AccuRev

AccuRev Installation and Release Notes

Version 4.7.4b

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AccuRev Installation and Release Notes

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AccuRev Installation Notes

Overview

Installation of AccuRev Configuration Management software involves downloading an installation program from the AccuRev Web site and running it on the target machine.

One machine at your site 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 installing the AccuRev Client software.

The software must be installed on each machine separately. There is no batch install capability, but you can perform a non-interactive installation, which is driven by a simple configuration file. See *Unix/Linux: Unattended Installation* for those instructions.

These notes present an overview of the installation process. The Wizard should be self-explanatory, but a detailed, step-by-step description of the installation process can be found in the "Quick Evaluation" chapters in *AccuRev Technical Notes*.

Compatibility with Previous Versions of AccuRev

AccuRev Version 4.7.4 is compatible with prior 4.7.x versions, but not with any prior AccuRev releases. If you are upgrading from a pre-4.7 release of AccuRev, you must upgrade the machine that runs the AccuRev Server software, along with all the machines that run AccuRev Client software.

No explicit conversion is required to bring the AccuRev data repository from any prior level to the Version 4.7.4 level. When you install Version 4.7.4 on the machine that runs the AccuRev Server software (this machine also hosts the data repository), the repository will be upgraded automatically, if necessary.

Note: AccuRev Versions 4.7.2 through 4.7.4 are not compatible with versions of the AccuRev Web Interface released prior to 2009.

Downloading the AccuRev Installation Package

On the Downloads page of the AccuRev, Inc. Web site (**http://www.accurev.com/ download.htm**), download the appropriate AccuRev installation package for your operating system. Make a note of the directory you saved the file to (referred to as `installer-loc` throughout this document).

Generic Name	Actual Name
`installer-loc`	

- If the file you downloaded is the Wizard itself (Windows:**.exe** file, Unix/Linux: **.bin** file), then you are ready to run the Wizard.

- If you downloaded a compressed package (**.zip** or **.gz** file), first extract the Wizard from the package. Many extraction tools are freely available. There are handy links to such tools on the Downloads page; and the **unzip** and **gunzip** programs are standard on many Unix/Linux systems.

For instructions on installing AccuRev, proceed to the appropriate section below:

Note: If you're installing AccuRev on a Unix or Linux machine, read section *Workaround for Unix/Linux Java Runtime Library Problems* below before proceeding to the section for your particular installation.

- *Installing or Upgrading an AccuRev Client*

- *Windows: Installing an AccuRev Server*

- *Unix/Linux: Installing an AccuRev Server*

- *Upgrading an AccuRev Server*

- *Unix/Linux: Unattended Installation*

Workaround for Unix/Linux 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 <AccuRev-installation-dir>/jre/lib/i386/xawt
> sed -i 's/XINERAMA/FAKEEXTN/g' ./libmawt.so
```

Installing or Upgrading an AccuRev Client

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

1. Navigate to the **installer-loc** directory and locate the downloaded installer.

2. Double-click the installer's icon to launch it, or enter the installer name on the command line (substituting the appropriate digits for the *N*s):

```
AccuRev_N_N_N_Windows.exe          (Windows)
AccuRevInstall.app                 (OS X)
sh AccuRevInstall.bin              (Unix/Linux, graphical Wizard)
sh AccuRevInstall.bin -i console   (Unix/Linux, text-based Wizard)
```

3. Select **Typical** as the installation type and see the *Installation Wizard Notes* to proceed through the remainder of the Wizard.

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

Windows: Installing an AccuRev Server

1. Navigate to the `installer-loc` directory and locate the downloaded installer.

2. Double-click the installer's icon to launch it, or enter the installer name on the command line (substituting the appropriate digits for the *N*s):

   ```
   AccuRev_N_N_N_Windows.exe
   ```

3. Select **Typical** as the installation type and see the *Installation Wizard Notes* to proceed through the remainder of the Wizard.

Unix/Linux: Installing an AccuRev Server

It is a Unix/Linux "best practice" to minimize the number of programs that run under the **root** user identity. When the procedure below has been completed, the AccuRev Server will be configured to run without **root** privileges.

1. Become the **root** user.

2. Create a new identity for the AccuRev Server to run under. For this procedure, we assume that you create this identity:

   username: **acserver**
   groupname: **acservergrp**
   home directory: **/home/acserver**

3. Create a directory in which the AccuRev client and server software will be installed, along with the AccuRev data repository. (And make sure to leave this directory empty.) For this procedure, we assume that you create this directory:

   installation directory: **/opt/accurev**

   IMPORTANT: You must select a directory that is local to your machine, not a networked or mounted drive. The AccuRev data repository and the AccuRev Server must be located on the same machine.

4. Change the ownership of the installation directory:

   ```
   chown acserver:acservergrp /opt/accurev
   ```

5. Switch to the new user identity, **acserver**.

6. Navigate to the **installer-loc** directory and locate the downloaded installer.

7. Double-click the installer's icon to launch it, or enter the installer name on the command line:

```
sh AccuRevInstall.bin              (graphical Wizard)
sh AccuRevInstall.bin -i console   (text-based Wizard)
```

   For a non-interactive alternative to the Wizard, see *Unix/Linux: Unattended Installation* on page 6.

8. Select **Typical** as the installation type and see the *Installation Wizard Notes* to proceed through the remainder of the Wizard.

Starting the AccuRev Server Automatically

When the Wizard completes, AccuRev is fully installed on your machine, and is ready to use. By default, the AccuRev Server process can be started and stopped manually by user **acserver**, with these commands:

```
/opt/accurev/bin/acserverctl start
/opt/accurev/bin/acserverctl stop
```

If you would like the AccuRev Server to be started automatically at system boot-time, follow these additional steps:

1. Edit the server configuration file (**/opt/accurev/bin/acserver.cnf**) as follows:

```
#USER = nobody          change to      USER = acserver
#GROUP = nobody                        GROUP = acservergrp
```

   This will configure the boot-time script that starts the AccuRev Server (see Step 4) to set the Server's user identity, using **setuid**.

2. Stop the newly installed AccuRev Server:

```
/opt/accurev/bin/acserverctl stop
```

3. Become the **root** user.

4. Using the files in directory **/opt/accurev/extras/unix**, set up the boot-time scripts to start the AccuRev Server.

5. Reboot the machine.

Upgrading an AccuRev Server

You don't need to uninstall any existing software. The AccuRev Installation Wizard lets you preserve your development data and configuration files, and installs the upgrade in the same place as your existing version. The data repository is automatically upgraded to the new release level.

1. Stop the AccuRev Server process.

    - Windows:

      ```
      net stop accurev
      ```

    - Unix/Linux:

      ```
      cd <AccuRev-bin-directory>
      ./acserverctl stop
      ```

2. Perform a full backup of the AccuRev data repository. For detailed instructions, see the section titled *Backing Up the Repository* (on page 3 of the *AccuRev Administrator's Guide*).

3. Navigate to the **installer-loc** directory and locate the downloaded installer.

4. Double-click the installer's icon to launch it, or enter the installer name on the command line:

    ```
    AccuRev_N_N_N_Windows.exe          (Windows)
    sh AccuRevInstall.bin              (Unix/Linux, graphical Wizard)
    sh AccuRevInstall.bin -i console   (Unix/Linux, text-based Wizard)
    ```

5. Select **Typical** as the installation type and see the *Installation Wizard Notes* to proceed through the remainder of the Wizard.

6. Verify that the new AccuRev Server process has been started, by running this command:

    ```
    accurev info
    ```

7. If you need to start the AccuRev Server process manually, use these commands:

    - Windows:

      ```
      net start accurev
      ```

    - Unix/Linux:

      ```
      cd <AccuRev-bin-directory>
      ./acserverctl start
      ```

Installation Wizard Notes

Use these notes to determine which installer options to choose for your installation type.

- Under **Configure: Set Host and Port**:

  - If you wish to install the AccuRev Server on this machine, or create a test installation, select **this machine**. The wizard will install both the client and server software.

  - For all other install types, select **another host** and enter the hostname and IP port number of the AccuRev Server to connect to.

- If you are performing a console installation using the text-based Wizard, be careful to enter only numeric characters for the port number. 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 reenter the port number correctly.

- Under **Choose Install Directory**:

  - *(Unix only)* Specify the directory you created.

  - *(all upgrades)* Specify your existing AccuRev installation directory.

  - *(all other installation types)* Specify a location where you have write permission.

- Under **Choose Link Location**, if you choose to create symbolic links to the AccuRev client programs, specify a location where you have write permission.

- *(Server upgrades only)* Select **No** when the Wizard asks, "Do you want to install a new license key file?"

Unix/Linux: Unattended Installation

On a Unix or Linux system, you can run the AccuRev installation program **AccuRevInstall.bin** as a non-interactive "console program" instead of as a Wizard.

Note: non-interactive console installation is not available on Windows or Mac OS X.

Follow these steps:

1. Create an installation configuration file by copying the sample text below.

2. Revise the settings in the configuration file, as appropriate for the target machine.

3. Invoke the installation program as follows:

   ```
   sh AccuRevInstall.bin -i SILENT -f <full-pathname-of-config-file>
   ```

   You must use a full pathname to specify the installation configuration file.

Use the following text as a template for the configuration file:

```
###
### AccuRev InstallAnywhere SILENT installation config file
###
#
# Unix/Linux usage:  sh AccuRevInstall.bin -i SILENT -f <config-file>

