

AccuRev

AccuRev®

Installation and Release Notes

Version 6.1

Revised 4-April-2014

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Introduction

AccuRev proudly introduces AccuRev Version 6.1, helping you unleash the power of software development teams to deliver superior results. AccuRev 6.1 provides additional refinements to the advances in Change Packages functionality introduced in Version 6.0, new features for working with issues in AccuWork, and new features to support continuous integration. Along with these and other improvements to the GUI, AccuRev 6.1 provides numerous enhancements to the command line interface and user documentation, as well as other changes based on feedback from our users.

Highlights of this Release

Highlights of the exciting developments in AccuRev 6.1 are captured here. Refer to the release notes for more details about these features and other enhancements

Simplified Issue Change Palette

The Issue Change Palette, which was modified in AccuRev Version 6.0, has benefited from additional enhancements that simplify its ease-of-use. Notable changes include the following:

- Enhancements to the change algorithm have made it possible to remove the Promote, Status, Details, and Resolved in Workspace columns from the Issue Change Palette's top panel. The upper panel still displays issues that need to be cross-promoted in order to resolve dependencies.
- A Show Dependencies option has been added to the Issue Change Palette to display only those issues whose change packages depend on those of other issues.
- In the previous release, the contents of the merge list that appears in the Issue Change Palette's lower pane were based on the contents of the Promote column. In AccuRev 6.1, the elements displayed in the lower pane are based on the currently selected issues.
- After a Merge or Patch operation, AccuRev now prompts you to promote the issue to fully resolve the dependency.

New: Diff Across All Segments

When users promote the same element against different issues, the element is said to contain different *segments*, or versions of the element that have been promoted against a specific issue. A new option, Diff Across All Segments, enables users to perform a diff operation on the earliest and latest versions of the element that were promoted against a given issue. Diff Across All Segments ignores any changes made to the element that were promoted against other issues.

AccuWork Improvements

AccuRev Version 6.1 delivers several significant enhancements to simplify working with issues.

- **New: Issue cloning** -- Cloning an issue creates a new, fully-defined issue based on an existing issue. Issues can be cloned in most places you find issue information displayed in AccuRev, including the Issue form and the Query Results pane. If the original issue has attachments or has been specified as a sub-task of another issue, you are prompted to include those attachments and establish the sub-task

relationship with the newly created issue. To help easily distinguish cloned issues, the original Short Description is prefixed with the text [**Clone of <issue number>**], which you can change before saving the new issue.

- **Subtask issue enhancements** -- AccuWork has long supported multiple relationship types for issues, including parent/subtask relationships (sometimes called *hierarchical issues*). Support for subtasks in AccuRev Version 6.1 has been enhanced with new features such as:
 - Drag-and-drop -- In previous releases, parent and subtask issue relationships could be created only by specifying the relationship using the Link with Issue dialog box accessible from the Relationships tab on the Issue form. In AccuRev Version 6.1, you can drag issues you want to specify as subtasks and drop them on the parent issue in most places where lists of issues are displayed, such as the Query Results pane.
 - Multiple-level hierarchy -- In previous releases, parent/subtask relationships were restricted to a single generation. Now you can create subtasks for issues that are themselves subtasks -- grandparent-> parent -> subtask, for example.
 - Dedicated Subtasks tab -- To make subtasks easier to work with, they are now displayed on their own tab on the Issue form. Subtasks are no longer displayed on the Relationships tab.

New: Features to Support Continuous Integration

AccuRev Version 6.1 introduces several new features to support continuous integration in the enterprise.

- **streamCustomIcon property** -- The new **streamCustomIcon** property allows you to display one of four build-status icons -- success, running, failed, or warning -- on any build streams in your depot. Using predefined XML, you can customize the tooltip that appears when you hover over the icon in the StreamBrowser; by default, the tooltip displays the build status reflected in the icon, but you might want to add the build number or change the text -- *build 1738 succeeded*, for example. In addition, a `<clickurl>` tag lets you include a URL. You might want to use this tag to provide a link to your build software -- *myBuildTool.local:8080*, for example -- so users have easy access to build artifacts or messages that might help them troubleshoot build failures.
- **streamStyle property** -- To help support the new **streamCustomIcon** property, the **style** property introduced in AccuRev Version 6.0 has been renamed as **streamStyle**. When you upgrade, AccuRev automatically migrates all occurrences of **style** to **streamStyle**, but any external scripts you might be using -- to change a stream's color based on an event, for example -- will have to be updated to use the new **streamStyle** name.
- **Internal StreamBrowser enhancements** -- The StreamBrowser now reads only those reserved properties that have a syntax of **stream***. This simple change reduces the StreamBrowser's memory needs and improves its performance.

New: Support for Secure Client-Server Communication

AccuRev 6.1 supports the Secure Sockets Layer (SSL) protocol to provide encrypted communication between AccuRev clients and servers. Once SSL has been enabled by the AccuRev system administrator, AccuRev servers provide certificates to authenticate themselves to the AccuRev clients that are trying to connect to them. When the certificate is accepted, AccuRev is able to establish encrypted client-server communication.

New CLI Commands and Options

The AccuRev command line interface (CLI) has a number of new options developed in concert with the enhancements to change packages and support for SSL.

New Options for **cpkdescribe**

The **cpkdescribe** command lists the elements in the specified change package -- the same content that is displayed on the Changes tab of the specified AccuWork issue record. New options provide more control over what information the **cpkdescribe** command returns.

- **cpkdescribe -t**

The **-t** option allows you to specify either a timestamp or transaction number to help you narrow your result set to a time or transaction of interest.

- **cpkdescribe --include_missing_segments**

The new **--include_missing_segments** option lets you include missing segments in the result set -- missing segments are excluded by the **cpkdescribe** command by default.

New Commands for SSL Support

Support for SSL in AccuRev 6.1 includes the addition of several new commands to the AccuRev CLI.

- **enable_ssl**

Allows users to inspect and accept (or reject) the SSL certificate. Certificates must be accepted in order to establish encrypted communication with the AccuRev server.

- **get_certificate**

Allows users to obtain a new SSL certificate when the currently accepted certificate expires. Once inspected, users must accept it to work with AccuRev.

- **disable_ssl**

Allows users to disable SSL for the AccuRev client in those situations in which previously established SSL is disabled on the AccuRev server.

In addition, a **--thumbprint** option for the **enable_ssl** and **get_certificate** commands allows you to automate acceptance of SSL certificates on unattended machines.

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

New Platform Support

AccuRev Version 6.1 adds support for the following platforms for both the AccuRev server and AccuRev client, except where noted:

- Microsoft Windows Server 2012
- Linux SUSE 12+
- Linux Ubuntu 12+
- IBM AIX 7.1 (AccuRev client only)
- Mac OS X 10.9 Mavericks (AccuRev client only)

New Version of the AccuRev License Manager

AccuRev 6.1 uses a new version of the Reprise License Manager, RLM 10.1, to enforce AccuRev licenses. Day-to-day license management is largely unaffected by use of RLM 10.1, but there are several important changes of which you should be aware:

- RLM binaries, which used to be installed in the **bin** directory where you installed AccuRev, are now installed in a dedicated **rlm** directory at your AccuRev installation directory root (c:\Program Files\AccuRev\rlm, for example).
- The **accurev.opt** file has also been moved to the dedicated **rlm** directory.
- Access to the RLM server is now password protected. AccuRev recommends that you change the default settings to restrict access to the RLM server.

