRev installation. This statement has been corrected in the current release.

- **27420** -- The **start** command in the *CLI User's Guide* incorrectly used two underscores to separate parts of the ACCUREV_WSPACE and ACCUREV_TOPDIR environment variables. This has been corrected in the current release.

- **27422** -- The AccuRev documentation now includes several links to instructional videos on commonly performed developer tasks such as creating and updating a workspace, sharing your work with others, and creating AccuWork queries.

- **27655** -- The description of story 26322 in the AccuRev 5.5 *Installation and Release Notes* incorrectly referred to "stream filters" in a description of the new Stream Favorites feature. This problem has been corrected in this version of the Release Notes.

- **27747** -- The *AccuRev Web Interface Installation and Release Notes* guide has been discontinued because the AccuRev Web UI installation is now available exclusively as part of the AccuRev installation. AccuRev Web UI installation procedures and release notes are included in the AccuRev Installation and Release Notes; configuration information formerly available in the *AccuRev Web Interface Installation and Release Notes* guide is in a new book, the *AccuRev Web Interface Administrator's Guide*, which is part of the AccuRev documentation set.

Changes in AccuRev Web UI Release 5.6

23790 -- Copy workflow

You can now copy an existing workflow. This allows you to reuse existing workflows making modifications as required.

23993 -- Remember last depot when opening, creating a workflow

AccuRev now remembers the last depot selected when you create a workflow or open a new workflow, eliminating the need to specify the value in the **Depot** field unless you need to change it.

24255 -- Minor fix to Workflow Rules for Stream dialog box

In the previous release, the **Ok** button was enabled before any fields had been edited. This problem has been corrected in the current release.

24335 -- Improved message when deleting a workflow

In the previous release, AccuRev displayed a warning message when you deleted a workflow. The actions available if one or more dependent views was open were not clear. The message has been improved in this release.

24767 -- Workspaces colored yellow in the StreamBrowser

Workspaces in the StreamBrowser are now displayed in yellow to distinguish them from other stream types (dynamic, snapshot, time basis, and so on).

24880 -- Look Up Issue field now takes third-party keys

The Look Up Issue field in the AccuRev Web UI now allows you to search AccuWork using third-party issue keys in addition to AccuWork issue numbers.

25034 -- useRichText element in wui_config.xml ignored

In previous releases, enabling rich text for fields in the AccuRev Web UI required specifying the `<useRichText value="yes"/>` element in the **wui_config.xml** configuration file. As of AccuRev Release 5.6, rich text is enabled using the AccuWork schema; the `<useRichText value="yes"/>` element in the **wui_config.xml** file, if present, is ignored. See "Appendix B, AccuWork," in the *AccuRev On-Line Help Guide* for more information.

25075 -- new Diff options

AccuRev 5.6 introduces new Diff Against options to help you identify and resolve conflicts that result in an (overlap) status. The **Diff Against** menu has a new submenu, **Overlapping Changes**, which provides two options:

- **Mine** - This **Overlapping Changes** option diffs your workspace or stream version against the common ancestor in the backing stream. This option identifies the changes in your workspace or stream that did not come from the backing stream; this option is the equivalent of diffing against the last version that you merged with.

  Note: This option is also available when submitting elements to a new or existing code review.

- **Theirs** - This **Overlapping Changes** option allows you to see only the changes added to the backing stream since the last time you merged with the backing stream. This option is useful for identifying the changes to the backing stream that caused the overlap condition.

The Overlapping Changes options are available only for elements with an (overlap) status.

26356 -- New version of GNU diff3

AccuRev 5.5d introduced an updated the version of GNU diff3, the third-party diff tool used by AccuRev diff and merge operations. The new GNU binaries are not installed with the AccuRev Web UI. If you are using a version of the AccuRev Web UI earlier than 2012.2, you will not be able to use diff operations from the Web UI with AccuRev 5.6.

Known Issues

This section describes known issues in AccuRev and in the AccuRev Web UI.

Known Issues in AccuRev

AccuRev 5.6 has the following known issues:

27429 -- renaming a directory using a different case creates a new directory

AccuRev incorrectly creates a new directory when you rename an existing directory using the opposite case (for example, renaming the directory *ACME* to *acme*). The current directory is created as a child of the newly created directory.

Known Issues in the AccuRev Web UI

The 5.6 release of the AccuRev 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.

Issues with text and log fields will be addressed once the next Google Web Toolkit is available.

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.

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.

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.

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

If you are using the AccuRev GUI running on Mac OS X and you open an issue in the Web UI, you might experience the following if 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

25851 -- Web UI Tomcat server must be restarted on UNIX/Linux servers

After installing the AccuRev Web UI server on a Linux or UNIX host, you must manually restart the Tomcat server even if the AccuRev installer starts it automatically. (Tomcat must be restarted by the same user that performed the installation.)

Source Code Availability

AccuRev uses third-party code in the development of some of its features. In accordance with open-source policy, this section describes what code is used and where you can find it.

Diff and Merge

AccuRev acdiff and acdiff3 programs implement text-file comparison and merging operations. The source code for the AccuRev programs acdiff and acdiff3 is available here:

http://www.accurev.com/download/open-source/acdiff_source.zip

Character Set Encoding Conversions

AccuRev uses GNU libiconv for character set encoding conversions. You can find the libiconv source code here:

http://www.accurev.com/download/open-source/accurev_gettext_iconv.zip

Rich Text Formatting

AccuRev uses SHEF for rich text formatting. You can find the SHEF source code here:

http://www.accurev.com/download/open-source/shef_accurev_source.zip

AccuRev 5.5 Release Notes

This chapter describes changes and other information related to AccuRev Release 5.5.

Source Code Availability

AccuRev uses third-party code from GNU. In accordance with their open-source policy, this section describes what code is used and where you can find it.

Diff and Merge

AccuRev acdiff and acdiff3 programs implement text-file comparison and merging operations. The source code for the AccuRev programs acdiff and acdiff3 is available here:

http://www.accurev.com/download/open-source/acdiff_source.zip

Character Set Encoding Conversions

AccuRev uses GNU libiconv for character set encoding conversions. You can find the libiconv source code here:

http://www.accurev.com/download/open-source/accurev_gettext_iconv.zip

Deprecated Features

This section describes deprecated features in AccuRev 5.5.

1. The traditional AccuRev "named" license manager (keys.txt) is no longer supported as of AccuRev Release 5.4, EXCEPT for Mac OS.

2. The following server platforms are no longer supported as of AccuRev Release 5.4:
   - 32 bit: XP, Vista, Windows server 2003, RedHat 4
   - 64 bit: XP, Vista, Windows server 2003, RedHat 4

3. In the Schema Editor, the "Stream" datatype was deprecated as of AccuRev Release 5.4.1.

4. Starting in AccuRev Release 5.6 (currently scheduled for Q3 2012), the AccuRev *server* will no longer be supported on 32-bit Solaris operating systems, on either Sparc or Intel platforms. The AccuRev server will only be supported on 64-bit Solaris operating systems, version 10 or higher. Note that the AccuRev *client* will continue to be supported on both 32- and 64-bit Solaris operating systems, version 10 or higher, on both Sparc and Intel platforms.

Changes in Release 5.5d

AccuRev Release 5.5d is a patch release for Version 5.5 that addresses the following issues:

26356 -- New version of GNU diff3 resolves merge operation errors

AccuRev updated the version of GNU diff3, the third-party diff tool used by AccuRev merge and diff operations. This upgrade resolves errors some users experienced when running **diff** from the AccuRev CLI.

26711 -- Java GUI no longer crashes trying to open obsolete depots or streams

In previous releases, the Java GUI would crash if depots and streams identified in **preferences.xml** were not present in the new installation (as could happen after performing a **maintain rmsite**, **maintain mksite**, for example). This problem has been corrected in the current release: the Java GUI will render tabs for obsolete depots and streams, which you can safely close.

26870 -- Correction to behavior when reparenting a time basis stream

In previous releases, if you attempted to reparent a time basis stream with a date earlier than that of the target backing stream AccuRev prompted you to either remove or retain the time basis. If you chose to retain the time basis, AccuRev completed the reparenting operation and displayed the error message "Unknown stream or ver spec". This problem has been corrected in the current release -- if you opt to retain the time basis, AccuRev displays a clearer message and the reparenting operation does not proceed.

26911 -- Master server crashes under heavy load from replica servers

In previous releases, heavy activity from one or more replica servers sometimes crashed the master AccuRev Server. This problem has been corrected in the current release.

