

AccuRev

Version 5.3a

Installation and Release Notes

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

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Introduction



Welcome to AccuRev, the best software configuration management (SCM) system available today.

Highlights of this Release

AccuRev Version 5.3a is a patch release that addresses issues discovered after the release of Version 5.3.

AccuRev Version 5.3 provides several enhancements and bug fixes including:

- Support of third-party ITS keys.
- A new client-only installer which also supports unattended installations for Windows and Linux.
- The ability to execute an administrative script at the end of an AccuRev installation.
- The server_auth_trig trigger has been enhanced with an additional exit state that allows you to validate a user's credentials against AccuRev if the initial custom (such as LDAP) login attempt failed.
- Performance improvements in the AccuRev Java GUI StreamBrowser and File Browser, and in the CLI **show wspaces** and **show members** commands.
- Support up to 4GB address space on 64-bit Windows for several AccuRev executables.

Note: As of AccuRev Release 5.2, AccuWorkflow administration is no longer accessible from the Java GUI. A Beta Release version of the new, improved AccuWorkflow is now available through the AccuRev Web UI. **You must recreate any existing workflows in the new interface.** Please see the AccuRev® Web Interface Installation and Release Notes, Version 2011.3, for more details.

For details about the specific changes introduced in this release, please see [AccuRev 5.3 Release Notes](#) on page 35.

If you are upgrading from a release prior to 5.2, make sure to read the [AccuRev 5.2 Release Notes](#) on page 39 and any other Release Notes for releases that have occurred since your last installation.

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

Other AccuRev Products

AccuRev, Inc. offers several related products that can increase your productivity. We invite you to explore these other product options and read their Release Notes:

- **AccuRev Web User Interface** — *AccuRev Web Interface Installation and Release Notes* (http://www.accurev.com/download/docs/wg2011.2_books/AccuRevWebGUI_2011_2_Install_Release_Notes.pdf)
- **Eclipse Plug-In for AccuRev** — *Eclipse Plug-in for AccuRev Installation and Release Notes* (http://www.accurev.com/cgi-bin/dlvalidate.cgi?file=ab2011.3/AccuBridge_2011_3_Eclipse_docset.zip)

- **Microsoft Visual Studio Plug-in for AccuRev** — *AccuBridge for Visual Studio PE Installation and Release Notes* (http://www.accurev.com/cgi-bin/dlvalidate.cgi?file=ab2011.2/AccuBridge_2011_2_VisualStudioPE_docset.zip)

Note: The above links take you to the documents that were available as of early October 2011. These products are constantly being updated, so check the following links to ensure that you are getting the most up-to-date documents:

- **For the Web UI:** <http://www.accurev.com/documentation.html>
- **For Eclipse and MS Visual Studio plug-ins:** <http://www.accurev.com/download.html#IDEs>

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 5.3

AccuRev Release 5.3 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, 5.1, or 5.2 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, 5.1, or 5.2 also require a database upgrade, although these are much quicker. The following table summarizes the upgrade requirements.

Table 1. Upgrading to AccuRev 5.3

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 5.3 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	Perform an upgrade installation to 5.3, 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 5.3 and run maintain dbupgrade .	5.0.x uses an older version of PostgreSQL than is required by AccuRev 5.3. 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).

Table 1. Upgrading to AccuRev 5.3

If you are upgrading from:	You must:	Notes:
5.0.5 to 5.2.1	Perform an upgrade installation to 5.2.1 and run maintain dbupgrade .	5.0.5 is a Japanese-localized version of AccuRev, and must be updated to 5.2.1 (not 5.2 or 5.3). Since 5.0.5 and 5.2.1 are already based on the third-party database, the dbupgrade process is relatively quick.
5.1 or 5.2	Perform an upgrade installation to 5.3 and run maintain dbupgrade .	Since 5.1 and 5.2 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 5.3.

In all cases, the 5.3 AccuRev Server will not start until after you have run **maintain dbupgrade**.

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 5.3 or recent releases:

- The ability to choose between different license managers (the traditional named “keys.txt”, or the standard/flexible license manager), and the ability to choose between local and remote managers for the standard/flexible license manager (see [Enabling the Standard/Flexible License Manager](#) on page 29).
Important: The named “keys.txt” license manager will not be offered after this release. Plan to switch to the standard/flexible license manager.
- The option to install the AccuRev Web UI server (see [Installing a Web UI Server](#) on page 13). (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.
- Users installing on Windows may notice a new “Checking for necessary Microsoft DLLs” message. The installer ensures that you have a current copy of the Microsoft Visual C++ 2005 SP1 Redistributable Package installed.

For a high level summary of new features in Release 5.3, see [Highlights of this Release](#) on page 1. For a detailed list of changes, see [AccuRev 5.3 Release Notes](#) on page 35.

Compatibility with Previous Versions

AccuRev 5.3 is not compatible with previous versions of AccuRev. You must use 5.3 clients with AccuRev 5.3 servers and replicas, and you must upgrade your database with the **maintain dbupgrade** command.

Note: As of AccuRev Release 5.2, AccuWorkflow administration is no longer accessible from the Java GUI. A Beta Release version of the new, improved AccuWorkflow is now available through the AccuRev WebUI. **You must recreate any existing workflows in the new interface.** Please see the *AccuRev Web Interface Installation and Release Notes*, Version 2011.3, for more details.

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	Description
<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_n_n_n_Windows.exe where <i>n_n_n</i> is the version number, such as AccuRev_5_3_0_Windows.exe</p> <p>(Windows, text-based console wizard) AccuRev_n_n_n_Windows.exe -i console</p> <p>(UNIX/Linux, graphical wizard) sh AccuRev_n_n_n_Linux_x86_m_m.bin where <i>n_n_n</i> is the version number and <i>m_m</i> is the OS version number, such as AccuRev_5_3_0_Linux_x86_2_4.exe</p> <p>(UNIX/Linux, text-based console wizard) sh AccuRev_n_n_n_Linux_x86_m_m.bin -i console</p> <p>(OS X, client only, graphical wizard only) AccuRevInstall.app</p> <hr/> <p>Note: As of Release 5.3, AccuRev also provides a client-only installer for Windows and Linux. Like the full installer above, this lightweight installer can also be used in graphical mode or text-based console mode. For example: AccuRev_n_n_n_WindowsClientOnly.exe AccuRev_n_n_n_LinuxClientOnly_x86_m_m.exe -i console For more information, see <i>Client-only Installer and Unattended AccuRev Installations</i> on page 15.</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>
<i>ac-storage</i>	<p>Location of the AccuRev database and container files. Defaults to:</p> <p>(Windows) C:\Program Files\AccuRev\storage (UNIX/Linux) <homeDirectory>/accurev/storage</p>
<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 5.3, perform the following steps:

1. Read the *Platform Support Notes* on page 29 for your operating system before proceeding, and follow the instructions there.
2. Check the *Known Issues* on page 43 for any issues that might apply to your site.
3. If you are installing a new AccuRev server on a UNIX/Linux machine, run the **adduser** command to make an OS-level user (**ac-user**). You should set **ac-install** as the home directory for this user. The AccuRev server cannot be installed by root on UNIX/Linux platforms
4. If you are upgrading an existing AccuRev server:

- Verify that you are still on maintenance. If you are using the “traditional” named AccuRev license manager, check the second date in your **keys.txt** file. If you are using the standard/flexible 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 named keys.txt license manager and wish to upgrade to the standard/flexible accurev.lic license manager), contact **renewals@accurev.com** to renew before upgrading.

- Read through the upgrade information that applies to your installation in *Server and Database Upgrades* on page 17 *before* you start in installation process.
 - 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. See the instructions at *Upgrading an Existing Replica Server to 5.3* on page 21 for running a trial upgrade and estimating the time to complete the process.
 - 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*.
 - **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 5.3 *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 19 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, 5.1.x, or 5.2.)
5. For *each* AccuRev 5.3 Server you plan to run, obtain a license file from <http://www.accurev.com/license-request.shtml> If you are running the traditional named license man-

ager, this will be a **keys.txt** file. If you plan to run the new standard/flexible 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 named 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 standard/flexible 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 5.3 *Administrator’s Guide* for more information.
6. 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 21. 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

AccuRev provides two types of installation:

- Full, interactive, Installation Wizard (both graphical and text-only console modes)
- [*Linux and Windows only*] Client-only, interactive, Installation Wizard (both graphical and text-only console modes), with unattended installation option.

The full Installation Wizard walks you through the steps for all types of AccuRev server and client installations. It is appropriate for any installation involving the AccuRev server or AccuRev Web UI server, and is the correct choice for a new customer setting up the AccuRev infrastructure for the first time.

The client-only Installation Wizard is useful if you just need to perform a simple client installation on Windows or Linux, to use with an existing, up-to-date server. The “unattended installation” option is especially useful if you need to deploy many clients across your enterprise.

Note: Because of the introduction of the new unattended client installer, the “Typical” and “Custom” installation options found in previous AccuRev releases are no longer offered. Experienced AccuRev users will recognize that the full Installation Wizard procedure now most closely resembles what was formerly known as the “Custom” installation.

Note: Release 5.2 introduced 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 AccuRev Installation Wizard, either on the same host as the AccuRev server using the **Server/Client/WebUIServer** option, or later on a different host, using the **WebUIServer**-only option. WebUI installation may become a requirement in a future AccuRev release.

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 5.3 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*. This includes backing up any replica server that you will be upgrading.
3. **Decide whether to use the full or client-only Installation Wizard** — If you:
 - are a new customer installing AccuRev for the first time and do not have any servers installed, or if you are an existing customer installing or upgrading an AccuRev server or AccuRev Web UI server, proceed to *Using the AccuRev Installation Wizard* on page 9 and start the Installation Wizard.
 - already have up-to-date AccuRev servers installed and wish to perform a simple client installation on Windows or Linux, or if you need to deploy multiple AccuRev clients using the unattended client installation utility, see *Client-only Installer and Unattended AccuRev Installations* on page 15.

Using the AccuRev Installation Wizard

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

1. **Start the Installation Wizard** — Start the AccuRev Installation Wizard by double-clicking the installer icon, or enter the installer name on the command line. You can choose to use the Wizard in either graphical mode (default) or specify the text-only console mode. (See [Table 2](#) on page 5 for the specific syntax.)
install-cmd
2. **License agreement** — Before you can proceed, you must click “I accept the terms of the license agreement.” Note that you must scroll all the way to the bottom before this button becomes active. *[Console: Press **Enter** until you get to the bottom, then enter “y”.]*
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 AccuRev on UNIX/Linux if you are logged in as **root**.
4. **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).
 - 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.
5. **Choose Product Features** — Select one of:
 - **Server/Client/WebUIServer** — Install the AccuRev Server, the AccuRev Client, and the AccuRev Web UI Server. **Note:** If 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 a Web UI Server* for more information.
Proceed to the following sections as needed:
 - *Installing or Upgrading an AccuRev Server* on page 10
 - *Installing or Upgrading an AccuRev Client* on page 12
 - *Installing a Web UI Server* on page 13
 - **Server/Client** — Install the AccuRev Server and the AccuRev Client.
Proceed to the following sections as needed:
 - *Installing or Upgrading an AccuRev Server* on page 10
 - *Installing or Upgrading an AccuRev Client* on page 12

- **WebUIServer** — Install only the AccuRev Web UI Server (includes an Apache Tomcat web server installation). Proceed to *Installing a Web UI Server* on page 13.
- **Client** — Install only the AccuRev Client. Proceed to *Installing or Upgrading an AccuRev Client* on page 12. **Note:** AccuRev 5.3 introduces the ability to perform unattended client installations. For more information, see *Client-only Installer and Unattended AccuRev Installations* on page 15.

After performing the various server/WebUI server/client steps, the Installation Wizard will prompt you for the following information before completing:

1. **PATH** [*Console: “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. **Note:** You may need to reboot after installation before this change takes effect.
2. **Choose a Java VM** [*Console: “Choose Java Virtual Machine”.*]— 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.
3. **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.

Note: On 64-bit Linux, 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, 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 30 for more information.

Installing or Upgrading an AccuRev Server

The AccuRev wizard will guide you through steps for installing a new AccuRev server or upgrading an existing server. At the end of the installation, make sure that you tune your database parameters as described in *Configuring Database Tuning Parameters* on page 21. You must reboot the database for the tuning parameters to take effect.

If the wizard discovers that an AccuRev server already exists in the location you specify, it will prompt you through an upgrade.

Upgrading to 5.3 from any previous release requires a database upgrade. The complexity of the database upgrade depends on the release from which you are upgrading (see *Table 1* on page 3).

