

AccuRev

AccuRev

Version 5.2 **BETA**

Installation and Release Notes

Revised 6-June-2011

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Introduction



Welcome to AccuRev, the best software change and configuration management (SCCM) system available today.

Highlights of this Release

AccuRev Version 5.2 provides several enhancements and bug fixes including:

- The introduction of element-level security (Element Access Control Lists, or “EACLs”).
- A new **Revert Change Package Directly in Stream** feature.
- Addition of new **Open in Web** and **Copy URL to Clipboard** buttons on the toolbar.
- Internationalization (I18N).
- Improvements to the AccuRev Installer.
- Improvements to memory footprint of the **pop** command.
- Enhancements to the **archive** command.
- A new AccuWorkflow interface, implemented through the AccuRev Web UI. [NOT AVAILABLE IN BETA]
- A new context-sensitive on-line help system that allows search and browse capabilities across the entire AccuRev documentation set.
- The administrator **maintain restore** command provides a new **-a** “ASCII” option. The **maintain dbupgrade** command prompts you through a new optional “trial run” mode that reports potential upgrade issues without writing to the database.

For details about the specific changes introduced in this release, please see [AccuRev 5.2 Release Notes](#) on page 29.

To install AccuRev, please see [AccuRev Installation Notes](#) on page 3.

AccuRev Installation Notes

Overview

This chapter describes how to install or upgrade AccuRev software at your site.

Installing AccuRev involves downloading an installation program from the AccuRev Web site and running it on the target machine(s) at your site. One machine should be the AccuRev Server machine — the one that runs the AccuRev Server process and hosts the AccuRev data repository. 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.

Introducing AccuRev 5.2

AccuRev Release 5.2 is intended for new customers and all existing customers who wish to upgrade to the latest 5.x release.

Upgrades from existing 4.x, 5.0.x, or 5.1 installations are supported. 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 or 5.1 also require a database upgrade, although these are much quicker. The following table summarizes the upgrade requirements.

Table 1. Upgrading to AccuRev 5.2

If you are upgrading from:	You must:	Notes:
pre-4.7	<ol style="list-style-type: none">1. First upgrade to 4.7.x, 4.8.x, or 4.9.x2. Upgrade to 5.2 and run maintain dbupgrade	You cannot directly upgrade to any 5.x release from a version prior to 4.7.
4.7.x, 4.8.x, 4.9.x	Upgrade to 5.2 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	<ol style="list-style-type: none">1. Export your database, upgrade to 5.2, then import your database.2. Run maintain dbupgrade.	5.0.x uses an older version of PostgreSQL than is required by AccuRev 5.2. The AccuRev installer will prompt you through the steps of exporting and then importing your database.
5.1.x	Upgrade to 5.2 and run maintain dbupgrade .	Since 5.0.x and 5.1.x are already based on the third-party database, the dbupgrade process is relatively quick.

In all cases, you must run **maintain dbupgrade** before starting the 5.2 AccuRev Server.

If you are upgrading from a previous release of AccuRev, you may notice the following new features in the installation process which have been introduced either in 5.2 or recent releases:

- The ability to choose between different license managers (the traditional “keys.txt”, or the Reprise license manager), and the ability to choose between local and remote managers for Reprise (see [Enabling the Reprise License Manager](#) on page 24).
- The option to install the AccuRev Web UI server (see [Installing the Web UI Server](#) on page 10). (The standalone Web UI installation is still available, but this new option allows you to install the Web UI server as part of the main AccuRev installation.)
- The option to install a 32- or 64-bit version of AccuRev when installing onto a 64-bit x86 Linux system with a 64-bit operating system.

For a high level summary of new features in Release 5.2, see [Highlights of this Release](#) on page 1. For a detailed list of changes, see [AccuRev 5.2 Release Notes](#) on page 29.

Compatibility with Previous Versions

AccuRev 5.2 is not compatible with previous versions of AccuRev. You must use 5.2 clients with an AccuRev 5.2 server, and you must upgrade your database.

Preparing for Installation

The setup process involves a number of configurable elements. For simplicity and clarity, the instructions consistently use a set of generic names, using *this font*. Fill in the values for your installation in the Actual Name column.

Table 2. Generic and actual names used during installation

Generic Name	Actual Name	Description/Defaults
<i>installer-loc</i>		Location of the downloaded AccuRev installation package.
<i>install-cmd</i>		<p>Command to run the AccuRev installer from the command line:</p> <p>(Windows, graphical wizard) AccuRev_ <i>n_n_n</i> Windows.exe, (where you substitute the actual version numbers for <i>n_n_n</i>, such as AccuRev_5_2_0_Windows.exe)</p> <p>(Windows, text-based console wizard) AccuRev_ <i>n_n_n</i> Windows.exe -i console</p> <p>(UNIX/Linux, graphical wizard) sh AccuRevInstall.bin</p> <p>(UNIX/Linux, text-based console wizard) sh AccuRevInstall.bin -i console</p> <p>(OS X, client only, graphical wizard only) AccuRevInstall.app</p>
<i>ac-install</i>		<p>Location that AccuRev is installed to. Defaults to:</p> <p>(Windows) C:\Program Files\AccuRev (UNIX/Linux) <homeDirectory>/accurev</p>

Generic Name	Actual Name	Description/Defaults
<i>ac-storage</i>		Location of the AccuRev database and container files. Defaults to: (Windows) C:\Program Files\AccuRev\storage (UNIX/Linux) <homeDirectory>/accurev/storage
<i>ac-host</i>		Hostname of the AccuRev Server.
<i>ac-port</i>		Port number that the AccuRev Server runs on. Defaults to 5050 .
<i>ac-user</i>		Name of the operating-system user that runs the AccuRev Server. Defaults to: acserver .
<i>ac-pass</i>		Password for the <i>ac-user</i> .
<i>db-port</i>		Port number that the database server runs on. Defaults to 5075 .
<i>db-admin-name</i>		Name of the database superuser. Defaults to postgres .
<i>db-admin-pass</i>		Password for the <i>db-admin-name</i> .

Before You Begin

Before you install AccuRev 5.2, perform the following steps:

1. Read the *Platform Support Notes* for your operating system before proceeding, and follow the instructions there.
2. 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 must set a home directory for this user. The AccuRev server cannot be installed by a superuser on UNIX/Linux platforms
3. If you are upgrading an existing AccuRev server:
 - Verify that you are still on maintenance. If you are using the “traditional” AccuRev license manager, check the second date in your **keys.txt** file. If you are using the Reprise license manager, check the expiration date on the first line of each license section in the **accurev.lic** file

If your license has expired (or if you have the traditional keys.txt license manager and wish to upgrade to the Reprise accurev.lic license manager), contact **renewals@accurev.com** to renew before upgrading.