See Chapter 12, License Management, in the *AccuRev Administrator's Guide* for more information.

Deprecated Features and Platforms

The following features were deprecated in AccuRev 6.0 and are no longer referenced in the user documentation:

- Transaction-level integration. Previously one of two integrations available between AccuRev SCM and the AccuWork issue tracking system. Please use change package-level integration, as described in The Schema Editor appendix of the *AccuRev 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 support for this argument is removed.

The following features were deprecated in AccuRev 5.7 and are no longer supported:

- 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.

In addition, the **style** stream property introduced in AccuRev Version 6.0 is no longer supported; it has been replaced with the **streamStyle** property. When you upgrade to Version 6.1, AccuRev automatically migrates all occurrences of **style** to **streamStyle**, but any external scripts you might be using `--` to change a stream's color based on an event, for example `--` will have to be updated to use the new **streamStyle** name.

AccuRev Installation Notes

This chapter describes how to install and upgrade AccuRev 6.1 software at your site. In addition to installation procedures, it provides information about installation package options, considerations for upgrading, and post-installation procedures. AccuRev 6.1 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 23.

Compatibility with Previous Versions

AccuRev 6.1 is not compatible with previous versions of AccuRev -- 6.1 AccuRev Clients will only work with the 6.1 AccuRev Server, and the 6.1 AccuRev Server does not support existing (6.0 and earlier) AccuRev Clients.

For a high level summary of new features in Release 6.1, see [Highlights of this Release](#) on page 1. For a detailed list of changes, see [AccuRev 6.1 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 Reprise License Manager (RLM) 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 6.

- **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 26 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 23 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 26 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 RLM. The RLM offers the choice of local or remote managers and must be installed on all platforms. See [Get an AccuRev License](#) on page 7 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, Linux, or Windows systems. (See [Table 5](#) on page 10 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 6.1, as summarized in the following table.

Table 1. Preparing to Install AccuRev

Step	Action	Comments
1	<i>Get an AccuRev License</i>	You do not need a license to install just the AccuRev Client or the AccuRev Web UI Server.
2	<i>Determine Configurable Elements</i>	The installation instructions use generic names. Refer to this section to determine values appropriate for your site prior to installation.
3	<i>Download the Installation Packages</i>	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 6.1, you need an **accurev.lic** license file, which is required by the Reprise 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.

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: <ul style="list-style-type: none"> ▪ Current, you can use it to install AccuRev 6.1 ▪ 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 RLM 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
<i><installer-loc></i>		Location of the downloaded AccuRev installation package.
<i><ac-install></i>		Location that AccuRev is installed to. Defaults to: <ul style="list-style-type: none"> ▪ (Windows) <code>C:\Program Files\AccuRev</code> (32-bit) or <code>C:\Program Files (x86)\AccuRev</code> (64-bit) ▪ (UNIX/Linux) <code><homeDirectory>/accurev</code>
<i><ac-storage></i>		Location of the AccuRev database and container files. Defaults to: <ul style="list-style-type: none"> ▪ (Windows) <code>C:\Program Files\AccuRev\storage</code> (32-bit) or <code>C:\Program Files (x86)\AccuRev</code> (64-bit) ▪ (UNIX/Linux) <code><homeDirectory>/accurev/storage</code>

Generic Name	Name at Your Site	Description
<code><ac-host></code>		Hostname of the AccuRev Server.
<code><ac-port></code>		Port number that the AccuRev Server runs on. Defaults to 5050 .
<code><ac-user></code>		Name of the operating-system user that runs the AccuRev Server. Defaults to: acservr .
<code><ac-pass></code>		Password for <code><ac-user></code> .
<code><db-port></code>		Port number that the database server runs on. Defaults to 5075 .
<code><db-admin-name></code>		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.
<code><db-admin-pass></code>		Password for <code><db-admin-name></code> . 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 10
Just the AccuRev Client	Installing or Upgrading an AccuRev Client on page 23
Just the AccuRev Web UI Server	Installing or Updating the AccuRev Web UI Server on page 28

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 6.1. See [Upgrade Paths to AccuRev 6.1](#) on page 18 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 6.1 you should:

1. Read the [Platform Support Notes](#) on page 41 for your operating system before proceeding, and follow the instructions there.
2. Check the [Known Issues](#) on page 60 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-Instal I >* 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 7 for more information.

Note: You *must* have an **accurev.lic** file in order to install AccuRev 6.1.

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 6.1 *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 18 *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 22 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://accurev.force.com/customerportal) 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 6.1 *AccuRev Administrator's Guide*. Before proceeding with replica server installation, contact AccuRev Support Services (<http://accurev.force.com/customerportal>) 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 12. 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.

Use Native Shells

AccuRev recommends using only shells that are native to/installed with the OS. Avoid using a third-party shells as they do not always work as expected.

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 9.

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 6.1 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 18 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://accurev.force.com/customerportal>) 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 32. 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 10 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 39 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 the 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 <code>_n_n_n</code> is the AccuRev version number AccuRev_6_1_0_Windows.exe , for example
	Console (text-based)	AccuRev_n_n_n_Windows.exe -i console where <code>_n_n_n</code> is the AccuRev version number AccuRev_6_1_0_Windows.exe -i console , for example
UNIX/Linux	GUI	sh AccuRev_n_n_n_platform_m_m.bin where: <ul style="list-style-type: none"> ▪ <code>_n_n_n</code> is the AccuRev version number ▪ <code>platform</code> is the UNIX/Linux platform name ▪ <code>_m_m</code> is the OS version sh AccuRev_6_1_0_Linux_x86_2_4 , for example

Table 6. Starting the AccuRev Installation Wizard

Platform	Installation Mode	Run This Procedure
	Console (text-based)	<pre>sh AccuRev_n_n_n_platform_m_m.bin -i console</pre> where: <ul style="list-style-type: none"> ▪ <i>_n_n_n</i> is the AccuRev version number ▪ <i>platform</i> is the UNIX/Linux platform name ▪ <i>_m_m</i> is the OS version <pre>sh AccuRev_6_1_0_Linux_x86_2_4 -i console, for example</pre>

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 8 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 28 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 11 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 22.

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. **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.

9. **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 8. 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.

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

- **Local AccuRev License Manager** -- Choose this option unless you have an existing RLM on another machine that you want to use. Later in the installation (*Step 13*) you will specify configuration settings for the RLM. [*Console: Type "1" for Local.*]
- **Remote AccuRev License Manager** -- If you DO have an existing RLM 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 RLM exists.
- **Port** -- Keep the default value of 2375, unless you know that the remote RLM 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 RLM server at boot time on UNIX/Linux systems (automatically done for Windows installations):
`<ac-instal />/extras/uni x/accurev_rlm`
- “The License Server” section of the on-line *RLM License Administration Manual* at http://www.reprisesoftware.com/RLM_Enduser.html

Note: As of this writing, the *RLM License Administration Manual* describes the features and functionality supported by the RLM server that is currently installed with AccuRev (RLM version 10.1). As RLM documentation is not installed with the RLM server (rather, it is hosted on the RLM web site), be aware that the available RLM documentation might not always match the version of your RLM server.