# Enables use of this config file; do not change.
INST_ROOT=true

# Location of AccuRev installation directory (OK to already exist).
# Installer creates subdirectories bin, doc, jre, etc.
USER_INSTALL_DIR=/opt/accurev

# Type of installation to perform:
# Client: Installs AccuRev Client software on this machine.
# Server: Installs AccuRev Client and Server software on this machine.
# Un-comment exactly one of the following lines.
```

```
#CHOSEN_INSTALL_SET=Client
CHOSEN_INSTALL_SET=Full

# Client install: hostname of machine to run AccuRev Server process.
# Full install: this setting ignored, hostname of local machine used.
SERVER_HOSTNAME=myhost

# The traditional port for the AccuRev Server is 5050. But you can
# change it to any number. We recommend the range 5000 - 6000.
SERVER_PORT=5050

# Full install: full pathname of a valid license key file.
# installer copies this file into site_slice dir, as "keys.txt".
LICENSE_KEY_FILE=/path/to/license-key-file
```

Note: For USER_INSTALL_DIR, you must select a directory that is local to your machine. The AccuRev data repository cannot be located on a disk that is accessed over the network by the AccuRev Server process.

Platform Support Notes

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

Java Compatibility

AccuRev Version 4.7 is fully compatible with the Java 2 Runtime Environment (JRE), Versions 1.5.x and higher. These Java versions are also labeled "J2SE Version 5" and higher.

Mac OS X

- AccuRev 4.7 is supported on Mac OS X 10.5 (Leopard). AccuRev versions prior to 4.6.2 did not install successfully on this platform.

- Be sure you have JRE 1.5 or higher installed. AccuRev does not install its own JRE on OS X, because Java is included with the OS X installation.

- An administrative user can choose either **Typical** or **Custom** in the AccuRev Installation Wizard. A non-administrative user must perform a **Custom** installation.

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

SunOS /Solaris on SPARC Hardware

- The following non-standard C/C++ language 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.

```
/lib/libgcc_s.so.1
/lib/libintl.so.8
/usr/local/lib/libiconv.so.2
/platform/SUNW,A70/lib/libc_psr.so.1
/platform/SUNW,A70/lib/libmd5_psr.so.1
```

- The machine must also have Version 3.3.x of the GNU C compiler.

- Solaris requires operating system patches, as described on the Sun Java Patch Page (**http:// sunsolve.sun.com**).

AIX

- The following non-standard C/C++ language 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.

```
libstdc++.a
/usr/lib/libcrypt.a
/usr/lib/libgcc_s.a
/usr/lib/libpthread.a
```

- The maximum file size on AIX is 2GB; therefore the Accurev Server has a file size limit of 2GB for database and index files.

- 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

- 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 non-standard C/C++ language 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.

```
/opt/hp-gcc-4.0.3/lib/libgcc_s.sl
/usr/lib/libpthread.1
```

Linux

- Linux systems require `glibc` version 2.3 or higher. To determine your `glibc` version, run **rpm -qi glibc** in a command shell.

Linux on PowerPC (64-bit) Hardware

To ensure that the AccuRev Installation Wizard and the AccuRev GUI client program pick up the correct Java runtime libraries:

- Set environment variable JAVA_HOME to the full pathname of the machine's Java installation directory. This must be the Java implementation provided by IBM for the PowerPC 64-bit Linux environment.

- Start the AccuRev Installation Wizard with this command line:

```
sh ./AccuRevInstall.bin LAX_VM <path-to-java-interpreter>
```

<path-to-java-interpreter> is the full pathname of the Java interpreter under JAVA_HOME.

- Start the AccuRev GUI in a similar manner:

```
cd <AccuRev-bin-directory>
sh ./acgui LAX_VM <path-to-java-interpreter>
```

- For important information on AccuRev and 64-bit Linux configurations, please contact *support@accurev.com*.

AccuRev 4.7.4b Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.4b. This release is a mandatory upgrade to AccuRev 4.7.4.

Issues Fixed

15348

> The performance of **accurev backup mark** has been improved by no longer including the **stream.ndx** or **stream_by_num.ndx** files. However, it is critical that when you restore the repository that you perform a **maintain reindex** command after any **maintain restore** command. See "The AccuRev Repository" and "The 'maintain' Utility" sections of the *AccuRev Administrator's Guide* for details about using the **accurev backup mark** and **maintain** commands.

21030

> The change introduced for issue **20733** in AccuRev 4.7.4 has been retracted. Promoting by transaction or issue from a stream now works the same way it did prior to Release 4.7.4.

AccuRev 4.7.4 Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.4.

Added Platform Support

AccuRev 4.7.4 has added support for Microsoft Windows 7.

Issues Fixed

15618

When the transaction-level integration between AccuRev and AccuWork is enabled, the **server-preop-trig** trigger is no longer passed the wrong issue number when the user enters an issue number that was not part of the default query.

Note: this issue did not affect the change-package-level integration or the AccuRev CLI.

18961

Promoting issues to a stream by dragging the default group box now promotes all issues in the default group.

19581

Removing an external symbolic link in a workspace now removes only the link.

20374

Update of an inconsistent workspace (caused by a failed workspace rename using the **chws** command) no longer causes a server crash.

20541

The **update** command will no longer result in files with status **(missing)** under certain complex conditions.

20549

Cross-linked files marked as **(stale)** will now update correctly. Previously, a cross-link would not be updated if the workspace had cross-links that pointed to time-based streams or snapshots under certain complex conditions.

20611

In the AccuRev GUI, reverting by change package when the change package contains a new file no longer causes the GUI to become unresponsive.

20693

Purging a file in an inconsistent workspace no longer causes a server crash. (See description of 'inconsistent workspace' in issue 20374, above.)

20696

A potential database deadlocking issue involving the **incl**, **excl**, and **chstream** commands has been resolved.

20733

Promoting by transaction or issue from a stream now promotes only the items that are not already in the destination stream.

20785, 20792

Session files for persistent logins on a replica server using MASTER_AUTHENTICATES_LOGIN now persist correctly through a server crash or restart cycle.

20835

A memory leak which manifested when multiple **update** commands were manually interrupted has been fixed.

20844

A server deadlock which sometimes occurred during log rotation when the system was under high load has been fixed.

20852

The **update** command will no longer fail due to evil-twin elements caused by cross-links.

AccuRev 4.7.3 Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.3.

Principal Enhancements

Display of Incomplete Issues in Stream Issues

(7834, 14773, 17779) The AccuRev GUI can now obtain a list of all complete and incomplete issues. (An issue is *incomplete* when some, but not all, of its change package entries are in the stream.)

Incomplete issues are shown in grey on the Stream Issues tab, and in default groups in the StreamBrowser in Stream Issue mode.

The Stream Issues tab in the AccuRev GUI can filter issues by whether they are complete or incomplete. The list of issues shown on the tab now includes all issues by default; unselect the *Include Incomplete Issues* checkbox to show only complete issues.
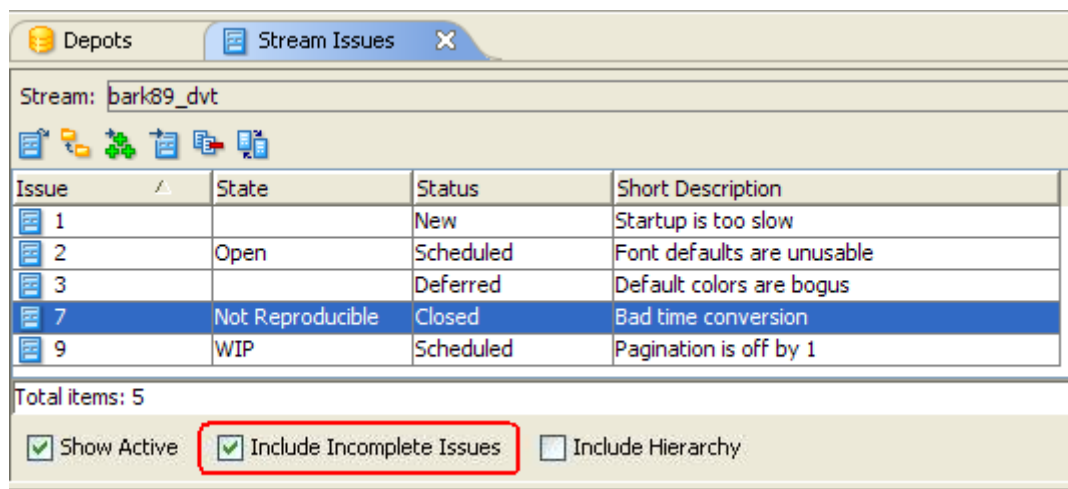
Improved Replica Authentication

(19261, 19686) Prior to V4.7.3, there were several issues with replica authentication:

- Any authentication scheme on the master was only as trustworthy as the security of all the replica servers. For example, someone could change the authentication mode of a replica server, allowing users to log in as anyone with no password.

- The security environment may not be trustworthy at the replica site (LDAP triggers at the replica may not be trusted, or the administrator might not want to store LDAP server logins at the replica.)

The changes to replica authentication allow sites using replication to deploy replicas to sites they may not trust to do user authentication, by allowing user authentication to be performed on the master server only.

A new parameter called MASTER_AUTHENTICATES_LOGIN has been made available for use in the **acserver.cnf** file on the master server.

- If this parameter is set to **true**, user authentication is performed on the master server only. The master and replica servers must have the same authentication method. Only the *accurev_login* or *custom* authentication methods are allowed. The replica server must be able to contact the master server to log in; if the connection fails, the login fails.

  To change the authentication method, change and restart the master server first, then change and restart all replicas.

- If this parameter is set to **false**, user authentication can be performed on the replica, as before.

After changing the value of the parameter, restart the master server.

> *Important! You must upgrade your organization's master servers to V4.7.3 first, before upgrading any replicas. If this order of installation is not observed, you will not be able to log on to the upgraded replica servers.*

As a result of these changes, the XML input to the **server_auth_trig** script has changed to add **server** and **port** elements, which should contain the hostname and port of the master server:

```
<triggerInput>
   ...XML input unchanged from prior version...
   <server>myserver</servers>
   <port>5050</port>
</triggerInput>
```

Remove Storage Containers on a Replica Server

(19633) There is a new command (**accurev replica archive**) used to remove unused container files from the depot's **storage** directory on a replica server.