- Plan a maintenance window during which you will perform this upgrade and data migration, when clients will not be able to connect to the server.
- If you are upgrading from 4.x: 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*.
- **Perform a full backup of your AccuRev data.** 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 5.2 *Administrator’s Guide* to back up your 4.x data.)
- If you are upgrading from 4.x, plan to have enough disk space available to accommodate the increase in size required by the 5.x database. (See the note under *Performing an Upgrade “In Place”* on page 15 for more details.)

- If you are upgrading from 5.0.x, plan to have enough disk space available to make at least one copy of your AccuRev database. During the upgrade process, you will be prompted to export your existing database to a temporary location prior to upgrading it. (This does not apply to upgrades from 4.x or 5.1.x.)
4. For *each* AccuRev 5.2 Server you plan to run, obtain a license file from <http://www.accurev.com/license-request.shtml> If you are running the traditional license manager, this will be a **keys.txt** file. If you plan to run the new Reprise license manager, this will be an **accurev.lic** file.

The server will not start if you have a 3.x or 4.x license key file.

Notes:

- If you will be installing a test server before upgrading your production servers, use the URL above to request a test key.
 - If you will be installing a replica server and if you are using the traditional license server, you will need to obtain a separate **keys.txt** file with the same license count as the file used by the master server. You cannot use the license key file used for the master server. If you are using the Reprise license manager, your master **accurev.lic** file will work for the replica, but you must ensure that you have enough licenses for all users. See “Replication Server Licenses” in the “License Management” chapter of the AccuRev 5.2 *Administrator’s Guide* for more information.
5. After installing an AccuRev server (and before running the **maintain dbupgrade** command if you are upgrading from a previous version of AccuRev), ensure that your database parameters have been tuned as described in *Configuring Database Tuning Parameters* on page 17. The installation wizard prompts you to do this when required.

Downloading the Installation Packages

On the Downloads section of the AccuRev, Inc. Web site (<http://www.accurev.com/download.htm>), download the appropriate AccuRev installation packages for your operating system (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. Many extraction tools are freely available. There are links to such tools on AccuRev’s Downloads page; and the **unzip** and **gunzip** programs are standard on many UNIX/Linux systems.

Determining the Type of Installation You Require

The AccuRev installation provides two types of installation:

- “Typical” — Primarily for simply installing or upgrading an AccuRev server or client, with most decisions like file location made for you with default values.
- “Custom” — For users who want to have more control over file location or extras like the Web UI server or a replication server.

You will need to decide which path to follow shortly after starting the AccuRev installation wizard, so read through the following sections prior to starting the installation.

Note: Release 5.2 introduces much tighter integration between the AccuRev Java client and the AccuRev Web UI client. If you do not already have an AccuRev Web UI server configured, you may wish to consider installing one now using the Custom installation, either on the same host as the AccuRev server using the **Server/Client/WebUIServer** option, or later on a different host, using the Custom **WebUIServer**-only option.

Getting Started

1. **Log in** — Log in to your target machine. If you will be installing a server, log in as *ac-user* (UNIX/Linux) or a user with installation privileges (Windows). (See *Before You Begin* above about creating *ac-user* on UNIX/Linux machines.)

Note: Do not attempt to install as user **root** on UNIX/Linux. For security reasons, the 5.2 installer does not allow a root installation to occur.

2. **Back up** — If you will be upgrading an existing server, perform a full backup and ensure that you have enough disk space as discussed above in *Before You Begin*.
3. **Start the installer** — Start the Accurev installation wizard by double-clicking the installer icon, or enter the installer name on the command line. (See *Table 2* on page 4 for the specific syntax.)

install-cmd

4. **License agreement** — Before you can proceed, you must click “I accept the terms of the license agreement.” Note that you now must scroll all the way to the bottom before this button becomes active.
5. **Confirm Administrator privileges** — (Windows only.) If the installer prompts you for this information, specify whether or not you have Administrator privileges on the current machine. Note that Windows requires that you have Administrator privileges; on UNIX/Linux, administrator privileges are irrelevant EXCEPT that you CANNOT install AccuRev on UNIX/Linux if you are logged in as **root**.
6. **Typical or Custom installation** — You must decide which type of installation you wish to use.

If you are performing a simple installation or upgrade of the Accurev server or client, and you are happy to use the default values for things like directory location, and license manager, choose **Typical**, and proceed to *Installing the Software — “Typical” Installations* on page 8

If you wish to install a Web UI or replica server, or if you are installing or upgrading the Accurev server or client but you wish to have total control over what and where files get installed, choose **Custom** and proceed to *Installing the Software — “Custom” Installations* on page 10

Installing the Software – “Typical” Installations

If you simply want to install or upgrade an Accurev server or client, and you are happy to accept defaults provided by the installer, then “Typical” installation is the best option to choose.

The AccuRev Installation Wizard looks for an existing installation, and if it finds one, performs an upgrade. Upgrades made in Typical mode prompt you for relatively little information, using default values wherever possible.

If the wizard does not find an existing installation, it prompts you to specify whether you want your client to connect to the current machine or another host. If you specify “this machine”, the wizard installs an AccuRev server as well as a client. If you specify “another host”, it assumes that you need to install just a client, and proceeds without installing server software.

The sections below assume “Typical” installations. For information about “Custom” installations, see *Installing the Software – “Custom” Installations* on page 10.

Installing an AccuRev Server

The AccuRev wizard will guide you through steps for installing a new AccuRev server. See the *Installation Wizard Notes for “Typical” Installations* to proceed through the remainder of the Wizard. At the end of the installation, make sure that you tune your database parameters as described in *Configuring Database Tuning Parameters* on page 17. You must reboot the database for the tuning parameters to take effect.

If the wizard determines that an AccuRev server already exists, it will prompt you through an upgrade.

Upgrading to 5.2 from any previous release requires a database upgrade. The complexity of the database upgrade depends on the release from which you are upgrading.

If the Wizard determines that you have an existing, *nonstandard 5.x* database installation, the installer will not continue. Nonstandard database installations are not supported. You need to contact AccuRev Customer Support to continue.

Installing or Upgrading an AccuRev Client Only

If you are upgrading, you don’t 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.