11. **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 13](#).

To use a new license, choose **Yes**, click **Next** to continue [*Console: Type "n" and press **Enter** to continue.*], and go to [Step 12](#).

12. **Specify AccuRev License Location** -- Specify the full path of your **accurev.lic** license file. See [Enabling the Reprise License Manager \(RLM\)](#) on page 40 for more information.
13. **AccuRev License Manager Configuration** -- Use this page to confirm default settings for the Reprise License Manager port and web port settings. Click **Next** to continue. [*Console: Press **Enter** to continue; there are separate prompts for RLM port and RLM Web port numbers.*]
14. **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.*]
15. **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.

16. **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 10 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 41 for more information.

17. **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.
18. **Database Tuning** -- The Installation Wizard reminds you that you can use database tuning parameters to improve performance. See [Configuring Database Tuning Parameters](#) on page 32 for more information. Click **Next** to continue. [*Console: Press **Enter** to continue.*]
19. **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 6.1. Click **Next** to continue. [*Console: Press **Enter** to continue.*]

20. **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 28 for more information on Web UI Server installation and configuration.

21. **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 39 if you choose to start the AccuRev Server at a later time.

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

23. **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 24](#).

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 17 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.

24. **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**.]*

25. **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**.]*

26. **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 6.1

Installation Type	Next Steps	For More Information
New	<p>If you chose not to start the AccuRev Server as part of the installation process, you must start it before you can use AccuRev.</p> <p>If you plan to make the AccuRev Web UI available to your users, you must:</p> <ul style="list-style-type: none"> ▪ 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 	<p>See Starting and Stopping AccuRev Servers on page 39</p> <p>Go to Starting, Stopping, and Testing the AccuRev Web UI Server on page 31</p> <p>Go to Configuring the AccuRev Web UI on page 31</p>
Upgrade	<p>After upgrading to AccuRev 6.1, you need to:</p> <ul style="list-style-type: none"> ▪ Run the maintain dbupgrade command to migrate your database to the current version installed with AccuRev ▪ Start the AccuRev Server 	<p>Go to:</p> <ul style="list-style-type: none"> ▪ Using the 'maintain dbupgrade' Command on page 33 ▪ Starting and Stopping AccuRev Servers on page 39

Server and Database Upgrades

This section contains instructions for upgrading AccuRev databases from previous releases to 6.1. Note that if you have existing replica servers, you must also follow the instructions in *Upgrading a Replica Server* on page 22. 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 6.1

This section summarizes the supported upgrade paths to AccuRev 6.1 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 6.1

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 6.1 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 6.1, 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 6.1 and run maintain dbupgrade .	5.0.x uses an older version of PostgreSQL than is required by AccuRev 6.1. 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 6.1 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 6.1.
5.4 or higher	Perform an upgrade installation to 6.1 and run maintain dbupgrade .	Note: 5.6.1 is a Japanese-localized version of AccuRev and cannot currently be updated to 6.1.

Additional Notes:

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

- When upgrading from all previous releases, the 6.1 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 10 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 10.

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 20 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 10.
2. If you have not already done so (as specified in [Running the AccuRev Installation Wizard](#) on page 11), 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 39.
9. Navigate to the `<install-loc>` directory and locate the downloaded AccuRev 6.1 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 6.1 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 32) and then go to [Using the 'maintain dbupgrade' Command](#) on page 33 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 6.1. Return here when done.
13. Ensure that the new **accurev.lic** license file exists in `<ac-install>/storage/site_license`.
14. Start the AccuRev Server process according to the instructions in [Starting and Stopping AccuRev Servers](#) on page 39. 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 6.1 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 6.1 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 6.1 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 6.1, 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 33) 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 10 and *Running the AccuRev Installation Wizard* on page 11.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and Stopping AccuRev Servers* on page 39.
3. See the *Running the AccuRev Installation Wizard* on page 11 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 33.
 5. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and Stopping AccuRev Servers* on page 39.

Upgrading an AccuRev Server from 5.1 or Higher

To upgrade from AccuRev 5.1 or higher you must upgrade your database schema by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 33) 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 10 and *Running the AccuRev Installation Wizard* on page 11.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and Stopping AccuRev Servers* on page 39.
3. See *Running the AccuRev Installation Wizard* on page 11 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 39.

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 10.

If your site uses AccuWork: For every replicated depot that has AccuWork issues, copy the entire *.../storage/depots/<depotName>/di spatch* directory from the master server to each replica server. *Tip:* Run "accurev show slices" to see the exact locations of your depots.

2. 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 19
 - *Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x* on page 19
 - *Upgrading an AccuRev Server from 5.0.x* on page 21
 - *Upgrading an AccuRev Server from 5.1 or Higher* on page 21
3. 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 24 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 26 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 41 for your operating system before proceeding, and follow the instructions there.
2. Check the [Known Issues](#) on page 60 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.

Use Native Shells

AccuRev recommends using only shells that are native to/installed with the OS. Avoid using a third-party shells as they do not always work as expected.

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.html>. 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 6.1, 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 **accurev 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 24 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 <i>_n_n_n</i> is the AccuRev version number AccuRev_6_1_0_WindowsClientOnly.exe , for example
	Console (text-based)	AccuRev_n_n_n_WindowsClientOnly.exe -i console where <i>_n_n_n</i> is the AccuRev version number AccuRev_6_1_0_WindowsClientOnly.exe -i console , for example
UNIX/Linux	GUI	sh AccuRev_n_n_n_platform_m_m.bin where: <ul style="list-style-type: none">▪ <i>_n_n_n</i> is the AccuRev version number▪ <i>platform</i> is the UNIX/Linux platform name▪ <i>_m_m</i> is the OS version sh AccuRev_6_1_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)	<pre>sh AccuRev_n_n_n_platform_m_m.bin -i console</pre> where: <ul style="list-style-type: none"> ▪ <code>_n_n_n</code> is the AccuRev version number ▪ <code>platform</code> is the UNIX/Linux platform name ▪ <code>_m_m</code> is the OS version <pre>sh AccuRev_6_1_0_LinuxClientOnly_x86_2_4.bin -i console, for example</pre>

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 8 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_instal l>/bin`" should be added to the user's path. See [Determine Configurable Elements](#) on page 8 if you are not familiar with the value represented by `<ac-instal l>`.