If the 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 Customer Support to continue.

As you proceed through this part of the installation, you may encounter some or all of the following prompts. The specific prompts that you see and the order in which you see them can vary depending

on your particular installation and the options that you select. All users will not see all prompts described below.

1. **Please Choose a Folder:** [Console: “Choose a Directory for AccuRev Server Data Storage”.] — 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.
2. **Install Replication** [Console: “Choose Replication Type”] — Choose “No replication” [Console: “None”] unless you have already determined (along with AccuRev Support) that your site will be implementing one or more replica servers. 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 the AccuRev 5.3 *Administrator’s Guide*, in the “Replication of the AccuRev Repository” and “License Management” chapters. Contact AccuRev Support Services for more information. To proceed with replica installation, see *Installing a Replication Server* on page 14. Note that before you can use a new replica server, you must configure it (and its master server) as described in the *Administrator’s Guide*. If you know for a fact that your site is implementing replica servers, select “Yes, this is the master” for the site that will be sending elements out to the replica. Select “Yes, this is a replica” for the site (typically remote) that will be connecting to a master server to receive files.

To upgrade an existing replica server, see *Upgrading an Existing Replica Server to 5.3* on page 21.

3. **Install new AccuRev config files?** — If the wizard discovers existing configuration files, it gives you the option of retaining them. Retaining them is generally the right choice, unless you want to reinstall your client or server from scratch or are otherwise making major changes to your existing installation. The AccuRev 5.3 installer will append any new required fields to your existing config files.
4. **Configure Database Port and User** — **db-port** and **db-admin-name**. [Console: prompts for these values individually.] 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 **db-admin-name** unless you have a specific reason to change it.
5. **Configure Database Password** [Console: “Set Database Superuser Password”.]— **db-admin-pass**. Enter the value for **db-admin-pass** that you chose in *Table 2* on page 5. 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. **Important:** The named “keys.txt” license manager will not be offered after this release. Plan to switch to the standard/flexible license manager.
- **Local Standard/Flexible Licensing** — This is one option for the standard/flexible license manager. If the license file that you received from AccuRev is “accurev.lic” and you do not have an existing standard/flexible license manager on another machine that you want to use, choose this option.

For more information about standard/flexible licensing, see the following:

- The “License Management” chapter in the *AccuRev Administrator’s Guide*.
 - An example script for automatically starting the standard/flexible license server at boot time on UNIX/Linux systems (automatically done for Windows installations):
[*ac-install/extras/unix/accurev_rlm*](#)
 - “The License Server” section of the on-line *Reprise License Manager End-User Guide* at http://www.reprisesoftware.com/RLM_Enduser.html
 - **Remote Standard/Flexible Licensing** — This option also applies to the standard/flexible license manager. If the license file that you received from AccuRev is “accurev.lic” and you DO have an existing license manager on another machine that you want to use, choose this option. This will cause the display of an additional installer page, “**License Manager Configuration**”:
 - **Hostname** — Enter the network name of the server where the remote standard/flexible license manager exists.
 - **Port** — Keep the default value of 2375, unless you know that the remote RLM is running on a different port.
7. **Choose a license key file, Install new AccuRev license key file, or Select 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 standard/flexible license manager, which requires that you provide a valid “accurev.lic” license file. For the standard/flexible license manager, see [Enabling the Standard/Flexible License Manager](#) on page 29.

If you are upgrading an AccuRev server and need to upgrade an existing database, see [Server and Database Upgrades](#) on page 17.

Installing or Upgrading an AccuRev Client

Note: AccuRev 5.3 introduces the ability to perform unattended client installations. For more information, see [Client-only Installer and Unattended AccuRev Installations](#) on page 15.

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.

1. The AccuRev wizard will guide you through steps for installing or upgrading the AccuRev client.
2. On the **Set Host and Port** screen, enter the [*ac-host*](#) and [*ac-port*](#) of an AccuRev Server. The default [*ac-host*](#) value is set to the current machine. This is fine if the server is in fact installed on this system, but if not, change this value to the host where the Accurev server is installed. The default [*ac-port*](#) value of 5050 is typically correct unless it has been changed to avoid conflict with another server.

Note: [Console] If you are performing a console installation using the text-based Wizard, be careful to enter only numeric characters for [*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.

Installing a 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 5.3 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, you must create 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.

Starting, stopping, and testing the AccuRev Web GUI server

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

```
ac-install/webui/tomcat/bin/[ startup | shutdown ].[ sh | bat ]
```

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

```
http://localhost:8080/accurev
```

If this does not display an AccuRev login window, try restarting the Tomcat server. For more information, see the “Testing the AccuRev Web Interface Installation” chapter of the *AccuRev Web Interface Installation and Release Notes* described in the next section.

Web UI Release Notes

After the installation is complete, see the installation directory for the AccuRev *Web Interface Installation and Release Notes*, typically:

```
ac-install/WebUI/AccuRevWebGUI_Install_Release_Notes.pdf
```

Note: The installation section of the AccuRev *Web Interface 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 install an AccuRev 5.3 server as a replica or master server.

To upgrade an existing replica server, see *Upgrading an Existing Replica Server to 5.3* on page 21.

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 AccuRev 5.3 *Administrator's Guide*, in the “Replication of the AccuRev Repository” and “License Management” chapters.

Note: The master server and the replica server must be the same version (i.e., “5.3”).

Before continuing, please make sure you have performed the necessary steps from *Before You Begin* on page 6.

Install an AccuRev 5.3 Server as a master server

1. Follow the instructions in *Installing or Upgrading an AccuRev Server* on page 10, 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. Complete the AccuRev installation process. When done, proceed to the “Replication of the AccuRev Repository” chapter of the *Administrator's Guide* to configure the replica and master.

Install an AccuRev 5.3 Server as a replica server

1. Follow the instructions in *Installing or Upgrading an AccuRev Server* on page 10, 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.
2. Complete the AccuRev installation process. When done, proceed to the “Replication of the AccuRev Repository” chapter of the *Administrator’s Guide* to configure the replica and master.

Client-only Installer and Unattended AccuRev Installations

AccuRev Version 5.3 and higher provides two installer executables:

- AccuRevInstall [.exe | .bin]: A full client/server installer which can be used for all installations: client, server, replication server, and Web UI Server.
- AccuRevClientInstall [.exe | .bin]: A lightweight client-only installer, which can be used interactively, and also non-interactively as a "silent" installer.