1. The AccuRev wizard will guide you through steps for installing or upgrading the Accurev client.
2. On the **Set Host and Port** screen, select **another machine**, and enter the *ac-host* and *ac-port* of an AccuRev Server. See the *Installation Wizard Notes for “Typical” Installations* for more information about these values, and for proceeding through the remainder of the Wizard.

Note: Using the **Typical** option for upgrades will upgrade the current AccuRev installation to the new version using the default options. If you need to change the type of installation, or alter any installation options during the upgrade, choose the **Custom** installation type.

Installation Wizard Notes for “Typical” Installations

1. If the wizard discovers existing configuration and license files, it gives you the option of retaining them. Retaining them is generally the right choice, unless you want to reinstall your client or

server from scratch, or unless you want to switch from the traditional license manager to the Reprise license manager.

2. Under **Configure: Set Host and Port:**

- If you wish to install or update the AccuRev Server on this machine, or create a test installation, select **this machine**. The wizard will install both the client and server software.
- For all other install types (such as client-only installations that will work with a server on another machine), select **another host** and enter the *ac-host* and *ac-port* to connect to.

3. If you are performing a console installation using the text-based Wizard, be careful to enter only numeric characters for the *ac-port*. If you enter non-numeric characters, the Wizard displays Java-level error data and proceeds to the next prompt. Enter **back** at that prompt, then re-enter the port number correctly.

4. Under **Configure Database Port and User:**

- Unless the default database port “5075” conflicts with something else on your machine, you should not change this value.
- Likewise, we recommend that you keep the default value “postgres” for the Superuser Name unless you have a specific reason to change it.

5. Under **Configure Database Password:**

Enter the value for *db-admin-pass* that you chose in *Table 2* on page 4. Make sure that you record this password in a secure location for later use.

6. Under **Product Licensing:**

You now have three choices for licensing:

- **Local Named User** — This is the traditional AccuRev license manager. If the license file that you received from AccuRev is “keys.txt”, choose this option.
- **Local Standard/Flexible Licensing** — This is one option for the new Reprise license manager. If the license file that you received from AccuRev is “accurev.lic” and you do not have an existing Reprise license manager on another machine that you want to use, choose this option.
- **Remote Standard Licensing** — This option also applies to the Reprise license manager. If the license file that you received from AccuRev is “accurev.lic” and you DO have an existing Reprise license manager on another machine that you want to use, choose this option. This will cause the display of an additional installer page, “**Reprise License Manager Configuration**”:
 - **Hostname** — Enter the network name of the server where the remote Reprise License Manager (RLM) exists.
 - **Port** — Keep the default value of 2375, unless you know that the remote RLM is running on a different port.

7. Under **Choose Install Directory:**

- (*all upgrades*) Specify your existing AccuRev installation directory.
- (*all other installation types*) Specify a location where you have write permission.

8. For database upgrade procedures, see *Database Upgrades* on page 14

Installing the Software – “Custom” Installations

“Custom” installations are not that different than “Typical” installations, except that they prompt you to specify more information instead of assuming default values. For example, “Custom” is a good choice if you wish to specify a particular, non-default installation directory for the AccuRev software. Also, if you wish to install a Web UI or replica server (which is not done by a Typical installation), you should specify “Custom”.

When you choose “Custom” at the beginning of an installation process, you are presented with the following options:

- **Server/Client/WebUIServer** — Install the AccuRev Server, the AccuRev Client, and the Accurev Web UI Server. **Note:** Although this option is selected by default, make sure that you really want to have both the AccuRev Server and the AccuRev Web UI server (with included Apache Tomcat web server) running on the same host. This can be fine for evaluation installations, but is not recommended for production installations without careful sizing and load considerations. See the note below in *Installing the Web UI Server* for more information.
- **Server/Client** — Install the AccuRev Server and the AccuRev Client.
- **WebUIServer** — Install only the AccuRev Web UI Server (includes an Apache Tomcat web server installation).
- **Client** — Install only the AccuRev Client.

For **Server/Client** and **Client** installations, refer to *Installation Wizard Notes for “Custom” Installations* on page 13 for assistance with various prompts.

For **WebUIServer** installations, refer to *Installing the Web UI Server* below.

For **Server/Client/WebUIServer** installations, refer to both as needed.

Installing the Web UI Server

If you wish to install the AccuRev Web UI Server, during the installation process choose either **Server/Client/WebUIServer** (if you also want to install or upgrade an Accurev server and client), or **WebUIServer** (if all you want is the Web UI Server).

Note: The Web UI options are for administrators who need to install the Web UI *server*. If you are an end user just looking to use the Web UI *client*, do NOT use these options. To use the Web UI client, you simply need to bring up a supported browser and point it to an existing Web UI server using URL information provided to you by your administrator.

The Web UI server installation options install an Apache Tomcat web server plus AccuRev Web UI Server software. If you wish to use a standalone Apache Tomcat (Version 5.5 or later), you should download and install the standalone Web UI installation package from the AccuRev web site and follow the instructions in “Installing Apache Tomcat” in the *AccuRev® Web Interface Installation and Release Notes*.

Make sure to consider variables such as disk space and system performance before deciding to add a web server to this machine.

Note: The AccuRev 5.2 Java GUI provides tight integration with the AccuRev Web UI, and will provide more with future releases. If you choose to not install the Web UI server on the AccuRev server, we strongly recommend that you install it on its own server, and configure the AccuRev server to

point to it, using the standalone download and documentation (*AccuRev® Web Interface Installation and Release Notes*).

Note: If you choose to install and use the Web UI with the Java GUI, you should ensure that the AccuRev installation is included in your PATH setting. If you try to use the Web UI from the Java GUI and the Web UI login screen comes up without a valid server to connect to, your PATH is probably not set correctly.

settings.xml file for integrations and Web UI

At the end of the installation, the wizard displays a message about creating a **settings.xml** file on the AccuRev server. This is necessary for the features in the Java GUI that call the Web UI, and if you are using AccuRev integrations to third party IDE packages such as Eclipse or Visual Studio.

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

1. Shut down any third party packages.
2. Create a file called `settings.xml` in the `ac-install\storage\site_slice\dispatch\config` directory.
3. Edit the file to add the lines shown below (replacing `webui-host` with the actual name of the host providing access to the 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.)

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

Web UI Release Notes

After the installation is complete, see the installation directory for the AccuRev Web UI Release Notes, typically:

[ac-install/WebUI/AccuRevWebGUI_Install_Release_Notes.pdf](#)

Note: The installation section of the *Accurev WebGUI Installation and Release Notes* applies only to standalone installations, and does not apply to a Web UI installation done with the AccuRev Installation Wizard. However, post-installation information found in this document, such as configuring Linux servers to automatically run Tomcat and the Web UI server upon boot-up, is still valid for AccuRev wizard installations.