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=local host
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.Iax=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\vccredit_x86_2010.exe=Yes
- fileOverwrite_C:\Program Files\myAccuRev\bin\vccredit_x64_2010.exe=Yes
- fileOverwrite_C:\Program Files\myAccuRev\bin\acgui.Iax=Yes
- fileOverwrite_C:\Program Files\myAccuRev\bin\acdiffgui.Iax=Yes
- fileOverwrite_C:\Program Files\myAccuRev\bin\accli.ent.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_1_0_WindowsClientOnly.exe -r c:\tmp\ac_wi_n_i_nstal_l.out
```

UNIX/Linux example

```
<installer_loc>/AccuRev_6_1_0_LinuxClientOnly_x86_2_4.bin  
-r /tmp/ac_l_i_nux_i_nstal_l.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_1_0_WindowsClientOnly.exe -i silent  
-f c:\tmp\ac_wi_n_i_nstal_l.out
```

UNIX/Linux example

```
<installer_loc>/AccuRev_6_1_0_LinuxClientOnly_x86_2_4.bin -i silent  
-f /tmp/ac_l_i_nux_i_nstal_l.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 11, the AccuRev Web UI Server is already installed. Go to [What to Do Next](#) on page 30.

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 10 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 <i>_n_n_n</i> is the AccuRev version number AccuRev_6_1_0_Windows.exe , for example
	Console (text-based)	AccuRev_n_n_n_Windows.exe -i console where <i>_n_n_n</i> is the AccuRev version number AccuRev_6_1_0_Windows.exe -i console , for example
UNIX/Linux	GUI	sh AccuRev_n_n_n_platform_m_m.bin where: <ul style="list-style-type: none"> ▪ <i>_n_n_n</i> is the AccuRev version number ▪ <i>platform</i> is the UNIX/Linux platform name ▪ <i>_m_m</i> is the OS version sh AccuRev_6_1_0_Linux_x86_2_4 , for example
	Console (text-based)	sh AccuRev_n_n_n_platform_m_m.bin -i console where: <ul style="list-style-type: none"> ▪ <i>_n_n_n</i> is the AccuRev version number ▪ <i>platform</i> is the UNIX/Linux platform name ▪ <i>_m_m</i> is the OS version sh AccuRev_6_1_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 8 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 10 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 41 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 31.

Table 11. After Installing the AccuRev Web UI Server

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 31.
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 31.
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 <i>AccuRev Web Interface Administrator's Guide</i> . See Web UI Release Notes on page 32.

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 31. 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/dspatch/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 6.1](#) on page 59. 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 39.
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 39).

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”.

Physical Memory (MB)	
Total	8181
Cached	3731
Available	3887
Free	189

- 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 39.

Using the ‘maintain dbupgrade’ Command

This section details the use of the **maintain dbupgrade** command to upgrade your existing AccuRev database to 6.1.

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 32, 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 6.1 *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/logs/dbupgrade.log`
- `<ac-storage>/site/logs/dbupgrade_18n_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://accurev.force.com/customerportal>).

See *Understanding maintain dbupgrade Messages* on page 34 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 35.
- **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 19.)

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 37). 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 38. Test your installation. If you were doing the upgrade on a test machine, return to [Performing an Upgrade "In Place"](#) on page 20 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 6.1, 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 37). 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 38, and [Upgrading an AccuRev Server from 5.0.x](#) on page 21 or [Upgrading an AccuRev Server from 5.1 or Higher](#) on page 21.)

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 6.1 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/di spatch/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/site/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.

▼ Stream name

▼ LINE tests bld 1.7ý (RUN, 10-07-07)ý

depot_id: 13, stream_id: 2802, time: 1178784798

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://accurev.force.com/customerportal>).
- **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.

Starting

Platform	Interface	Start Procedure
Windows	GUI	Services window > Locate service, right-click, choose Start Service
	Command line	<code>net start accurev</code>
UNIX/Linux	Command line	<code>cd <ac-install>/bin ./acserverctl start</code>

Stopping

Platform	Interface	Stop Procedure
Windows	GUI	Services window > Locate service, right-click, choose Stop Service
	Command line	<code>net stop accurev</code>
UNIX/Linux	Command line	<code>cd <ac-install>/bin ./acserverctl stop</code>

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.

Starting

Platform	Interface	Start Procedure
Windows	GUI	Services window > Locate service, right-click, choose Start Service
	Command line	<code>net start "accurev db server"</code>
UNIX/Linux	Command line	<code>cd <ac-install>/bin ./acserverctl dbstart</code>

Stopping

Platform	Interface	Stop Procedure
Windows	GUI	Services window > Locate service, right-click, choose Stop Service
	Command line	<code>net stop "accurev db server"</code>
UNIX/Linux	Command line	<code>cd <ac-install>/bin ./acserverctl dbstop</code>

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 Operation" in the AccuRev 6.1 *Administrator's Guide* for more information, and for setting up your system to automatically start the AccuRev processes at boot time.

Enabling the Reprise License Manager (RLM)

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

The AccuRev 6.1 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 6.1 *Administrator's Guide* for more details.

The procedures for starting the RLM server are summarized in the following table:

Platform	Interface	Procedure
Windows	GUI	Services window > Locate service, right-click, choose Start Service
	Command line	<code>net start "accurev rlm"</code>
UNIX/Linux	Command line	<code>rlm -c <path to accurev.lic> -dlog <path to RLM log file></code>

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 6.1 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. 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 6.1 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/XI_NERAMA/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 libraries listed below are not present on your system, download and install them (and their dependencies) prior to running the installer. You must have these 32-bit libraries installed even if you are installing the 64-bit version of AccuRev.

Note that newer versions of Red Hat, Fedora, SUSE, and Ubuntu no longer provide packages containing comprehensive 32-bit compatibility libraries (for example, ia32-libs), but rather encourage users to install only the libraries they need. If you are using an older version of these operating systems, some of these libraries might already be present on your machine.

- lib6:i386
- libice6:i386
- libx11-6:i386
- libxau6:i386
- libxaw7:i386
- libxext6:i386
- libxi6:i386
- libxmu6:i386
- libxtst6:i386
- zlib1g:i386

Note: This list gives the name and notation (:i386, for example) required for Ubuntu 13.10. Comparable libraries are present in other Linux distributions -- libxaw.i686 instead of libxaw7:i386, for example.

- (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 you only have the **x86_64** version of this library 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/libconv.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: <code>(sudo) chown -R <ac-user> <ac-install /></code>
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: <ul style="list-style-type: none">▪ Go to http://accurev.force.com/customerportal▪ 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 6.1 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-api.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\Uninstall\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 6.1 Release Notes

This chapter describes changes and other information related to AccuRev Version 6.1 (AccuRev 6.1).

Deprecated Features

The following features were deprecated in AccuRev 6.0 and are no longer described in the user documentation. They will not be supported in a future release:

The following features were deprecated in AccuRev 6.0 and are no longer referenced in the user documentation:

- Transaction-level integration. Previously one of two integrations available between AccuRev SCM and the AccuWork issue tracking system. Please use change package-level integration, as described in The Schema Editor appendix of the *AccuRev 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 variants in AccuRev 6.0, this argument is no longer necessary and is ignored if invoked `--` when you revert an issue, AccuRev now assigns changes automatically to a variant of the original issue. (Revert variants are highlighted in red in the AccuRev GUI.) Please update any scripts that use this argument so they will not break when support for this argument is removed.

