

# AccuRev

The TimeSafe<sup>®</sup> Configuration Management System

## **AccuRev Installation and Release Notes**

**Version 4.7**

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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*.

## 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
<b>installer-loc</b>	

- 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 systems.

Proceed to the appropriate section below:

- *Quick Start: Upgrading an Existing 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*

## Quick Start: Upgrading an Existing Installation

Upgrading a machine from an earlier AccuRev release is easy; just run the installer, choose the **Typical** option, and respond to the prompts. You are not required 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. Upgrading the AccuRev Server machine automatically upgrades the data repository to the new release level. Since the upgrade is a one-way process, you are advised to back up the data repository before upgrading.

### Upgrading to AccuRev 4.7

When you upgrade to AccuRev 4.7, you must upgrade the machine that runs the AccuRev Server software, along with all the machines that run the AccuRev Client software, at the same time.

## Installing or Upgrading an AccuRev Client

Use the instructions in this section if you are installing or upgrading AccuRev Client software on any operating system.

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 *Ns*):

```
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 *Ns*):

```
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: /apps/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 /apps/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.

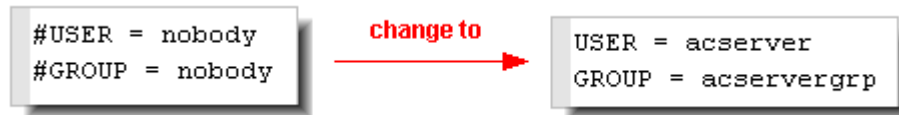
## Starting the AccuRev Server Automatically

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:

```
/apps/accurev/bin/acserverctl start  
/apps/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 (`/apps/accurev/bin/acserver.cnf`) as follows:



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:

```
/apps/accurev/bin/acserverctl stop
```

3. Become the **root** user.
4. Using the files in directory `/apps/accurev/extras/unix`, set up the boot-time scripts to start the AccuRev Server.
5. Reboot the machine.

## Upgrading an AccuRev Server

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 section *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:

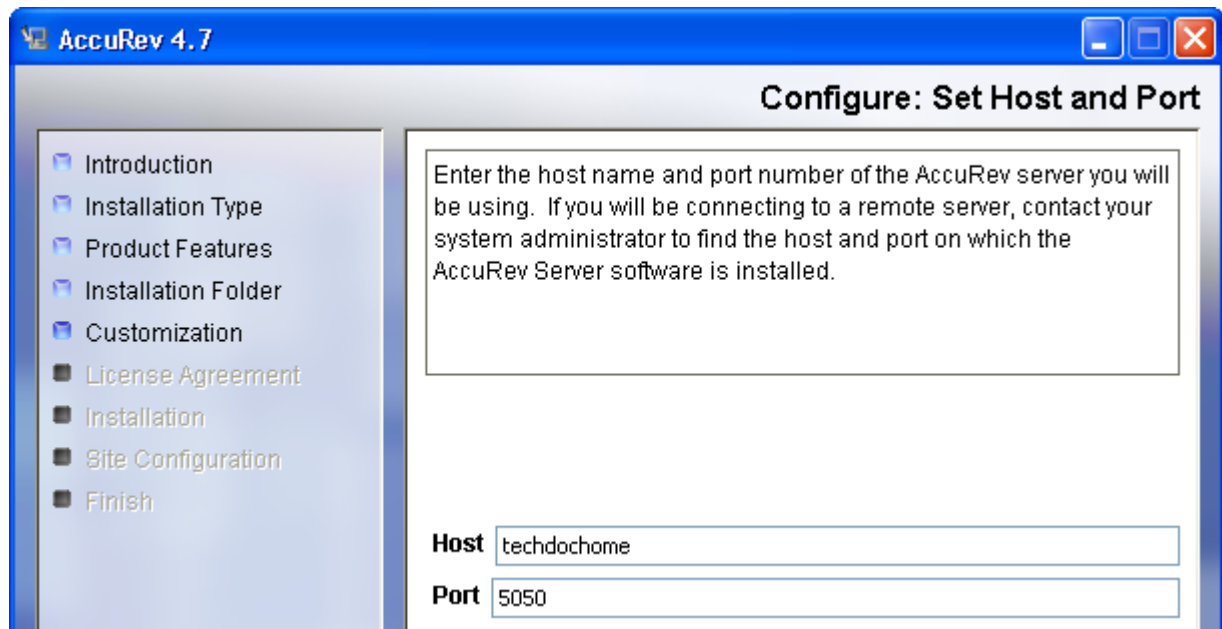
```
cd <AccuRev-bin-directory>
```

```
./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 fully 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.