In Version 5.3, the client-only installer is only provided for Windows and Linux platforms. Additional platforms will be supported in future releases. While either installer image can be used for AccuRev client installations, the client-only installer has several potential advantages over the full client/server installer:

- The image size of the client-only installer is smaller, making it easier to distribute over finite bandwidth networks.
- The client-only installer provides a more simplistic interactive installation experience for client-only users, since no server-related choices are involved.
- The client-only installer supports “silent install” mode in addition to the graphical and console interactive install modes.

Unattended “Silent” Installations

The client-only installer is particularly suitable when AccuRev client installs or upgrades are being performed automatically by a centralized software distribution mechanism. In a typical scenario, the installer image is pushed to each of the client machines and then run silently with a response file which provides information required by the installer at install time. This provides a highly efficient mechanism for large AccuRev deployments to keep pace with current versions of AccuRev.

Creating the Response File

For silent installs, the easiest way to create the response file is to run the client-only installer once interactively with the “-r <fullpath/responseFilename>” command-line parameters, on each of the target platforms. For example:

Windows

```
installer_loc\AccuRevClientInstall.exe -r c:\tmp\ac_win_install.out
```

Linux

```
installer_loc/AccuRevClientInstall.bin -r /tmp/ac_linux_install.out
```

This creates a platform-specific response file based upon your interactive choices. Note that you must specify the full path for the response file so that you can easily locate it.

The interactive choices to be made during installation include:

- Installation directory
- The host (or IP address) and port number associated with the AccuRev server
- Whether or not "<ac_install>/bin" should be added to the user's path

Running the Silent Installation

Once the response file for a given platform is created, it can be used to perform automated silent installs on numerous like-platform clients. Silent installs can be invoked with the "-i silent -f <full-path/responseFilename>" command-line parameters. For example:

Windows

```
installer_loc\AccuRevClientInstall.exe -i silent -f c:\tmp\ac_win_install.out
```

Linux

```
installer_loc/AccuRevClientInstall.bin -i silent -f /tmp/ac_linux_install.out
```

Sample Response File

An example response file is shown below:

```
# Mon Aug 22 14:20:22 EDT 2011
# 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\\AccuRev

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

#Adjust System PATH Variable
#-----
ADD_TO_PATH_INPUT_RESULTS=\\",\\"No\\"
```

```

ADD_TO_PATH_INPUT_RESULTS_1=
ADD_TO_PATH_INPUT_RESULTS_2=No
ADD_TO_PATH_INPUT_RESULTS_BOOLEAN_1=0
ADD_TO_PATH_INPUT_RESULTS_BOOLEAN_2=1

#Install
#-----
-fileOverwrite_C:\Program\ Files\AccuRev\bin\UninstallerData\
Uninstall\ AccuRev.lax=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\UninstallerData\
resource\iawin32.dll=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\UninstallerData\
resource\remove.exe=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\vcredist_x86.exe=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\acgui.lax=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\acdiffigui.lax=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\bin\acclient.cnf=Yes
-fileOverwrite_C:\Program\ Files\AccuRev\LICENSE.TXT=Yes

```

Post-installation Administrative Scripts

The AccuRev installers (both full and client-only) 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, which the AccuRev installer will execute as the last step of the installation.

Server and Database Upgrades

This section contains instructions for upgrading existing AccuRev databases from various releases to 5.3. Note that if you have existing replica servers, you must also follow the instructions in *Upgrading an Existing Replica Server to 5.3* on page 21. In all cases, we strongly recommend 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 server(s) will be unavailable to your users.

Upgrading an AccuRev Server from pre-4.7 to 5.3

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 6.

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 5.3*).

Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x to 5.3

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 6.
2. If you have not already done so (as specified in *Getting Started* on page 8), 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 as user **root** on UNIX/Linux. The installation will not complete correctly.*

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. Stop the AccuRev Server process on the test machine according to the instructions in *Starting and stopping AccuRev* on page 28.
8. Navigate to the **installer-loc** directory and locate the downloaded AccuRev 5.3 installer.
9. 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**.

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 5.3 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 21) and then go to *Using the ‘maintain dbupgrade’ Command* on page 22 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 5.3. Return here when done.
12. Put the new 5.x **keys.txt** (traditional license manager) or **accurev.lic** (standard/flexible 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 28. 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.

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 5.3 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 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 5.3 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 a 5.3 upgrade to 4.7.x, 4.8.x, or 4.9.x

Important: Rolling back a 5.3 upgrade that you have made from 4.7.x, 4.8.x, or 4.9.x will lose any changes that have occurred in the AccuRev repository between the upgrade and 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, make sure that all 4.x `*.ndb` files are still present on the system, then perform the following commands:

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

Upgrading an AccuRev Server from 5.0.x to 5.3

To upgrade from AccuRev Release 5.0.x to 5.3, 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 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 22) 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 6 and *Getting Started* on page 8.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and stopping AccuRev* on page 28.
3. See the *Using the AccuRev Installation Wizard* on page 9 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, 5.2, and 5.3).
 - 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 22.
 5. Start the AccuRev Server and AccuRev DB Server processes as described in *Starting and stopping AccuRev* on page 28.

Upgrading an AccuRev Server from 5.1 or 5.2 to 5.3

To upgrade from AccuRev 5.1 or 5.2 to 5.3, you must upgrade your database schema by manually running the **maintain dbupgrade** command (see *Using the 'maintain dbupgrade' Command* on page 22) after the installer completes. Fortunately, versions 5.1, 5.2, and 5.3 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 or 5.2 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 6 and *Getting Started* on page 8.
2. Stop the AccuRev Server and PostgreSQL database processes as described in *Starting and stopping AccuRev* on page 28.
3. See *Using the AccuRev Installation Wizard* on page 9 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* on page 28.

Upgrading an Existing Replica Server to 5.3

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 6.
2. **If your site uses AccuWork:** For every replicated depot that has AccuWork issues, copy the up-to-date issue schema file from the master to the replica server. Issue schema files are found in the following locations:

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

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

3. Proceed with the installation as if the replica server were a master server. Depending on your current AccuRev replica software version, refer to the appropriate section(s):
 - *Upgrading an AccuRev Server from pre-4.7 to 5.3* on page 17
 - *Upgrading an AccuRev Server from 4.7.x, 4.8.x, or 4.9.x to 5.3* on page 18
 - *Upgrading an AccuRev Server from 5.0.x to 5.3* on page 19
 - *Upgrading an AccuRev Server from 5.1 or 5.2 to 5.3* on page 20
4. After the upgraded replica server has started, execute the following command against the replica server:

`accurev replica sync`

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* on page 28.
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)* 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 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* on page 28).