26945 -- setValue clause fails when validation includes date field comparison

AccuRev 5.5 caused the setValue clause for a date (`setValue (submittedBy , "CUR_DATE")`, for example) to fail if the validation logic included a date field comparison that used that value. This problem has been corrected in the current release.

26955 -- Merge view sometimes displayed conflicts incorrectly

The AccuRev Merge view uses color-coding to identify differences between versions of a file in the workspace, the backing stream, and those files' common ancestor. These files are passed as parameters to the underlying diff tool for comparison. Under certain circumstances, the order in which the diff tool expected these files was different from the order in which they were actually passed, resulting in the incorrect display of conflicts, making merging difficult. This problem has been corrected in the current release.

27035 -- CLI commands fail with multiple mount points to the same path

In previous releases, if you had multiple mount points that referred to the same path, AccuRev CLI commands would fail. This problem has been corrected in the current release.

27040 -- 5.5 upgrade installation fails when license server is remote

The upgrade installation to AccuRev 5.5 would fail if the AccuRev license server was on a machine other than the one on which the AccuRev Server was installed. Specifically, the DB_PASS property in the acserver.cnf configuration file was not getting set correctly. This problem has been corrected in the current release.

27077 -- Files with ptext file type cannot be annotated in the Java GUI

In AccuRev 5.5, files that were specified as ptext files when added to the depot could not be annotated using the Java GUI. This problem has been corrected in the current release.

27126 -- Workspace Explorer pane cannot manage large stream names

In previous releases, long basis stream names created the following problems in the File Browser:

- The Workspace Explorer could not display names longer than 40 characters

- The splitter between the Workspace Explorer panel and the File Browser would automatically expand to show as much of the basis stream name as possible, but it could not be collapsed, which could make working in the File Browser difficult

These problems have been corrected in the current release -- the Workspace Explorer accommodates basis stream names up to 79 characters, and the splitter can be collapsed to show as little of the Workspace Explorer as you wish.

27129 -- Workspace actions disabled for streams

In previous releases, AccuRev allowed you to perform workspace actions such as creating a new file or new folder when the focus was on a stream. Menu choices and other actions applicable to workspaces (such as Include/Exclude Mode) are now disabled when you are on a stream.

27160 -- WIP not applicable for external files

In the previous release, AccuRev incorrectly allowed you to choose **WIP** from the shortcut menu (right-click) for external files, which then also incorrectly enabled cut/copy/paste operations on those files. This problem has been corrected in the current release, and the **WIP** choice is now disabled for external files.

27175 -- Rename should be disabled when multiple elements are selected

In the previous release, if you selected multiple elements from the File Browser, the **Rename** and **Edit** choices in the shortcut menu (right-click) were available. This problem has been corrected in the current release, and the **Rename** and **Edit** choices are now disabled when multiple files have been selected.

27190 -- Shortcut menus persist for previously selected stream

In previous releases, the shortcut menu (right-click) displayed for *stream_a* would appear even after displaying the shortcut menu for *stream_b*. In some cases, this behavior would result in the shortcut menu for a workspace being displayed after selecting the shortcut menu for a stream. This problem has been corrected in the current release.

Changes in Release 5.5

AccuRev Release 5.5 includes the following features and bug fixes:

13484, 23875 -- Depot name now passed to server_preop_trig

The depot name is now passed to the **server_preop_trig** trigger for **cpkadd** and **cpkremove** operations.

16288 -- New: Shortcut keys for Cut/Copy/Paste supported in File Browser

Shortcut keys Ctrl+x (Cut), Ctrl+c (Copy), Ctrl+v (Paste) are now supported in the File Browser. In addition, a paste operation, whether performed using shortcut keys or the Paste context menu, now performs a "Paste Link" if the Copy operation was used to place the element on the clipboard.

In addition to shortcut keys, Cut, Copy, and Paste operations are also available from the Edit menu. Note, however, that buttons for these operations have been removed from the AccuRev toolbar.

18348 -- History Browser shows incomplete transaction history

In previous releases, the History Browser did not display the complete depot transaction history for a user. This problem has been corrected in the current release.

19896 -- Nested groups cannot be added to other groups

In previous releases, you could not add a group that included another group as one of its members to another group. This problem has been corrected in the current release.

20809 -- diff command with -a and -1 or -j restarts AccuRev Server

In previous releases, running the **diff -a** command with either **-1** or **-j** options caused the AccuRev Server to restart. The **-1** or **-j** options are no longer supported with the **diff -a** command.

22505 -- Third-party issue keys displayed in History View

If you have implemented third-party issue tracking system support in AccuRev, you now have the option of displaying third-party issue keys in addition to, or instead of, AccuWork issue numbers in History View.

22661 -- Improvements to session management

In previous releases, an AccuRev user session was logged out when another user logged in to AccuRev on the same machine. This prevented "user1", for example, from remaining logged in to the AccuRev Web UI if another "user2" later logged in to AccuRev (via the CLI or the Java GUI, for example) on that machine. This problem has been corrected in the current release.

24053 -- New: eacl command -i option shows element access for a user

A new **eacl** command option, **-i**, displays all the elements that have the privilege for the principal specified in the ACE in XML format.

24194 - UTF8 support on Windows

AccuRev Windows clients now support arbitrary Unicode in repositories irrespective of system codepage.

24458 -- New: eacl command "readonly" privilege

A new **eacl** command privilege, readonly, prevents the specified user from modifying the element during **add**, **keep**, **move**, **defunct**, and **revert** commands.

24476, 26364 -- New: feature to speed AccuRev client upgrades in the enterprise

Starting with AccuRev 5.6, AccuRev users will be able to download and install the AccuRev client installation package that the AccuRev administrator has placed on the AccuRev Server. These installation packages can be run manually, or unattended (sometimes called a "silent install"). While the upgrade client feature will not be fully supported until AccuRev 5.6, AccuRev 5.5 users might notice it in two places:

- CLI -- a new command, **upgrade_client**, has been added to the AccuRev command line interface.
- Java GUI -- a new choice, **Upgrade Client**, appears on the **Help** menu.

Again, this feature will not perform any client upgrade or installation activities until the AccuRev Server itself is upgraded to Version 5.6.

24520 -- Memory required for initial update and stat -a commands reduced

In previous releases, the initial **update** of a workspace and **stat -a** commands required significant amounts of memory which negatively affected performance on the AccuRev Server. The memory required for these operations has been dramatically reduced in the current release. For example, performing **stat -a** on a stream with 400,000 elements in AccuRev 5.4.1 and earlier took 1 gigabyte of memory. The same operation in AccuRev 5.5 takes only 74 megabytes of memory.

24567 -- pre-promote-trig passes incorrect change package information to server-preop-trig

In previous releases, if both **pre-promote-trig** and **server-preop-trig** triggers were implemented, AccuRev would pass incorrect change package information from the **pre-promote-trig** to the **server-preop-trig** trigger during the promote operation. AccuRev now correctly traps the issue number in a **<changePackageID>** element and passes it to the **server-preop-trig** trigger.

24647 -- Web UI server logins cause AccuRev Server session expiration

A problem has been corrected which could cause an AccuRev Server session to expire prematurely if another login occurred on a Web UI server located on the same machine.

25094 -- Performance improvements over high-latency, low-bandwidth WAN

In previous releases, populating and updating a workspace could take a long time over a WAN, especially when the initial **update** or **pop** operation involved large amounts of data over networks with high latency and/or low bandwidth. New streaming algorithms, and a new compression option for replica servers, dramatically improve **update** and **pop**.

Consider the following figures comparing the initial **update** and **pop** of 3.0 GB of data on AccuRev 5.4.1 and earlier with AccuRev 5.5 using the new `COMPRESSION_ENABLED=TRUE` setting on the replica server:

Initial update or pop	Bandwidth (Mbps)	Latency (ms)	5.4.1 and Earlier	5.5
update	.12	220	10h 53min 35sec	4h 55min 24sec
pop	.12	220	9h 21min 9sec	4h 55min 50sec

See the chapter "Replication of the AccuRev Repository" in the *AccuRev® Administrator's Guide* for more information.

25403 -- Annotate now correctly handles UTF-8

In previous releases, Annotate was unable to handle content with UTF-8 character encoding. This problem has been corrected in the current release.

25482 -- Reserved accurev-ent licences ignored by AccuRev

The RLM Standard/Flexible License Manager used by AccuRev 5.5 allows administrators to reserve licenses for specific users and groups. In previous releases, AccuRev incorrectly excluded any reserved licences from the count when determining license availability, regardless of whether or not a reserved license was currently in use. This problem has been corrected in the current release.

