serena™

SERENA® CHANGEMAN® VERSION MANAGER™
WEB CLIENT USER'S GUIDE

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Welcome to Version Manager

Thank you for choosing the Serena® ChangeMan® Version Manager™ **web client**, a powerful and versatile version control system that will revolutionize the way that you develop software. Version Manager helps you organize, manage, and protect your software development projects on every level—from storing and tracking changes to individual files, to managing and monitoring an entire development cycle.

Purpose of this manual

This manual introduces you to browser-based interface, highlights differences between the Version Manager web client and the Version Manager desktop client, and provides instructions on how to get started using Version Manager web client. This manual supplements the *Serena ChangeMan Version Manager User's Guide*, which is designed to be the primary source of information about Version Manager features and concepts, and the Version Manager web client online help.

Once you start using the Version Manager web client, access the online help for detailed instructions on how to perform daily tasks, such as checking out files, managing version labels, and adding workfiles to projects.

For more information

Refer to the *Serena ChangeMan Version Manager Getting Started Guide* for a description of the Version Manager documentation set, a summary of the ways to work with Version Manager, and instructions for accessing the online help.

Edition status

The information in this edition applies to *Release 8.1 of Version Manager Web Client* or later. This edition supersedes earlier editions of this manual.

Typographical Conventions

The following typographical conventions are used in the online manuals and online help. These typographical conventions are used to assist you when you use the documentation; they are not meant to contradict or change any standard use of typographical conventions in the various product components or the host operating system.

Convention	Explanation
italics	Introduces new terms that you may not be familiar with and occasionally indicates emphasis.
bold	Emphasizes important information and field names.
UPPERCASE	Indicates keys or key combinations that you can use. For example, press the ENTER key.
monospace	Indicates syntax examples, values that you specify, or results that you receive.
monospaced italics	Indicates names that are placeholders for values you specify; for example, *filename*.
monospace bold	Indicates the results of an executed command.

Convention	Explanation
vertical rule |	Separates menus and their associated commands. For example, select File | Copy means to select Copy from the File menu. Also, indicates mutually exclusive choices in a command syntax line.
brackets []	Indicates optional items. For example, in the following statement: `SELECT [DISTINCT]`, DISTINCT is an optional keyword.
. . .	Indicates command arguments that can have more than one value.
	Shows you which shortcut button to click. Shortcut buttons are placed in the margin.

Contacting Technical Support

Registered customers can log in to `http://support.serena.com/`.

Chapter 1
Version Manager Web Client Basics

Introducing the Version Manager Web Client

The Serena ChangeMan Version Manager web client is the web-based client component of Version Manager that allows you to access Version Manager projects via the Internet or intranet. The Version Manager web client works with the Version Manager Server, the web-based server component of Version Manager.

With the Version Manager web client, you can use your web browser to view detailed information about projects and archives, and to perform such tasks as checking in and checking out files, managing locks, version labels and promotion groups, and running reports.

Because the Version Manager web client allows you to access Version Manager projects from any connected point on the Internet or intranet, it's ideally suited for remote users, mobile users and users in web-intensive environments, such as members of Internet programming and content development teams.

In addition, the lightweight web browser interface offers the benefits of a very low cost of maintenance for users and administrators in all environments.

Version Manager Web Client Features

The Version Manager web client provides the essential end-user version control features of Version Manager. It is designed for users who do not need access to administrative features.

The Serena ChangeMan Version Manager web client online help provides detailed procedures for using these features.

The Version Manager web client provides the following features:

- **Add Workfiles**. Add one or more workfiles to a project database or project. You can also add an entire directory with subdirectories, which becomes a project with subprojects in the project database.

- **Create Projects**. Manually create new projects with a different directory structure than the existing workfile structure.

- **Check in** and **Check out**. Check files in to and out of archives.

- **Get.** Get copies of revisions without checking them out.

- **Lock** and **Unlock**. Lock and unlock revisions of files.

- **Version Labels**. Assign, change, and delete version labels.

- **Promotion Groups**. Promote revisions, and to assign, change, and remove promotion groups.

- **History Reports**. Run reports that show detailed information on archives.

- **Difference Reports**. Compare two revisions or two workfiles, or compare a workfile and a revision.

- **Merge Files.** Merge two revisions or two workfiles, or a workfile and a revision.

- **Options**. Set default dialog box and display options.

- **Copy** and **Move**. Copy or move versioned files between projects in a project database.

- **Workspaces**. Set, create, rename, and delete public or private workspaces.

- **Rename**. Change the names of projects and Version Manager 5.3/6.0 folders in the interface.

- **Delete**. Remove projects, Version Manager 5.3/6.0 folders, and versioned files from the interface.

- **Change Password**. Change the password you use to log in to a project database. This also changes your password in Version Manager if an Access Control Database is in place.

Version Manager Web Client Components

The combined services of the Version Manager Server component, a supported web server, and the Version Manager web client component provide access to your archives via the Internet or an intranet.

Before you can use the Version Manager web client, your Serena products administrator must install the Version Manager Server component on a system that is running a web server. Once the Version Manager Server is configured for use with Version Manager projects, you can install the web client applet using the URL distributed by your administrator.

Depending on your browser settings, a warning or confirmation dialog might ask you if you want to proceed with the client applet installation. You may get a similar dialog when you run the applet. For more information on downloading and installing the client applet, see Chapter 2, "Getting Started" on page 19.