Free physical memory can be estimated as follows:

- UNIX/Linux (expressed in MB):

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

- Windows Server 2003/XP (expressed in KB): Access the Performance tab on the Windows Task Manager. Add up the *Available* and *System Cache* values under “Physical Memory”.

Physical Memory (K)	
Total	8181000
Available	189000
System Cache	3731000

- Windows Server 2008/Vista 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; 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.

4. Start the AccuRev Database Server process according to the instructions in *Starting and stopping AccuRev* on page 28.

Using the ‘maintain dbupgrade’ Command

This section details the use of the **maintain dbupgrade** command to upgrade your existing AccuRev database to 5.3.

For 4.x databases (4.7 or higher), **dbupgrade** performs three 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 21, 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 5.3 *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 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.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 Customer Support.

See [Understanding maintain dbupgrade Messages](#) on page 23 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 the sections below.

Messages from maintain dbupgrade

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.
```

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 the failure(s).

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 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.
- **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_il18n_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 examples and additional information below.

- **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 Customer Support) and rerun **dbupgrade** before proceeding.

As an end-user, you should only be concerned with WARNING and FATAL entries. In the case of a successful data migration or database upgrade, there should not be any 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 the "Performing a Test Upgrade on a Separate Machine" section.)

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 reason(s) for the error(s).

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 5.3, 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 27"). 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 28. Test your installation. If you were doing the upgrade on a test machine, return to [Performing an Upgrade "In Place"](#) on page 19 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 5.3, 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 27). 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 28, and *Upgrading an AccuRev Server from 5.0.x to 5.3* on page 19 or *Upgrading an AccuRev Server from 5.1 or 5.2 to 5.3* on page 20.)

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 reason(s) for the error(s).

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

Fatal message example #3:

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

Explanation:

The AccuWork [schema.xml](#) file is missing from the [ac-storage/depots/depot-name/dispatch/config](#) directory.

Fatal message example #4:

```
FATAL: Database error: ...
FATAL: Retrieving list of depots from database: Database error: ...
FATAL: table 'X' rowcount mismatch: expected Y, got Z
FATAL: LOC width X not supported!
```

Explanation:

If you receive any of these errors, please contact AccuRev Support.

Messages from dbupgrade_i18n_report.html

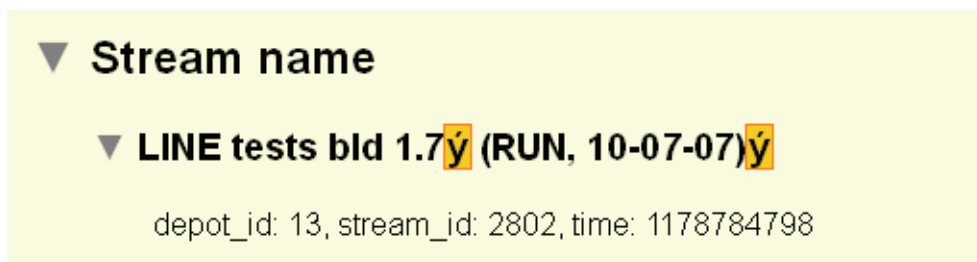
Note: Please store the [ac-storage/site_slice/logs/dbupgrade_i18n_report.html](#) file in a safe place. It contains information that could assist AccuRev Support with troubleshooting any data migration or database upgrade issues.

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 1.7ŷ (RUN, 10-07-07)ŷ”. Clicking on the handle for this entry narrows down the location to depot_id 13 and stream_id 2802.



2. Use the displayed information (depot_id, stream_id, issue_num, etc.) to navigate to the suspect entry in your existing (4.9, 5.0.x, or 5.1) AccuRev UI.
3. Compare the appearance of the suspect entry in the report against how it appears in your existing AccuRev installation.

Here are some general rules for interpreting these results:

- **All highlighted characters are correct.** Congratulations! 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 by 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.
- **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

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

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

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

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

In summary:

- Starting the AccuRev Server will automatically start the AccuRev Database if it is not already running.
- Stopping the AccuRev Server will NOT automatically stop the AccuRev Database.
- Starting the AccuRev Database will NOT automatically start the AccuRev Server.
- Stopping the AccuRev Database will also stop the AccuRev Server, but only if you say "Y" to the prompt. Otherwise, neither will be stopped.

See “Controlling Server Operations” in the *AccuRev 5.3 Administrator’s Guide* for more information, and for setting up your system to automatically start the AccuRev processes at boot time.

Enabling the Standard/Flexible License Manager

This AccuRev release installs both the traditional named “keys.txt” license manager, as well as the new standard/flexible license manager which supports 24-hour flexible licenses and 7-day standard licenses. Only one can be active at a time, and when you install, you select which one you want enabled.

If you install the named “keys.txt” manager, but later decide that you wish to switch to standard/flexible licenses, see the “License Management” chapter of the *AccuRev 5.3 Administrator’s Guide*.

Important: The named “keys.txt” license manager will not be offered after this release. Plan to switch to the standard/flexible license manager.

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> 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 5.3 server and client. We will investigate and attempt to address issues reported on other platforms, but we reserve the right to request that you reproduce the problem on a supported platform.
2. Virtualization environment support: We will investigate and attempt to address issues reported on virtualization platforms not supported by AccuRev, but we reserve the right to request that you reproduce the problem on one of the supported OS platforms listed in the Platform Support Matrix, running in a non-virtualization environment.
3. See *Deprecated Features* on page 37 for platforms that will no longer be supported in future releases.

Java Compatibility

AccuRev 5.3 is compatible with the Java 2 Runtime Environment (JRE), Versions 1.6.x and higher. These Java versions are also labeled “J2SE Version 6” and higher.

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

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

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

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

Linux

- PostgreSQL may fail to function properly when SELinux mode is set to “Enforcing”. See http://docs.fedoraproject.org/en-US/Fedora/13/html/SELinux_FAQ/#id2963608 for more information. To find out the current SELinux mode run **getenforce** (as **root**). To set SELinux mode to “Permissive”, run **setenforce PermissiveEdit**.
- Linux systems require **glibc** version 2.3.4 or higher. To determine your **glibc** version, run **rpm -qi glibc** in a command shell. Ubuntu systems require **libc6-i386**.
- The AccuRev Installation program and the AccuRev GUI fail on some older UNIX/Linux platforms because of Java library problems. Use this procedure to work around these problems:
 - Set the environment variable **LIBXCB_ALLOW_SLOPPY_LOCK** to the value 1.
 - Run the installation program.
 - Fix the runtime library file in the new AccuRev installation area:

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

- (64-bit Linux) If the 32-bit versions of the packages listed below are not present on your system, download and install them (and their dependencies) prior to running the installer. **Note:** You must have the 32-bit compatibility libs installed even if you are installing the 64-bit version of AccuRev.