The following features were deprecated in AccuRev 5.7 and are no longer supported:

- `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.

In addition, the **style** stream property introduced in AccuRev Version 6.0 is no longer supported; it has been replaced with the **streamStyle** property. When you upgrade to Version 6.1, AccuRev automatically migrates all occurrences of **style** to **streamStyle**, but any external scripts you might be using `--` to change a stream's color based on an event, for example `--` will have to be updated to use the new **streamStyle** name.

Changes in AccuRev Release 6.1

AccuRev Release 6.1 includes the following new features and bug fixes:

2674, 32089, 33232 -- Change Palette functionality has been improved

The Change Palette has been modified 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.
- The **Show Dependencies** button is now available in the Issue Change Palette.
- The first four display columns (**Promote**, **Status**, **Details**, and **Resolved in Workspace**) have been removed from the Issue Change Palette.
- In previous versions of AccuRev, the contents of the merge list that appear below the Issue Change Palette were based on the contents of the **Promote** column. In AccuRev 6.1, the contents of the merge list that appear below the Issue Change Palette are based on the issues that are currently selected in the Issue Change Palette.
- After a **Merge** or **Patch** operation, AccuRev now prompts the user to **Promote** the issue.

7071 -- Output order of the "accurev hist -t <timestamp>-<timestamp>" command corrected

In previous releases, the `accurev hist -t - <timestamp>-<timestamp>` command returned transactions for the period specified by the `<timestamp>` parameters, but in the reverse chronological order. This problem has been corrected in the current release.

14428 -- 'Diff Previous Transaction' operation generates an error

In previous versions, promoting a file multiple times to the same stream, reparenting the stream, and then performing a **Diff Against Previous Transaction** operation produced an error message that read "Previous transaction cannot be found for selected version." The problem was caused by referencing the original backing stream instead of the current one. This error has been corrected in the current release.

17508 -- New: support has been added for commands taking comments in the server_preop_trig trigger script

Support has been added to the `server_preop_trig` trigger script for the use of comments for the following AccuRev commands: **add**, **archive**, **co**, **defunct**, **keep**, **ln**, **promote**, and **purge**. The `server_preop_trig.pl` script in the `<AccuRev-installation-dir>\examples` directory has been updated to include examples of the commenting capability for each of the commands.

18052 -- Incorrect error message when trying to remove reference tree

In previous versions, the attempt to remove a reference tree by a user who did not create the reference tree returned the following message: "You specified a workspace: ref_tree_name that you did not create. Use 'rmws' with the -s switch to force removal." This error message was incorrect as the user

was trying to remove a reference tree and not a workspace. The error message has been corrected in the current release.

19191, 22175 -- The chws command sometimes failed to completely change workspace names

In previous releases, the **chws** command sometimes failed to change the workspace name in both the workspace and stream database tables, allowing the workspace name and stream to get out of sync. This problem has been corrected in the current release.

20099 -- An accurev add -xR "" . command gives incorrect results

In previous releases, an **accurev add -xR "" .** CLI command produced undefined behavior because the command does not specify a valid file or directory. This problem has been corrected in the current version so that error-handling code now detects either an **accurev add -xR "" .** command or an **accurev add -xR ""** command at the time that it is entered and notifies the user that the command syntax is incorrect.

20761 -- Server startup limits number of client threads based on number of file handles

In previous releases, the number of threads available at server startup was limited based on the number of file handles available. This limitation has been removed in the current release.

21002 -- Problem with exclude rules from source of cross-link

In previous releases, include/exclude rules related to cross-links could cause a **-populate** command to fail when it should succeed in a workspace or a reftree. This problem has been corrected in the current release.

23286 -- Stream name not passed to the server_preop_trig trigger in a Send to Issue operation

In previous releases, the stream name was not passed to the **server_preop_trig** trigger when a user performed a **Send to Issue** operation from a stream. This problem has been corrected in the current release.

23287 -- Add file version information to cpkadd/cpkremove validation in the server_preop_trig trigger

In previous versions, the information provided to the **server_preop_trig** trigger for a **cpkadd** or **cpkremove** operation did not include file version information. This problem has been corrected in the current release.

24207 -- Subtask issue enhancements

AccuWork has long supported multiple relationship types for issues, including parent/subtask relationships (sometimes called *hierarchical issues*). Support for subtasks in AccuRev Version 6.1 has been enhanced with new features such as:

- **Drag-and-drop** -- In previous releases, parent and subtask issue relationships could be created only by specifying the relationship using the Link with Issue dialog box accessible from the Relationships tab on the Issue form. In AccuRev Version 6.1, you can drag issues you want to specify as subtasks and drop them on the parent issue in most places where lists of issues are displayed, such as the Query Results pane.
- **Multiple-level hierarchy** -- In previous releases, parent/subtask relationships were restricted to a single generation. Now you can create subtasks for issues that are themselves subtasks -- grandparent-> parent -> subtask, for example.

- Dedicated Subtasks tab -- To make subtasks easier to work with, they are now displayed on their own tab on the Issue form. Subtasks are no longer displayed on the Relationships tab.

27429 -- Renaming a directory using a different case creates a new directory

In previous releases, AccuRev incorrectly created a new directory when you rename an existing directory using the opposite case (for example, renaming the directory *ACME* to *acme*). The current directory was created as a child of the newly created directory. This problem has been corrected.

24574, 29649 -- Login access controls are not provided for the RLM Web server

In previous releases, the Reprise License Manager did not require login access controls for the AccuRev Web server. This problem has been corrected in the current release with the use of version 10 of the Reprise License Manager.

27065 -- Replica server points to master server's WebUI

In previous releases, users attempting to invoke the Web UI from the replica server could incorrectly open the master server's Web UI instead. This was possible if the AccuRev Web UI had been installed on both the master server and the replica server and if the settings.xml file had not yet been created on the replica server. This problem has been corrected in the current release.

29212 -- Version Browser shows two entries for a file promoted by transaction

In previous releases, the Version Browser incorrectly showed two entries for a file that was promoted by transaction if the file had been promoted previously. This problem has been corrected in the current release.

29649 -- Support for Reprise License Manager 10.1

AccuRev 6.1 uses a new version of the Reprise License Manager, RLM 10.1, to enforce AccuRev licences. Day-to-day license management is largely unaffected by use of RLM 10.1, but there are several important changes of which you should be aware:

- RLM binaries, which used to be installed in the **bin** directory where you installed AccuRev, are now installed in a dedicated **rlm** directory at your AccuRev installation directory root (c:\Program Files\AccuRev\rlm, for example).
- The **accurev.opt** file has also been moved to the dedicated **rlm** directory.
- Access to the RLM server is now password protected. AccuRev recommends that you change the default settings to restrict access to the RLM server.

See Chapter 12, License Management, in the *AccuRev Administrator's Guide* for more information.