Once the client applet is installed, you can log into the Version Manager web client interface and view detailed information about projects and perform actions from within your web browser.

Using the Version Manager Web Client with Version Manager

You must use Version Manager to perform all administrative tasks on project databases. Administrative tasks can include creating and configuring project databases or roots, defining security, and setting up promotion models.

Most end-user tasks in the Version Manager web client, such as checking out files or adding workfiles, follow the same procedures as those in the Version Manager desktop client. These procedures are documented in the Version Manager Web Client online help. However, some differences do exist for tasks involving version labels and promotion groups.

Version Labels and Promotion Groups

When working with version labels and promotion groups in Version Manager, you choose the specific operation you want to perform from the menu. For example, you choose Actions | Version Label | Assign to assign a version label or Actions | Promotion Group | Remove to remove a promotion group.

In the Version Manager web client, you perform all operations with version labels and promotion groups by selecting the Label button or Promote button on the Actions menu. At the top of the Version Label or Promotion Group dialog box, you select which operation you want to perform. The contents of the dialog box change with your selection.

For example, if you select Actions | Label, the dialog box appears as below. By default, the **Assign** option is selected and the contents of the dialog box correspond to that operation.
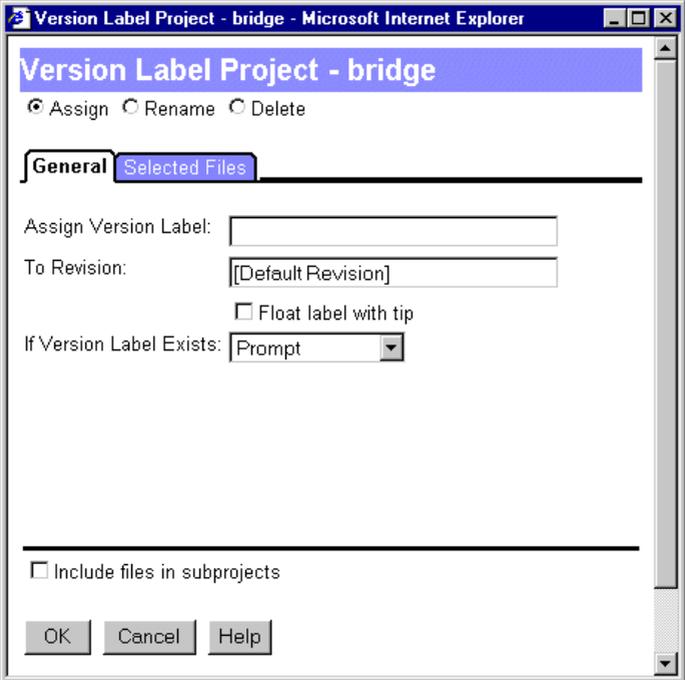
NOTE It is best practice to use version labels that do **NOT** look like revision numbers.

If you select the **Rename** option, the contents of the dialog box change:
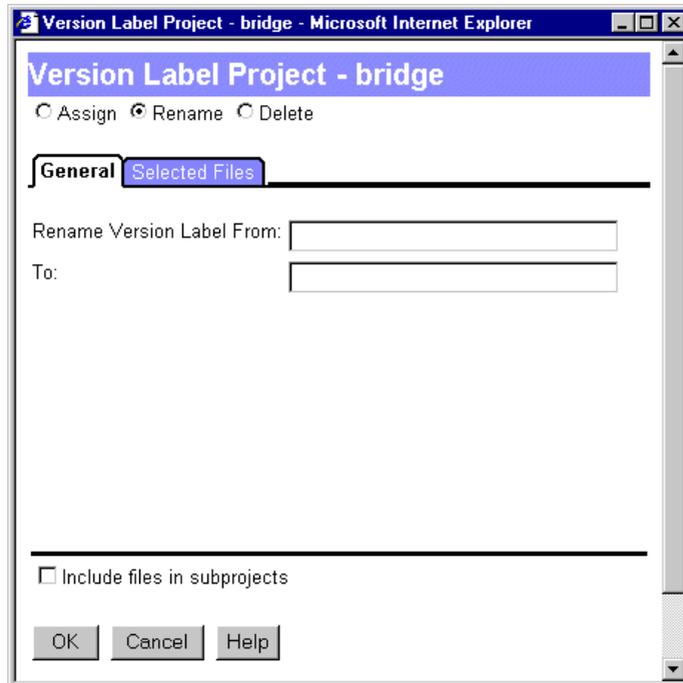
Using TrackerLink (Tracker) with the Version Manager Web Client

You can use TrackerLink in the Version Manager web client or desktop client to associate workfiles with issues in Serena Tracker. Use TrackerLink as a tool to bridge Tracker and Version Manager. When checking in, checking out, locking, or adding workfiles, you can associate those workfiles with issues through the TrackerLink Workfile Association dialog box.

Configuring TrackerLink

Before you can use TrackerLink, your administrator must:

■ Configure TrackerLink options. See the *Serena ChangeMan Version Manager Administrator's Guide*.

■ Associate the servlet for your Version Manager project database with the URL of a Tracker database. See the *Serena ChangeMan Version Manager Installation Guide*.

Using TrackerLink

Use TrackerLink to associate issues with workfiles when you:

■ Check out a file

■ Check in a file

■ Lock a file

■ Add new workfiles

If your settings do not automatically log you in to Tracker, you will be prompted for your login information when you associate workfiles.