```
glibc.i386 (version 2.3.4 or higher)
xorg-x11-libs.i386 (version 6.8 or higher)
```

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).

AIX

- Only the AccuRev client software is supported on this platform.
- 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, but they can be placed in any location that is specified in environment variable LIBPATH.

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

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

- bos.rte.bind_cmds
 - bos.rte.iconv
 - bos.rte.libc
 - bos.rte.libpthread
 - bos.rte.security
 - openssl-0.9.7X
 - gettext-0.1X
- If you choose to use the bundled Java Runtime Environment (JRE), 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.
- The value of the tunable system parameter **maxssiz** (maximum stack size) for the HP-UX kernel must be at least 0x2000000, rather than the default of 0x800000.

Use this command to determine the current setting:

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

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

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

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

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

```
/usr/local/lib/libiconv.sl  
/usr/local/lib/libcrypto.sl
```

The pathnames above show the typical locations for these shared libraries. However, if the libraries aren't installed in /usr/local/lib or the default library path, you can:

1. Add the directory to the SHLIB_PATH environment variable.
2. Enable SHLIB_PATH for each of the executables in the /bin directory by running the following command:

```
> chattr +s enable ac-install/bin/<executable_name>
```

Note: 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.

SPARC only: 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, but they can be placed in any location that is specified in environment variable LD_LIBRARY_PATH.