Installing a Replication Server

Use these instructions to configure an AccuRev 5.2 server as a replica or master server. Note that the master server and the replica server must be the same version (i.e., “5.2”).

Before continuing, please make sure you have performed the necessary steps from *Before You Begin* on page 5.

Configure an existing 5.2 AccuRev Server as a master server

1. Stop the AccuRev Server according to the instructions in *Starting and stopping AccuRev* on page 24.
2. Edit the `acserver.cnf` file, located in the AccuRev `bin` directory. Add the following line:

```
REPLICATION_ENABLED = true
```

3. If you would like the master server to authenticate logins on the replica, add the following line to the `acserver.cnf` file:

```
MASTER_AUTHENTICATES_LOGIN = true
```

4. Restart the AccuRev Server process.
5. Create a new AccuRev username (*replica-user*) that will be used as the user identity for requests from a replica server.

Install an AccuRev 5.2 Server as a master server

1. Follow the instructions in *Installing an AccuRev Server* on page 8, except:
 - On the **Choose Install Type** screen, select **Custom**, then select either **Server/Client/WebUIServer** or **Server/Client** at the **Choose Product Features** screen.
 - Proceed through the installation program. When prompted for replication options, confirm that this server will be a master server.
2. If you would like the master server to authenticate logins on the replica:
 - Ensure that the authentication methods on the master server and the replica server are the same.
 - Stop the AccuRev Server according to the instructions in *Starting and stopping AccuRev* on page 24.
 - Add the following line to the `acserver.cnf` file:

```
MASTER_AUTHENTICATES_LOGIN = true
```
 - Restart the AccuRev Server process.

3. After the installation is complete, create an AccuRev username (*replica-user*) that will be used as the user identity for requests from a replica server.

Install an AccuRev 5.2 Server as a replica server

1. Follow the instructions in *Installing an AccuRev Server* on page 8, except:
 - On the **Choose Install Type** screen, select **Custom**, then select a **Server/Client** option at the **Choose Product Features** screen.
 - Proceed through the installation program. When prompted for replication options, confirm that this server will be a replica server.

Caution: The AccuRev 5.2 server will not start. Continue with the remainder of this procedure to successfully install AccuRev as a replica server.
2. Start the AccuRev Server according to the instructions in *Starting and stopping AccuRev* on page 24.
3. From the replica server, log in to the master server as *replica-user* with a permanent session file. If you are using an existing master server, this user may already exist, or you may wish to create another user to communicate with the replica.

```
accurev login -n -H <mast-server-host>:<mast-server-port> replica-user
Password: *****
```

4. Set up replication as described in the sections titled “Synchronize the Site Slice” and “Configure the Replica Server to Include the Desired Depots” in the AccuRev 5.2 *Administrator’s Guide*.

Upgrade an existing AccuRev 4.7.x replica server to 5.2

1. Verify that the master server for this replica has been correctly upgraded to AccuRev 5.2.
2. Verify that no one is logged onto the replica server.

Remove the AccuRev 4.7.x installation on the replica server machine, and follow the steps under *Install an AccuRev 5.2 Server as a replica server* to install a new AccuRev 5.2 replica server.

Installation Wizard Notes for “Custom” Installations

Here are the prompts that you may encounter when you choose a “Custom” installation:

- **Server Installation including WebUI** — The AccuRev installer warns you that if you are installing the WebUI Server, you will also be installing an Apache Tomcat web server, and that you must ensure that your target machine can handle the resource demands of such an installation.
- **Install Replication**—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. Before deciding to install a replica server, see “Replication of the AccuRev Repository” in the AccuRev *Administrator’s Guide*. Contact AccuRev Support Services for more information.
- **Where would you like to install?** — 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).
- **Please Choose a Folder:** (for the repository) — Specify a different directory if you do not want to use the *ac-storage* default (*<homeDirectory>/accurev/storage* on Linux/UNIX, *C:\Program Files\AccuRev\storage* on Windows). **Note:** Ensure that the path you specify is LOCAL disk storage (not a network drive) and that it has plenty of space.

- **Product Licensing** — Same as the “Typical” prompt. See *Installation Wizard Notes for “Typical” Installations* on page 8.
- **Choose a license key file, Install new AccuRev license key file, or Select Reprise License Key File** — The prompt you see depends on whether you have specified a traditional license manager, which requires that you provide a valid “keys.txt” file, or a Reprise License Manager, which requires that you provide a valid “accurev.lic” license file. For Reprise license manager, see *Enabling the Reprise License Manager* on page 24.
- **Configure Database Port and User** — Same as the “Typical” prompts for *db-port* and *db-admin-name*. See *Installation Wizard Notes for “Typical” Installations* on page 8.
- **Host and Port** — Same as the “Typical” prompts for *ac-host* and *ac-port*. See *Installation Wizard Notes for “Typical” Installations* on page 8.
- **PATH** — 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.
- **Choose a Java VM** — If the AccuRev Installation Wizard identifies one or more existing Java VM (or “JRE”) packages on your system, it gives you the choice of using one of those, or installing a new one. If you specify an existing JRE, AccuRev will display a message indicating the minimum version required by AccuRev, and ask you to confirm your choice. AccuRev recommends using our provided JVM, as this ensures that all AccuRev components have been thoroughly tested with this specific version.
- **32- or 64-bit AccuRev on Linux** — If the AccuRev Installation Wizard determines that you are installing on 64-bit X86 hardware running a 64-bit Linux operating system, it offers you the option of installing either a 32- or 64-bit version of AccuRev. In all other situations, it installs the 32-bit version by default.

If You are Upgrading from an Existing AccuRev Installation

Proceed to the appropriate section in *Database Upgrades* below.

Database Upgrades

Upgrading an AccuRev Server from pre-4.7 to 5.2

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 5.

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

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 to 5.2*).

Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x to 5.2

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

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

Performing a Test Upgrade on a Separate Machine

1. Make sure that you have performed the necessary steps from *Before You Begin* on page 5.
2. Move the files created during the full backup of AccuRev 4.x to your test machine.
3. On the test machine, log in as **ac-user** (Unix/Linux) or a user with installation privileges (Windows).