To associate an issue with a workfile on check in, check out, adding workfiles, or on locking a file:

1 Select the files you want to associate with issues.

2 Make the check in, check out, add workfiles, or lock request.

3 Click the **Associate Issues** button on the Check Out, Check In, Lock, or Add Workfiles dialog boxes. The TrackerLink Workfile Association dialog box appears.
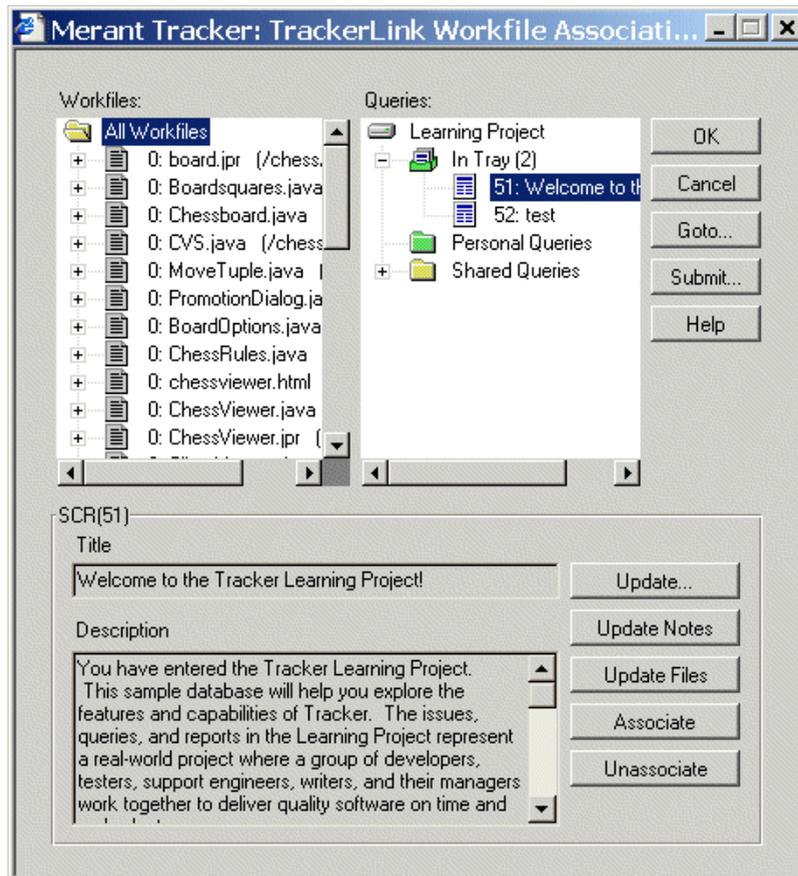
4 Select a query from the **Queries** pane to run a query to find and select the issues to associate with your workfiles or find them in the In Tray.

5 From the **Workfiles** pane, select the files to associate with an issue.

6 Double-click the first issue number to associate with your workfile. This associates that issue with the workfile, and the number that appears to the left of the workfile name increases by one. You can also choose the **Associate** button to associate the issue and your workfile.

7 Double-click the workfile name to see the currently associated issues. If its title and description appear, the issue is currently selected.

8 If you change your mind about a particular association, you can:

• Double-click the issue number in the Workfiles pane to unassociate it.

• Select the issue and click the Unassociate button.

> **NOTE** You can associate several files with one issue at the same time, but you can not select a query and associate all of its matching issues with a workfile or workfiles at the same time. Issues must be selected individually.

If a file has no associations, the current workfile will have a plus sign next to it. When you select it, it will appear with "(no associations)" below it.

Launching the Tracker Web Client

You can access the Tracker web client by clicking the Tracker icon   on the Actions tab.

Using SourceBridge (TeamTrack) with the Version Manager Web Client

You can use SourceBridge in the Version Manager web client or desktop client to associate workfiles with issues in Serena TeamTrack. When checking in, checking out, locking, or adding workfiles, you can associate those workfiles with issues in TeamTrack.

Configuring SourceBridge

Before you can use SourceBridge, your administrator must:

■ Configure SourceBridge options. See the *Serena ChangeMan Version Manager Administrator's Guide*.

■ Associate the servlet for your Version Manager project database with the URL of a TeamTrack database. See the *Serena ChangeMan Version Manager Installation Guide*.

Using SourceBridge

Use SourceBridge to associate issues with workfiles when you:

■ Check out a file

■ Check in a file

■ Lock a file

■ Add new workfiles

To associate an issue with a workfile on check in, check out, adding workfiles, or on locking a file:

1 Select the files you want to associate with issues.

2 Make the check in, check out, add workfiles, or lock request.

3 Click the **Associate Issues** button on the Check Out, Check In, Lock, or Add
Workfiles dialog boxes. SourceBridge will opens.

Search **4** Complete any of the following fields to specify the issues you want to work with:

- **Project (includes Sub-Projects):** Select a TeamTrack project.

- **Keywords:** Enter keywords to search for. You may use the percent symbol (%) as
  a wildcard.

- **Show Only Items I Own:** Select this check box to limit the search to items that
  you own.

> **NOTE** To log in as a different user, click the **Logon** button.

- **Item ID:** Enter the ID of the item(s) to search for. You may use the percent
  symbol (%) as a wildcard.

- **Append Search Results to List:** Select this option to append new search results
  to any existing items in the Results pane. If this option is not selected, any existing
  results will be replaced when you run a new search.