25658 -- EACL changes to file access not reflected during Update

In the previous release, if an EACL (element access control list) denied you access to a file currently in your workspace, the next time you updated the workspace the file would correctly no longer appear in the AccuRev GUI. However, the file would remain in your physical workspace. This problem has been corrected in the current release.

25850 -- New: acserver.cnf setting to log read operations

A new setting in the **acserver.cnf** file, `LOG_FILE_READS = true`, logs all read operations to **site_slice/ logs/acfiles.log**. Information for each read operation includes the user name, the client machine's IP address, time of the operation, ID of the affected element, version, and path name. Write operations remain available through the **hist** command.

25855 -- AccuRev misinterpreting uppercase letters in eacl command

In previous releases, AccuRev did not correctly interpret the privilege string values (`full` and `deny`) when they were specified using any uppercase letters, causing AccuRev to default to the deny privilege. This problem has been corrected in the current release.

25859 -- Installation failures on Linux and UNIX

In previous releases, the AccuRev installer relied on the $USER environment variable to perform installations on Linux and UNIX platforms, and fresh installations would fail if this environment variable was not set. The installer now uses the Java property prop.user.name and prompts you to provide it if it is missing or unspecified.

25880 -- Improved testing for existing PostgreSQL database during installation

AccuRev installs a pre-configured copy of the PostgreSQL database; the installer attempts to verify this PostgreSQL variant during subsequent installations. In previous releases, AccuRev could fail to verify a valid PostgreSQL installation, causing the installation to fail. This problem has been corrected in the current release.

25950 -- Client hangs when trying to connect to a mismatched AccuRev Server

In previous releases, the AccuRev client would sometimes hang when trying to connect to a mismatched AccuRev Server. This problem has been corrected in the current release, and AccuRev now displays a warning message in this situation.

25972 -- New: Changes to Promote sequence with change packages

If you have implemented Change Packages, you will notice that AccuRev now prompts you to first select the issue against which you are promoting your changes, and then displays the dialog box allowing you to enter a comment.

25976 -- New: File Browser usability enhancements

The File Browser includes several enhancements resulting from feedback gathered by a usability study. Notable changes include the following:

- The Update button is larger, has a different graphic, a label, and a new tool tip.

- Tool tips have been added for workspace search filters; these tool tips state the types of elements returned by the search.

- Existing tool tips for File Browser tool bar buttons have been enhanced to provide more information, rather than simply naming the operation performed by the button.

- When you search your workspace -- for all pending elements, for example -- AccuRev now displays a count value that indicates the number of elements returned by the search.

26000 -- AccuRev 5.4 did not support Windows Universal Naming Convention

Support for Windows Universal Naming Convention (UNC) is restored in the current release.

26025 -- Server crashed on promote by transaction when an element ID could not be resolved

In previous releases, the AccuRev Server would crash during a promote by transaction if the transaction contained at least one element ID (eid) that AccuRev could not resolve. This problem has been corrected in the current release.

26038, 26155-- Include rule now correctly populates a workspace

In previous releases, the include rule (**incl**) did not populate a workspace if an **incldo /./** was either:

- Set on the workspace (using the pick and choose option on the workspace creation), or

- Inherited from another stream in the hierarchy

This problem has been corrected in the current release.

26052, 26451-- Errors setting depot-wide EACLs corrected

In previous releases, a network error (`network error - Connection lost while receiving data. Error 6 - acp.c:81 - Communications failure`) could occur when setting depot-wide EACLs. Because EACLs did not get written to the database, AccuRev users for whom EACLs were set were inappropriately denied access to their files. This problem has been corrected in the current release.

26072 -- New: Move the StreamBrowser and Version Browser by dragging

You can now move the StreamBrowser and Version Browser diagrams by dragging (press and hold mouse button, then move the mouse) the diagram background, much as you might in a mapping application. Horizontal and vertical scroll bars can also be used in these views.

26073 -- Stream name now displayed in Active stream issues tab

In previous releases, the string *Stream Issues*, along with the generic issue form icon, was displayed on the Active Issues tab. This tab now displays the stream name and the icon associated with the active issues mode.

26149 -- New: Support for stream, user/group properties

You can now specify properties as name/value pairs for streams, users, and groups. Property values can include simple strings or physical files. For example, you might want to specify the value of a *profile* property for a user as an image (*joe_headshot.jpg*, for example). Using the CLI you can:

- Specify a property (**setproperty** is the CLI command)

- Retrieve a property (**getproperty**, and **show**...**properties**)

- Delete a property (**rmproperty**)

For more information, see the *CLI User's Guide*.

26176 -- New: Workflow rules summary in StreamBrowser

A new feature in the AccuRev 5.5 StreamBrowser allows you to display a summary of workflow rules for any streams for which workflow rules have been set. AccuRev displays a workflow icon for such streams in the StreamBrowser, and clicking the icon displays a read-only summary of the workflow rules that have been set for it. As with AccuRev 5.4.1 and earlier, workflow rules continue to be defined and managed using the AccuRev Web Interface.

26178 -- Spaces in date in hist -t command work again

In AccuRev Version 4.x, the **hist** command accepted spaces for the value specified for the **-t** option (`-t "2012/02/28 15:31:12 - 2012/02/28 15:31:12"`, for example). In AccuRev Version 5.x, AccuRev would throw an error if the value specified for the **-t** option included spaces. This has been corrected in the current release: you can specify the value for the **-t** option with or without spaces.

26203 -- Replica licenses no longer assigned to AccuWork users connecting to master

In previous releases, the RLM Standard/Flexible License Manager assigned both AccuWork and replica licenses to AccuWork users when they connected to the AccuRev master server through the replica server, reducing the pool of available replica licenses. This problem has been corrected in the current release.

26260 -- New: "Close Others" choice for tab management

A **Close Others** choice has been added to the tab shortcut menu (right mouse-click) allowing you to easily close all other currently open tabs. **Close** and **Close All** are also available.

26266 -- Improper error handling running maintain dbupgrade

AccuRev improperly handled the error created when a user without the appropriate privileges ran **maintain dbupgrade**: the **maintain dbupgrade** operation would later fail, but AccuRev generated an irrelevant error message that masked the real reason for the failure. This problem has been corrected in the current release.

26322 -- New: Stream Favorites

Stream Favorites replace the stream filters in AccuRev 5.4.1 and earlier. Stream Favorites are easier to create and manage, and they can be selected by simply double-clicking them from the new Stream Favorites panel. Additional benefits of Stream Favorites include the ability to make a Stream Favorite public so that it can be used by other users associated with the depot. Existing stream filters are converted automatically to Stream Favorites when you upgrade to AccuRev 5.5; AccuRev reminds you of this by displaying a message the first time you open the StreamBrowser.

26328 -- Standard/Flexible License Manager improvements

In previous releases, AccuRev required that the Standard/Flexible License Manager license file, **accurev.lic**, be located on the same machine on which the AccuRev Server was running. This requirement has been relaxed in the current release. Now, as long as value of the `LICENSE_SERVER =` setting in the AccuRev Server's **acserver.cnf** file matches the value of the `HOST` setting in the **accurev.lic** file, the **accurev.lic** can reside on either the AccuRev Server or Standard/Flexible License Manager server.

For general information about standard/flexible licenses, see the "License Management" chapter in the AccuRev *Administrator's Guide*. To learn how to install and configure the Standard/Flexible License Manager, see *Installing or Upgrading an AccuRev Server* on page 12.

26332 -- Improved performance of Select Issue (Change Package) dialog box

If you have implemented change packages, AccuRev executes the query you specify on the Change Packages tab of the Schema Editor when fetching issues to display on the Select Issue (Change Package) dialog box, which is used during the promote operation in the Java GUI. Such queries can potentially return hundreds of issues, and in previous releases, you could use the value in the optional **Issue Owner Field** to filter issues on the client, only *after* they had been fetched from the AccuRev Server.

In the current release, AccuRev uses the value of the **Issue Owner Field** (assignedTo, submittedBy, or closedBy) to essentially add another clause to the query used to fetch issues from the server; because the issues are now filtered initially on the server, rendering the issue list on the Select Issue (Change Package) dialog box is now more efficient.

26352 -- Stream diff could silently fail in some cases

If an element with the same eid ended up in two streams as the result of a cross-link, and a stream diff was performed on those two streams, the stream diff would fail on that element. This problem has been corrected in the current release.

26398 -- Installing a replica server creates java.lang.StackOverflowError

In the previous release, performing an installation of an AccuRev replica server generated a `java.lang.StackOverflowError` error during installation of InstallAnywhere Variables. This problem has been corrected in the current release.