*Important! Do not attempt to install as user **root** on Unix/Linux. The installation will not complete correctly.*

4. 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.
5. Perform a full restore of the backed-up data on the test machine as described in *Restoring the AccuRev Repository* of the *AccuRev 4.x Administrator's Guide*.
6. Stop the AccuRev Server process on the test machine according to the instructions in *Starting and stopping AccuRev* on page 24.
7. Navigate to the **installer-loc** directory and locate the downloaded AccuRev 5.2 installer.
8. 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**.
9. Choose **Typical** (see *Installing the Software — "Typical" Installations* on page 8) or **Custom** (see *Installing the Software — "Custom" Installations* on page 10).

Important! If there are multiple AccuRev installations on the machine, the one installed most recently will be upgraded.

10. Proceed through the upgrade program.

Caution: The AccuRev 5.2 server will not start after the AccuRev server upgrade. Do not start the server until you have completed the database upgrade as described below.

11. After the AccuRev server installation is complete, tune your database (see *Configuring Database Tuning Parameters* on page 17) and then go to *Using the 'maintain dbupgrade' Command* on page 18 and run the **maintain dbupgrade** command to upgrade your AccuRev 4.7.x database to AccuRev 5.2. Return here when done.
12. Put the new 5.x **keys.txt** (traditional license manager) or **accurev.lic** (Reprise license manager) in **ac-install\storage\site_slice**.
13. Start the AccuRev Server process according to the instructions in *Starting and stopping AccuRev* on page 24. Test your installation and ensure that all data have been upgraded correctly.

Performing an Upgrade "In Place"

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

Note: The upgrade process will require additional disk space of up to three times the total used by the 4.x metadata. The size of the upgraded 5.2 database may be as much as 25%-30% larger than 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 the upgrade, you can remove any 4.x .ndb and .ndx files. You should save a backup of everything except the .ndx files

Note: If you have previously installed 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.

Note: When upgrading from 4.x to 5.2 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.

Upgrading an AccuRev Server from 5.0.x to 5.2

To upgrade from AccuRev Release 5.0.x to 5.2, 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. The data repository is automatically upgraded to the new release level.

The 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 that is used by your existing database.

The upgrade process includes a database upgrade. The data migration must be finalized by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 18) 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 5 and *Getting Started* on page 7.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and stopping AccuRev* on page 24.
3. See the *Installation Wizard Notes for "Typical" Installations* on page 8 or *Installation Wizard Notes for "Custom" Installations* on page 13 to proceed through the remainder of the Wizard.

The update process includes the following steps:

- Exporting your existing database from `ac-storage` to a temporary location.
- Updating PostgreSQL from Release 8.3 (used by AccuRev Release 5.0.x) to Release 8.4 (used by AccuRev Releases 5.1 and 5.2).
- 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 update the schema. See *Using the 'maintain dbupgrade' Command* on page 18.
5. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and stopping AccuRev* on page 24.

Upgrading an AccuRev Server from 5.1 to 5.2

To upgrade from AccuRev 5.1 to 5.2, you must update your database schema by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 18) after the installer completes. Fortunately, versions 5.1 and 5.2 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 5.1 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 5 and *Getting Started* on page 7.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and stopping AccuRev* on page 24.
3. See the *Installation Wizard Notes for "Typical" Installations* on page 8 or *Installation Wizard Notes for "Custom" Installations* on page 13 to proceed through the remainder of the Wizard.

The update process includes the following steps:

- Exporting your existing database from *ac-storage* to a temporary location.
 - Updating PostgreSQL from Release 8.3 (used by AccuRev Release 5.0.x) to Release 8.4 (used by AccuRev Releases 5.1 and 5.2).
 - Importing your database from the temporary location back into *ac-storage*.
4. After the import has completed successfully, you will be prompted to tune your database and then run the **maintain dbupgrade** command on your database to update the schema. See *Configuring Database Tuning Parameters* on page 17 and *Using the 'maintain dbupgrade' Command* on page 18.
 5. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and stopping AccuRev* on page 24.

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.

1. Log in as *ac-user*.
2. 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*) Please note that editing **postgresql.conf** could also require you to alter part of your operating system's kernel configuration and possibly reboot your system. Please 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 if the machine running AccuRev has more than 4GB of RAM.
- `effective_cache_size` – Subtract the `shared_buffers` setting from the amount of free physical memory on the system when AccuRev is not running, then take 75% of that value.

Free physical memory can be estimated as follows:

- UNIX/Linux (expressed in MB):

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

- Windows (expressed in KB): Access the Performance tab on the Windows Task Manager. Add up the *Available* and *System Cache* values under “Physical Memory”.
- Other operating systems: You may be able to use the `top` command; please 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.

3. Stop, then start the AccuRev Database Server process according to the instructions in *Starting and stopping AccuRev* on page 24.

Using the ‘maintain dbupgrade’ Command

This section details the use of the `maintain dbupgrade` command to upgrade your existing AccuRev database to 5.2.

For 4.x databases (4.7 or higher), `dbupgrade` performs three tasks:

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

For 5.0.1 and 5.1.x databases, `dbupgrade` upgrades the AccuRev database schema. (5.0.5 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 17, 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 test 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 5.2 *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 db-admin-pass
```

You will be prompted 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, answering **Y** kicks off the trial upgrade, and **N** kicks off a real upgrade that will modify your data.

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

- `ac-storage/site_slice/logs/dbupgrade.log`
- `ac-storage/site_slice/logs/dbupgrade_i18n_report.htm`

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 Customer Support.

See [Understanding maintain dbupgrade Messages](#) on page 19 for descriptions of messages that appear during the upgrade.

Understanding maintain dbupgrade Messages

Messages from dbupgrade.log

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

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

```
*** The following depot(s) had metadata migration failures:
```

```
current_qa
```

```
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.
```

When the upgrade completes successfully, the following message 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.
```

Migrating the Site Slice

The message that appears at the start of the site-slice migration will look like:

```
Starting Pools/Slices upgrade...
```

```
Found 62 rows to upgrade
```

```
In progress - 0% complete
```

Data from each table in the site-slice will be migrated before continuing to the depot tables.