29918 -- AccuRev does not use a Windows virtual drive when opening a workspace

In previous releases, the workspace storage path was always used to determine the working directory of a workspace. This behavior has changed in the following way: if a user runs an **accurev chws -l** command and the new location for the workspace is a Windows virtual drive, AccuRev remembers the virtual location. When the user later attempts to open this workspace, AccuRev will use the Windows virtual drive as the location of the working directory if it maps to the storage location and if it is currently accessible.

29944 -- Linux client causes a segfault error when running a cat command on a non-existent element

In previous releases, running a **cat -p depot -v "-e "** command on a Linux client produced a segfault error. This has been corrected in the current release.

30552 -- Promote by issue causes "unknown server error" when the workspace version contains changes that are not assigned to an issue

In previous releases, a promote by issue operation run in the AccuRev GUI returned an "unknown server error" when the workspace version contained changes that were not assigned to an AccuWork issue. This has been corrected in the current release.

30757, 31987 -- New: Features to Support Continuous Integration

AccuRev Version 6.1 introduces several new features to support continuous integration in the enterprise.

- **streamCustomIcon property** -- The new **streamCustomIcon** property allows you to display one of four build-status icons -- success, running, failed, or warning -- on any build streams in your depot. Using predefined XML, you can customize the tooltip that appears when you hover over the icon in the StreamBrowser; by default, the tooltip displays the build status reflected in the icon, but you might want to add the build number or change the text -- *build 1738 succeeded*, for example. In addition, a `<clickurl>` tag lets you include a URL. You might want to use this tag to provide a link to your build software -- *myBuildTool.local:8080*, for example -- so users have easy access to build artifacts or messages that might help them troubleshoot build failures.
- **streamStyle property** -- To help support the new **streamCustomIcon** property, the **style** property introduced in AccuRev Version 6.0 has been renamed as **streamStyle**. When you upgrade, AccuRev automatically migrates all occurrences of **style** to **streamStyle**, but any external scripts you might be using -- to change a stream's color based on an event, for example -- will have to be updated to use the new **streamStyle** name.
- **Internal StreamBrowser enhancements** -- The StreamBrowser now reads only those reserved properties that have a syntax of **stream***. This simple change reduces the StreamBrowser's memory needs and improves its performance.

30901 -- New version support

AccuRev Version 6.1 adds support for the following platforms for both the AccuRev server and AccuRev client, except where noted:

- Microsoft Windows Server 2012
- Linux SUSE 12+
- Linux Ubuntu 12+
- IBM AIX 7.1 (AccuRev client only)
- Mac OS X 10.9 Mavericks (AccuRev client only)

30982 -- 6.0 client upgrade uploaded 5.7 client

For a brief time after the introduction of AccuRev 6.0, the client upgrade available on the AccuRev web site installed the AccuRev 5.7 client. This problem was corrected.

30983 -- New: Diff Across All Segments

When users promote the same element against different issues, the element is said to contain different *segments*, or versions of the element that have been promoted against a specific issue. A new option, Diff Across All Segments, enables users to perform a diff operation on the earliest and latest versions of the element that were promoted against a given issue. Diff Across All Segments ignores any changes made to the element that were promoted against other issues.

31088 -- New: Issue cloning

Cloning an issue creates a new, fully-defined issue based on an existing issue. Issues can be cloned in most places you find issue information displayed in AccuRev, including the Issue form and the Query Results pane. If the original issue has attachments or has been specified as a sub-task of another issue, you are prompted to include those attachments and establish the sub-task relationship with the newly created issue. To help easily distinguish cloned issues, the original Short Description is prefixed with the text [**Clone of <issue number>**], which you can change before saving the new issue.

31175 -- Unaffiliated changes are ordered from oldest segment to newest segment

The XML output from the **issuelist** command now lists unaffiliated changes (sometimes referred to as "dark matter") found in a stream in ascending transactional order according to the head version of the unaffiliated segment.

31326 -- Validation set for Stream properties in the server_admin_trig trigger fails to operate through GUI

In previous releases, no error message was displayed in the AccuRev GUI when the **server_admin_trig** trigger denied an action. This problem has been corrected in the current release.

31401 -- Client-side pre-promote-trig trigger supports promote by issue

The XML input for the pre-promote-trig trigger now supports a `<changePackageID>` subelement that takes an issue number as its argument. The XML specifying the promoting issues, 2312, 2314, and 3115 would look like this, for example:

```
<changePackages>
  <changePackageID>2312</changePackageID>
  <changePackageID>2314</changePackageID>
  <changePackageID>3115</changePackageID>
</changePackages>
```

31513 -- New: Support for Secure Client-Server Communication

AccuRev 6.1 supports the Secure Sockets Layer (SSL) protocol to provide encrypted communication between AccuRev clients and servers. Once SSL has been enabled by the AccuRev system administrator, AccuRev servers provide certificates to authenticate themselves to the AccuRev clients that are trying to connect to them. When the certificate is accepted, AccuRev is able to establish encrypted client-server communication.

Support for SSL in AccuRev 6.1 includes the addition of several new commands to the AccuRev CLI.

- **enable_ssl**
Allows users to inspect and accept (or reject) the SSL certificate. Certificates must be accepted in order to establish encrypted communication with the AccuRev server.
- **get_certificate**
Allows users to obtain a new SSL certificate when the currently accepted certificate expires. Once inspected, users must accept it to work with AccuRev.
- **disable_ssl**
Allows users to disable SSL for the AccuRev client in those situations in which previously established SSL is disabled on the AccuRev server.

In addition, a **--thumbprint** option for the **enable_ssl** and **get_certificate** commands allows you to automate acceptance of SSL certificates on unattended machines.

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

31597, 32224 -- stat command performance improvements

In previous releases, the performance of the **stat** command used a lot of memory when sending large list of files (**accurev stat my_stream -l file_list.txt**, for example), resulting in slow performance. In addition, calculating the CRC values included all input files, not just those that were modified.

These problems have been corrected in the current release, with a significant increase in the performance of **stat**'ing large lists of files.

31635 -- Attachments cannot be deleted in the AccuRev GUI

In previous releases, attachments added to an issue could not be deleted. This problem has been corrected in the current release.

31769 -- stat -a, stat -R and files commands do not report status for a file

In previous releases, renaming a file from "fileA" to "fileB" and then creating a new file named "fileA" and promoting it could cause the file to appear to be missing in AccuRev. In this situation, running AccuRev commands such as "**accurev stat -a**," "**accurev stat -R**", or "**accurev files**" on fileA produced no information, and running an "**accurev stat**" command using the depot's relative path name reported the file as missing. This problem has been corrected in the current release.

31942 -- hist command behaves inconsistently when using multiple -f switches

In previous releases, the **hist** command sometimes failed to provide output when multiple **-f** switches were used (**hist -fx -fe**, for example). To address this problem, the behavior of the **hist** command has been changed in the current release in the following manner: if a command contains multiple **-f** switches, the union of the **-f** switches is used so that a command such as **hist -fx -fe** is treated as if it were **hist -fxe**.

31946 -- The history of a cross-link not showing cross-link status

In previous releases, running a **hist** command on a cross-link and using the **-e** option with an eid returned an output in which the element did not have a cross-link status. This problem has been corrected in the current version.

