Getting Acquainted with

AccuRev

(AccuRev 5.0)

This guide gets you acquainted, quickly and easily, with AccuRev — the new generation configuration management software with integrated issue management (AccuWork) — from AccuRev, Inc.

Note: Perform a full product installation (client + server) of AccuRev as described in the *AccuRev Installation and Release Notes* prior to using this guide.

You will first learn how to populate a repository of files under AccuRev version control. You will then go through typical Developer and Release Engineer experiences using AccuRev configuration management, followed by setup of AccuWork, AccuRev's integrated issue management system.

This guide does not attempt to provide exhaustive explanations of product features. For full details, see the AccuRev documentation set, which you can download from *http://www.accurev.com*. The manuals are in PDF format, and can be viewed using Acrobat Reader. AccuRev's graphical user interface has a context-sensitive help system.

The support team at AccuRev, Inc. is available to help you at any time as you get acquainted with our software. So please contact us with any questions and/or comments via email at **support@accurev.com**.

Throughout this guide, the symbol ⇘ denotes a command or set of commands to be selected from the AccuRev GUI's main command menu, one of the GUI's toolbars, or an individual object's context ("right-click") menu. For example: ⇘ Admin ⇘ Depots indicates that you should select the **Admin** menu and then select the **Depots** command from the menu.

This guide omits some trivial steps, such as clicking the **Ok** or **Close** button in message or status windows.

A. Initial Setup

In this section, we'll use AccuRev's "Quick Setup Wizard" for initial data setup. If you prefer the do-it-yourself approach, using individual AccuRev commands, please follow the procedure in Appendix A.

Operation A1: Starting the AccuRev Graphical User Interface

Step 1: Double-click the AccuRev icon on your desktop,
–or–
In a Command Prompt window, enter **acgui**

AccuRev's Quick Setup Wizard appears.

Operation A2: Using the Quick Setup Wizard

Step 1: In another window, find a directory of files that you'd like to place under version control. (It's OK if it has subdirectories.) This data won't be modified — the Wizard will make a copy of it. Note the pathname of this directory for use in the next step.

Step 2: In the Quick Setup Wizard, proceed through the following steps:

Step 2a: Creating an AccuRev username

Step 2b: Creating a new storage repository (depot)

Step 2c: Creating a workspace for yourself, and copying data files to the workspace. Make these choices:

- Select **Yes** when asked "Do you have files that you would like to import into AccuRev?"
- Select **Yes** when asked "Do you want to create a workspace in a new location …?"
- Indicate the directory you selected in Step 1 when prompted "Where are the files stored …"
- Accept AccuRev's suggestion for the location of the new workspace

Step 2d: Adding the files in your workspace to the depot:

- Click **Promote** in the Promote window

After completing the initial setup, you can proceed to use any or all of the remaining three sections of this guide:

Section B: Perform the AccuRev operations that a *Developer* uses most frequently

Section C: Perform the AccuRev operations that a *Release Engineer* or *Quality Engineer* uses most frequently

Section D: Perform *issue management* tasks using AccuWork

B. Developer Experience

The Developer experience includes accessing workspaces, creating new versions of files (edit/keep/promote), updating workspaces, and merging two versions of a file.

Operation B1: Going to your workspace

Perform this step if your workspace is not already open in the AccuRev GUI

Step 1: ↳ File ↳ Open Workspace

Step 2: Select the workspace that you created in Operation A1 above

*All of the files in your workspace have a status of **(backed)**. This means that you have not yet modified these files.*

Operation B2: Editing one of your source files

Step 1: If necessary, navigate through folders in the Folders pane (upper left); then select a file to edit

Step 2: ↳ Right-Click ↳ Edit

Step 3: Make some changes to your source file

Step 4: Save the file, and close the editor

*You did not have to "check out" the file before editing it. The status of the file is now **(modified)**.*

Operation B3: Keeping your modified file

The "Keep" operation is a "private checkin". It makes a copy of your modified file in secure storage maintained by the AccuRev Server process. It also records the creation of a new version of the file in the AccuRev database. Keeping new versions in the workspace enables you to checkpoint and back up your own code, while preventing your changes from being seen by other developers.