- **Filter on Active/Inactive:**

  - **Active:** Select this option to search for only those items that are active.

  - **Inactive:** Select this option to search for only those items that are inactive

- **Both:** Select this option to search for items regardless of whether they are active or inactive.

5 Click the **Search** button. The search results appear in the Results pane.

Results **6** To view the details of a TeamTrack issue, click its ID. The issue will then open in the TeamTrack web client.

7 Select the check box next to the issue(s) that you want to associate with items under source control.

Associations **8** From the Associations pane, select the files to associate with the selected issues.

9 Click the **Associate** button to associate the selected issues and workfiles. The associations are then displayed in the Associations pane.
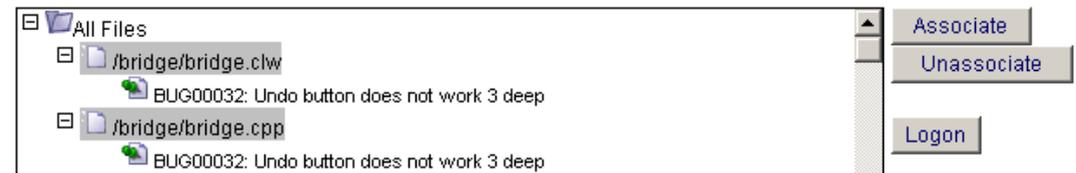
10 To remove an association, select the issue in the Associations pane and click the **Unassociate** button.

11 Click the **Done - Continue with . . .** button.

Launching the TeamTrack Web Client

You can access the TeamTrack web client by clicking the:

- TeamTrack icon ⬤ on the Actions tab of the Version Manager web client.

- Issue ID in the Results pane of the SourceBridge associate dialog.

Using the Version Manager Web Client with Previous Releases

You should upgrade Version Manager 5.3/6.0 project roots to the current format using Version Manager. However, you can still access 5.3/6.0 project roots in the Version Manager web client without upgrading them. While most functionality is supported in this scenario, some restrictions apply to ensure compatibility with the Version Manager 5.3/6.0 GUI.

You cannot:

- Create, delete, or rename projects within the Version Manager 5.3/6.0 project root. However, you can perform these actions on 5.3/6.0 folders.

- Add multiple directories. You can add a single directory by selecting all of the files within it.

- Automatically see newly added archives in the content pane. You must use the Update Project Folder option to update the display if archives have been added in other interfaces, such as the command-line interface.

System Requirements

The Version Manager web client is supported on Windows and UNIX operating systems. For specific supported platform, web browser, and version information, refer to the readme file (`readmevm.htm`).

Chapter 2
Getting Started

Installing the Version Manager Web Client Applet

Before you can connect to the Serena ChangeMan Version Manager Server, you must download and install the Version Manager web client applet. To download and install the applet, open the Version Manager web client install page in a supported web browser and follow the on-screen instructions.

> **NOTE** The client applet is browser-specific. If you have multiple browsers installed, a dialog will appear so you can select the browsers for which to install the applet. If you're using Netscape Communicator on UNIX, your UNIX administrator may need to install the applet for you. See "Configure the Web Browsers" in the "Introducing the Version Manager Web Server" chapter of the *Serena ChangeMan Version Manager Installation Guide*.

To download and install the Version Manager web client applet:

1 Start your web browser.

2 Open the URL of the Version Manager Web Client Install page. The URL of this page is `http://`*hostname*`:`*port*`/vminet_install.html` (for non-secure web services) or `https://`*hostname*`:`*port*`/vminet_install.html` (for secure web services), where *hostname* is the name of the system hosting the Version Manager Server and *port* is the server port.

> **NOTE** You may not need to specify the port. See your administrator for the correct URL.

3 Follow the on-screen prompts to download and install the client applet.

Depending on the web browser you are using, you may need to restart the browser after you complete the installation. The instructions on the installation page indicate whether you need to restart the browser.

Connecting to the Version Manager Web Client

You connect to Version Manager web client to establish a link between your web browser and Version Manager project databases or roots. You must connect to the Version Manager web client before you can log into a project.

> **NOTE** If you know the URL of the project database, or if you have the location bookmarked in your web browser, you can open the URL directly without connecting to the Project Databases page.

To connect to the web client:

1 Start your web browser.

2 Open the URL of the Version Manager Web Client Project Databases page. The URL of this page is `http://`*hostname*`:`*port*`/vminet.html` (for non-secure web services) or `https://`*hostname*`:`*port*`/vminet.html` (for secure web services), where *hostname*

is the name of the system hosting the Version Manager Server and $port$ is the server port.