### 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.

## 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 **/apps/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 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>
```

# AccuRev Release Notes

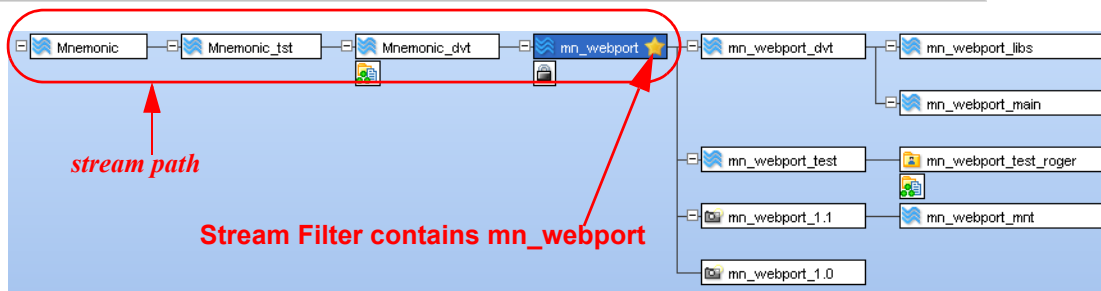
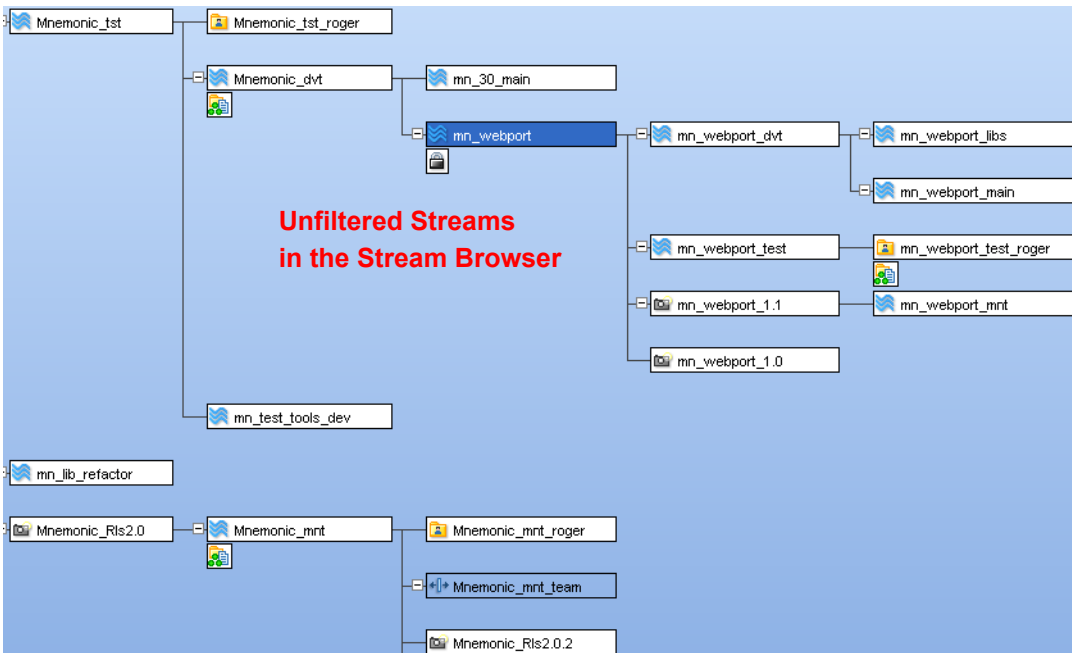
Please read these notes to familiarize yourself with the changes in AccuRev for Version 4.7.

## Principal Enhancements in Version 4.7

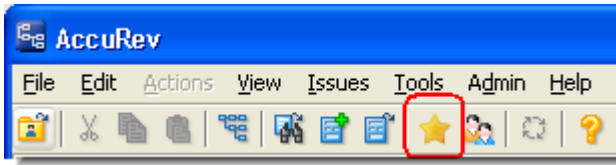
### Stream Filtering

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.



Shows workspaces for this user

The CLI’s **show streams** command has also changed to support the new stream filtering capabilities. New command options include:

- **-m**: Search for streams by specifying a part of the stream name.
- **-l** (“dash-ell”): Specify a file containing a list of stream names to return information on.
- **-1** (“dash-one”): Obtain only the immediate children of the specified stream.
- **-r**: Obtain just the stream path above and the entire subtree below the specified stream, as if that stream was part of the stream filter.

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

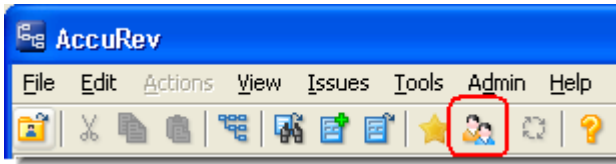