32092 -- Diff Against Backed Version hangs AccuRev GUI

In previous releases, performing a **Diff Against > Backed Version** operation in the AccuRev GUI on an element of type ptext that existed in two workspaces attached to the same stream could hang AccuRev. This problem has been corrected in the current version.

32129 -- Unknown server errors generated when promoting change packages

In previous releases, internal AccuRev server errors like the following were displayed when AccuRev encountered an error during the promote of a change package:

Unknown server error: 1056

Unknown server error: 1049

These messages could obscure the real reason for the promote failure, making it difficult for the user to troubleshoot. This problem has been corrected in the current release, and internal errors such as these are no longer displayed to the user.

32283 -- Poor GUI performance running Show Dependencies on incomplete issue

In AccuRev 6.0.2, the AccuRev GUI would slow, appearing to hang, when executing the Show Dependencies command on an incomplete issue in a stream. Though the command would eventually complete, the performance was unacceptable. This problem has been corrected in the current release using a more efficient algorithm to calculate dependencies.

32324 -- Poor stat command performance on Windows

The performance of the **accurev stat** command on Windows degraded between AccuRev 6.0.1 and AccuRev 6.0.2. The improved performance achieved in AccuRev 6.0.1 has been restored in AccuRev 6.1.

32387 -- UNC paths for remote reference trees caused errors

In AccuRev 6.0.2, certain AccuRev commands and triggers on reference trees on remote file systems would fail if the reference tree location was changed from one specified with a mapped drive to one specified using the Universal Naming Convention (UNC). In such cases, AccuRev would display the following error:

```
Workspace directory on not accessible from this machine. Could not find workspace
```

This problem has been corrected in the current release.

32433 -- Exporting an issue generates an error

In previous releases, exporting an AccuWork issue to HTML resulted in an error like:

```
File error  
9 >=0
```

This error has been corrected in AccuRev 6.1, and you can now export AccuWork issues to both HTML and XML.

32496 -- Cannot change sort order, column width in Include/Exclude view

In previous releases, columns in the Rules pane in the Include/Exclude view could not be resized or sorted if the AccuRev GUI was restarted after selecting this view. This problem, which affected only workspaces, has been corrected in the current release, and the Element, Kind of Rule, and Set in Stream columns can now be resized and sorted even after the AccuRev GUI is restarted.

32674 -- New options for cpkdescribe

The **cpkdescribe** command lists the elements in the specified change package -- the same content that is displayed on the Changes tab of the specified AccuWork issue record. New options provide more control over what information the **cpkdescribe** command returns.

- **cpkdescribe -t**

The **-t** option allows you to specify either a timestamp or transaction number to help you narrow your result set to a time or transaction of interest.

- **cpkdescribe --include_missing_segments**

The new **--include_missing_segments** option lets you include missing segments in the result set -- missing segments are excluded by the **cpkdescribe** command by default.

32903, 33009 -- Unaffiliated changes sometimes overlooked a version's regular ancestry

In the previous release, if a version's merge, patch, or revert ancestry had been assigned to an issue, AccuRev did not consider that version to be dark matter. However, it is the regular ancestry that must

be assigned to an issue to avoid the content gaps in promote that can result in the creation of unaffiliated changes. This problem has been corrected in the current release.

32952 -- Versions from multiple issues were not always coalesced

In the previous release, AccuRev could not successfully coalesce versions from multiple issues if those issues were promoted in one order to the backing stream, and then promoted in a different order to a stream deeper in the hierarchy. The second promote would require a patch operation, after which AccuRev would detect two version segments to promote when there was just one. This problem has been corrected in the current release, and AccuRev now coalesces versions from multiple issues into a single promotable segment in this situation.

32955 -- Internal-only information codes suppressed

In previous releases, AccuRev would sometimes display internal-only server-side information codes on the AccuRev client. This problem has been corrected in AccuRev 6.1.

32956 -- cpkremove unable to remove EID from certain change packages

In the previous release, the **cpkremove** command was unable to remove the EID for a version segment from a change package if that segment had merge ancestry and had been assigned to an issue. This problem has been corrected in the current release.

32974 -- All variants included in change package history

In the previous release, AccuRev returned transaction information for only variant 0 when querying change package history. Change package history now returns transaction information about all variants.

33044 -- Patched and merged issues can now be promoted individually

In previous releases, AccuRev did not allow you to individually promote issues if they entered a stream via a merge or patch operation. This problem has been corrected in the current release.

33045 -- All versions now included in change package when sending file from workspace

In the previous release, AccuRev would include only the tip (latest active) version in the change package when a file was sent to a change package from the workspace. AccuRev now includes all intermediate versions when a file is sent to the change package from the workspace.

Corrections and Changes to the Documentation

Please note the following corrections and changes to the AccuRev 6.1 documentation.

16536 -- The description of the backup command in the documentation requires clarification

In previous versions, the description of the time delays that accompany the execution of a backup command was unclear in the AccuRev Administrator's Guide. This description has been changed in the current release to read as follows: "The backup command makes a copy of the AccuRev metadata. During backup command execution, clients can continue to work. Only transactions that are complete at the time the backup command is invoked are included in the metadata backup. The backup may take a few seconds or a few minutes, depending on the amount of metadata on your system. After running the backup, you can make a complete copy of the file storage area (the storage directory tree), without worrying about synchronization or time-skew."

24439 -- Clarify the use of the -s -t options for the update command

The CLI documentation now describes how to use the **-s** and **-t** options with the **update** command to inspect a stream for changes that occurred within a specified range of transactions.

25346 -- Document that the remove sessions command must be run on the master server

In previous releases, the CLI documentation did not mention that the **remove sessions** command must be run on the master server in order to work. In a master/replica environment, issuing the command **accurev remove sessions** against an account with a logged-in session from a replica does not remove the sessions if it is run from the replica server. The session is removed only if you issue the command against the master server.

27035, 27691 -- New: CLI support for diffing overlapped elements

AccuRev 5.6 introduced new Diff Against options in the AccuRev GUI to help identify and resolve conflicts that result in an (**overlap**) status -- **Diff Against Overlapping Changes**, which provided 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.

These Diff Against options were subsequently supported in the AccuRev CLI but were never documented. New **--mine** and **--theirs** options that can be used alone or in combination with the **-a** and **-v** options of the **diff** command are now documented in the *AccuRev CLI User's Guide* and CLI help.

28410 -- Correct syntax for db-admin property in the maintain command

The *Administrator's Guide* and command line help for the **maintain server_properties** command showed that the **db-admin** property was optional when running **maintain server_properties update**. In fact, the **db-admin** property is required if you specify the **update** option. In addition, this property was referred to as db-admin-role in the command line help, and db-admin in the *Administrator's Guide*. Both of these errors are corrected in the current release.

29123 -- Document the fileModTime xml output -x switch

The CLI documentation now describes the **fileModTime** value that is returned in the output of an **accurev show -fix wspaces** CLI command. The **fileModTime** value represents the timestamp of the last time the workspace was updated, converted to UNIX timestamp format.