The Project Databases page appears.
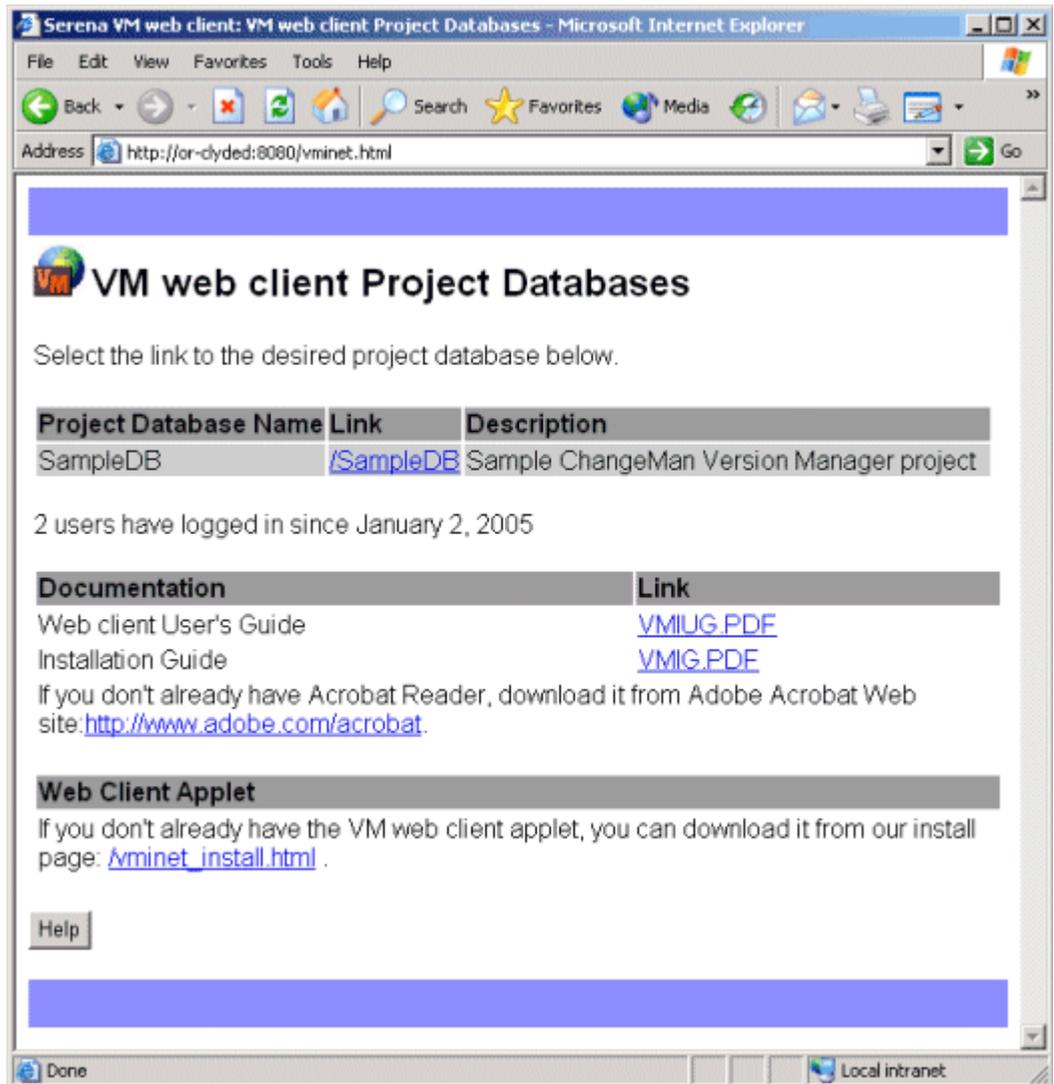
3 Click the name of the project database or root to which you want to connect in the **Link** list.

NOTE You can also access the online documentation and the client applet installation page from the Project Databases page.

After you have connected to the Version Manager Server, the Login page appears. Continue to the next section.

Logging In to a Project Database

Log in to a project database when you want to access Version Manager projects, 5.3/6.0 folders, and versioned files. You must enter your user ID and password, which is typically assigned to you by your administrator. See your administrator for your user ID and password.

To log in to a project database:

1   Open the Login page by connecting to Version Manager web client as described in "Connecting to the Version Manager Web Client" on page 20. The Login page appears.
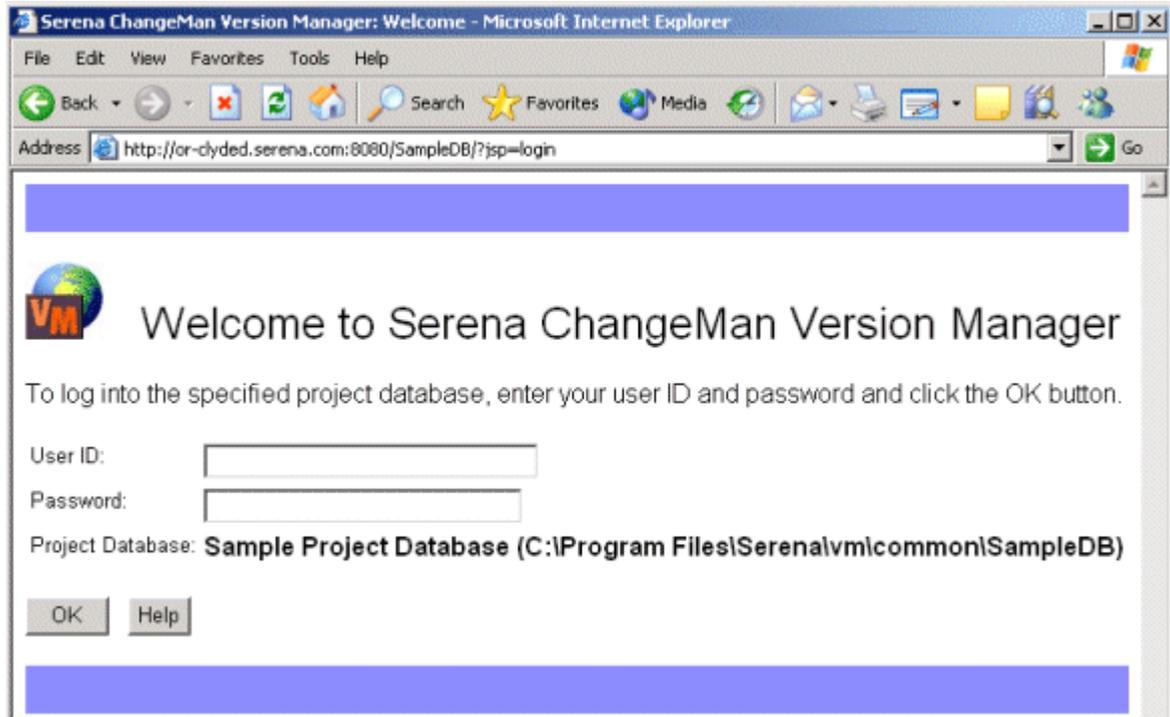
2   Enter your user ID in the **User ID** field.