Step 1: Select the file you modified

Step 2: ↳ Right-Click ↳ Keep

Step 3: Enter a comment, and click Ok

*Note: The status of the file now includes the indicator **(kept)***

Operation B4: Promoting your kept file to share your changes with the rest of the group

The "Promote" operation allows you to share your changed file with other users.

Step 1: Select the file you just modified and kept

Step 2: ↳ Right-Click ↳ Promote

Step 3: Enter a comment, and click Promote

*Promote makes the version that you created with "Keep" available to be copied into other users' workspaces. The status of the file is once again **(backed)**.*

Operation B5: <u>Creating a second workspace</u>

Step 1: ➥ File ➥ New ➥ Workspace

Step 2: From the List of depots, select your depot

Step 3: As the **Basis stream**, select the stream with the same name as the depot

Step 4: Click Next

Step 5: As the **Name of workspace to create**, enter a new name (example: **acme2**)

Step 6: As the **Location** for the new workspace, choose an existing directory (example: **C:\Documents and Settings\Derek** or **/usr/home/derek**)

Step 7: Make sure the **Append workspace name to its location** checkbox is checked

Step 8: Click Finish

The new workspace is created, and Update is invoked to copy the files you placed under version control to the workspace.

Operation B6: <u>Working on additional files in the second workspace</u>

You can peform a search to list all the files that you are currently working on.

Step 1: Select a text file to edit in your second workspace

Step 2: ➥ Right-Click ➥ Edit

Step 3: Make some changes to your text file

Step 4: Save the file, and close the editor

Step 5: Repeat steps 1-4 on one or more additional files

Step 6: Select the Pending search in the Searches pane (lower-left)

Step 7: Select the file(s) you modified

Step 8: ➥ Right-Click ➥ Keep

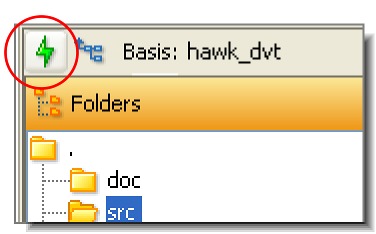
Step 9: Select the same file(s)

Step 10: ➥ Right-Click ➥ Promote

Operation B7: <u>Switching back to your first workspace</u>

Step 1: Click the tab in the GUI window that contains your first workspace
If you have closed that tab, re-open the workspace using:
➥ File ➥ Open Workspace.

Step 2: Click the Update toolbar button



This brings the changes you promoted while working in your second workspace into your first workspace.

Operation B8: <u>Merging two versions of a file</u>

Step 1: In your first workspace, select a file to edit

Step 2: ↳ Right-Click ↳ Edit

Step 3: Make some changes to your text file, save the file, and close the editor

Step 4: Select the file

Step 5: ↳ Right-Click ↳ Keep

Step 6: Select the file

Step 7: ↳ Right-Click ↳ Promote

Step 8: Switch to your second workspace, and click the edited file's folder in the Folders pane. **Don't perform an Update.**

*The file's status now includes the indicator **(stale)**.*

Step 9: Edit the *same* file in the second workspace

*The file's status now includes the indicator **(overlap)**. The yellow highlight emphaszes this status. This means that someone else has promoted a version before you did. In this case, the "someone else" is you, working in your first workspace. The file in your second workspace requires a merge before you can promote it.*

Step 10: Select the file

Step 11: ↳ Right-Click ↳ Merge

Step 12: Proceed to merge the file, using the graphical Merge tool. The only toolbar buttons you need are and (to navigate from conflict to conflict), along with and (to resolve the current conflict, by selecting text from one of the versions). You finish the Merge by preserving the merged file, selecting Keep & Exit when all the conflicts have been resolved.

See the topic "The AccuRev Merge Tool" in the AccuRev online help (in your AccuRev install directory under doc/WebHelp/Merge_Tool_AccuRev.htm).

Step 13: Select the file

Step 14: ↳ Right-Click ↳ Promote

C. Release Engineer / Quality Engineer Experience

The AccuRev experience for a Release Engineer or Quality Engineer includes working with the StreamBrowser™, creating new streams and snapshots, comparing streams, and rearranging the stream hierarchy.

Operation C1: Launching the Stream Browser

This allows you to easily see and control your development stream hierarchy graphically.

Step 1: ↳ View ↳ Streams

Step 2: If necessary, select your depot from a list of depots in a pop-up window.