26514 -- StreamBrowser performance improvement

In previous releases, AccuRev calculated requirements for all streams in a depot, regardless of whether or not they would actually be displayed. For example, if your depot contained thousands of snapshot streams, AccuRev accounted for those streams before rendering the display in the StreamBrowser even if your StreamBrowser display filter was set to **No Snapshots**. This problem has been corrected in the current release.

26541 -- update -s -fx now outputs old and new version on a content change

In previous releases, the XML output by the **update -s -fx** command contained only the new version when content changed. This omission has been corrected in the current release, and the old version content is now output to the **<stream1>** tag.

26592 -- Write operations managed on a per-depot basis

In previous releases, time-consuming write operations occurring in one depot could affect the performance of other depots on the same AccuRev Server. This problem has been corrected in the current release.

26639 -- New: Display information on Kando-backed streams

Each stream may be mapped to a branch in a Git repository, via the optional AccuRev Kando™ product. If a stream is mapped to a Git branch, AccuRev displays a Kando icon on the stream. Clicking the Kando icon displays information about any Git branches and their repositories that are mapped to this stream via Kando.

26724 -- Running database analyze no longer required

In previous releases, users who migrated to AccuRev 5.x experienced performance problems on the AccuRev Server, usually starting a couple of days following the migration to the 5.x release. The workaround to resolve these problems was to run `psql analyze` on a daily basis. These performance

issues have been addressed in the current release, and you no longer have to run `psql analyze` on a scheduled basis.

26801 -- Unexpected behavior for mismatched clients and replica servers

In previous releases, when an out-of-date AccuRev client executed a command against a replica server, the command would sometimes appear as `*null` on the server. For example:

`2012/05/21 03:44:55.499+02:00 1251 (not logged in) *null 0x411a5940` *xx.xxx.xxx.xxx*

where *xx.xxx.xxx.xxx* is the server's IP address.This problem has been corrected in the current release.

Corrections to the documentation

- **23786** -- Difference between 'time' and 'startTime' were clarified in the **show** command description in the *CLI User's Guide*.

- **24535** -- The requirement that the **\site_slice** and **\db** directories must both be located under the same parent directory was clarified in the *Administrator's Guide*.

- **26077** -- The relationship between the **update** command and the USE_IGNORE_ELEMS_OPTIMIZATION was clarified in the *CLI User's Guide*, *Technical Notes*, and *Online Help Guide*.

- **26129** -- Previous versions of the documentation included statements announcing AccuRev's deprecation of support for reference trees. AccuRev currently has no intention to deprecate support for reference trees, and these statements have been removed from the documentation.

- **26181** -- The CLI help was not updated in the previous AccuRev release, Version 5.4.1; it has been updated for Version 5.5.

- **26189 --** The *Administrator's Guide* referred to the file **acerver.cnf**, and not **acserver.cnf**.

- **26253 --** An error in the XML sample in the **mkrules** command in the *CLI User's Guide* was corrected.

- **26431 --** The note in the **eacl** command concerning the use of the **add -d** option in the *CLI User's Guide* was clarified.

- **26680 --** Generic values used in AccuRev examples and procedures are now called out more clearly.

- **26760 --** Several **pop** examples in the *CLI User's Guide* incorrectly showed the **-v** and **-D** options out of sequence. The **-v** option always needs to precede the path to the element.

Known Issues

25851 — Web UI Tomcat server must be restarted on UNIX/Linux servers

After installing the AccuRev Web UI server on a Linux or UNIX host, you must manually restart the Tomcat server even if the AccuRev installer starts it automatically. (Tomcat must be restarted by the same user that performed the installation.)

26661 — Installation failure upgrading AccuRev Server from 4.8 and 4.9 -- Windows only

If you are upgrading the AccuRev Server from version 4.8 or 4.9 to either 5.5 or 5.4.1, the AccuRev installation can fail under the following circumstances:

- You are installing the AccuRev Server on Windows 2008 Server or Windows 7 Server

- Windows User Account Control (UAC) is enabled

- You choose a location for your AccuRev installation directory that is on a disk that differs from the Windows OS installation disk (**D:\AccuRev**, instead of the **C:\Program Files (x86)\AccuRev**, for example)

- One or more of the directories leading up to and including the AccuRev **\storage** directory is not readable or traversable by the user who invoked the installer

In this situation, AccuRev displays the following error message:

```
The database initialization failed. The installer will now exit.


initdb: could not create directory "d:/AccuRev/storage": File exists
initdb: removing contents of data directory "d:/AccuRev/storage/db"
```

Workaround: To work around this problem, before upgrading the AccuRev Server first check permissions for the current user using the Microsoft Windows **AccessChk** utility available at *http://technet.microsoft.com/en-us/sysinternals*.

For example, to check permissions for the current user on **D:**, run:

```
accesschk %USERNAME% -q -d "D:\"
```

The sample output might look like the following:

```
C:\>accesschk %USERNAME% -q -d "D:\"
R  D:\
C:\>accesschk %USERNAME% -q -d "D:\AccuRev"
R  D:\AccuRev
C:\>accesschk %USERNAME% -q -d "D:\AccuRev\storage"
D:\AccuRev\storage
```

In the sample output, the current user has read/traversal permissions (R) on **D:** and **D:\AccuRev**, but no permissions at all on **D:\AccuRev\Storage**.

After correcting the permissions on **D:\AccuRev\Storage**, the expected output should be:

```
C:\>accesschk %USERNAME% -q -d "D:\AccuRev\storage"
R D:\AccuRev\storage
```

AccuRev 5.4 Release Notes

Deprecated Features

1. The traditional AccuRev "named" license manager (keys.txt) is no longer supported as of AccuRev Release 5.4, EXCEPT for Mac OS.

2. The following server platforms are no longer supported as of AccuRev Release 5.4:

    - 32 bit: XP, Vista, Windows server 2003, RedHat 4

    - 64 bit: XP, Vista, Windows server 2003, RedHat 4

3. In the Schema Editor, the "Stream" datatype was deprecated as of this release (5.4.1).

4. Starting in AccuRev Release 5.6 (currently scheduled for Q3 2012), the AccuRev *server* will no longer be supported on 32-bit Solaris operating systems, on either Sparc or Intel platforms. The AccuRev server will only be supported on 64-bit Solaris operating systems, version 10 or higher. Note that the AccuRev *client* will continue to be supported on both 32- and 64-bit Solaris operating systems, version 10 or higher, on both Sparc and Intel platforms.

Changes in this Release (5.4.1)

AccuRev Release 5.4.1 includes the following features and bug fixes:

23843— Support AccuRev Workflow Edition in AccuRev 5.4.1

AccuRev Workflow Edition is now supported in AccuRev 5.4.1. This support includes:

- New features in the Java GUI for automating issue processing and inspecting the workflow

- New command line options for the **promote**, **cpkdepend**, **hist**, and **show streams** commands

- New parameters in the **server_preop_trig** trigger input XML for working with issues that are subject to workflow rules

25040 — Third-party ITS key support in the Java GUI

If you have enabled the use of third-party issue tracking system (ITS) keys in the AccuWork schema, the *Select Issue (Change Package)* dialog and the *Look Up Issue* dialog display additional controls that let you indicate whether you want to use AccuWork issue numbers or third-party keys when specifying issues. See the section "Using Third-Party Keys in the Java GUI" in the *AccuRev® Technical Notes* for more information.

25149 — New -q option for the promote command

The new **-q** option for the **promote** command suppresses the execution of a workflow transition that would otherwise be executed when an issue enters a stream. This option is applicable only if the stream into which the issue is being promoted has a workflow rule restricting entry to issues in a specific workflow stage and a transition has been specified for that stage in the workflow rule. See the *AccuRev® Web User Interface User's Guide* for more information on implementing a workflow.

25150 — New attributes for the <issue> subelement generated for server_preop_trig

Several new attributes have been added to the **<issue>** subelement in the trigger input XML generated by the **server_preop_trig** trigger. The complete list of attributes for the **<issue>** subelement are:

- **id** – The issue number.
- **destination_stage** – The workflow stage with which the issue will be associated after transitioning from the current stage (that is, after the **promote** operation).
- **current_stage** – The workflow stage with which the issue is currently associated.
- **workflow** – The name of the workflow whose rules the issue is currently subject to.
- **complete** – Whether or not the issue will be complete in the destination stream upon completion of the **promote** operation.