3   Enter your password in the **Password** field.

> **NOTE**
>
> ■   If you have a password for the project database in the Version Manager desktop client, your web client password will match your desktop client password.
>
> ■   For security reasons, the Input Method Editor is disabled in the **Password** field. You will not be able to enter double-byte characters in this field.

4   Click OK.

You may also need to log in to a project if your administrator has configured an Access Control Database for it. In this case, the Login page appears when you select the project.

To log into a project:

1   **Enter your user ID in th**e **User ID** field.

2 Enter your password in the **Password** field.

3 Select the **Remember this user name/password** option to store this information so that you don't have to log in to the project for future Version Manager web client sessions.

4 Click OK.

Changing Your Password

You can change the password assigned to you by your administrator at any time. The password you change is the one that you entered in the Login page. Once you've changed your password, the new password takes effect the next time you log into the Version Manager web client.

If security is enabled in Version Manager for this project database, changing your password in the Version Manager web client changes it in the desktop client as well (and vice-versa).

To change your password:

1 On the File menu tab, click the **Change Password** button. The Change Password dialog box appears.

2 Enter your current password in the **Old password** field.

3 Enter your new password in the **New Password** field, up to 29 characters.

4 Re-enter the new password in the **Verify new password** field.

5 Click OK.

Switching Users

You can continue to work with an open project database or project using a different user name and password. The Switch User option provides a quick way to switch to a user ID with different privileges without having to close and reopen the project database.

To switch users for a project database or project:

1 On the File menu tab, click the Switch User button.

The Switch User dialog box appears.

2 Enter the new user ID in the **User ID** field.

3 Enter the password in the **Password** field, if required.

4 Click OK.

Logging Out of a Project Database

Log out of a project database when you are finished with your source control tasks or when you want to log in to a different project database. When you log out of a project database, your Version Manager web client session is immediately terminated, requiring you to re-enter your user ID and password the next time you want to access a Version Manager project database.

To log out of a project database:

■ Click the Logout button, located on the right side of the tabbed menus. The Logout page appears.

■ To log into a different project database, click the `vminet.html` link to view a list of project databases available on this server.

> **NOTE** Depending on your servlet configuration, if you do not explicitly log out of a project database, a time logout based on inactivity may occur.

Chapter 3
Navigating the Interface

Version Manager Web Client Panes

Once you have logged in to a project database, navigate the
Serena ChangeMan Version Manager web client interface to view the projects,
subprojects, 5.3/6.0 folders, versioned files, and revisions contained in the project
database. Five panes comprise the Version Manager web client interface: the Project
pane, Content pane, Revision pane (not shown below), Menu pane, and Status pane.
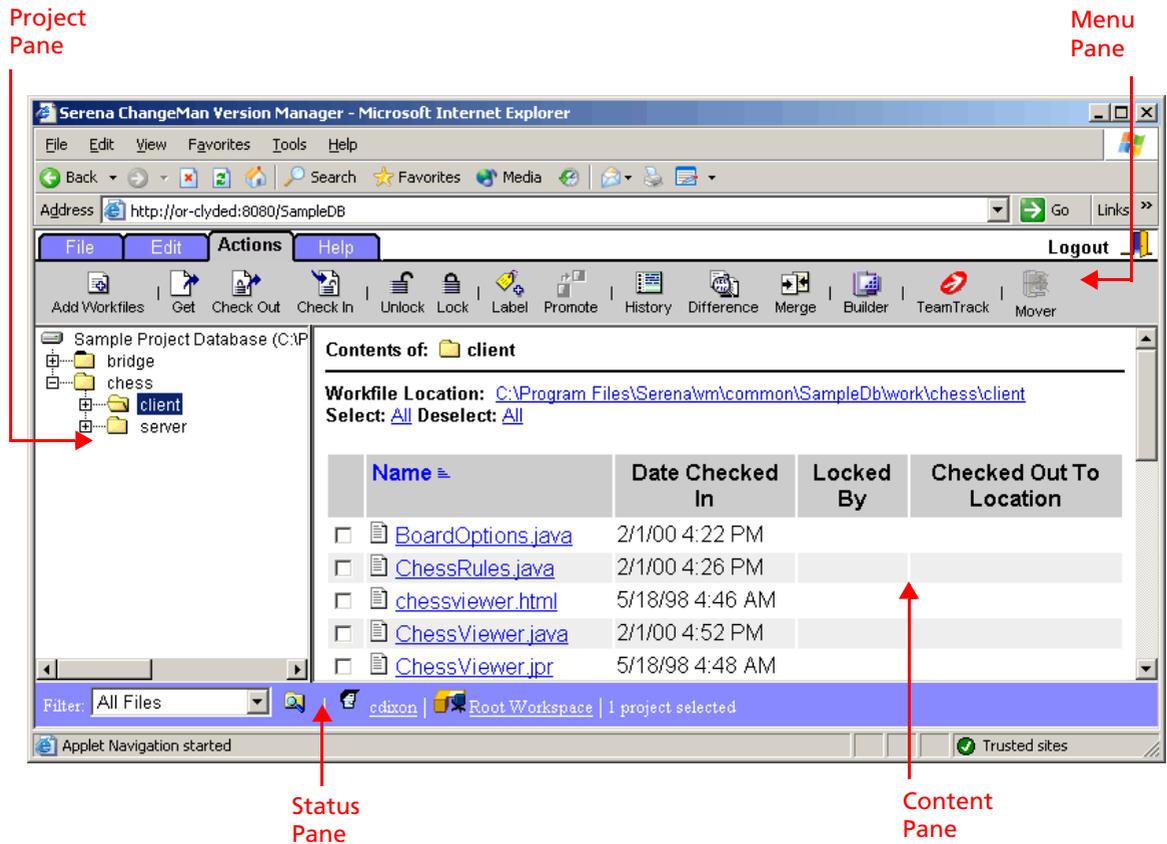
Working in the Project Pane