## User/Group Filtering

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.

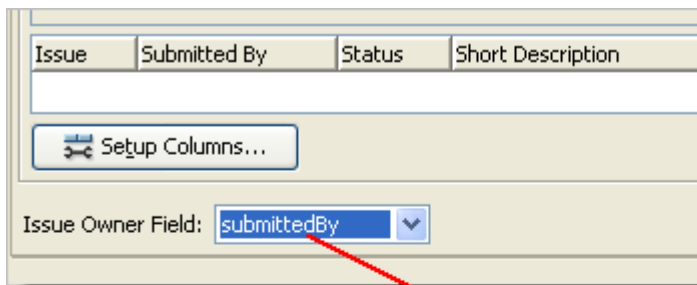
- The Select Issue dialog (when change-package-level integration is set up between AccuRev and AccuWork).

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

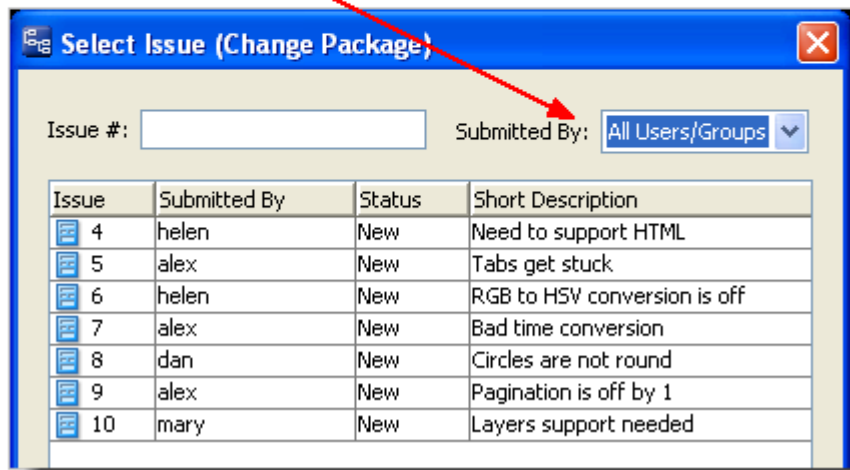


### Issue Filtering by User/Group on Promote

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.

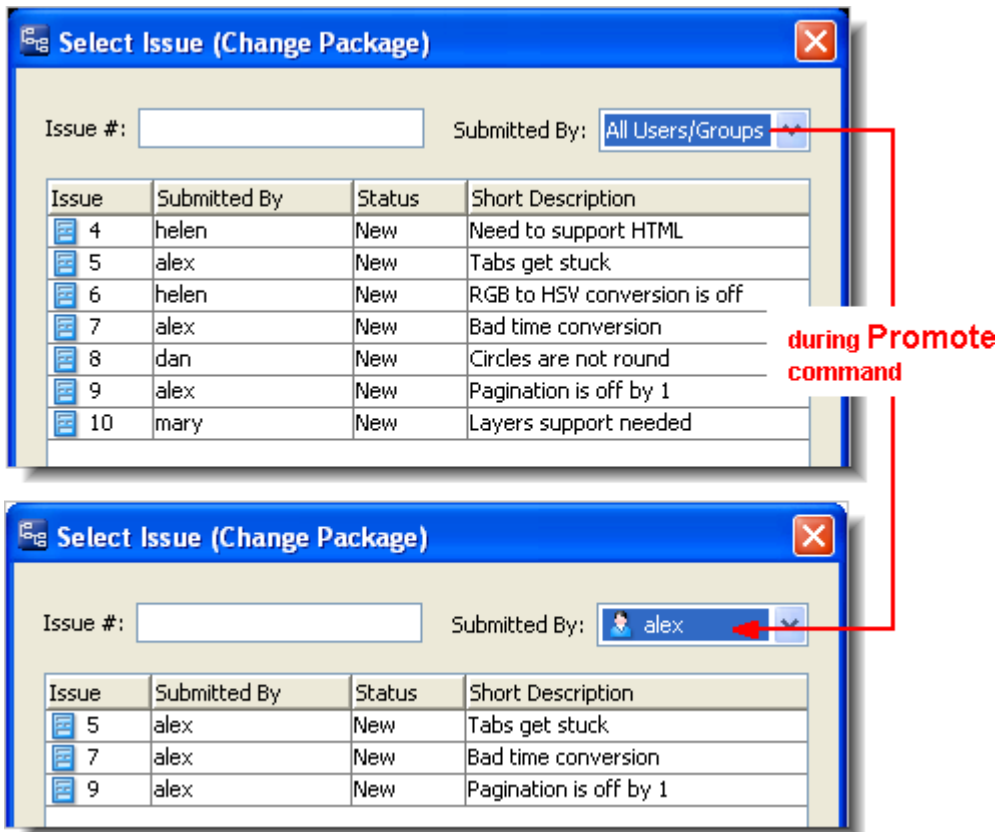


**Change Packages tab of Schema Editor**



On 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 certain users), and promote your changes to one of those issues instead of one assigned to you.

**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 the user's `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 will be *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 in Version 4.7

### 3430

See *Enhanced System Performance* on page 13.

### 8782

See *Stream Filtering* on page 10.

### 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 13.

### 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 13.

### 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 13.

## 16952

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

## 16991

See *User/Group Filtering* on page 11.

## 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 13.