The Stream Browser tab appears, showing the streams in your depot.

Step 3: In the choice box at the bottom of the Stream Browser tab, make sure that **All Workspaces** or **Current User** is selected. This setting includes your “private” workspace streams in the display.

Currently, there’s only one "public" development stream: the depot’s “base stream” or “root stream”. It has the same name as the depot.

Operation C2: Creating a snapshot stream to capture the current state of development

Step 1: Select the depot’s base stream

Step 2: ↳ Right-Click ↳ New Snapshot

Step 3: Give the new snapshot a name (example: **acme_1.0**)

Step 4: Leave the Basis Time set to **Now**

Step 5: Click Ok

The newly created snapshot stream appears in the Stream Browser.

Operation C3: Creating an integration stream based on the base stream

Now, rather than having to promote directly into the base stream you can promote to an integration stream below the base stream.

Step 1: Select the base stream

Step 2: ↳ Right-Click ↳ New Stream

Step 3: Give the new stream a name (example: **acme_int**)

Step 4: Leave the Stream Type set to **Dynamic stream**.

Step 5: Leave the Basis Time set to **None**

Step 6: Click Ok

The newly created integration stream appears in the Stream Browser, as a direct “child” of the base stream.

Operation C4: <u>Reparenting your workspaces</u>

*You can easily "reparent" your workspaces within the Stream Browse, so that they are based on the integration stream rather than the base stream. (example: reparent them from **acme** to **acme_int**)*

Step 1: Drag-and-drop one of your workspaces onto the integration stream

Step 2: Drag-and-drop the other workspace onto the integration stream

The Stream Browser shows that your workspace streams are now based on the integration stream.

Operation C5: <u>Updating your workspace</u>

*Execute the following steps for each workspace that you have just reparented. Work with **different** files in the two workspaces.*

Step 1: Double-click the workspace to open it

Step 2: Click the Update toolbar button

An Update is always required after reparenting a workspace.

Step 3: Select a file in your workspace

Step 4: ↳ Right-Click ↳ Edit

Step 5: ↳ Right-Click ↳ Keep

Step 6: ↳ Right-Click ↳ Promote

This promotes the new version of the file to the integration stream. The process remains the same no matter which stream the workspace is based on: ↳ Edit; ↳ Keep; ↳ Promote.

Step 7: (optional) Edit/Keep/Promote additional files

Operation C6: <u>Promoting your changes from the integration stream to the base stream</u>

Step 1: Switch back to the Stream Browser tab (example: **acme**)

Step 2: Click the icon just below the integration stream (example: **acme_int**)

This opens a subwindow showing the file(s) you just promoted to the integration stream.

Step 3: Select all of the files

Step 4: ↳ Right-Click ↳ Promote

The files have now been promoted from the integration stream to the base stream.

Operation C7: <u>Creating a second snapshot of the base stream</u>

Step 1: Select the base stream

Step 2: ↳ Right-Click ↳ New Snapshot

Step 3: Give the second snapshot stream a name (example: **acme_2.0**)

Step 4: Leave the Basis Time set to **Now**

Step 5: Click Ok

The newly created snapshot stream appears in the Stream Browser.

Operation C8: **Comparing the contents of the two snapshot streams**

Step 1: Select the first snapshot stream (example: **acme_1.0**)

Step 2: ↳ Right-Click ↳ Show Diff By Files

A "show difference" icon is added to the mouse pointer.

Step 3: Click on the second snapshot stream (example: **acme_2.0**)

A list appears, containing the files you promoted above.

Operation C9: **Observing the differences between snapshots at the individual-file level**

Step 1: Select a file from the differences list you just generated

Step 2: ↳ Right Click ↳ Show Difference

Operation C10: **Seeing inheritance in the stream hierarchy**

Step 1: Go to the Stream Browser tab (example: **acme**)

Step 2: Drag-and-drop one workspace from its current parent, the integration stream, to the base stream. (Leave the other workspace under the integration stream.)

Step 3: Double-click the workspace you just "reparented" to open it, then click the Update toolbar button

Step 4: Note the version-ID of some file in the workspace (example: **acme/1**). The direction of the separator character varies with the operating system.

Step 5: Modify that file (↳ Right-Click ↳ Edit)

Step 6: Select the same file, then ↳ Right-Click ↳ Promote

This is a shortcut—the Promote command in the GUI performs an automatic Keep on the modified file.