The Project pane displays the open project database and its projects, subprojects, and
5.3/6.0 folders in a hierarchical tree. Click +/- to expand or collapse the tree. When you
select a project, subproject, or 5.3/6.0 folder, its versioned files appear in the Content
pane to the right.

The following icons can appear in the Project pane:

Icon	Description
	The open project database displayed by its name and its location in parenthesis. A 5.3/6.0 project database displays by its location only.
	A project, subproject, or folder. The icon for a 5.3/6.0 project or folder appears in blue.

Icon	Description
📁	A project with a configuration file attached to it. These configuration settings override the project database settings. The icon for a 5.3/6.0 project appears in blue.
📁✖	A project that you cannot open because you have not been defined in the Access Control Database. The icon for a 5.3/6.0 project appears in blue.

Working in the Content Pane

The Content pane displays the versioned files contained in the project database or project that you selected in the Project pane. To:

- Select versioned files for action, click the check boxes next them.

- Edit or view a versioned file in the default editor or browser, click the file icon.

> **NOTE** For information on setting the default editor, see "Setting Your Default Editor" on page 55.

- Open the Revision pane and view details on all of the revisions in a versioned file, click the file name.

- Sort the versioned files, click the heading of the column you wish to sort by. To inverse the sort order, click the column heading again.

The Content pane contains the following fields and icons:

Field or Icon	Description
Contents of	Displays the name of the project database or project in which the versioned files reside.
Workfile Location	Displays the project's workfile location
Page	Only displays when more items exist than can be contained on the page. Click Previous, Next, or [number] to go to the previous, next, or specific page. Click Index to go to the Page Index on the bottom, which lists the first and last files on each page. This field is duplicated at the bottom of the page, except the Index link is replaced by Top, which takes you to the top of the page.
Select/Deselect	Options to select and clear all items. If more items exist than can be contained on the page, you can choose to select all items on the current page.
Name	The name of the versioned file. Click to open the Revision pane.
Date Checked In	The date and time the versioned file was last checked in.
Locked By	The user ID that currently holds a lock on the item.
Checked Out To Location	If versioned file is checked out, displays the path the file is checked out to.
📄	A versioned file that does not contain any locked revisions. view or edit the file in the default editor.

Field or Icon	Description
📄	A versioned file that contains a locked revision. view or edit the file in the default editor.
📄	A versioned file that references an archive that cannot be found.
Page Index	Only displays when more items exist than can be contained on the page. It displays the page number and first and last files on each page.

Working in the Revision Pane

Once you click a versioned file link, the Revision pane appears. The Revision pane displays details on all revisions of the versioned file. To:

- Select a revision for action, click the check box next it.

- Edit or view a revision in the default editor or browser, click the revision number.

> **NOTE** For information on setting the default editor, see "Setting Your Default Editor" on page 55.