For example:

```
<ISSUES>

   <ISSUE id="11" destination_stage="WIP" current_stage="NEW"
   workflow="Enhancement" complete="true"/>

   <ISSUE id="12" destination_stage="WIP" current_stage="NEW"
   workflow="Enhancement" complete="false"/>

</ISSUES>
```

The **<issues>** parameter includes **<issue>** subelements for all issues being promoted, whether or not the issue was explicitly selected for the promote (as can be the case when promoting by file, when one or more issues can be implicitly selected).

Suppressing Transitions — Your script can use the XML in the file specified by the **output_file** parameter to indicate whether or not you want the workflow transition associated with the destination stage to be executed for complete issues when they are promoted. For example:

```
<ISSUES>

   <ISSUE id="11" apply_transition="true" />

   <ISSUE id="12" apply_transition="true" />

</ISSUES>
```

Note that transitions are applied to complete issues only. In addition, the **apply_transition** attribute is ignored if you use the **-q** option for the **promote** command.

See the *AccuRev® Administrator's Guide* for more information on using the **server_preop_trig** trigger.

25263, 25897 — cpkdepend and hist commands now return third-party keys in XML output

The XML output of the **hist** and **cpkdepend** commands now includes third-party key information where appropriate:

- **cpkdepend** – By default, the standard output and XML (**-fx**) returned by the **cpkdepend** include both AccuWork issue numbers and third-party keys if you have third-party keys enabled. If you want the output to include *only* third-party keys, you must use the **-3** option; in this case, both the input (**-I**) and the output use third-party keys.
- **hist** – To include third-party key information in the XML returned by the **hist** command, specify the ouput format option as **-f3x**. Specifying **-fx** displays only AccuWork isssue numbers in the standard output.

See "Using Third-Party ITS Keys" in the 5.4.1 edition of the *Technical Notes* for more information.

25555 — New stream_rules option for show streams command

A new **stream_rules** option for the **show streams** command lists the workflows and workflow rules associated with the stream that dictate:

- What workflow an issue must be in before it can enter or leave a stream

- Optionally, what workflow stage an issue must be in before it can enter or leave a stream

- Whether or not to allow incomplete issues or individual files to be promoted.

By default, output is in XML format, regardless of whether or not the **-fx** option is used.

25849 — The -t option for stat and pop commands now produce correct results

In previous 5.x releases, **pop -t** and **stat -t** commands produced different results when run on a parent stream and on a time-based child stream. This problem has been fixed in the current release.

25886 — Content of cross-link streams is now correct

In previous 5.x releases, cross-linking streams (**incl -b**) did not always result in the correct content in the target stream because the time-basis in the target or source stream was not applied correctly. This problem has been corrected in the current release.

25923 — Documentation error fixed in *Administrator's Guide*

The Linux procedure in the section "Changing the Per-Process Open File Descriptor Limit" in the *AccuRev® Administrator's Guide* used to instruct readers to specify a path for **pam_limits.so**:

...

2. Add this line to file **/etc/pam.d/login**:

session required /lib/security/pam_limits.so

...

Specifying the path in this fashion prevented logging in to the machine console in some environments. The proper syntax is as follows:

session required pam_limits.so

25951 — The -D option for the pop command creates the correct element structure

In previous 5.x releases, the **-D** option for the **pop** command incorrectly created a new directory at the root for each subelement of the element specified as a parameter in the **-L** option. Consider the following example, where **\sub_folder** is a subelement of **\folder**:

```
accurev pop -R -D -v Depot_Dev -L C:\my_pop folder
Creating dir: \.\folder
Populating element \.\folder\file.txt
Populating element \.\folder\bar.java
Populating element \.\folder\foo.java
Creating dir: \.\sub_folder
Populating element \.\sub_folder\acme.txt
Populating element \.\sub_folder\coyote.txt
Populating element \.\sub_folder\roadrunner.txt
```

This command now correctly creates **\folder\sub_folder** directory structure, instead of creating **\folder** and **\sub_folder** as siblings.

Changes in 5.4

AccuRev Release 5.4 included the following features and bug fixes:

18865, 25172, — New stream and workspace search, find, and filter features

Several enhancements have been made to the search and find capabilties of the Java GUI:

- In the StreamBrowser, the **Find** command has been enhanced to list all results in a table display. It is also possible to limit the **Find** results to streams below the current one by right-clicking on a stream and invoking **Find** from the context menu.

- A new **Search** feature is available in the Workspace display, allowing you to locate all elements whose names include the specified string in locally-accessible workspaces.

- A new Filter capability to refine search results has been added to several dialogs (such as "Choose Depot" and "Change Palette Destination Stream") throughout the GUI, as well as to both the stream **Find** and workspace **Search** features described in the previous two bullets.

For details about these new features, see the AccuRev 5.4 on-line help (*On-Line Help Guide*), starting at the "Find, Search, and Filter Features" section in the chapter "Using the AccuRev GUI".

22914— New, optional Timestamp Optimization behavior

A new Timestamp Optimization (TSO) feature is now optionally available. The traditional TSO provides good performance when identifying modified files, but can miss files with older time stamps that have been copied into the workspace from another directory. The new TSO maintains a small local database cache on the client which allows all modified files to be identified without a significant impact to performance. For details, see the "File Browser" chapter of the AccuRev *On-Line Help Guide*.

> **Note:** Because this new Timestamp Optimization feature requires a one-time, full scan of the workspace, the first **accurev stat** or **accurev update** CLI command, or the first GUI **Update** or search command such as **Pending** or **Modified**, that your users perform may take up to several minutes to complete. After this one-time scan has been completed, these commands will behave with performance that is equivalent or better than prior releases.

n/a — acserver.log entries now include time zone offset

The format of **acserver.log** entries has been expanded to include a time zone offset. For example:

```
2011/12/20 14:33:41.329-05:00 Server locale is C
```

where "-05:00" is the ISO-8601 TZ offset with respect to GMT.

This enables you or AccuRev Support to correlate logs from masters, replicas, and clients spread across different time zones.

25139 — Mac OS X Lion (10.7) support for AccuRev Clients

AccuRev clients are now supported on Mac OS X Lion (10.7). (This platform is not officially supported for AccuRev servers, but can be installed on a Beta-release basis.)

24663 — Diff Against Backed error in Java GUI

A problem has been corrected which could cause the following error message to appear when performing a "Diff Against Backed" operation in the Java GUI: "No authorization for access to selected version: eid xxxx".

24972— "accurev hostinfo" now returns host name value in usable format

The **accurev hostinfo** command has been updated to return the host name value in a form that is compatible with standard/flexible license manager.

24977 — AccuRev Installer no longer prompts for JRE version

The full AccuRev installer no longer asks if you wish to use an existing Java Runtime Environment (JRE). It now always installs its own version.

24979 — AccuRev Installer no longer prompts for type of installation

Because the full AccuRev Installer has been streamlined, the prompt to choose between "typical" and "custom" installations has been removed.

25057 — "unaffilated changes" after merges

A problem has been fixed which could cause deep overlap merges to result in "unaffiliated changes".

25128 — "accurev eacl" command and renamed elements

A problem has been corrected with the **accurev eacl** command which allowed it to operate on renamed elements by specifying the old element name.

25209 — Bug fixed with "accurev cat" and cross-links in snapshots

A problem has been fixed which could cause the **accurev cat** command to return the wrong version of a cross-linked element in a snapshot.

25254 — Native Windows 64-bit support

The full AccuRev installer now provides the option for installing a native 64-bit version of AccuRev when it detects a Windows 64-bit operating system. You can also choose to install the 32-bit version on 64-bit machines.

The client-only installer automatically installs the 64-bit version of the client when it detects a Windows 64-bit operating system.

25292 — Client-only installation failure when installing on top of existing installation

A problem has been fixed with the AccuRev client-only installer which could cause it to fail when performing an installation over a previous installation.

25462 — AccuRev Installer no longer supports Named ("keys.txt") licenses

The traditional Named AccuRev license manager ("keys.txt") is no longer supported as of AccuRev 5.4. You can only install the standard/flexible license manager ("accurev.lic").

25518, 25733— Installer no longer overwrites LD_LIBRARY_PATH

A problem has been fixed which, under certain circumstances, could cause the AccuRev installer to overwrite rather than prepend the value of LD_LIBRARY_PATH (DYLD_LIBRARY_PATH on the Mac).

25522 — Exclude rules and "accurev update"

An issue has been corrected which caused excluded elements in the workspace to be incorrectly updated.

25573 — Windows 64 stack size increased to 10MB

The stack size of 64-bit AccuRev installations on Windows x64 machines has been increased to 10 MB to prevent overflows. (32-bit AccuRev installations on x64 Windows machines are unchanged.)