```
/lib/libgcc_s.so.1  
/platform/SUNW,A70/lib/libc_psr.so.1  
/platform/SUNW,A70/lib/libmd5_psr.so.1  
/usr/local/lib/libiconv.so.2  
/usr/local/lib/libintl.so.3
```

The libraries above are typically part of the following SUN or SMC (<http://sunfreeware.com/> or <http://unixpackages.com/>) packages:

- SUNWcar
- SUNWgccruntime (or SMCgcc 3.3.x)
- SMCliconv
- SMCintl

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

- 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.
- 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 5.3 supports the AccuRev client software on the Mac OS X platform. The AccuRev 5.3 server is being provided as a beta release for this platform. If you install the beta server, it may be necessary to increase Mac OS X shared memory kernel parameters. If so, the AccuRev installer will prompt you for any necessary changes.
- 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-**root** user.
- The following is a recommended method for getting all required executables into the PATH for Mac OS X:

Create the following three files using "sudo":

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

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

1. Make a backup copy of acdiffgui:

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

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

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

3. Create the following link:

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

4. Close any shells.
5. Open a new shell.

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

Uninstalling AccuRev

On Windows, we recommend that you run

`ac-install\bin\UninstallerData\Uninstall AccuRev.exe` to ensure that the AccuRev services and registry entries are removed cleanly. Back up and remove any folders and files left under `ac-install`.

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

AccuRev 5.3 Release Notes

Changes in this Release (5.3a)

AccuRev Release 5.3a is a patch release for 5.3 that addresses the following issues:

11039, 13317 — 3rd Party ITS keys and XML files

The option of using the new third-party ITS key feature in XML files with the -Fx switch (as described at the end of the new “Using Third-Party ITS Keys” chapter of the AccuRev *Technical Notes*) is now implemented.

24546 — AccuWorkflow support: transitions and conditions

AccuRev now supports the following AccuWorkflow transition features: Create a new issue, modify issue without a transition, transition without promote, and transition and promote with conditions. (For more information about AccuWorkflow, see the Version 2011.3 editions of the AccuRev *Web Interface Installation and Release Notes* and the AccuRev *Web Interface User's Guide*.)

25014, 25017 — Question marks in UNIX/Linux supported

AccuRev now allows question mark characters (?) to be used in UNIX/Linux element names.

25102 — maintain dbupgrade

An issue has been corrected which could allow **maintain dbupgrade** to partially succeed when it reported that the upgrade had failed.

25103, 25087 — Release Notes

Cross-references to external documents no longer appear as non-functional hyperlinks. Also, the platform support information for SunOS, HP-UX, and AIX has been updated and expanded in the AccuRev *Installation and Release Notes*. (See *Platform Support Notes* on page 29.)

Changes in Release 5.3

AccuRev Release 5.3 includes the following features and bug fixes:

11039 — Client-only installer, and unattended install for Windows and Linux

AccuRev 5.3 introduces a lightweight client-only installer, which also provides the option for configuring unattended installations on Windows and Linux hosts. See *Client-only Installer and Unattended AccuRev Installations* on page 15 for details.

13317, 16158 — Third-party ITS keys

Some AccuRev commands can now support issue numbers (or “keys”) from third-party issue tracking systems (ITS). For information about configuring AccuRev to use this feature, see the new “Using Third-Party ITS Keys” chapter of the AccuRev *Technical Notes*.

16277 — server_auth_trig enhancement

The server_auth_trig trigger has been enhanced with a third exit state (“2”) so that you can write the trigger script to first try to authenticate a user with a custom authentication (such as LDAP, if

you have configured such a system), and if that fails, authenticate against AccuRev. The `server_auth_trig` exit codes are now:

0=login succeeded

1=login failed

2=Accurev should validate the user's password instead of this trigger script (implies that the initial custom authentication failed).

Any other return code is the same as returning "1".

17631 — Invalid Relationship error

When you modify your schema to use a third-party ITS key for the "3pty ITS Key" field, linking to a tracking issue no longer fails with the error "Invalid Relationship".

20783 — Workspace not recognized on Linux if created on Windows

A problem has been fixed which could prevent AccuRev on Linux from recognizing a workspace created on a Windows client when the storage location was on the Linux file system.

21005 — server_post_promote trigger and purge

A problem has been fixed which could cause the `server_post_promote` trigger to enter incorrect stream values after a **purge** operation.

22680 — Non-expiring login sessions

A non-expiring login session is no longer replaced by an expiring session after a subsequent login. Note that an incorrect login no longer logs out the previously active session. (A correct login still replaces any previously active session.) Script writers should check the exit status of "accurev login" to determine whether or not a login succeeded, instead of possibly relying on subsequent commands to fail.

24418 — AccuRev installer on Windows can take a long time to complete

An issue has been corrected that could cause the final step of an AccuRev installation on Windows to take up to 30 minutes or more to complete if you were installing on a virtual machine (VM) with storage area network (SAN) disk space, with a large number of existing files.

24581 — Post-installation administrative scripts

You can now configure the AccuRev installers to invoke a user-defined script or executable. See *Post-installation Administrative Scripts* on page 17 for more details.

24728 — StreamBrowser performance

The performance of the StreamBrowser has been improved when displaying depots with many streams.

24715 — SESSION_TIMEOUT enforcement

A problem has been fixed with `SESSION_TIMEOUT`, which allowed commands to be executed without a fresh login after the session had timed out.

24783 — File Browser performance

The refresh performance of the AccuRev GUI File Browser has been improved when viewing a directory that's many levels from the root.

24787 — Session tokens on restarted replica server

The session tokens on a replica server are no longer lost in the event of a replica server restart.

24893 — StreamBrowser and snapshots

A problem has been corrected which could cause the StreamBrowser to incorrectly display snapshot streams after their view setting was toggled.

Deprecated Features

The following server platforms will no longer be supported in AccuRev V5.x versions released after January of 2012.

- 32 bit: XP, Vista, Windows server 2003, RedHat 4
- 64 bit: XP, Vista, Windows server 2003, RedHat 4

Also see *Deprecated Features* on page 39 of *AccuRev 5.2 Release Notes*

AccuRev 5.2 Release Notes

Deprecated Features

The traditional AccuRev “named” license manager (keys.txt) will not be offered in future releases. Plan to switch to the “standard/flexible” license manager (accurev.lic).

Changes in Release 5.2.1

AccuRev Release 5.2.1 was a Japanese localization release which included the following features and bug fixes:

24194, 24195—Improved I18N encoding support

Release 5.2.1 provides improved encoding support for UTF-8 on Windows and EUCJP on Linux.

24468—AccuWork problem with new depot and schema

A problem has been corrected which could cause a new depot schema to be inaccessible if the depot was created after logging into the GUI.

24525—Stream names in Japan are restricted to ASCII characters

To address issues in Japanese installations, stream names are now restricted to ASCII characters when the locale is set to “ja_JP”. In all other locales, non-ASCII characters are still allowed.

24616—Server installer permissions

The AccuRev installer has been updated to better handle permissions when installing the AccuRev server in Japan.

Changes in Release 5.2e

AccuRev Release 5.2e was a cumulative patch release for Version 5.2 that addressed the following issue, as well as issues from Releases 5.2a, 5.2b, 5.2c, and 5.2d:

24802, 24803 — Performance improvements

The performance of **show members** and **show wspaces** has been improved.

24510 — maintain restore

The **maintain restore** command has been modified to allow sites with a large number of depots to restore without making PostgreSQL configuration changes.

Changes in Release 5.2d

AccuRev Release 5.2d was a cumulative patch release for Version 5.2 that addressed the following issues, as well as issues from Releases 5.2a, 5.2b, and 5.2c:

24709 — Running a command against one depot from another depot's workspace

A problem has been corrected which could cause a segmentation fault or access violation error when executed an AccuRev command against one depot while you were in the workspace of a different depot (for example, running `hist -p B` from a workspace in depot "A").

Changes in Release 5.2c

AccuRev Release 5.2c was a cumulative patch release for Version 5.2 that addressed the following issues, as well as issues from Release 5.2a and Release 5.2b:

24471 — basis version for reverted change packages incorrect

Previously, when reverting a change package AccuRev set the basis to the version before the one being reverted instead of to the current version at the time the revert was performed. This problem has been corrected in the current release.

24553 — basis version for patch records incorrect

When using the `-O` option for the `patch` command, AccuRev did not correctly record the basis version for the patch record. This problem has been corrected in the current release.

24556 — 4GB address space support for 64-bit Windows

Several AccuRev binaries (`accurev`, `accurev_server`, and `maintain`) have been modified to handle address spaces larger than 2GB in 64-bit Windows environments.

Changes in Release 5.2b

AccuRev Release 5.2b was a cumulative patch release for Version 5.2 that addressed the following issues, as well as an issue from Release 5.2a:

24501 — pop dialog never completes

When performing a `pop` command in the GUI, with both `recursive` and `overwrite` options set, the dialog would not disappear even after a successful completion of the operation. This has been corrected.

24506 — pop and stat crash

A problem has been fixed which caused a crash when `pop` or `stat` were used with nested paths (for example, `accurev [pop|stat] -R path1 path1/path2`).

24511 — empty values are passed to commands

A problem has been fixed which could cause a server crash when empty values were passed to a command (for example, `accurev lsrules -s`).

24539 — update failures due to ac_tmp_map.txt move-aside file

A problem has been corrected which could cause `update` to fail with the message "Move aside directory not usable", when a workspace is at the partition root level of a second drive.

24548 — annotate crash

A problem has been fixed which caused `annotate` to crash with an "Unknown exception(0, 0)" error, when used with a non-ASCII file that had been kept with `accurev keep -E text`.

Changes in Release 5.2a

AccuRev Release 5.2a was a patch release for Version 5.2 that addressed the following issue:

24491 — ACLs after migration

A problem has been fixed which caused depot and stream ACLs applied to *authuser* and *anyuser* to be lost after upgrading from version 4.x to 5.2. This issue does not affect upgrading from 5.0.x or 5.1 to 5.2.

Changes in Release 5.2

AccuRev Release 5.2 included the following features and bug fixes:

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

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

22333 — New “Revert Change Package Directly in Stream” feature

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

21359, 22805 — Make AccuRev I18N (Internationalization) Compliant

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

23000, 24003 — Installer changes

The AccuRev 5.2 Installation Wizard has been upgraded to handle:

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

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

The optionally licensed AccuWorkflow product has been completely rewritten and is now available exclusively through the AccuRev Web UI client.

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

The AccuRev Java GUI has several links that invoke the Web UI, or copy URLs to the clipboard that allows a user to bring up a particular screen in the Web UI. It is also possible to set a preference so that any time an AccuWork issue gets displayed, it automatically comes up in the Web UI rather than in the Java GUI. For more details, see “Configuring the Web User Interface (Web UI)” in the “AccuRev Server” chapter of the AccuRev *Administrator’s Guide*.

Note: In summary, there are three ways for the Web UI to be invoked when you open an AccuWork issue:

- If you have an AccuWorkflow license installed, the Web UI will automatically be invoked for any AccuWork issue. Please note that the license mentioned in the previous sentence is for AccuWorkflow, not AccuWork.

- If the AccuRev administrator configures the server as described in the Administrator's Guide to use the Web UI for all AccuWork requests.
- If an individual user configures the client preferences to use the Web UI for all AccuWork requests.

20985, 22902 — New archive options

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

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

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

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

12227, 20324, 20880, 22774, 22884 — New documentation and on-line help system

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

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

17047, 20749 — Error 6 on promote and purge

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

17945 — merge now handles overlapped, renamed folders

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

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

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

23198 — Diff for streams with xlinks

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

23240 — No-op updates

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

23354 — Changing depot case sensitivity causes performance issue

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

23546 — Promotions of stranded elements or “evil twins”

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

23618 — deep overlap performance

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

24088,24089 — I18N long file names

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

23964 — Memory footprint of the pop command

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

24222 — maintain command behavior has been improved

The behavior of the administrative **maintain** command has been improved to make it prompt the user for necessary information, and to make it more secure by disallowing database admin passwords to be specified as part of the **maintain** command line. See the “The maintain Utility” chapter of the 5.2 AccuRev *Administrator’s Guide* for updated command syntax.

6722 — Doc for chws -s and changing principal names

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

21008, 23882, 24150 — Updates to the triggers documentation

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

Changes from Releases 4.9.1

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

Known Issues

Also see *Known Issues* on page 45, in the *AccuRev 5.1 Release Notes*, and *Known Issues* on page 49, in the *AccuRev 5.0/5.0.1 Release Notes*

24418 — AccuRev installer on Windows can take a long time to complete [FIXED 5.3]

Under certain circumstances, the AccuRev installer on Windows can take up to 30 minutes or more to complete. If you are installing on a virtual machine (VM) with storage area network (SAN) disk space, and you have a large number of existing files, the final step of the installation (setting default permissions) can take a long time. Do not kill the process; allow it time to finish.

24248 — Depot names must be ASCII.

Only stream and workspace names can be non-ascii, not depot names.

23564 — Delete preferences.xml when switching locales

If you switch between the Japanese and English versions of AccuRev, you must delete the **preferences.xml** file located in `<homeDirectory>/accurev`. When switching between locales, your preferences file can be left in the state where there is no UTF-8 header, but there are Japanese characters which cause Exceptions when you try to login to AccuRev.

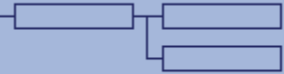
15780 — hist -t can return transactions outside of limits

If you specify a date range such as:

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

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

AccuRev 5.1 Release Notes



Performance Improvements

AccuRev Release 5.1 was a limited-availability release for existing 5.0.x customers requiring specific performance improvements. The release made more efficient use of the third-party relational database management system (RDBMS), resulting in substantial improvements in overall performance and end-user productivity.

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

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

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

Deprecated Features

Old licensing features

Because of the introduction of the new standard/flexible license manager, the “traditional” authentication method is no longer available as of AccuRev Release 5.1. If you still use traditional authentication, you must switch to “accurev_login” or “custom” authentication.

Note that this also means that the environment variables `ACCUREV_PRINCIPAL` and `AC_PRINCIPAL`—which were used to retrieve the user name for the traditional login method—are deprecated. (AccuRev also no longer makes use of the common “USER”, “LOGNAME” and “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 49, in the *AccuRev 5.0/5.0.1 Release Notes*

23297 — mkreplica and replica sync performance

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

23354 — Changing depot case sensitivity impacts performance

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

21829 — Chrome browsers and Help

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

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

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

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

Windows XP:

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

Windows 7:

```
"C:\Users\<user>\AppData\local\Google\Chrome\Application\chrome.exe"  
--allow-file-access-from-files "%1"
```

If this does not work for your installation, another option is to try using this switch as the default for all instance of Chrome on your system. The following example shows how to use this fix in Windows. Adjust appropriately for other operating systems. The following procedure assumes that you have Chrome set as your default .htm/.html browser:

1. Open Windows Explorer.
2. Navigate to **Tools => Folder Options => File Types**
3. Select "HTM" or "HTML", then click Advanced.
4. Select **Open**, then click **Edit...**
5. In the "Application used to perform action:" field, you should see a line similar to:

Windows XP:

```
"C:\Documents and Settings\<user>\Local Settings\Application  
Data\Google\Chrome\Application\chrome.exe" -- "%1"
```

Windows 7:

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

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

Windows XP:

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

Windows 7:

```
"C:\Users\<user>\AppData\local\Google\Chrome\Application\chrome.exe"  
--allow-file-access-from-files "%1"
```

7. Click **OK**, **OK**, and **Close** to save your changes and exit out of the dialogs.

Of course, if this line has already been customized at your site, you will need to adjust the above instructions as needed.

Also, note that implementing this fix will disable a security change introduced with Chrome, so the security policies of some organizations may prohibit them from doing this.

Changes in this Release (5.1)

AccuRev Release 5.1 includes the following features and bug fixes:

20405, 20406 — server_admin_trig now gets mkgroup and mkuser values

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

18915, 21219, 21521 — Stranded elements and incomplete issues

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

21222 — 64-bit Linux Server

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

Changes from Releases 4.7.4, 4.8, and 4.9

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

AccuRev 5.0/5.0.1 Release Notes

Limitations

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

- Only one AccuRev 5.0.x server may be installed per machine.
- UNIX/Linux users should not install AccuRev 5.0.x as user **root**, as the installation will not complete correctly.
- Upgrades from AccuRev 5.0 pre-release versions are not supported. If you have a pre-release AccuRev 5.0 version, you must uninstall it, then reinstall the new version, and upgrade your database from 4.7.x as described in *Server and Database Upgrades* on page 17.

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.