When all the records in the table have been processed, a summary of the pools/slices migration will appear:

```
Table upgrade - 100% complete
```

```
Committing changes to the database
```

```
Number of rows in the table: 62
```

If errors are detected during the site-slice 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.
```

Migrating the Depots

When the site slice has been migrated, the program begins to migrate all active and available data from the depots. Each depot will be migrated in its entirety before moving on to the next depot. The progress is displayed in the same way as the site-slice migration.

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

```
*** The following depot(s) had metadata migration failures:
```

```
current_dev
```

```
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.
```

Once the site-slice and depot metadata have been successfully migrated, a summary message will appear in 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.
```

Ancestor and Transaction Upgrade Messages

During the upgrade, changes are made to the tables associated with the element versions, ancestors, and associated transactions. The upgrade program searches the transaction-entries table for all records containing a transaction or element-ID with a zero value. These records are deleted from the table. The message will look like:

```
- Searching for Transaction-Entries with zero transaction/eid numbers.  
The number of rows found: 12  
Deleted 12 rows.
```

The upgrade program searches virtual-versions table for records appearing there, but not in the transaction-entries table. It adds the missing records to the transaction-entries table. The message will look like:

```
- Searching for missing Transaction-Entries.  
The number of rows found: 2.  
List of missing Transaction-Entries to be inserted.  
Transaction Number: 8254, EID: 517  
Transaction Number: 17254, EID: 2718  
Inserted 2 rows.
```

The upgrade program searches the transaction-entries table for records that appear there, but not in the virtual-versions table. It deletes the invalid entries from the transaction-entries table. The message will look like:

```
- Searching for invalid Transaction-Entries.  
The number of rows found: 2.  
List of invalid Transaction-Entries to be deleted.  
Transaction Number: 8564, EID: 527  
Transaction Number: 12854, EID: 1469  
Deleted 2 rows.
```

The upgrade program searches the transaction and virtual-versions tables for records that are missing an appropriate record in the element-ancestor table. It adds the missing records to the element-ancestor table. The message will look like:

```
- Searching for missing ancestor entries.  
The number of rows found: 2.  
List of missing ancestor entries to be inserted.  
  
Transaction Number: 7435, EID: 295  
VVR Stream: 87, VVR Version: 7, Stream: 53, Version: 4  
Transaction Number: 15469, EID: 1630  
VVR Stream: 125, VVR Version: 17, Stream: 93, Version: 11  
Inserted 2 rows.
```

The upgrade program searches the transaction table for records that do not match the number of elements associated with the transaction in the transaction-entries table. It updates the invalid total in the transactions table. The message will look like:

```
- Searching for mismatch transaction entry totals.  
The number of rows found: 13.  
Updated 13 rows.
```

Messages from dbupgrade_i18n_report.htm

The information in dbupgrade_i18n_report.htm contains the results of the UTF-8 conversion based on the codepage that you specified. Open it in a web browser and look for any highlighted characters -- these represent non-ASCII characters found during the conversion. Click on a line to display a list of streams where the offending character occurs. In the illustration, two non-ASCII characters appear in the name of stream id#2802.

▼ Stream name

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

depot_id: 13, stream_id: 2802, time: 1178784798

Here are some general rules for interpreting these results:

- **There are no highlighted characters.** Congratulations! Your data will convert cleanly, and you can proceed to perform the “real” conversion.
- **There are some highlighted characters.** Maybe some of these look like garbage characters, or maybe some are legitimate non-ASCII characters, such as umlauts or accents that were introduced when adding a foreign document to the depot. Determine whether or not these characters are acceptable, or if you can fix them after the upgrade (for example, by renaming a stream or a file with a legible name). Just be aware that snapshots or time bases will bring back the non-ASCII characters.

Contact AccuRev Customer Support if you have any concerns about proceeding with the upgrade.

- **There are many highlighted characters and the problem seems to be consistent.** If you can identify a recurring, common problem, you may need to use a different codepage. For more information about codepages, 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.

Starting and stopping AccuRev

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

Start	Stop
Windows: <pre>net start accurev</pre> UNIX/Linux: <pre>cd <i>ac-install</i>/bin ./acserverctl start</pre>	Windows: <pre>net stop accurev</pre> UNIX/Linux: <pre>cd <i>ac-install</i>/bin ./acserverctl stop</pre>

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

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

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

When you stop the AccuRev Database, the AccuRev Server is automatically shut down first. See “Controlling Server Operations” in the *AccuRev 5.2 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

This AccuRev release installs both the traditional “keys.txt” license manager, as well as the new Reprise License Manager which supports 24-hour floating licenses and 7-day standard licenses. You can only choose one license manager, and by default the older “keys.txt” manager is enabled while the Reprise license manager is disabled. To use the new Reprise license manager you must:

1. Contact AccuRev to request Reprise licenses for your site.
2. Install the new “accurev.lic” file as specified in the instructions you receive with the file. (Typically, you place this file in *ac-install/bin*.)
3. Start the Reprise license manager server. The easiest way to do this once is to enter `rlm` on the command line:

```
> ac-install/bin/rlm
```

For the long-term, you will want to configure your system to start the Reprise license manager automatically at boot time. For details, see “The License Server” section of the on-line *Reprise License Manager End-User Guide* at http://www.reprisesoftware.com/RLM_Enduser.html

4. Edit `ac-install/bin/acserver.cnf` to contain the following lines to specify the Reprise license manager:

```
### LICENSE_MANAGER = keys.txt
LICENSE_MANAGER = reprise
LICENSE_SERVER = </license_server_hostname>
LICENSE_PORT = 2375
```

Note: LICENSE_PORT (default 2375) is the port that AccuRev uses to communicate with the RLM server, and should not be confused with the `ac-port` value (typically 5050) that AccuRev clients use to communicate with the AccuRev server. LICENSE_PORT is the same port that comes with your `accurev.lic` license file. If you are familiar with the older `keys.txt` license files, it is important to realize that this is different than the AccuRev PORT value that came with those licenses. For information about changing these port values, see the “License Management” chapter in the *AccuRev Administrator’s Guide*.

5. Restart the AccuRev server.

For more information about the Reprise License Manager, see the “License Management” chapter of the *AccuRev Administrator’s Guide*.

Platform Support Notes

The following sections contain important notes on installing AccuRev software on specific hardware/software platforms:

Java Compatibility

AccuRev 5.x is compatible with the Java 2 Runtime Environment (JRE), Versions 1.5.x and higher. These Java versions are also labeled “J2SE Version 5” and higher.