25607 — Server crash and "mem.c" error message

A problem has been corrected which could cause a server crash and an error message: "mem.c:xxx Attempt to allocate chunk of size 0".

25748 — Chained crosslinks cause problems with "accurev update" and "accurev stat"

A problem has been corrected where, under certain circumstances, having two or more cross-linked directories nested in a path in a Workspace could result in incorrect behavior under that path, from **update** (files missed) or **stat** (incorrect results).

24657, 25257, 25276, 25413 — Doc fixes

- Several notes have been added to the *Administrator's Guide* reminding users to run the **maintain server_properties update** command after making changes to the values of SITE_SLICE_LOC, MASTER_SERVER, or PORT in the acserver.cnf file. This step has also been added to the section "Moving the AccuRev Server ".

- Installation documentation has been updated to reflect that Web UI and client-only installations on UNIX/Linux can be installed by user root, unlike the server installation which is restricted to non-root users.

- Installation documentation has been updated to ensure that the locale setting on an AccuRev server host is UTF-8 compliant prior to beginning the installation.

Known Issues

25851 — Web UI Tomcat server must be restarted on UNIX/Linux servers

After installing the AccuRev Web UI server on a Linux or UNIX host, you must manually restart the Tomcat server even if the AccuRev installer starts it automatically. (Tomcat must be restarted by the same user that performed the installation.)

25930 — 5.4 client with 5.4.1. server compatibility

If you are using a 5.4 client with a 5.4.1 server, you might notice some changes in behavior and functionality. See *Compatibility with Previous Versions* on page 7 for more information.

26181 — CLI Help was not updated for 5.4.1

The CLI Help accessible from the command line was not updated for Version 5.4.1. Complete CLI reference and usage information is available in the *AccuRev® CLI User's Guide* in both PDF and the AccuRev online help.

AccuRev 5.3 Release Notes

Changes in 5.3b

AccuRev Release 5.3b was a patch release for 5.3 that addressed the following issues:

25289 — "accurev update" performance fix for cross-links

A bug has been fixed with the **update** command which could cause excessive delays in workspaces with no cross-links but where include/exclude rules were defined.

25362 — Bug fix for issues caused by "evil twins" on Windows servers

A bug has been fixed which could cause the following issues on AccuRev Windows servers when listing directories with "evil twins" (two or more elements with the same pathname in a dynamic stream):

- "Network Error 6" errors on AccuRev clients

- "SAException(7): ERROR: invalid byte sequence for encoding ..." error messages in acserver.log

25405 — Bug fix for cross-links in snapshot streams

A bug has been fixed that could allow cross-linked files in a snapshot stream to change if they were defuncted or edited.

Changes in 5.3a

AccuRev Release 5.3a was a patch release for 5.3 that addressed the following issues:

11039, 13317— 3rd Party ITS keys and XML files

The option of using the new third-party ITS key feature in XML files with the -Fx switch (as described at the end of the new "Using Third-Party ITS Keys" chapter of the AccuRev *Technical Notes*) is now implemented.

24546— AccuWorkflow support: transitions and conditions

AccuRev now supports the following AccuWorkflow transition features: Create a new issue, modify issue without a transition, transition without promote, and transition and promote with conditions. (For more information about AccuWorkflow, see the Version 2011.3 editions of the AccuRev *Web Interface Installation and Release Notes* and the AccuRev *Web Interface User's Guide*.)

25014, 25017— Question marks in UNIX/Linux supported

AccuRev now allows question mark characters ('?') to be used in UNIX/Linux element names.

25102 — maintain dbupgrade

An issue has been corrected which could allow **maintain dbupgrade** to partially succeed when it reported that the upgrade had failed.

25103, 25087— Release Notes

Cross-references to external documents no longer appear as non-functional hyperlinks. Also, the platform support information for SunOS, HP-UX, and AIX has been updated and expanded in the AccuRev *Installation and Release Notes*. (See *Platform Support Notes* on page 42.)

Changes in Release 5.3

AccuRev Release 5.3 includes the following features and bug fixes:

11039— Client-only installer, and unattended install for Windows and Linux

AccuRev 5.3 introduces a lightweight client-only installer, which also provides the option for configuring unattended installations on Windows and Linux hosts. See *Using "Silent" Client Installations* on page 28 for details.

13317, 16158— Third-party ITS keys

Some AccuRev commands can now support issue numbers (or "keys") from third-party issue tracking systems (ITS). For information about configuring AccuRev to use this feature, see the new "Using Third-Party ITS Keys" chapter of the AccuRev *Technical Notes*.

16277 — server_auth_trig enhancement

The server_auth_trig trigger has been enhanced with a third exit state ("2") so that you can write the trigger script to first try to authenticate a user with a custom authentication (such as LDAP, if you have configured such a system), and if that fails, authenticate against AccuRev. The server_auth_trig exit codes are now:

0=login succeeded

1=login failed

2=Accurev should validate the user's password instead of this trigger script (implies that the initial custom authentication failed).

Any other return code is the same as returning "1".

17631 — Invalid Relationship error

When you modify your schema to use a third-party ITS key for the "3pty ITS Key" field, linking to a tracking issue no longer fails with the error "Invalid Relationship".

20783 — Workspace not recognized on Linux if created on Windows

A problem has been fixed which could prevent AccuRev on Linux from recognizing a workspace created on a Windows client when the storage location was on the Linux file system.

21005 — server_post_promote trigger and purge

A problem has been fixed which could cause the server_post_promote trigger to enter incorrect stream values after a **purge** operation.

22680— Non-expiring login sessions

A non-expiring login session is no longer replaced by an expiring session after a subsequent login. Note that an incorrect login no longer logs out the previously active session. (A correct login still replaces any previously active session.) Script writers should check the exit status of "accurev login" to determine whether or not a login succeeded, instead of possibly relying on subsequent commands to fail.

24418 — AccuRev installer on Windows can take a long time to complete

An issue has been corrected that could cause the final step of an AccuRev installation on Windows to take up to 30 minutes or more to complete if you were installing on a virtual machine (VM) with storage area network (SAN) disk space, with a large number of existing files.

24581 — Post-installation administrative scripts

You can now configure the AccuRev installers to invoke a user-defined script or executable. See *Using "Silent" Client Installations* on page 28 for more details.

24728 — StreamBrowser performance

The performance of the StreamBrowser has been improved when displaying depots with many streams.

24715 — SESSION_TIMEOUT enforcement

A problem has been fixed with SESSION_TIMEOUT, which allowed commands to be executed without a fresh login after the session had timed out.

24783 — File Browser performance

The refresh performance of the AccuRev GUI File Browser has been improved when viewing a directory that's many levels from the root.

24787 — Session tokens on restarted replica server

The session tokens on a replica server are no longer lost in the event of a replica server restart.

24893 — StreamBrowser and snapshots

A problem has been corrected which could cause the StreamBrowser to incorrectly display snapshot streams after their view setting was toggled.

Deprecated Features

The following server platforms will no longer be supported in AccuRev V5.x versions released after January of 2012.

- 32 bit: XP, Vista, Windows server 2003, RedHat 4
- 64 bit: XP, Vista, Windows server 2003, RedHat 4

Also see *Deprecated Features* on page 105 of *AccuRev 5.2 Release Notes*

AccuRev 5.2 Release Notes

Deprecated Features

The traditional AccuRev "named" license manager (keys.txt) will not be offered in future releases. Plan to switch to the "standard/flexible" license manager (accurev.lic).

Changes in Release 5.2.1

AccuRev Release 5.2.1 was a Japanese localization release which included the following features and bug fixes:

24194, 24195—Improved I18N encoding support

Release 5.2.1 provides improved encoding support for UTF-8 on Windows and EUCJP on Linux.

24468—AccuWork problem with new depot and schema

A problem has been corrected which could cause a new depot schema to be inaccessible if the depot was created after logging into the GUI.

24525—Stream names in Japan are restricted to ASCII characters

To address issues in Japanese installations, stream names are now restricted to ASCII characters when the locale is set to "ja_JP". In all other locales, non-ASCII characters are still allowed.

24616—Server installer permissions

The AccuRev installer has been updated to better handle permissions when installing the AccuRev server in Japan.

Changes in Release 5.2e

AccuRev Release 5.2e was a cumulative patch release for Version 5.2 that addressed the following issue, as well as issues from Releases 5.2a, 5.2b, 5.2c, and 5.2d:

24802, 24803 — Performance improvements

The performance of **show members** and **show wspaces** has been improved.