Step 7: Switch back to the Stream Browser tab

Step 8: Double-click the base stream to open it, then navigate to the file that you just promoted

Step 9: Note the new version of the file in the stream (example: **acme/2**)

Step 10: Switch back to the Stream Browser tab

Step 11: Double-click the integration stream to open it, then navigate to the file that you just promoted to the base stream.

*The version of the file in the integration stream (example: **acme/2**) is the same as the version in the base stream. This version has been automatically inherited from the base stream.*

Step 12: Switch back to the Stream Browser tab

Step 13: Double-click the second workspace (the one that is still under the integration stream) to open it, and navigate to the same file.

*The version-ID of the file in this workspace is **not** the same as in its parent, the integration stream. This fact is reflected in the file's **(stale)** status indicator. Inheritance by workspaces is not automatic, but occurs only when you Update the workspace.*

Step 14: Click the Update toolbar button

*The same file version (example: **acme/2**) has now been loaded into the workspace. The file's status no longer includes the **(stale)** indicator.*

Operation C11: <u>**Using a basis time to block inheritance**</u>

Step 1: Go to the Stream Browser tab (example: **acme**)

Step 2: Select the integration stream

Step 3: ⇨ Right-Click ⇨ Change Stream

Step 4: Select a Basis Time of **Now**, then click Ok

Step 5: Double-click the workspace below the base stream to open it

Step 6: Modify a file in the workspace (⇨ Right-Click ⇨ Edit)

Step 7: Select the same file, then ⇨ Right-Click ⇨ Promote

Step 8: Switch back to the Stream Browser tab

Step 9: Double-click the base stream to open it, then navigate to the file that you just promoted.

*Note the version of the file in the stream (example: **acme/3**)*

Step 10: Switch back to the Stream Browser tab

Step 11: Double-click the integration stream to open it, then navigate to the file that you just promoted to the base stream.

*The version of the file in the integration stream is **not** the same as the version in the base stream. The basis time prevents automatic inheritance from the base stream.*

Step 12: Switch back to the Stream Browser tab

Step 13: Double-click the workspace below the integration stream to open it.

Step 14: Click the Update toolbar button. Then click View Full Log.

No new file versions are loaded into the workspace.

Step 15: Switch back to the Stream Browser tab

Step 16: Select the integration stream

Step 17: ⇨ Right-Click ⇨ Change Stream

Step 18: Select a Basis Time of **None** (cancelling the basis time setting), then click Ok

Step 19: Double-click the integration stream to open it, then navigate to the file that you just promoted to the base stream

*The version of the file in the integration stream (example: **acme/8**) is the same as the version in the base stream. As soon as the basis time is removed from the integration stream, it inherits the new file version from the base stream.*

Step 20: Double-click the workspace below the integration stream, then click the Update toolbar button. Then click View Full Log.

The new file version is loaded into the workspace.

Operation C12: Viewing the history of a stream

Step 1: Go to the Stream Browser tab (example: **acme**)

Step 2: Select the base stream

Step 3: Right-Click Show History

Step 4: Select the most recent **promote** transaction

The file versions involved in the transaction appear in the bottom pane of the History Browser.

Step 5: Experiment with changing the transaction range, searching for a comment string, etc.

Step 6: Locate the oldest **promote** transaction, and note the timestamp for use in the next operation.

Operation C13: Using a time-based stream to reproduce a previous configuration

Step 1: Go to the Stream Browser tab (example: **acme**)

Step 2: Select the base stream

Step 3: Right-Click New Stream

Step 4: Specify the stream name (example: **acme_old_config**)

Step 5: Specify the basis time by clicking the Specified radio button, then entering a time just after that of the base stream's first **promote** transaction (the time you noted above). Then click Ok

Step 6: Drag-and-drop the workspace from the integration stream to the newly created stream

Step 7: Double-click the workspace to open it, then click the Update toolbar button. Then click View Full Log

Older versions of files are loaded into the workspace.

Step 8: Drag-and-drop the workspace from the newly created stream back to the integration stream

Step 9: Double-click the workspace to open it, then click the Update toolbar button

Newer versions of files are loaded into the workspace.