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

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

1. Run the Installation Wizard with environment variable `LIBXCB_ALLOW_SLOPPY_LOCK` set to the value 1.
2. Fix the runtime library file in the new AccuRev installation area:

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

Linux

- PostgreSQL may fail to function properly when SELinux mode is set to “Enforcing”. See http://docs.fedoraproject.org/en-US/Fedora/13/html/SELinux_FAQ/#id2963608 for more information. To find out the current SELinux mode run **getenforce** (as **root**). To set SELinux mode to “Permissive”, run **setenforce PermissiveEdit**.
- Linux systems require `glibc` version 2.3 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 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 you are installing a 32-bit version of AccuRev, and the 32-bit versions of the packages listed below are not present on your system, download and install them (and their dependencies) prior to running the installer. **Note:** You must have the 32-bit compatibility libs installed even if you are installing the 64-bit version of AccuRev.

```
glibc.i386 (version 2.3 or later)
xorg-x11-libs.i386 (version 6.8 or later)
```

For Ubuntu:

```
libc6-i386
ia32-libs
```

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

For example:

```
> arch
x86_64

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

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

Windows

- Download and install the *Microsoft Visual C++ 2005 SP1 Redistributable Package (x86)* using the instructions at <http://www.microsoft.com/downloads/details.aspx?FamilyID=200b2fd9-ae1a-4a14-984d-389c36f85647>.
- Machines running Windows Server 2003 must be upgraded to SP2 before installing AccuRev 5.x.
- Disable anti-virus checking for the *ac-storage* directory and all directories beneath it to avoid performance problems associated with anti-virus checks.

Mac OS X

- Only the AccuRev client software is supported on this platform.
- Be sure you have JRE 1.5 or higher installed. AccuRev does not install its own JRE on OS X, because Java is included with the OS X installation.
- You must be a non-administrative user, and you must perform a **Custom** installation.

- 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

$cmd = "java -Duser.dir=/Applications/AccuRev/bin -xms32M -Xmx512M -classpath \"/
Applications/AccuRev/bin/oro.jar:/Applications/AccuRev/bin/xercesImpl.jar:/Applica-
tions/AccuRev/bin/xml-apis.jar:/Applications/AccuRev/bin/fw.jar:/Applications/
AccuRev/bin/werken.opt.jar:/Applications/AccuRev/bin/diff.jar\" diff.DiffApp ";

foreach $arg(@ARGV){
    $cmd .= "\"$arg\" ";
}

system ($cmd);
```

3. Close any shells.

4. 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.

AccuRev 5.2 Release Notes

Deprecated Features

The traditional AccuRev “named” license manager (keys.txt) will not be offered after this release. Plan to switch to the Reprise “standard/flexible” license manager (accurev.lic).

Changes in this Release (5.2)

AccuRev Release 5.2 includes the following features and bug fixes:

10313, 23905, 23916, 23962 – New Element-level security (“EACL”s) feature

This release introduces the ability to set Access Control Lists (“ACL”s) on individual elements. See the “AccuRev Security Overview” chapter of the AccuRev 5.2 *Administrator’s Guide* for details about this new feature.

23333 – New “Revert Change Package Directly in Stream” feature

It is now possible to revert a change package without using a workspace for conflict resolution. See the “The Stream Issues and Stream Diff (Issues) Tabs” section of the “StreamBrowser” chapter of the new AccuRev 5.2 *On-Line Help Guide*, and the “direct revert” discussion in the **revert** command section of the AccuRev 5.2 *CLI User’s Guide* for more details.

21359, 22805 – Make AccuRev I18N (Internationalization) Compliant

AccuRev 5.2 has been rewritten to allow it to be localized for foreign languages.

23000, 24003 – Installer changes

The AccuRev 5.2 Installation Wizard has been upgraded to handle:

- the Reprise “standard/flexible” license manager
- 64-bit AccuRev installations on 64-bit hardware running a 64-bit operating system

23657 – AccuWorkflow has been improved and moved to the Web UI

[NOT AVAILABLE IN 5.2 BETA] The optionally licensed AccuWorkflow product has been completely rewritten and is now available exclusively through the AccuRev Web UI client.

23410, 24184 – Tighter integration between Java GUI client and WebUI client

[NOT AVAILABLE IN 5.2 BETA] The AccuRev Java GUI has several links that invoke the Web UI, or copy URLs to the clipboard that allows a user to bring up a particular screen in the Web UI. It is also possible to set a preference so that any time an AccuWork issue gets displayed, it automatically comes up in the Web UI rather than in the Java GUI.

20985, 22902 – New archive options

It is now possible to use the **archive -I** option to force the archive of an initial/only version.

It is also now possible to archive an entire stream hierarchy in one of two ways, using a new **-I allInHierarchy** option:

- Find all versions for the specified elements in the specified stream and its descendant streams, that don't exist in any other stream, and archive them.
- Find all versions for the elements ever in the specified stream and its descendant streams, that don't exist in any other stream, and archive them.

Any versions found outside the stream and its descendant hierarchy will not be archived.

12227, 20880, 22774, 22884 — New documentation and on-line help system

AccuRev 5.2 replaces the old context-sensitive on-line help system with the documentation mechanism introduced in 4.9. This means that the entire AccuRev 5.2 documentation set (except Installation & Release Notes, AccuBridge, and WebUI documents) is now searchable and viewable from a single browser. This also helps address the following customer requests:

- All documentation (including the on-line help) is now available in PDF.
- It is now possible to hyperlink between different books.
- The doc is now more consolidated, making it easier to find information.

17047, 20749 — Error 6 on promote and purge

A crash has been fixed which displayed an “Error 6” message with 'duplicate key constraint violation' when performing **promote** and **purge** operations that involved renames of multiple elements to the same name.

17945 — merge now handles overlapped, renamed folders

The merge command now correctly handles folders that have been renamed both in your own workspace and another workspace, causing an overlap condition.

22541 — Redundant data transmitted as part of show -s command

The communications between server and client have been refactored so that significantly less redundant data are transferred during a show -s operation.

23198 — Diff for streams with xlinks

The performance of the Diff command has been improved when working with streams containing cross links.

23240 — No-op updates

The **update** command has been improved so that operations that result in no update do not take excessive time to complete.

23354 — Changing depot case sensitivity causes performance issue

A problem has been corrected where changing depot case sensitivity via the **chdepot -C** command would fail to recreate loc indices, resulting in severe performance degradation.

23546 — Promotions of stranded elements or “evil twins”

A problem has been fixed with promoting stranded elements or “evil twins”, which could result in element appearing to be archived, or in a “multiple versions specified for element” message.

23618 — deep overlap performance

Upgrading your database to 5.2 improves the performance of **deep overlap**.

24088,24089 — I18N long file names

Long file name handling has been corrected to work with internationalization (I18N).

23964 — Memory footprint of the pop command

The `pop` command has been updated to make better use of system memory.

6722 — Doc for `chws -s` and changing principal names

The documentation for `chws -s` has been updated to explain how to change a workspace name to reflect a change in a principalname.

21008, 23882, 24150 — Updates to the triggers documentation

In the “AccuRev Triggers” chapter of the *Administrator’s Guide*, the sections covering `server_post_promote` trigger, multiple-platform environments, and disabling triggers have been rewritten or updated.