24510 — maintain restore

The `maintain restore` command has been modified to allow sites with a large number of depots to restore without making PostgreSQL configuration changes.

Changes in Release 5.2d

AccuRev Release 5.2d was a cumulative patch release for Version 5.2 that addressed the following issues, as well as issues from Releases 5.2a, 5.2b, and 5.2c:

24709 — Running a command against one depot from another depot's workspace

A problem has been corrected which could cause a segmentation fault or access violation error when executed an AccuRev command against one depot while you were in the workspace of a different depot (for example, running "`hist -p B`" from a workspace in depot "A").

Changes in Release 5.2c

AccuRev Release 5.2c was a cumulative patch release for Version 5.2 that addressed the following issues, as well as issues from Release 5.2a and Release 5.2b:

24471 — basis version for reverted change packages incorrect

Previously, when reverting a change package AccuRev set the basis to the version before the one being reverted instead of to the current version at the time the revert was performed. This problem has been corrected in the current release.

24553 — basis version for patch records incorrect

When using the **-O** option for the **patch** command, AccuRev did not correctly record the basis version for the patch record. This problem has been corrected in the current release.

24556 — 4GB address space support for 64-bit Windows

Several AccuRev binaries (accurev, accurev_server, and maintain) have been modified to handle address spaces larger than 2GB in 64-bit Windows environments.

Changes in Release 5.2b

AccuRev Release 5.2b was a cumulative patch release for Version 5.2 that addressed the following issues, as well as an issue from Release 5.2a:

24501 — pop dialog never completes

When performing a **pop** command in the GUI, with both **recursive** and **overwrite** options set, the dialog would not disappear even after a successful completion of the operation. This has been corrected.

24506 — pop and stat crash

A problem has been fixed which caused a crash when **pop** or **stat** were used with nested paths (for example, "`accurev [pop|stat] -R path1 path1/path2`").

24511 — empty values are passed to commands

A problem has been fixed which could cause a server crash when empty values were passed to a command (for example, "`accurev lsrules -s`").

24539 —update failures due to ac_tmp_map.txt move-aside file

A problem has been corrected which could cause **update** to fail with the message "Move aside directory not usable", when a workspace is at the partition root level of a second drive.

24548 — annotate crash

A problem has been fixed which caused **annotate** to crash with an "Unknown exception(0, 0)" error, when used with a non-ASCII file that had been kept with "`accurev keep -E text`".

Changes in Release 5.2a

AccuRev Release 5.2a was a patch release for Version 5.2 that addressed the following issue:

24491 — ACLs after migration

A problem has been fixed which caused depot and stream ACLs applied to *authuser* and *anyuser* to be lost after upgrading from version 4.x to 5.2. This issue does not affect upgrading from 5.0.x or 5.1 to 5.2.

Changes in Release 5.2

AccuRev Release 5.2 included the following features and bug fixes:

10313, 23905, 23916, 23962 — New Element-level security ("EACL"s) feature

This release introduces the ability to set Access Control Lists ("ACL"s) on individual elements. See the "AccuRev Security Overview" chapter of the AccuRev 5.2 *Administrator's Guide* for details about this new feature.

23333 — New "Revert Change Package Directly in Stream" feature

It is now possible to revert a change package without using a workspace for conflict resolution. See the "The Stream Issues and Stream Diff (Issues) Tabs" section of the "StreamBrowser" chapter of the new AccuRev 5.2 *On-Line Help Guide*, and the "direct revert" discussion in the **revert** command section of the AccuRev 5.2 *CLI User's Guide* for more details.

21359, 22805 — Make AccuRev I18N (Internationalization) Compliant

AccuRev 5.2 has been rewritten to allow it to be localized for foreign languages.

23000, 24003 — Installer changes

The AccuRev 5.2 Installation Wizard has been upgraded to handle:

- the "standard/flexible" license manager
- 64-bit AccuRev installations on 64-bit hardware running a 64-bit operating system

23657 — AccuWorkflow has been improved and moved to the Web UI

The optionally licensed AccuWorkflow product has been completely rewritten and is now available exclusively through the AccuRev Web UI client.

23410, 24184 — Tighter integration between Java GUI client and WebUI client

The AccuRev Java GUI has several links that invoke the Web UI, or copy URLs to the clipboard that allows a user to bring up a particular screen in the Web UI. It is also possible to set a preference so that any time an AccuWork issue gets displayed, it automatically comes up in the Web UI rather than in the Java GUI. For more details, see "Configuring the Web User Interface (Web UI)" in the "AccuRev Server" chapter of the AccuRev *Administrator's Guide*.

Note: In summary, there are three ways for the Web UI to be invoked when you open an AccuWork issue:

- If you have an AccuWorkflow license installed, the Web UI will automatically be invoked for any AccuWork issue. Please note that the license mentioned in the previous sentence is for AccuWork*flow*, not AccuWork.

- If the AccuRev administrator configures the server as described in the Administrator's Guide to use the Web UI for all AccuWork requests.

- If an individual user configures the client preferences to use the Web UI for all AccuWork requests.

20985, 22902 — New archive options

It is now possible to use the **archive -I** option to force the archive of an initial/only version.

It is also now possible to archive an entire stream hierarchy in one of two ways, using a new **-I allInHierarchy** option:

- Find all versions for the specified elements in the specified stream and its descendant streams, that don't exist in any other stream, and archive them.

- Find all versions for the elements ever in the specified stream and its descendant streams, that don't exist in any other stream, and archive them.

Any versions found outside the stream and its descendant hierarchy will not be archived.

12227, 20324, 20880, 22774, 22884 — New documentation and on-line help system

AccuRev 5.2 replaces the old context-sensitive on-line help system by combining help content with the documentation mechanism first introduced in 4.9. This means that the entire AccuRev 5.2 documentation set (except *Installation & Release Notes*, AccuBridge, and WebUI documents) is now searchable and viewable from a single browser. This also helps address the following customer requests:

- All documentation (including the on-line help) is now available in PDF.

- It is now possible to hyperlink between different books.

- The doc is now more consolidated, making it easier to find information.

17047, 20749 — Error 6 on promote and purge

A crash has been fixed which displayed an "Error 6" message with 'duplicate key constraint violation' when performing **promote** and **purge** operations that involved renames of multiple elements to the same name.

17945 — merge now handles overlapped, renamed folders

The merge command now correctly handles folders that have been renamed both in your own workspace and another workspace, causing an overlap condition.

22541 — Redundant data transmitted as part of show -s command

The communications between server and client have been refactored so that significantly less redundant data are transferred during a **show -s** operation.

23198 — Diff for streams with xlinks

The performance of the **Diff** command has been improved when working with streams containing cross links.

23240 — No-op updates

The **update** command has been improved so that operations that result in no update do not take excessive time to complete.

23354 — Changing depot case sensitivity causes performance issue

A problem has been corrected where changing depot case sensitivity via the **chdepot -C** command would fail to recreate loc indices, resulting in severe performance degradation.

23546 — Promotions of stranded elements or "evil twins"

A problem has been fixed with promoting stranded elements or "evil twins", which could result in element appearing to be archived, or in a "multiple versions specified for element" message.

23618 — deep overlap performance

Upgrading your database to 5.2 improves the performance of **deep overlap**.

24088,24089 — I18N long file names

Long file name handling has been corrected to work with internationalization (I18N).

23964 — Memory footprint of the pop command

The **pop** command has been updated to make better use of system memory.

24222 — maintain command behavior has been improved

The behavior of the administrative **maintain** command has been improved to make it prompt the user for necessary information, and to make it more secure by disallowing database admin passwords to be specified as part of the **maintain** command line. See the "The maintain Utility" chapter of the 5.2 AccuRev *Administrator's Guide* for updated command syntax.

6722 — Doc for chws -s and changing principal names

The documentation for **chws -s** has been updated to explain how to change a workspace name to reflect a change in a principalname.

21008, 23882, 24150 — Updates to the triggers documentation

In the "AccuRev Triggers" chapter of the *Administrator's Guide*, the sections covering server_post_promote trigger, multiple-platform environments, and disabling triggers have been rewritten or updated.

Changes from Releases 4.9.1

AccuRev Release 4.9.1 was released after 5.1, and the changes from that release have been merged into 5.2.

Known Issues

Also see

24418 — AccuRev installer on Windows can take a long time to complete [FIXED 5.3]

Under certain circumstances, the AccuRev installer on Windows can take up to 30 minutes or more to complete. If you are installing on a virtual machine (VM) with storage area network (SAN) disk space, and you have a large number of existing files, the final step of the installation (setting default permissions) can take a long time. Do not kill the process; allow it time to finish.