Operation C14: Making fixes to a previous release

Step 1: Go to the Stream Browser tab (example: **acme**)

Step 2: Select the second snapshot created (example: **acme_2.0**)

Step 3: ➪ Right-Click ➪ New Stream

Step 4: Enter a name for the new maintenance stream (example: **acme_2.0_maint**) and click Ok

Step 5: Drag-and-drop the workspace from the base stream to the new maintenance stream

Step 6: Double-click the workspace to open it, then click the Update toolbar button

Step 7: Modify some files in the workspace

Step 8: Select the Modified search in the Searches pane.

*All files in the workspace with **(modified)** status appear in the Details pane.*

Step 9: Select all the modified files

Step 10: ➪ Right-Click ➪ Promote

Step 11: Switch back to the Stream Browser tab

A default group icon appears below the new maintenance stream.

Step 12: Click the icon to display the versions that were promoted to the maintenance stream

Step 13: Click the icon again to close this display

Operation C15: Promoting changes from the maintenance stream to the integration stream

Step 1: Drag-and-drop the icon below the maintenance stream to the integration stream

A Change Palette tab opens.

Step 2: If any files in the Change Palette have **(overlap)** status (yellow highlight), select them and ➪ Right-Click ➪ Merge. Click Ok in the pop-up window.

Proceed to merge the file(s), using the graphical Merge tool (just as in Operation B8).

Step 3: Select all the files in the Change Palette tab, and ➪ Right-Click ➪ Promote

If you merged one or more files, they are displayed in a separate pane at the bottom of the Change Palette tab. You must Promote these files separately from the files in the upper pane, which did not need to be merged.

Step 4: Close the Change Palette tab

Step 5: Once again, drag-and-drop the icon below the maintenance stream to the integration stream

No files are displayed in the Change Palette tab, showing that all the changes in the maintenance stream have already been promoted to the integration stream.

Step 6: Close the Change Palette tab

D. Issue Management with AccuWork

The AccuWork experience includes setting up an issues database format (“schema”), creating issue records, querying the issues database, and using the “change package” integration between configuration management and issue management.

Operation D1: <u>Setting up the default schema</u>

Step 1: ↳ Admin ↳ Schema Editor

Step 2: If necessary, select your depot from a list of depots in a pop-up window.

Step 3: Click Yes (”Do you want to use the default schema?”)

Step 4: Click Ok (“Please note …)

Step 5: Click Save (lower right-corner of Schema Editor tab)

Operation D2: <u>Creating a few new issues</u>

Step 1: ↳ Issues ↳ New Issue

Step 2: Enter data in all of the required fields (red labels)

Step 3: Experiment with how the different types of fields manage various types of data

Step 4: Click Save & Close to save the issue record and close the tab

Step 5: Repeat this process a few times so you have a few issues to work with

Operation D3: <u>Creating a query and making it your default query</u>

Step 1: Enter command: ↳ Issues ↳ Queries

Step 2: Click New Query to create an empty new query

Step 3: Give your query a name by clicking its name "New Query 1" twice (with a short pause in between) and then typing the name (e.g. **All Defects**)

Step 4: Click Click here to add…

Step 5: Set the first choice box value to **issueNum**

Step 6: Set the second choice box value to **greater than or equal to**

Step 7: Enter the number **1** in the third query box

Step 8: Click Ok

The name of the new query appears in the left (Query List) pane, which lists all the queries that you’ve created. The right (Query Results) pane shows the results of running the query against the issues database.

Step 9: In the Query List pane, with the query you just created …
↳ Right-Click ↳ Set as Default

Step 10: Click the Columns toolbar button in the Query Results pane

Step 11: Select additional fields to appear in the Query Results pane:

Step 11a: Select a field from the **Available** list (Ex: **shortDescription**)

Step 11b: Click the right-arrow button ➡ to move the field to the **Selected** list

Step 11c: Repeat the steps above for all of the fields you wish to add to the query results output

Step 11d: Click Ok

Step 12: Click Save all queries above the left pane to save your query

Step 13: Close the query tab

Step 14: Reopen a query tab: ↳ Issues ↳ Queries

The query you just created runs automatically, because you set it as your default query.