Changes from Releases 4.9.1

AccuRev Release 4.9.1 was released after 5.1, and the changes from that release have been merged into 5.2.

Known Issues

Also see *Known Issues* on page 33, in the *AccuRev 5.1 Release Notes*, and *Known Issues* on page 37, in the *AccuRev 5.0/5.0.1 Release Notes*

15780 — `hist -t` can return transactions outside of limits

If you specify a date range such as:

```
accurev hist -s "mystream" -t "2010/12/12 07:30:49 - 2010/12/13 07:30:49"
```

AccuRev can return transactions that precede the start time. In the CLI, you can work around this issue by reversing the start and end values to the `-t` option.

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.

AccuRev 5.1 Release Notes

Performance Improvements

AccuRev Release 5.1 has been redesigned to use the third-party relational database management system (RDBMS) more efficiently, resulting in substantial improvements in overall performance and end-user productivity.

Scalability issues in 5.0.x have been corrected so that the performance of most commands in 5.1 is now a function of how many elements they are working with, rather than being affected by other factors such as where in the stream hierarchy the command is operating. In other words, command performance in 5.1 is predictably linear or proportional based on the number of elements the command is operating upon.

Also, some commands such as **diff** and **update** are now faster in 5.1 than in previous versions (including 4.x) due to improved business logic that takes advantage of the new capabilities provided by the RDMS.

Along with the performance improvements, peak memory usage of many commands has also been reduced compared to 5.0.1.

Deprecated Features

Old licensing features

Because of the introduction of the new Reprise License Manager, the “traditional” authentication method is no longer available as of AccuRev Release 5.1. If you still use traditional authentication, you must switch to “accurev_login” or “custom” authentication.

Note that this also means that the environment variables `ACCUREV_PRINCIPAL` and `AC_PRINCIPAL`—which were used to retrieve the user name for the traditional login method—are deprecated. (AccuRev also no longer makes use of the common “USER”, “LOGNAME” and “USER-NAME” environment variables, although other programs on your system may continue to use them.)

Additionally, the `authn` file, which formerly held the encrypted password on the client, is no longer used. Finally, the `setlocalpasswd` command which could be used to update that file has also been removed.

Please see the “AccuRev Security Overview” chapter of the *AccuRev Administrator’s Guide* for information about authentication methods.

Known Issues

Also see *Known Issues* on page 37, in the *AccuRev 5.0/5.0.1 Release Notes*

23297 — mkreplica and replica sync performance

The `mkreplica` and `replica sync` commands are slow when used with a large transaction range.

23354 — Changing depot case sensitivity impacts performance

Changing depot case sensitivity via the **chdepot -C** command fails to recreate loc indices, resulting in severe performance degradation.

21829 — Chrome browsers and Help

Recent Chrome browsers do not work with on-line Help systems (see <http://code.google.com/p/chromium/issues/detail?id=47416>). A security enhancement to Chrome browsers in June 2010 has caused problems in several on-line Help systems. In AccuRev's case, the left-hand navigation pane is blank, and it is impossible to display the Table of Contents, Search, and Glossary tabs. Possible workarounds include:

- rolling back to an older version of Chrome
- using a different browser
- disabling the security feature in the AccuRev preferences
- disabling the security feature system-wide

Google has provided a command line switch to disable this new security feature. You can try disabling this feature just for AccuRev Help, by using the following procedure:

1. In the AccuRev GUI, go to **Tools, Preferences**
2. In the On-line Help Browser field, specify the start-up command line for Chrome with the "--allow-file-access-from-files" argument (Windows XP and 7 examples shown):

Windows XP:

```
"C:\Documents and Settings\\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"
```

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.

Changes in this Release (5.1)

AccuRev Release 5.1 includes the following features and bug fixes:

20405, 20406 — server_admin_trig now gets mkgroup and mkuser values

When you use the **mkuser** or **mkgroup** commands, the **\$user** and **\$group** input parameters for **server_admin_trig** now get populated, making it possible to put naming convention logic around the creation of group and user names

18915, 21219, 21521 — Stranded elements and incomplete issues

A problem has been fixed which could cause an issue to not appear if it consisted of only a stranded element.

21222 — 64-bit Linux Server

If the AccuRev installer wizard determines that it is installing on 64-bit x86 hardware with a 64-bit Linux operating system, it will present the option of installing either 32- or 64-bit AccuRev software.

Changes from Releases 4.7.4, 4.8, and 4.9

AccuRev Releases 4.7.4, 4.8, and 4.9 were released after 5.0, and the changes from those releases were merged into 5.1.

AccuRev 5.0/5.0.1 Release Notes



Limitations

The following limitations apply to this release of AccuRev 5.0.x:

- Only one AccuRev 5.0.x server may be installed per machine.
- UNIX/Linux users should not install AccuRev 5.0.x as user **root**, as the installation will not complete correctly.
- Upgrades from AccuRev 5.0 pre-release versions are not supported. If you have a pre-release AccuRev 5.0 version, you must uninstall it, then reinstall the new version, and upgrade your database from 4.7.x as described in *Database Upgrades* on page 14.

If you encounter any issues with this release, please contact AccuRev Support Services (<http://support.accurev.com>).

Added Platform Support

AccuRev 5.0.x has added support for the following platforms:

- **Microsoft Windows:** Windows 7
- **Linux:** Fedora 10 and 11, SUSE 10.2, 11.0, and 11.1, Ubuntu 8.10 and 9.04

Deprecated Features

- Link-based workspaces are not supported in AccuRev 5.0. If you are using link-based workspaces and would like to upgrade to AccuRev 5.0, please contact Customer Support.
- The “traditional” authentication method will no longer be available in the next release of AccuRev. If you still use traditional authentication, please switch to “accurev_login” or “custom” authentication. Please see the “AccuRev Security Overview” chapter of the *AccuRev Administrator’s Guide* for information about authentication methods.

Known Issues

- The **-G** option for the **revert** command returns XML to the command line instead of displaying the information in the defined graphical Merge tool.
- The **maintain vercheck** command incorrectly reports that archived **.sto** files are missing.

Changes in this Release (5.0.1)

AccuRev Release 5.0.1 includes the following features and bug fixes:

20980

An issue with **purge** has been fixed, which caused purged files to sporadically have incorrect element type or modification times set.

21018

It is no longer possible to change the time basis of a stream to any time before its backing stream was created.

21074

An issue has been fixed which caused `Update -s <stream> -t <t1-t2>` to crash `accurev_server` if `<stream>` did not exist at the time of the **update** transaction.