24248 — Depot names must be ASCII.

Only stream and workspace names can be non-ascii, not depot names.

23564 — Delete preferences.xml when switching locales

If you switch between the Japanese and English versions of AccuRev, you must delete the **preferences.xml** file located in *<homeDirectory>/.accurev*. When switching between locales, your preferences file can be left in the state where there is no UTF-8 header, but there are Japanese characters which cause Exceptions when you try to login to AccuRev.

15780 — hist -t can return transactions outside of limits

If you specify a date range such as:

```
accurev hist -s "Mystream" -t "2010/12/12 07:30:49 - 2010/12/13 07:30:49"
```

AccuRev can return transactions that precede the start time. In the CLI, you can work around this issue by reversing the start and end values to the **-t** option.

AccuRev 5.1 Release Notes

Performance Improvements

AccuRev Release 5.1 was a limited-availability release for existing 5.0.x customers requiring specific performance improvements. The release made more efficient use of the third-party relational database management system (RDBMS), resulting in substantial improvements in overall performance and end-user productivity.

Scalability issues in 5.0.x have been corrected so that the performance of most commands in 5.1 is now a function of how many elements they are working with, rather than being affected by other factors such as where in the stream hierarchy the command is operating. In other words, command performance in 5.1 is predictably linear or proportional based on the number of elements the command is operating upon.

Also, some commands such as **diff** and **update** are now faster in 5.1 than in previous versions (including 4.x) due to improved business logic that takes advantage of the new capabilities provided by the RDBMS.

Along with the performance improvements, peak memory usage of many commands has also been reduced compared to 5.0.1.

Deprecated Features

Old licensing features

Because of the introduction of the new standard/flexible license manager, the "traditional" authentication method is no longer available as of AccuRev Release 5.1. If you still use traditional authentication, you must switch to "accurev_login" or "custom" authentication.

Note that this also means that the environment variables ACCUREV_PRINCIPAL and AC_PRINCIPAL—which were used to retrieve the user name for the traditional login method—are deprecated. (AccuRev also no longer makes use of the common "USER", "LOGNAME" and "USERNAME" environment variables, although other programs on your system may continue to use them.)

Additionally, the authn file, which formerly held the encrypted password on the client, is no longer used. Finally, the **setlocalpasswd** command which could be used to update that file has also been removed.

Please see the "AccuRev Security Overview" chapter of the *AccuRev Administrator's Guide* for information about authentication methods.

Known Issues

Also see *Known Issues* on page 115, in the *AccuRev 5.0/5.0.1 Release Notes*

23297 —mkreplica and replica sync performance

The **mkreplica** and **replica sync** commands are slow when used with a large transaction range.

23354 — Changing depot case sensitivity impacts performance

Changing depot case sensitivity via the **chdepot -C** command fails to recreate loc indices, resulting in severe performance degradation.

21829 — Chrome browsers and Help

Recent Chrome browsers do not work with on-line Help systems (see `http://code.google.com/p/chromium/issues/detail?id=47416`). A security enhancement to Chrome browsers in June 2010 has caused problems in several on-line Help systems. In AccuRev's case, the left-hand navigation pane is blank, and it is impossible to display the Table of Contents, Search, and Glossary tabs. Possible workarounds include:

- rolling back to an older version of Chrome

- using a different browser

- disabling the security feature in the AccuRev preferences

- disabling the security feature system-wide

Google has provided a command line switch to disable this new security feature. You can try disabling this feature just for AccuRev Help, by using the following procedure:

1. In the AccuRev GUI, go to **Tools**, **Preferences**

2. In the On-line Help Browser field, specify the start-up command line for Chrome with the "--allow-file-access-from-files" argument (Windows XP and 7 examples shown):

   Windows XP:

   ```
   "C:\Documents and Settings\<user>\Local Settings\Application
      Data\Google\Chrome\Application\chrome.exe"
      --allow-file-access-from-files "%1"
   ```

   Windows 7:

   ```
   "C:\Users\<user>\AppData\local\Google\Chrome\Application\chrome.exe"
      --allow-file-access-from-files "%1"
   ```

If this does not work for your installation, another option is to try using this switch as the default for all instance of Chrome on your system. The following example shows how to use this fix in Windows. Adjust appropriately for other operating systems. The following procedure assumes that you have Chrome set as your default .htm/.html browser:

1. Open Windows Explorer.

2. Navigate to **Tools** => **Folder Options** => **File Types**

3. Select "HTM" or "HTML", then click Advanced.

4. Select **Open**, then click **Edit...**

5. In the "Application used to perform action:" field, you should see a line similar to:

   Windows XP:

```
"C:\Documents and Settings\<user>\Local Settings\Application
    Data\Google\Chrome\Application\chrome.exe" -- "%1"
```

Windows 7:

```
"C:\Users\<user>\AppData\local\Google\Chrome\Application\chrome.exe"
    -- "%1"
```

6. Replace the empty "--" with "--allow-file-access-from-files":

Windows XP:

```
"C:\Documents and Settings\<user>\Local Settings\Application
    Data\Google\Chrome\Application\chrome.exe"
    --allow-file-access-from-files "%1"
```

Windows 7:

```
"C:\Users\<user>\AppData\local\Google\Chrome\Application\chrome.exe"
    --allow-file-access-from-files "%1"
```

7. Click **OK**, **OK**, and **Close** to save your changes and exit out of the dialogs.

Of course, if this line has already been customized at your site, you will need to adjust the above instructions as needed.

Also, note that implementing this fix will disable a security change introduced with Chrome, so the security policies of some organizations may prohibit them from doing this.

Changes in this Release (5.1)

AccuRev Release 5.1 includes the following features and bug fixes:

20405, 20406 — server_admin_trig now gets mkgroup and mkuser values

When you use the **mkuser** or **mkgroup** commands, the $user and $group input parameters for server_admin_trig now get populated, making it possible to put naming convention logic around the creation of group and user names

18915, 21219, 21521 — Stranded elements and incomplete issues

A problem has been fixed which could cause an issue to not appear if it consisted of only a stranded element.

21222 — 64-bit Linux Server

If the AccuRev installer wizard determines that it is installing on 64-bit x86 hardware with a 64-bit Linux operating system, it will present the option of installing either 32- or 64-bit AccuRev software.

Changes from Releases 4.7.4, 4.8, and 4.9

AccuRev Releases 4.7.4, 4.8, and 4.9 were released after 5.0, and the changes from those releases were merged into 5.1.

AccuRev 5.0/5.0.1 Release Notes

Limitations

The following limitations apply to this release of AccuRev 5.0.x:

- Only one AccuRev 5.0.x server may be installed per machine.

- UNIX/Linux users should not install AccuRev 5.0.x as user **root**, as the installation will not complete correctly.

- Upgrades from AccuRev 5.0 pre-release versions are not supported. If you have a pre-release AccuRev 5.0 version, you must uninstall it, then reinstall the new version, and upgrade your database from 4.7.x as described in *Server and Database Upgrades* on page 20.

If you encounter any issues with this release, please contact AccuRev Support Services (http://support.accurev.com).

Added Platform Support

AccuRev 5.0.x has added support for the following platforms:

- **Microsoft Windows:** Windows 7

- **Linux:** Fedora 10 and 11, SUSE 10.2, 11.0, and 11.1, Ubuntu 8.10 and 9.04

Deprecated Features

- Link-based workspaces are not supported in AccuRev 5.0. If you are using link-based workspaces and would like to upgrade to AccuRev 5.0, please contact Customer Support.

- The "traditional" authentication method will no longer be available in the next release of AccuRev. If you still use traditional authentication, please switch to "accurev_login" or "custom" authentication. Please see the "AccuRev Security Overview" chapter of the *AccuRev Administrator's Guide* for information about authentication methods.

Known Issues

- The **–G** option for the **revert** command returns XML to the command line instead of displaying the information in the defined graphical Merge tool.

- The **maintain vercheck** command incorrectly reports that archived **.sto** files are missing.

Changes in this Release (5.0.1)

AccuRev Release 5.0.1 includes the following features and bug fixes:

20980

An issue with **purge** has been fixed, which caused purged files to sporadically have incorrect element type or modification times set.

21018

It is no longer possible to change the time basis of a stream to any time before its backing stream was created.

21074

An issue has been fixed which caused `Update -s <stream> -t <t1-t2>` to crash accurev_server if `<stream>` did not exist at the time of the **update** transaction.