Operation D4: <u>Enabling the built-in integration between AccuRev configuration management and AccuWork issue management</u>

Step 1: ↳ Admin ↳ Schema Editor (or return to the existing Schema Editor tab)

Step 2: Go to the Change Packages tab

Step 3: In the Change Package Results section (top part), click Setup Columns

Step 4: Select some fields from the **Available** list (Ex: **issueNum**, **shortDescription**), and click the right-arrow button ➡ to move the fields to the **Selected** list

Step 5: Click Ok

Step 6: In the Change Package Triggers section (bottom part), click New trigger in the toolbar

A new window opens, in which you specify a condition, along with a query to be performed if that condition is satisfied when the integration is invoked.

Step 7: In the Condition section (top part), click Click here to add…

Step 8: Use the three choice boxes to form this condition:

PROMOTE_DEST_STREAM is in hierarchy <*depot*>

*… where <**depot**> is the name of your depot.*

Step 9: In the Query section (bottom part), click Click here to add…

Step 10: Use the choice boxes and the text field to form this condition:

issueNum greater than 0

This query selects all issue records.

Step 11: Click Ok

Step 12: Click Save (lower right-corner of Schema Editor tab)

Step 13: Open a workspace (or go to one that is already open)

Step 14: Edit and Keep several files

Step 15: Promote all those files

The integration evalutes the condition you defined in Step 8 (it's TRUE), then runs the query you defined in Step10. The selected records are presented as a list of issues to choose from.

Step 16: Select the issue that you want to associate the promoted files with, and click Ok

Step 17: ↳ Issues ↳ Look Up

Step 18: Enter the number of the issue you chose when promoted by the integration (Step 16), and click Ok

The issue appears in an edit form.

Step 19: Go to the Changes tab

*The files that you promoted are listed on this tab. The specific versions that you promoted are listed in the **Version** column.*

Operation D5: **<u>Turning off the integration between configuration management and issue management</u>**

Step 1: ↳ Admin ↳ Schema Editor (or return to the existing Schema Editor tab)

Step 2: In the Change Packages tab, click the condition/query pair to select it

Step 3: Click Delete trigger ✕

Step 4: Click Save (lower right-corner of Schema Editor tab)

With no query to be invoked at Promote time, the integration is effectively disabled.

Appendix

E. Initial Setup without Using the Quick Setup Wizard

Operation E1: **<u>Create an AccuRev username and password</u>**

Step 1: ↳ Admin ↳ Security

Step 2: Click the Add User  button to create a new user

Step 3: Enter a username, but do not enter the optional password

Step 4: Click Ok

Step 5: ↳ Tools ↳ Login

Step 6: Select your newly created user

Step 7: Click Ok

Operation E2: **<u>Create a new storage depot (a repository of files under AccuRev control)</u>**

Step 1: ↳ File ↳ New ↳ Depot

Step 2: Give the depot a name (example: **widget**)

Step 3: Click Ok (and continue to the next operation)

Operation E3: **<u>Create a workspace to store your work</u>**

Step 1: Click Yes (“Do you want to create a workspace for the depot?”)

Step 2: Click Next to select your newly created depot, and the stream that has the same name as the depot

Step 3: Click Next to accept the default name for the workspace

Step 4: Click Next to accept defaults for the new workspace

Step 5: Choose a physical location for the workspace (example: **C:\ws\widget**)

Step 6: Click Next

Step 7: Select the pathname you prefer from the two pathnames offered

Step 8: Click Finish

Operation E4: **<u>Import files into your workspace</u>**

Step 1: Use operating system commands to copy some sample files into workspace. (example: **xcopy /E /Y c:\myfiles\src* c:\ws\acme**)

Operation E5: **<u>Add the files in your workspace to the depot</u>**

Comment: *If your newly created workspace is not already open in the AccuRev GUI, open it: ↳ File ↳ Open Workspace*

Step 1: Select the External search in the Searches pane (lower-left)

Step 2: Select one of the files in the search results

Step 3: ↳ Edit ↳ Select All

Step 4: ↳ Right-Click ↳ Add to Depot

Step 5: (optional) Enter a comment string

Step 6: Click Ok

Step 7: Select the Pending filter

Step 8: As above, select all the files listed in the details pane

Step 9: ↳ Right-Click ↳ Promote

Step 10: (optional) Enter a comment string

Step 11: Click Promote

Step 12: Click the Update button to update your workspace

Updating often greatly improves workspace-search performance.