29430 -- Edit the documentation for the incl, incldo and excl commands

The documentation for the **incl**, **incldo** and **excl** commands now includes the word "rule" in the title line so as to return these commands when a user searches for the word "rules" in the documentation.

29670 -- Clarification of the use of the <depot> parameter for lsrules and mkrules

In previous releases, the requirement for the use of the **<depot>** parameter in the **lsrules** and **mkrules** commands was not made clear. The CLI usage documentation and examples have been revised.

29773 -- XML issuediff and issuelist commands are not documented

The **issuediff** and **issuelist** XML commands are now documented in the *CLI User's Guide* and CLI help.

29823 -- Need to update how to run acgui in debug mode

The "Running the AccuRev GUI in debug mode" section of the On-Line Help documentation has been updated to include changes when running acgui in debug mode in AccuRev version 5.6 and later.

30948 -- Cross-references for the login command improved

The cross-references in the See Also section for the login command have been improved to include additional related commands and documentation.

30960 -- setproperty and rmproperty documentation clarified

The documentation for the **setproperty** and **rmproperty** CLI commands has been clarified with respect to modifications required to the server_admin_trig trigger. In addition, the reference information for the server_admin_trig trigger has been updated to include information on propertyName, propertyValue, streamName, and propertyKind parameters.

31504 -- New: -t option for cpkdescribe

The new **-t** option for the **cpkdescribe** command is documented in the *CLI User's Guide* and CLI help.

31956 -- %USERPROFILE% misspelled in AccuRev Technical Notes

In previous versions of the *AccuRev Technical Notes*, the %USERPROFILE% variable described in **.acignore** topics was spelled as %USER_PROFILE%. This problem has been corrected in the current release.

32220 -- Clarification regarding the creation of versions

A passage in the user documentation asserted that new versions are created "...when content changes." In fact, new versions are created during operations --like **keep**, **add**, **merge**, and **rename**-- even if the file's content does not change.

32255 -- Typo corrected in Getting Started with AccuRev

A typographical error in Chapter 1, Day-to-Day Usage of AccuRev in *Getting Started with AccuRev* was corrected.

Changes in AccuRev Web UI Release 6.1

AccuRev Web UI Release 6.1 includes the following:

32961 -- Use AccuRev Plug-In for Crucible 3.0 or later

The integration between the AccuRev Web UI and Crucible is only available for versions of Crucible prior to 3.0. If, however, you are using Crucible 3.0 or later, you can add AccuRev contents to a Crucible review by using the AccuRev Plug-In for Atlassian Crucible, which is available here:

<http://www.accurev.com/customer-support-resources/downloads/integration-packages>

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

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\\Local Settings\Application
Data\Google\Chrome\Application\chrome.exe" -- "%1"
```

Windows 7:

```
"C:\Users\\AppData\local\Google\Chrome\Application\chrome.exe"
-- "%1"
```

6. Replace the empty "--" with "--allow-file-access-from-files":

Windows XP:

```
"C:\Documents and Settings\\Local Settings\Application
Data\Google\Chrome\Application\chrome.exe"
--allow-file-access-from-files "%1"
```

Windows 7:

```
"C:\Users\\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.

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.

24248 — Depot names must be ASCII

Only stream, workspace, and reference tree names can be non-ASCII. Depot names must be ASCII.

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.

33129 -- Additional GitCentric configuration required when AccURev 6.1 with SSL

If you are using a current version of GitCentric (2013.3, 2013.2, or 2013.1) with AccuRev 6.1 *and* you have enabled the Secure Sockets Layer (SSL) protocol on the AccuRev server, you need to take the following additional steps to continue using GitCentric in an SSL-enabled environment. Completing this procedure ensures that the SSL certificates are in a directory that is recognized by the bridge.

1. Add the following lines to whatever script you use to start Tomcat (for example, **catalina.sh**):

```
# Copy AccuRev certificates from home directory to temp/.accurev
mkdir -p $CATALINA_TMPDIR/.accurev
rm $CATALINA_TMPDIR/.accurev/*.crt
cp <GitCentric Install Path>/certs/*.crt $CATALINA_TMPDIR/.accurev
```

where *<GitCentric Install Path>* is the full path to the GitCentric installation directory.

2. Obtain an SSL certificate from the AccuRev server by running the **accurev get_certificate** command from an AccuRev client on the machine on which GitCentric is installed.
3. Execute the following:

```
mkdir <GitCentric Install Path>/site/certs
cp ~/.accurev/*crt <GitCentric Install Path>/certs
```

4. Restart the Tomcat server.

33324 -- AccuRev Windows client performance when SSL is enabled on AccuRev server

If you enable the Secure Sockets Layer (SSL) protocol on the AccuRev server, users of the AccuRev GUI client on Windows might notice a slight (sub-second) delay when executing commands. This delay is most noticeable when using the File Browser to browse workspaces or streams.

33428 -- Use chws for workspaces created on bind mounts

(*UNIX/Linux only*) If you create a workspace on a bind mount, the workspace storage and location will differ. If you are working in the mounted directory, AccuRev will not display newly created elements in the GUI, and the **stat** command will display errors like "Bad element name" and "Element not found in workspace" -- even though the elements exist in the workspace.

To work around this problem, you need to use the **chws** command to change the workspace location to be the same as its storage. For example:

1. Run **accurev show -fv wspaces** to clearly identify the location and storage paths associated with the workspace. In the output, the **Location** is the bind mount, and the **Storage** is the workspace's physical storage. For example:

Workspace	Location	Storage	Host	Stream#
newWS	/home/shankin/ws/W1	/export/home/shankin/ws/W1	shankin-vm64	10 13 13 1 0

2. Next, **cd** to the workspace Storage path. For example:

```
cd /export/home/shanki n/ws/W1
```

3. Finally, run the **chws** command using the **-w** and **-l .** (el period) options to change the location of the workspace. For example:

```
accurev chws -w -l .
```

Note that after you perform this procedure, AccuRev will still default the workspace location to the bind mount the next time you create a workspace (`/home/shanki n/ws/`, for example). Once you specify the path for the new workspace as the storage location (`/export/home/shanki n/ws/`, for example), however, AccuRev will remember it and no subsequent manual intervention is required.

33457 -- Client connection lost on Windows 2003 using SSL

(*Windows 2003 only*) AccuRev clients receive the following error when attempting to connect to an AccuRev server for which SSL has been enabled:

Network Error - 6: Connection lost while receiving data.

To work around this limitation:

1. Execute the **accurev enable_ssl** command.
2. Review and accept the certificate when prompted.

Once the certificate has been installed, the AccuRev client will be able to connect to the AccuRev server without any additional action.

Known Issues in the AccuRev Web UI

The 6.1 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.

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

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-l-gpl-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 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 "<styl e><col or><background-col or>#FF0000</background-col or></col or></styl e>"
```

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.

Note: The name of the style property changed to streamStyle in AccuRev 6.1. See [30757, 31987 -- New: Features to Support Continuous Integration](#) on page 53 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.

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.

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 corrected 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 [28324 -- New: set stream background color](#) on page 71 for more information.