```
accurev replica -t <transaction-range> [ -i ] [ -fx ] [ -p <depot-name> ]
     archive
```

The **–t** option specifies a transaction range. The command looks for **archive** transactions in that range and physically removes the container files of all the versions on the replica associated with those archive transactions.

The **–i** option lists the versions that would be archived (in XML format), but doesn't actually archive them. For example:

```
<transactions>
  <transaction
    id="15"
    type="archive">
    <elements>
      <e
        id="2"
        r="2/5"
```

```
         location="/file1.txt"
      <e
        id="2"
        r="2/6"
        location="/file1.txt"
    </elements>
  </transaction>
</transactions>
```

The **–fx** option displays the results in XML format.

The **–p** option specifies the depot to use (default: the depot of the current workspace). If the **–p** option is not specified, you must be in a workspace.

The **accurev replica archive** command activates the **server_preop_trig** trigger with a **replica_archive** command. The command lists each element for which the storage container was removed. For example:

```
Removing storage for element /file1.txt (2/5)
Removing storage for element /file1.txt (2/6)
```

Filter Issues on Promote

(19879) The Select Issue dialog that appears when you promote by issue now has the ability to filter the issues shown according to a text search. Type the search terms into the O*nly show issues that contain* field, and press the Enter key to filter the issues. To remove the filter, delete the text from the field and press the Enter key.
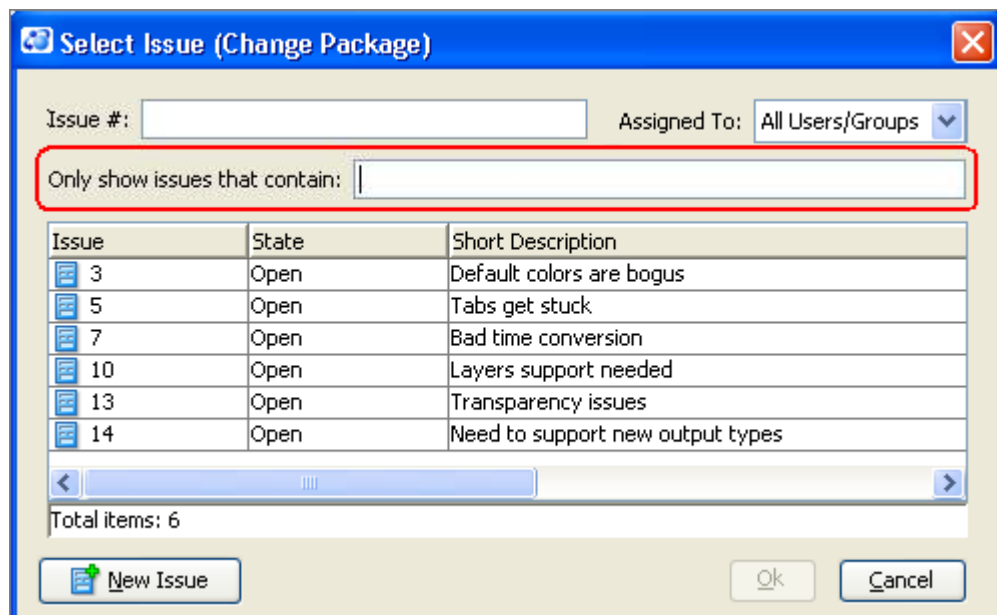
Technical Note

AccuRev Server Changes

(19120, 19673, 19674) The AccuRev Server has been changed to eliminate the likelihood of AccuRev commands blocking each other and causing perceived "server hangs".

Prior to this version:

- The **purge** command sent files to the client while holding a server lock that blocked other write requests. In organizations with slow networks or large files this behavior translated to long delays while the server was blocked.

- Large **add** and **keep** commands (affecting thousands of files) also blocked write operations.

- If a **chstream** or **chws** command (among others) was issued while any of these three commands were in progress, *all* operations were blocked until the **add**, **keep**, or **purge** completed, resulting in an unresponsive server.

Version 4.7.3 introduces changes so that the **purge** command no longer holds a server lock, and the "blocking" commands (such as **chstream** or **chws**) no longer block read-only requests (such as **accurev info**) when waiting on a lengthy **add**, **keep**, or **purge** command.

Issues Fixed

7834

See *Display of Incomplete Issues in Stream Issues* on page 13.

10414

When viewing a workspace in the AccuRev GUI, the choice to select or unselect the Time Optimization checkbox is now workspace-wide (previously the scope of this choice had been limited to a single directory).

11743

The **accurev remove** command now supports terminating all login sessions for a named user:

```
accurev remove sessions <user-name>
```

This command will go through the **server_admin_trig** trigger, where restrictions can be placed on who can execute it.

Unlike other items which can be removed with the **accurev remove** command, once the login sessions are removed, they cannot be reactivated. The user whose sessions have been removed can log in again as needed, as long as they are otherwise allowed to by the system.

13550

The **accurev revert** command will now allow any version to be reverted. If you revert the first version in a stream, the element is defuncted.

14731

The AccuRev GUI now supports logging XML commands that are sent via the **accurev xml** command. Each logged command is saved in a file in a temporary directory under the user's home directory. The preference is set as follows:

```
accurev setpref AC_KEEP_TMP_FILES true
```

14773

The Stream Issues tab in the AccuRev GUI can filter issues by whether they are complete or incomplete. The list of issues shown on the tab now includes all issues by default. See *Display of Incomplete Issues in Stream Issues* on page 13.

16404

Undefuncting a directory containing both elinks and subdirectories no longer causes an error when running **accurev update**.

17779

Incomplete issues are now shown in grey on the Stream Issue tab and in default groups in the StreamBrowser (when in Stream Issue Mode). See *Display of Incomplete Issues in Stream Issues* on page 13.

18372

A "some files were busy" message no longer occurs when the user runs **accurev update** on a system where the workspace and AccuRev server are on separate physical hard drives. If you are currently encountering this message, delete the **.accurev/ac_tmp_map.txt** file in your home directory.

19120, 19673, 19674

The AccuRev Server has been changed to eliminate the likelihood of AccuRev commands blocking each other and causing perceived "server hangs". See *AccuRev Server Changes* on page 16.

19133

Changing the time basis on a child stream through the GUI no longer fails when its backing stream has inherited an ACL set to 'none' for all users and the child stream has an ACL set to 'all'.

19261, 19686

An AccuRev Server running replication can now be configured to authenticate users only at the master. See *Improved Replica Authentication* on page 13.

19575

Running **accurev update** on a reparented workspace containing cross-links with **(modified) (overlap)** status no longer fails.

19633

The **accurev replica archive** command is now available to remove unused storage containers from a replica server:

```
accurev replica -t <transaction-range> [ -i ] [ -fx ] [ -p <depot-name> ]
    archive
```

See *Remove Storage Containers on a Replica Server* on page 14 for more information.

19845

Running **accurev update** on a reparented workspace no longer fails with an error indicating an **(external)** status file — which is actually **(backed)** in the workspace.

19879

The Select Issue dialog that appears on promote now has the ability to filter the issues shown according to a text string. (This dialog appears when change-package-level integration has been configured.) See *Filter Issues on Promote* on page 15.

19887

The **server_post_promote** trigger now correctly handles the source stream when promoting by issue. There are two new tags in the trigger parameters file. These tags appear directly after the **stream1** parameter:

Parameter	Description
source_stream	Name of the stream the versions were promoted from.
dest_stream	Name of the stream the versions were promoted to.

19888

The **accurev diff** command now correctly passes the flags specified by *-- <diff-utility-flags>* when running on Microsoft Windows.

19976

The **accurev update** command now considers symlink files to be "recently touched" only if the linked file has changed.

19988

A file handle leak from failed **accurev replica sync** requests has been fixed.

20017

The **accurev update** command no longer considers ignored directories to be "recently touched".

20025

The AccuRev server no longer crashes or hangs due to insufficient stack space on the AIX platform. (The issue was observed when using the **accurev promote**, **annotate**, and **issuelist** commands.)

20115

The **accurev diff** command now uses less memory when comparing two streams that have many cross-links.

20126

The **accurev update** command now has reduced memory usage for updates in workspaces containing cross-links.

20131

The **accurev update** command no longer fails with a "busy files" error when a directory is removed during the update and the files under it get updated.

20138

The AccuRev GUI now correctly handles newlines when displaying messages passed from the **client_dispatch_custom_promote** trigger.

20210

Files in a cross-linked directory now correctly appear after changing a cross-link rule to point at a dynamic or pass-through stream that is a child of a snapshot.

20275

The **accurev archive –i** option now returns correctly-formed XML, correcting a missing **</infoOnly>** tag.

20342

Implemented changes to prevent certain cases of false change package coalescing failures.

20353

The **accurev diff –c** and **accurev diff -- –u** commands now correctly report file names relative to the top of the workspace for use with the Unix **patch** command. Previously these command options had returned temporary file names (***.tmp**) or absolute path names.

AccuRev 4.7.2a Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.2a. This release was a mandatory upgrade to AccuRev 4.7.2.

Issues Fixed

19710

The **stat** and **pop** commands now correctly show all relevant cross-link elements, even if multiple cross-link rules were set in one transaction.

19644

Corrected a condition where **promote** appeared to hang when a file that had been renamed had change package conflicts.

19640

Improved the speed of showing issue dependencies.

19739

The AccuRev CLI now correctly recognizes an NFS mount if the local and host paths are the same.

AccuRev 4.7.2 Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.2.

Principal Enhancements

Performance Improvements

AccuRev 4.7.2 contains performance improvements in the following areas. Please refer to the *Issues Fixed* section for descriptions of individual issues.

- **accurev update** – See issues *19066*, *19188*, *19234*, *19494*, and *19501*.

- **accurev stat** – See issues *19066* and *19188*.

- **accurev pop** – See issues *19188* and *19494*.

- **accurev hist -e** and Version Browser – See issue *19202*.

- **accurev diff** – See issues *19234* and *19501*.

- AccuRev Server startup – See issue *19482*.

Include from Stream Dialog Allows Filtering

(17663) The dialog shown when creating cross-links (via the **Include from Stream** command available from the context menu in the File Browser details pane when in Include/Exclude mode) now includes a toolbar used to filter the streams shown in the dialog.
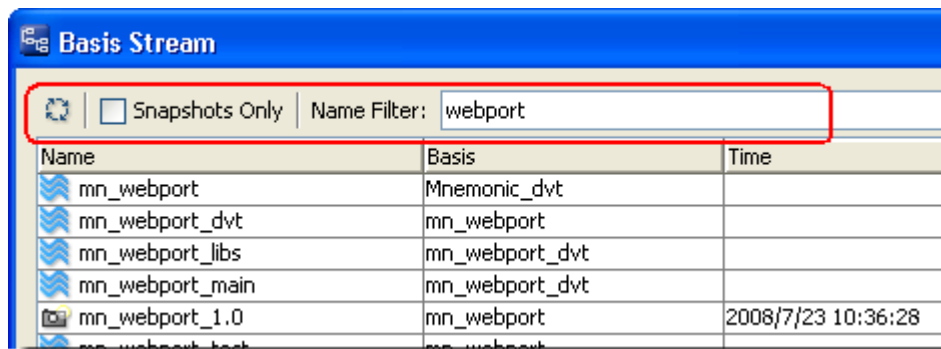
- The **Refresh** button contacts the AccuRev Server to refresh the list of streams shown.

- The *Snapshots Only* checkbox restricts the streams shown to snapshot streams only. This setting (as well as the sort order of the columns in the dialog) is stored as a preference.

- The *Name Filter* field filters the streams shown using the text you enter in the field. If the stream name contains the text entered in this field, the stream appears. Otherwise, it is filtered out and does not appear.

In addition, if the **Include from Stream** command is invoked on an existing cross-link to change its basis stream, that basis stream is highlighted in the dialog.

Diff of a Stream Between Two Transactions

(6245) The **accurev diff** command now supports diff of a stream between two transactions, using the **–t** option (**–t** *<transaction-1>-<transaction-2>*). The new stream diff syntax is:

```
accurev diff -a -i -v <stream-spec-1> -V <stream-spec-2>
   [ -t <transaction-1>-<transaction-2> ]
```

The same stream must be specified in the **–v** and **–V** options, and no element list can be provided. You may need to use quotes in composing the argument following **–t**; as the entire argument must be interpreted by the command shell as a single token. Each transaction is specified as a positive integer (for example, **1834** or **23965**).

Expanded Transaction History Output

(17050) The XML output of the **accurev hist** command now includes more information on changes to streams and include/exclude rules. Specifically, the `transaction` element now contains a `stream` element, which is structured as follows:

```
<stream
    name="stream name"
    streamNumber="stream number"
    depotName="depot name"
    *time="snapshot time or time basis"
    type="stream type: workspace, passthrough, snapshot, or normal"
    basis="name of the basis stream"
    basisStreamNumber="number of the basis stream"
    *prevTime="previous time basis, if the time basis has been changed"
    *prevName="previous stream name, if the stream has been renamed"
    *prevHidden="true (if the stream has been reactivated) or false (if the stream has been hidden)"
    *prevBasis="name of previous basis stream, if the stream has been reparented"
    *prevBasisStreamNumber="number of previous basis stream, if the stream has been reparented">
    *<wspace -- this element appears if the transaction involves a workspace
        Storage="path to the workspace on disk"
        Host="hostname of the machine the workspace is located on"
        Target_trans="most recent transaction at the time of the workspace's last update"
        fileModTime="time the file was modified"
        EOL="the workspace's end-of-line type"
        Type="the workspace's lock type" />
</stream>
```

> *Important! Elements and attributes marked with an asterisk are optional, and only appear in the XML output if the transaction involved specific AccuRev operations. For example, the* `prevBasis` *and* `prevBasisStreamNumber` *attributes will only appear if the transaction involved reparenting a stream.*

The XML output of the **accurev hist** command will also show this information for streams created (`transaction type="mkstream"`) *after* installing version 4.7.2.

In addition, the `comp-rule` element will contain some or all of the following new attributes for transactions that involve creating or modifying cross-links:

```
xlinkStreamNum="stream number of the cross-linked stream"
xlinkStreamName="stream name of the cross-linked stream"
prevXlinkStreamNum="stream number of the previous cross-linked stream"
prevXlinkStreamName="stream name of the previous cross-linked stream"
```

Show Include/Exclude Rules at a Point in Time

(17886) The **accurev lsrules** command now supports the **–t <*time-spec*>** option. The new syntax is:

```
accurev lsrules [ -s <stream> ] [ -d | -R ] [ -t <time-spec> ]
    [ -f <format(s)> ]
```

–t <time-spec>

> Show the rules that existed as of the specified time. A *time-spec* can be any of the following:
>
> • Time in <YYYY/MM/DD HH:MM:SS> format: e.g. **2004/06/07 20:27:15**
>
> • Time keyword: **now**
>
> • Transaction number as a positive integer: e.g. **146** or **23965**
>
> • Transaction number keyword: **highest**

Usage Notes

The following sections describe situations that are not discussed elsewhere in the AccuRev documentation. Some of these situations involve known defects in AccuRev processing.

Restrictions on the Use of AccuRev in Solaris Zones

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

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

2. 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.

3. Workspaces in the non-global one can not be used from the global zone.

4. 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 for the site or depots.

Patching from the Change Palette

(18832) There is a new action **Send To > Change Palette (Changes)** available on the context menu in the Versions pane of the History Browser. Use this command to send the selected versions to the Change Palette along with their basis version information. Versions sent to the Change Palette using this command will allow the **Patch** command to operate properly.

The online help for the History Browser should replace the description of the **Send to Change Palette** command with the following text:

Send to Change Palette

(dynamic stream only) Load the selected versions into the Change Palette, so that they can be merged and promoted to other streams.

Send to Change Palette (Changes)

(dynamic stream only) Load the selected versions into the Change Palette, so that they can be patched to other streams.

Clarification of Option Usage in the AccuRev Promote Command

(18501) When promoting via the CLI, the **–k** and **–l** ("dash-ell") options conflict and should not be used together. The **–k** and **–l** options should appear as follows in the *CLI User's Guide*:

–k   Selects all kept elements. (Not valid with **–s** or **–l**.)

–l *<list-file>*

Process the elements listed in *<list-file>*. This must be a text file, with one element name per line. Extra whitespace is not allowed; make sure there are no empty lines and no leading or trailing white space around the filenames. There is no provision for comment lines in a list-file.

If you use this option, you cannot also specify **–k** or an *<element-list>*.

Issues Fixed

6245

The **accurev diff** command now supports diff of a stream between two transactions, using the **–t** option (**–t** *<transaction-1>-<transaction-2>*). See *Diff of a Stream Between Two Transactions* on page 22.

17050

The **accurev hist** command now includes more information on changes to streams, include/ exclude rules, and cross-links. See *Expanded Transaction History Output* on page 22.

*Important! If you have been parsing the XML output from the **hist** command, you will need to check that you are getting the correct <stream> tag, since that tag now appears within both the <transaction> and the <streams> tags.*

17663

The dialog shown by the **Include from Stream** command (available the context menu in the File Browser details pane when in Include/Exclude mode) now includes filtering capabilities. See *Include from Stream Dialog Allows Filtering* on page 21.

17886

The **accurev lsrules** command now supports the **–t** *<time-spec>* option. See *Show Include/ Exclude Rules at a Point in Time* on page 23.

18501

When promoting via the CLI, the **–k** and **–l** ("dash-ell") options conflict and should not be used together. See *Clarification of Option Usage in the AccuRev Promote Command* on page 24.

18670

For AccuRev installations using custom authentication, passwords with a length that is a multiple of 16 will now function normally.

18716

AccuRev now exhibits improved handling of workspaces located on `lofs` mounts in non-global Solaris zones. See *Restrictions on the Use of AccuRev in Solaris Zones* on page 23.

18832

Added new action **Send To > Change Palette (Changes)** to the available commands in the Versions pane of the History Browser. See *Patching from the Change Palette* on page 24.

18915

The display of change packages that are partially in the stream is now highlighted correctly in the Stream Issues tab.

19066

The **accurev update** command was modified so that the initial update will set appropriate file modification times on updated files. Subsequent **accurev update** or **accurev stat** commands will not calculate file checksums, thus improving the performance of these commands.

19165

Comments in the **server_admin_trig** trigger were updated to indicate that the trigger will fire twice when the user reparents a stream.

19188

AccuRev now exhibits improved performance for the initial **update**, **pop**, and **stat** commands in streams and workspaces that contain large numbers of cross-linked elements.

19197

Corrected a condition in which running the **accurev diff** command would cause a client-server communications failure ("Error 6").

19202

AccuRev now exhibits improved performance for the **accurev hist -e** command and when opening the version browser in the AccuRev GUI, in depots that have include/exclude/cross-link rules.

19234

AccuRev now exhibits improved performance for stream diff (**accurev diff -a -i -v *<stream1>* -V *<stream2>*)** and **accurev update** commands in streams that have include/exclude rules.

19253

The stream ID is now stored in the database when a **mkstream** transaction is created. This was done so that additional information could be displayed as part of issue 17050. Please note that streams and workspaces created prior to installing version 4.7.2 will not display this additional stream information as part of the **accurev hist** command.

19255

Cross-promoting an issue whose change package includes binary elements is now possible using the AccuRev GUI.

19299

AccuRev manuals available from the **Help > Manuals** command in the AccuRev GUI should now have properly functioning cross-document links. The content of these manuals has not changed.

19376

Fixed an error condition in which AccuRev would display a *No name found for eid* error during a merge in the GUI.

19387

The **accurev stat -O** command now works as described.

19450

The **Merge** command in the AccuRev GUI no longer fails with a permissions error when the current version originates from a stream that had an ACL set to prohibit the user from accessing it.

19461

Fixed a server crash that happened when issuing **accurev stat** commands in streams and workspaces that contained circular cross-links.

19482

Removed a time delay in AccuRev Server startup introduced in version 4.7.1.

19494

The **accurev pop** and **accurev update** commands now exhibit improved handling of Windows files located on network file systems.

19495

The **accurev stat** and **accurev update** commands no longer cause memory leaks when canceled by the user.

19501

AccuRev now exhibits improved performance for stream diff (**accurev diff -a -i -v** *<stream1>* **-V** *<stream2>*) and **accurev update** commands if the participating streams contain common include/exclude/cross-link rules. Greatest improvements should be seen if no rules change, diminishing as more and more rules differ between the two streams.

19520

The AccuRev Server will now clean up connections from disconnected or unresponsive clients in a timely manner.

19548

The AccuRev GUI no longer (incorrectly) indicates that the Java VM environment is too old. Any Java VM version 1.3.0 or higher should suffice.

AccuRev 4.7.1 Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.1.

Principal Enhancements

Improved Display of Issue Dependencies

(#14152, #18323) The Issue Dependencies tab (opened by the **Show Dependencies** command in a Stream Issues tab) includes an **issues pane** and a **change package contents pane**:

element that causes issue #9 to depend on issue #5
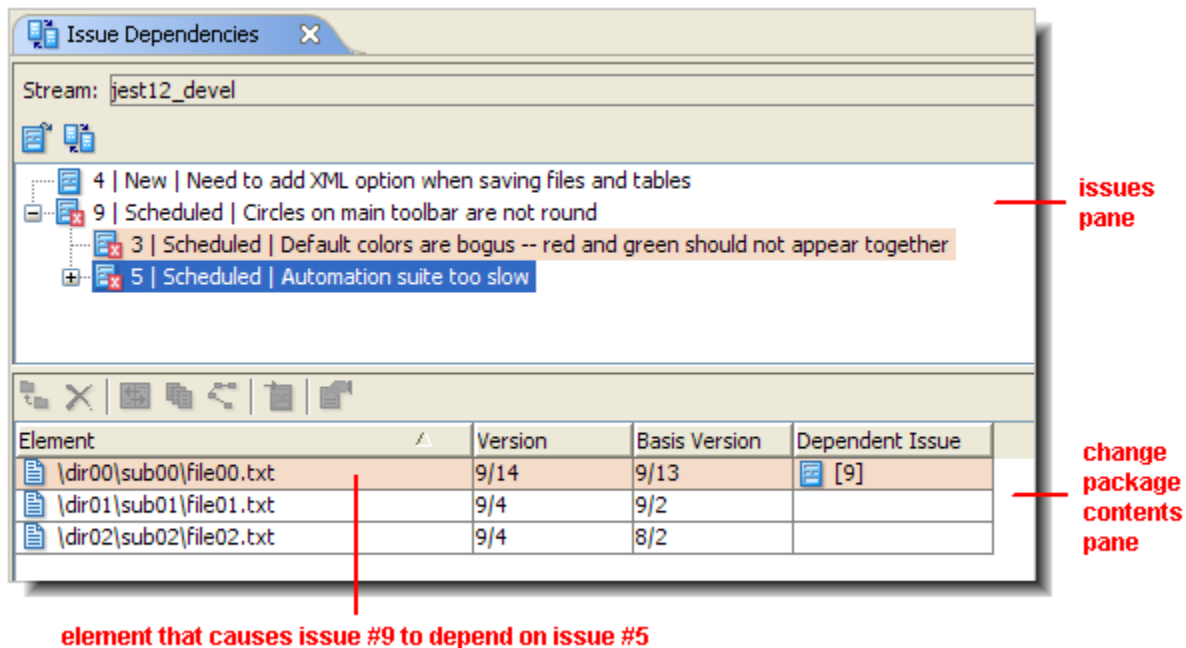
Selecting an issue in the upper pane displays its change package in the lower pane, as a table of change package entries. Each change package entry (that is, each row of the table) can now convey detailed dependency information. If an entry is causing a dependency on one or more other issues:
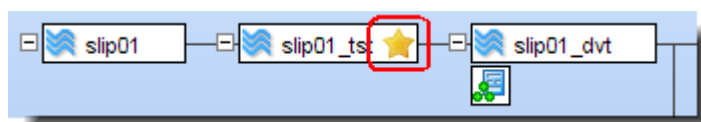
- The entire row is shaded in light brown.

- A new column, **Dependent Issue**, lists the other issue(s) whose dependence on this issue is caused, in whole or in part, by this particular entry.

If a row is unshaded, that change package entry does not cause a dependency relationship with any other issue. This means that for an issue that is a "leaf" in the issues pane's dependency tree, all the change package entries are unshaded.

Improved Indication of Stream Filter Members in Stream Browser

(#17021) In its graphical display mode, the Stream Browser uses a star icon to indicate the streams that are currently members in the stream filter.

Membership in the stream filter is now indicated in the tabular display mode, also:


Improvement to New Issue Creation during Promote Command

(#17719) If the change-package-level integration between AccuRev and AccuWork is enabled, the **Promote** command automatically displays a **Select Issue** dialog box with a list of issue records, enabling you to add the promoted versions to (the change packages of) one or more of those issue records. The issue record list is generated by running a query that was previously defined in the Change Package Triggers section of the Change Packages subtab in the Schema Editor.

The **Select Issue** dialog box includes a **New Issue** button, which creates a new issue record. If the newly created record is not selected by the Change Package Triggers query, a warning appears:
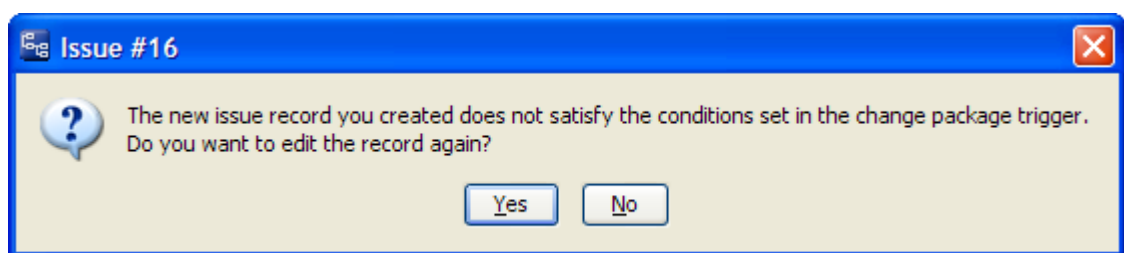
The **Select Issue** dialog box now also contains a new ![icon] control. Holding the mouse over this control displays a tooltip containing the Change Package Triggers query. This makes it easier for you to edit the issue record so that it will be selected by the query.
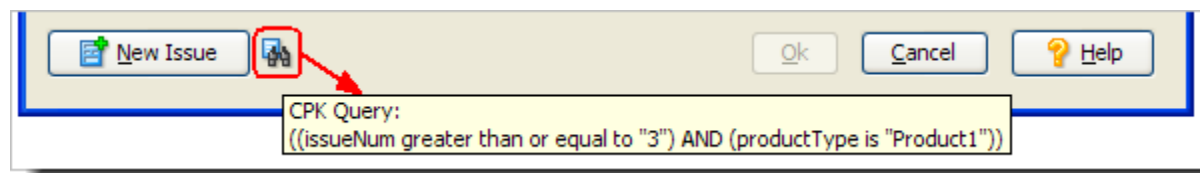
Usage Notes

The following sections describe situations that are not discussed elsewhere in the AccuRev documentation. Some of these situations involve known defects in AccuRev processing.

Change in Watchdog Processing

(#13745) In previous releases, the AccuRev Server's Watchdog process periodically checked the Server's open file handle count. But this check was not being performed in a thread-safe manner. In Version 4.7.1:

- The Watchdog no longer performs the periodic open-file-handle check.

- If the AccuRev Server is running on a Unix/Linux system, this command (invoked on any client machine) displays an open-file-handle count:

  ```
  accurev xml -l anyname.xml
  ```

  ... where **anyname.xml** contains this line:

  ```
  <serverInfo/>
  ```

- If the AccuRev Server is running on a Windows system, this **accurev xml** client command does not work. Instead, use Microsoft's **Handle** utility on the AccuRev Server machine to monitor the open file handles. (See "Process Utilities" at **http:/www.sysinternals.com**.)

Strict Enforcement of Issue Records' Read-Only Status

(#16218) In prior releases, AccuRev did not strictly enforce the read-only status of an entire issue record, or of a particular subtab (or "table") within an issue record. For example, the CLI command **cpkremove** could modify the change package of an issue record, even if a Schema Editor validation set the Changes subtab to **ro** (read-only) status. Similarly, a **Promote** command could invoke the change-package-level integration between AccuRev and AccuWork to modify issues' change packages.

Starting in AccuRev 4.7.1, read-only restrictions on part or all of an issue record are strictly enforced. This means that manual procedures and scripts that took advantage of the lax enforcement must be revised. In particular, you might need to remove **setIssuePermission** and **setTabPermission** actions on the Schema Editor's Validation subtab.

Documentation Errors

(#10964) The description of the AccuRev CLI command **promote –g** does not include the phrase "missing version", making it less useful to perform a search for this concept in the *AccuRev CLI User's Guide*.

(#18269) Page 43 of the *AccuRev Administrator's Guide* (section "Establish an AccuRev User Identity for the AccuRev Server Process" in chapter "tion of the AccuRev Repository") includes an erroneous command:

```
accurev login -n -H masthost repl43svr
```

... should be ...

```
accurev login -n -H masthost:<master-server-port> repl43svr
```

(#18302) In the "AccuRev Merge Tool" topic in the AccuRev GUI's online help system, the "Conflict Resolution Buttons" section is out-of-date and incorrect. For correct documentation, see the section "Selecting a Section from a Contributor (or Multiple Contributors)", located earlier in the same help topic.

(#18353) In the "Stream Browser" topic in the AccuRev GUI's online help system, the order in which a stream's substreams are displayed in graphical mode is described incompletely. The help topic does not mention that fact that dynamic or pass-through streams whose names begin with a capital letter appear first, sorted alphabetically.

Windows Element Name Errors with Case-Sensitive Depot

(#17373) Some Windows applications, such as Microsoft Visual Studio, can change the case of a filename without informing you — for example, from **DeliverToTheTarget.cc** to **delivertothetarget.cc**. If the file is an AccuRev element in a case-sensitive depot, such a change causes AccuRev to consider the file to be renamed, which can cause failures in such commands as **Update**.

Inconsistent Diff-Against-Backed Results in a Time-Based Stream

(#16561) If a text-file element is active in a time-based stream, the diff-against-backed command, in both the GUI and the CLI, can produce an incorrect result. Example:

```
accurev diff -v my_timed_stream -b /./foo.java
```

For the correct result, specify the backing stream by name:

```
accurev diff -v my_timed_stream -V its_backing_stream /./foo.java
```

Misleading Revert-by-Issue Situation

(#17811) When the Stream Browser is in Stream Issue Mode, the **Revert by Change Package** command is enabled in a workspace's development activity subwindow. But this command does not work, and displays a misleading error message: "you need to have at least one workspace associated with stream ...".

Workaround: (1) create a new stream between the workspace and its backing stream; (2) promote the issue to the new stream; (3) perform a **Revert by Change Package** command on that issue in the new stream.

Possible Problems with Change-Package-Level Integration in GUI

(#15257) If the change-package-level integration between AccuRev and AccuWork is enabled, the **Promote** command automatically displays a dialog box with a list of issue records, enabling you to add the promoted versions to (the change packages of) one or more of those issue records. You can specify the issue record(s) by point-and-click from the displayed list, or by typing in the

Issue # input field. The promoted version(s) are then added to the change packages of those issue records.

If a field other than the default **issueNum** is specified as the **3pty ITS Key** for the issue database (on the Schema Editor's Schema subtab), specifying issue records by typing their identifiers can lead to errors: if multiple issue records have the same identifier, AccuRev automatically adds the promoted version(s) to just one of those records — perhaps not the one you intended.

Specifying issue records by point-and-click always produces the correct results.

New Element Stranding Scenario

(#18549) The chapter "Version Control of Namespace-Related Changes" in *AccuRev Technical Notes* describes scenarios that result in one or elements becoming <u>stranded</u> — that is, not having a valid pathname in a given workspace or stream. But that chapter does not describe the following scenario:

• An element (file, directory, or link) is active in a dynamic stream.

• The dynamic stream's virtual version is a reference to a version that has been purged, so that there is no active version of the element in a higher-level stream (and no version in the depot's root stream).

The only known scenario involves promoting an active element from a dynamic stream to one of its child streams, then purging the element from the original stream.

Update to Issue Dependency Terminology

(#18463) Certain terms are not defined in the AccuRev GUI help topics that discuss issue dependencies, and issue records being "in" streams ("Streams and Issues", "The Stream Issues and Stream Diff (Issues) Tabs", "The Issue Dependencies Tab"). Nor are these terms discussed in the chapter "Notes on Promote-by-Issue" in *AccuRev Technical Notes*. These terms include:

direct, indirect

An issue record is "in" a stream <u>indirectly</u> if its versions were propagated to the stream with a promote-by-issue operation (a cross-promote, not a standard child-to-parent promote).

Any other kind of promotion causes an issue record to be "in" a stream <u>directly</u>.

incomplete

This term has the same meaning in a change-package dependency situation as in the Stream Issues tab: some, but not all, of an issue's change package entries are "in" the stream.

cyclical

In a change-package dependency display, refers to the situation which issue A depends on issue B *and* issue B depends on issue A.

coalesce

If a promote-by-issue operation (a standard child-to-parent promote, not a cross-promote) involves multiple issues whose change packages include the same element, AccuRev attempts

to combine those entries into a single, valid change package entry. This process is termed
<u>coalescing</u>. If the element's change package entries cannot be coalesced (caused, for example,
by a "gap"), the promote operation fails.

If this occurs, proceed as described in section "Cross-Promoting Issues to a Non-Parent
Stream — Patch Required" in *AccuRev Technical Notes*.

Problem with Numbering of Depot Slices

AccuRev 4.7.1 fixes an issue (issue #*17952*) that occurred only in AccuRev 4.7, causing
erroneous numbering of depot storage directories (<u>slices</u>) within the AccuRev repository. You can
determine whether this problem exists in your repository *after* upgrading the AccuRev Server
machine to Version 4.7.1:

1. Stop the AccuRev Server process.

2. Run this command:

```
maintain dbcheck
```

If there's a problem, the command output resembles this:

```
Invalid pool entry.
    Expected pool_num: 6
        Existing values pool_num: 4 hidden: 0 storage:
                C:/Program Files/AccuRev/storage/depots/d6
    Impacted projects
        project_id: 4 project_name: d4
        project_id: 6 project_name: d6
```

If you detect this problem, contact AccuRev Customer Support: 800-383-8170 or
support@accurev.com.

Issues Fixed

10881

A malformed XML-format command file, submitted with the CLI's **xml** command, no longer causes the command's AccuRev Server thread to hang.

10902

An XML-format command file with unexpected element tags, submitted with the CLI's **xml** command, no longer causes a client-server communications failure ("Error 6").

13469

The **Defunct** command now correctly removes a file from the workspace tree when the file's directory is cross-linked to another stream.

13678

In the Stream Browser, the **Show Active Issues** command is now enabled in the context menu of a snapshot.

15244

When an **Update** brings no new file versions into a workspace, AccuRev no longer performs the unnecessary operation of relinking element links.

15925, 17887

The performance of **Update** has been significantly improved for a workspace whose contents are determined, in whole or in part, by one or more cross-links.

16218

AccuRev now strictly enforces the read-only status of issue records' change packages, set in the GUI's Schema Editor (**setTabPermission** validation action for an issue record's Changes tab). See the Usage Note *Strict Enforcement of Issue Records' Read-Only Status* on page 30.

16240

The CLI command **accurev co –v –e** (specifying an element by its element-ID and specifying a particular stream) no longer crashes the AccuRev Server if the element's directory has **(defunct)** status in that stream.

17317

In the Stream Browser, a stream's previous expanded/collapsed state is now preserved when a new or changed stream filter is applied.

17516

In an AccuWork edit form, the **Export** command now creates an HTML file correctly, even if it has a related issue with a field of type **Choose** or **List** whose value is **<none selected>**.

17530

AccuRev no longer selects versions inconsistently when a directory in Stream B is cross-linked to Stream A, and element links are created in Stream A.

17869

An invalid setting for the ACCUREV_HOME environment variable no longer causes the AccuRev GUI to fail silently. Instead, an appropriate error message appears.

17928

On a Unix/Linux system, creating and updating a workspace no longer produces erroneous permissions on a directory that is an element link or a symbolic link, in cases where a higher-level directory is included in the backing stream by a cross-link.

17946

Promoting an element *out* of Stream A no longer causes an update of a reference tree based on Stream A to act as if a new version had been promoted *into* Stream A.

17952

Removing a depot (**maintain rmdepot**) no longer causes that depot's slice number to be reused when a new depot is subsequently created.

17985

AccuRev no longer has trouble locating an element whose name was previously used for another element, if the name changes took place in a renamed stream.

18066

The performance of a workspace **Update** that requires a large number of directories to be removed — due to **Defunct** operations or after reparenting to a stream with a significantly different directory structure — has been greatly improved.

18525

When invoked from the Change Palette, the **Send to Workspace** command no longer selects inappropriate element versions in certain cases. This occurred only when the Change Palette was populated from an issue-record display — for example, a Stream Issues tab.

AccuRev 4.7 Release Notes

Please read these notes to familiarize yourself with the changes in AccuRev 4.7.

## Principal Enhancements

Stream Filtering

AccuRev 4.7 contains functionality to limit the number of streams shown in the GUI to a subset of the depot's total streams. This per-depot *stream filtering* feature affects both the Stream Browser and all other areas of the GUI in which a depot's streams are listed. If your organization has depots containing thousands of streams, this filtering capability is a powerful tool to improve system performance and focus attention on just the streams you're interested in.

Example: If you are working on the **mn_webport** stream as shown in the first image below, the unfiltered Stream Browser view may seem quite cluttered. When **mn_webport** is added to the stream filter, the Stream Browser display is limited to the stream path of that stream, and all its children. (The *stream path* for a particular stream is the sequence of streams that starts at the root stream and ends at that stream.)
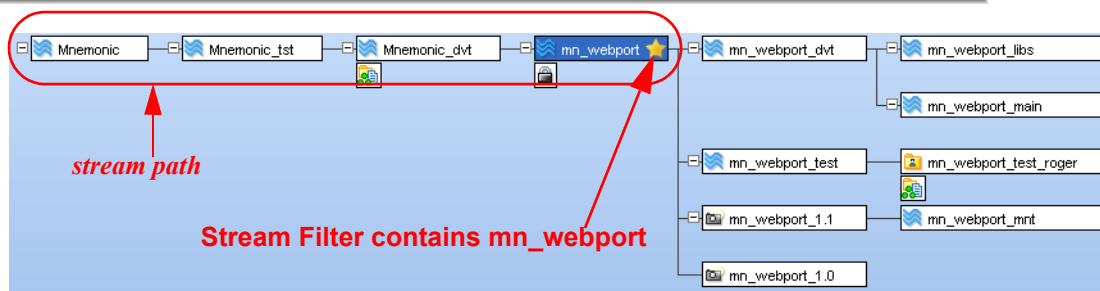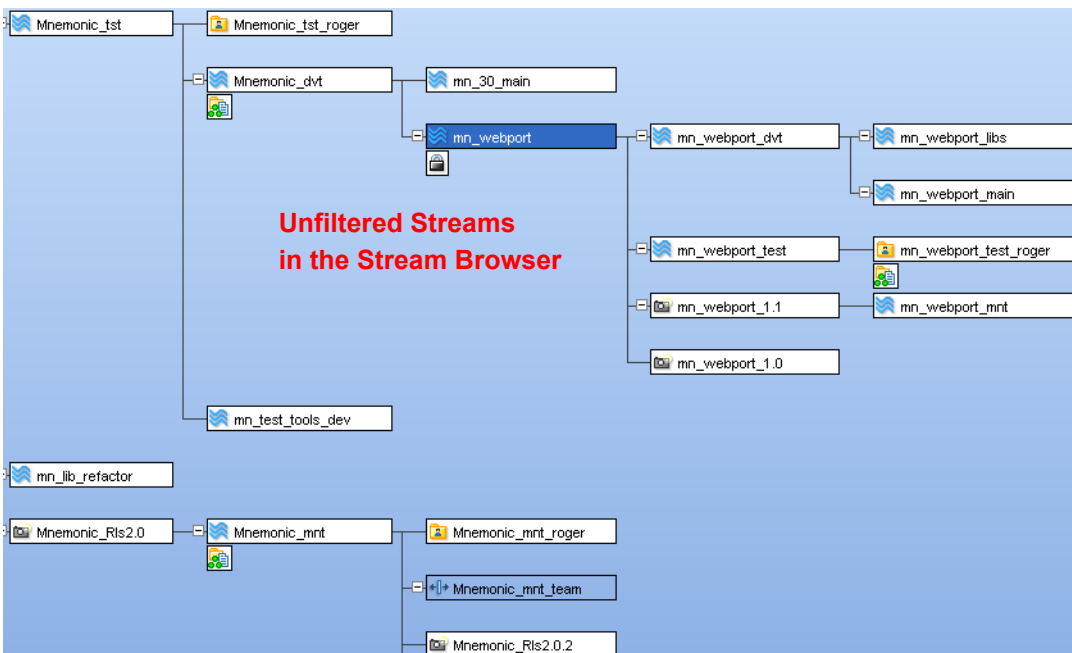
The **Filter Streams** button on the main AccuRev toolbar allows you to define which streams will be part of the filter.
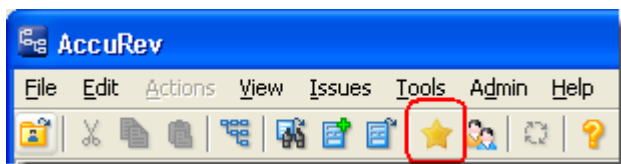
> **Note:** If the Stream Browser History display is enabled, browsing "into the past" will display all streams from that point in history, regardless of any stream filter settings.

The Stream Browser's Zoom feature has been removed from the AccuRev GUI in Version 4.7. The global stream filtering functionality is intended to provide a more robust way of limiting the number of streams available throughout the AccuRev GUI.

In addition to the GUI's global stream filtering, the Stream Browser now includes a new option, which limits the display to the stream paths that end in workspaces. The workspaces shown belong to the username that appears in the *Workspaces* field. This option applies only to streams in the Stream Browser tab.
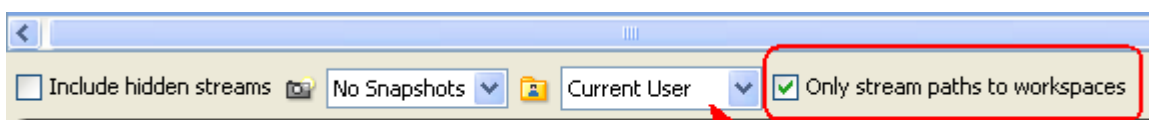
The CLI's **show streams** command has also changed to support the new stream filtering capabilities. New command options include:

- **–m**: Selects a stream if its name matches, fully or partially, a stream name specified with other options.

- **–l** ("dash-ell"): Specify stream name(s) in a file, instead of on the command line.

- **–1** ("dash-one"): Also list the immediate children of the stream(s) selected by other options.

- **–r**: List the members of the stream path above and the entire subtree below the stream(s) selected by other options.

Complete details of the changes to the **show streams** command can be found in the *AccuRev CLI User's Guide*.
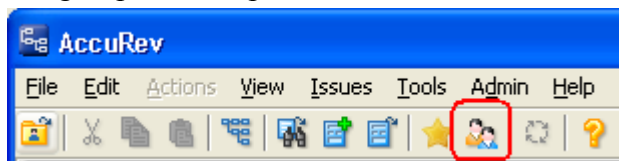
User/Group Filtering

Similar to stream filtering, AccuRev 4.7 contains *user/group filtering* functionality, which limits the set of users and groups shown in certain areas of the AccuRev GUI. This feature affects:

- The *Workspaces* drop-down list in the Stream Browser.

- The Add to Stream Filter dialog.

- All drop-down lists in AccuWork that contain user or group data (such as *Assigned to* or *Submitted by*), and throughout the workflow.

- The Select Issue dialog (when change-package-level integration is set up between AccuRev and AccuWork).

The **Filter Users/Groups** button on the main AccuRev toolbar allows you to define which users and groups will be part of the filter.


Issue Filtering by User/Group on Promote

The Change Packages tab in the Schema Editor now contains an Issue Owner Field drop-down, which lists all the AccuWork fields that contain user or group data. (These fields have type **User** in the AccuWork issue database schema.) Choosing an option from the list adds a field to the Select Issue dialog displayed by the change package trigger during a **Promote** command.
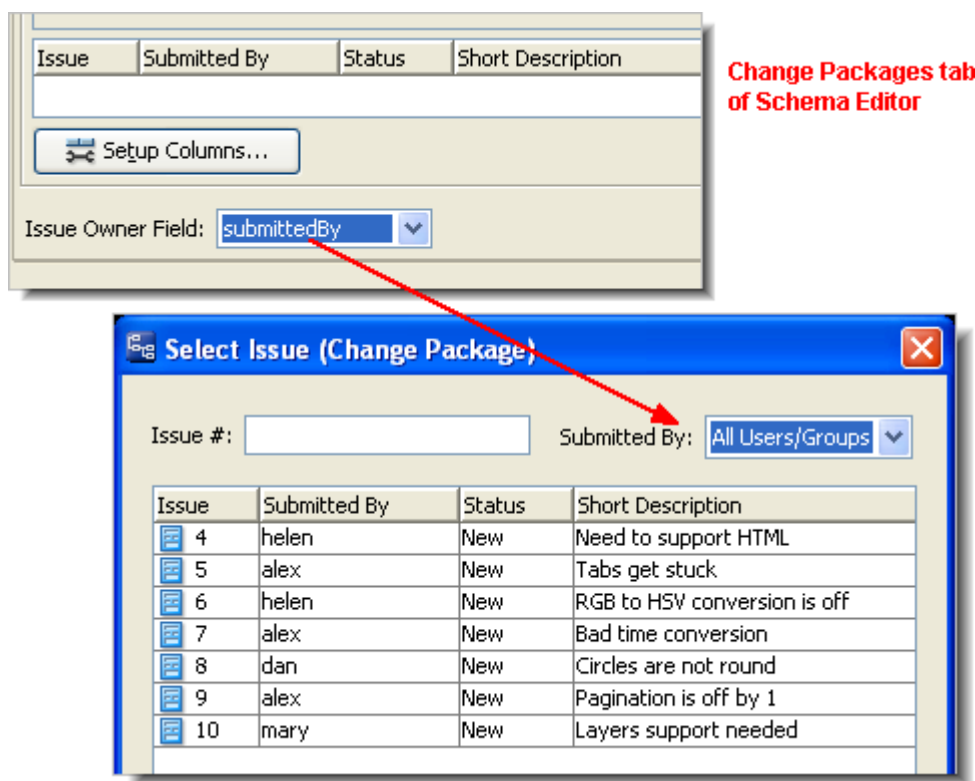
In the Select Issue dialog, you can filter the issues by any of the users and groups shown in the field (for example, issues assigned to or submitted by a certain user), and promote your changes to one of those issues.

> **Note:** If you are using a user/group filter, that filter also applies to the data shown in the Select Issue dialog.
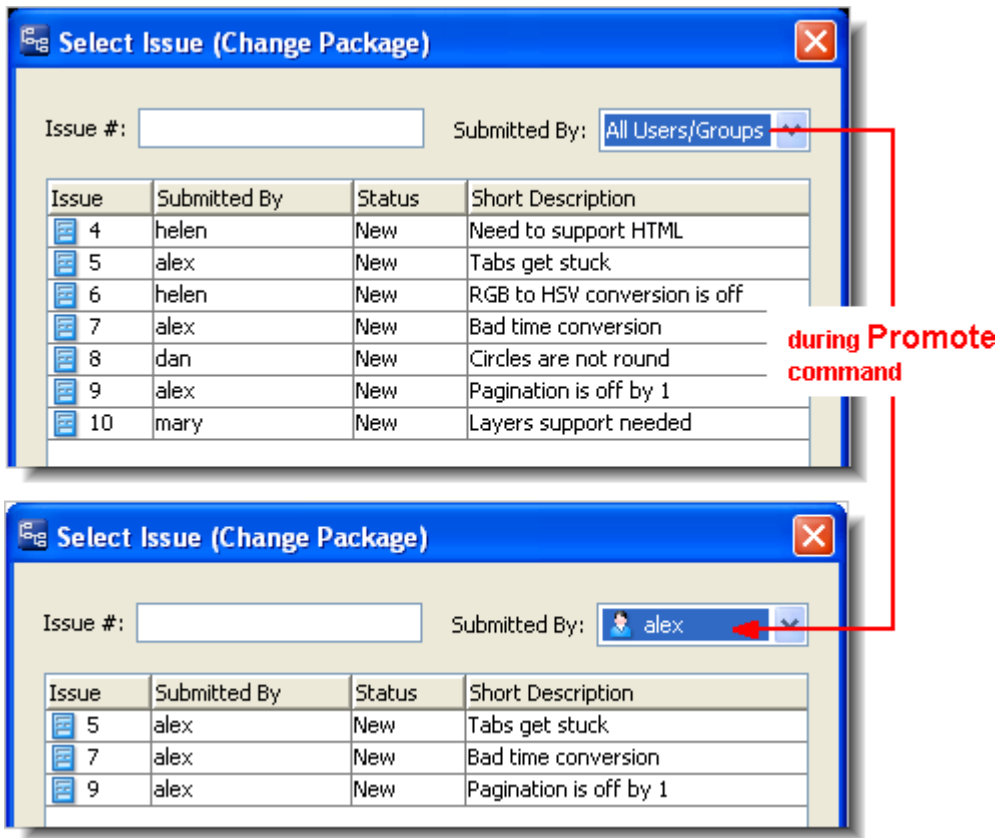
Enhanced System Performance

AccuRev 4.7 contains numerous enhancements to system performance, with special emphasis on performance in large-scale environments containing more than 100,000 streams in a depot or more than 200,000 elements in a workspace. These enhancements include:

- Improved replication performance in LAN environments.

- Improved performance on replica synchronization cycles.

- Improved performance of **stat –p**, **stat –x**, and **update** on large workspaces.

  Note: We also recommend upgrades to client machine RAM — up to 2GB — if you routinely use workspaces containing more than 100,000 elements.

- General AccuRev Server and Client performance improvements.

Relaxed Time Synchronization Requirements

AccuRev 4.7 is less demanding than previous releases in its requirement for system-clock synchronization of AccuRev client machines and AccuRev server machines. Most commands now succeed even if the system-clock "timewarp" exceeds the traditional 5-second threshold.

Only CLI client commands that use the **–t** option to specify a time (and the corresponding GUI commands) check for a timewarp. These commands use the setting of your AC_SYNC environment

variable to determine how to proceed: **ignore** (ignore the timewarp), **warn** (issue a warning), or **error** (generate an error).

In a replication environment, a warning message is recorded in the AccuRev Server log on the replica server machine for the **replica sync** command if the timewarp exceeds the 5-second threshold between the system clocks on the replica server and master server machines.

See "System Clock Synchronization" in the *AccuRev Administrator's Guide* for more information.

Integrated 4.6CC Functionality

AccuRev 4.7 and later will work properly with AccuBridge for ClearCase. Previously, AccuBridge for ClearCase was only compatible with the AccuRev 4.6CC release.

Added Platform Support

AccuRev 4.7 has added support for the following platforms:

- **Linux:** Fedora 9, Ubuntu 8.04
- **Microsoft Windows:** Windows XP (64-bit), Windows 2008 Server (32-bit and 64-bit)

Deprecated Features Announced in Version 4.7

The following sections discuss AccuRev features that are *deprecated* — they work and are supported in this release, but are scheduled to be removed from the product in a future release.

Final Supported Release for Several Platforms

AccuRev 4.7, along with any patch releases (4.7.1, 4.7.2, etc.), will be supported on the platforms listed below. However, future releases of AccuRev will not be supported on these platforms:

- Red Hat Enterprise Linux 3
- SUSE 9.3
- Fedora Core 6
- Fedora 7
- Ubuntu 6.x
- Microsoft Windows 2000

Issues Fixed

3430

See *Enhanced System Performance* on page 39.

8782

See *Stream Filtering* on page 36.

8962

Two conditions under which a stream cannot have include/exclude rules (if the stream is a snapshot, or if it has an "All" lock) now have separate error messages.

13721

See *Relaxed Time Synchronization Requirements* on page 39.

13990

Entering comments longer than 4KB is now supported.

14922, 17336

Using the Windows **subst** command to define part of the path to a workspace no longer causes errors in detecting whether the current working directory is in a workspace.

15838

Issuing a **promote** command with both the **–k** and **–p** options now produces an error message stating that those two options are incompatible.

15905

The **chws** command has been altered so that it no longer blocks other commands from being executed when used in an environment under heavy server load.

15969

See *Enhanced System Performance* on page 39.

15998

Attempting to revert a valid transaction now works properly when the AC_MERGE_CLI environment variable is set.

16265

Errors returned from a third-party merge tool specified with AC_MERGE_CLI no longer cause AccuRev protocol errors.

16418

Persistent logins (**login –n**) using custom authentication mode now survive a restart of the AccuRev Service.

16421

The master server will not check for sufficient licenses when processing requests from a replica sever. This addresses a condition that occurred when the license had changed and was updated on the replica server but not the master server.

16435

In cases where promote-by-issue fails due to the issue having indirect state, the AccuRev GUI will now prompt the user to promote the tracking issue. (Previously the command would produce an error message.) See "Working with the Tracking Issue" in the *AccuRev Technical Notes* for more information.

16504

Display issues have been corrected on the New Workspace dialog. This issue applied to Solaris systems only.

16551

The **–T** option now operates correctly for replica servers.

16585

Example trigger scripts shipped with AccuRev have been fixed so that the list of Affected Files is reported correctly.

16611

If you right-click a stream in the Stream Browser to begin a command such as **Reparent**, the AccuRev GUI now correctly remembers that stream regardless of subsequent commands that might change the selection.

16631

The **login** command no longer expands wildcards in the user name and password arguments.

16767

Workspace move, rename, or defunct operations will no longer cause files to vanish from the workspace upon update.

16914

The **pop** command has been altered so that if it is terminated due to issues like buffer space or shutdown of the client process on the machine running the command, it can no longer crash the AccuRev Server.

16929

See *Enhanced System Performance* on page 39.

16952

Promote-by-transaction on a transaction containing **(stranded)** files will now happen correctly.

16991

See *User/Group Filtering* on page 37.

17027

The **hist –s** command now performs correctly when invoked on an element cross-linked from one stream to another.

17220

The SERVER_HOSTNAME and SERVER_PORT settings in the configuration file used for unattended installation now set the correct values in **acclient.cnf** during installation. See *Unix/Linux: Unattended Installation* on page 6.

17235

Attempting to check out an **(excluded)** element by element-ID will no longer result in an AccuRev Server communication error.

17251

See *Relaxed Time Synchronization Requirements* on page 39.