- Sort the revisions, click the heading of the column you wish to sort by. To inverse the sort order, click the column heading again.
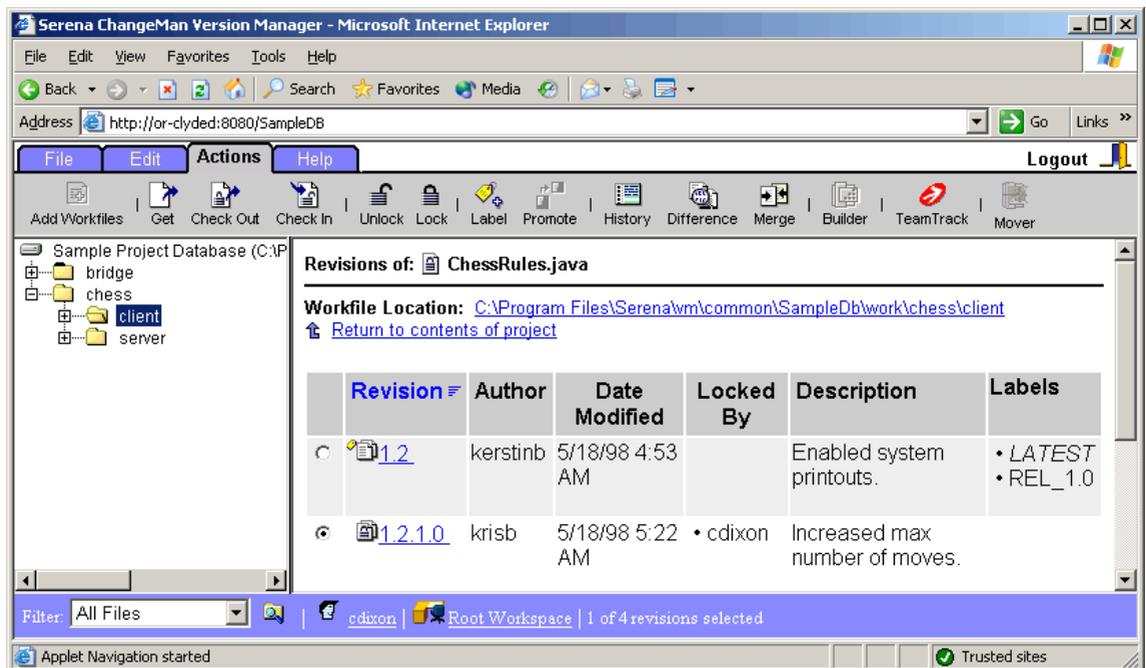
The Revision pane contains the following fields and icons:

Field or Icon	Description
Revisions of	Displays the name of the versioned file containing the revisions.
Workfile Location	Displays the workfile location of the versioned file. Click the workfile location link to bring up the Set Workfile Location dialog box.
Page	Only displays when more items exist than can be contained on the page. Click Previous, Next, or [number] to go to the previous, next, or specific page.
Return to the contents of the project	Brings you back to the Content pane.
Revision	The number of the revision. The default revision is selected. Click to edit or view the revision in the default editor.
Author	The original author of the revision.
Date Modified	The timestamp on the file when it was last checked in.
Locked By	The user ID who currently holds a lock on the revision.
Description	The description added to the revision when it was checked in.
Labels	If a label is assigned to the revision, the label name displays.
Promotion Groups	If a promotion group is assigned to the revision, the promotion group displays.
	A revision.
	A locked revision.
	A revision assigned a promotion group.
	A locked revision assigned a promotion group.
	A revision assigned a version label.
	A locked revision assigned a version label.
	A revision assigned a promotion group and version label.
	A locked revision assigned a promotion group and version label.

Working in the Menu Pane

The Menu pane provides buttons to execute Version Manager web client commands. Click a tab to access the commands on the File, Edit, Actions, or Help menu. Click a button on the menu to execute a command.

The following menu buttons are available:

File menu button	Description
	Creates a new project or 5.3/6.0 folder.
	Sets or changes a workfile location for the selected project database, project, or versioned file.
	Updates 5.3/6.0 project folders to display new archives added by other users.
	Renames an existing project or 5.3/6.0 folder.
	Deletes an existing project, 5.3/6.0 folder, or versioned file.
	Displays the properties of a project database, project, 5.3/6.0 folder, or versioned file.
	Sets, creates, renames, or deletes workspaces.
	Switches to a different user ID for the selected project database or project.
	Changes your password for logging into the selected project database or project.

Edit menu button	Description
	Copies one or more versioned files to another project or 5.3/6.0 folder.
	NOTE The archives remain in their original location.
	Moves one or more versioned files to another project or 5.3/6.0 folder.
	NOTE The archives remain in their original location.

	Sets options for the Version Manager web client display and operations.

Actions menu button	**Description**
	Adds workfiles to a project database, project, or 5.3/6.0 folder.
	Gets a revision and makes a copy in the workfile location.
	Checks out an editable revision to the workfile location.
	Checks in a modified workfile to the archive.
	Unlocks a revision without performing a check in.
	Locks a revision without performing a check out.
	Assigns, renames, or deletes a version label from a revision.
	Assigns, promotes, changes, or removes a promotion group from a revision.
	Creates a history report on a project database, project, versioned file, or 5.3/6.0 folder.
	Launches the Merge Tool to compare (difference) revisions or workfiles.
	Launches the Merge Tool to merge revisions or workfiles.
	Launches the Serena ChangeMan Builder web client to control and run your build process.

	(May not appear.) Launches another web browser to bring up the TeamTrack URL associated with the current project database. Your administrator defines this URL in the Version Manager Application Server.
	(May not appear.) Launches another web browser to bring up the Tracker URL associated with the current project database. Your administrator defines this URL in the Version Manager Application Server.
	(May not appear.) Launches TrackerLink so that you can associate workfiles with issues in Tracker when checking out, checking in, locking, and adding workfiles.

Deployment menu button	**Description**
	Requires Serena ChangeMan Mover to deploy files from Version Manager to another application.
	Requires Mover. Use to set up the file deployment.
	Requires Mover. Use to schedule the file deployment.

Help menu button	**Description**
	Launches the Version Manager web client help system.
	Launches the What's New page in the help system. The What's New page communicates to you what features are new in this version of Version Manager.
	Brings up the Serena support page.
	Displays an About box with Version Manager web client copyright and version information.
	Logs you out of the project database.

Working in the Status Pane

The Status pane lets you view and modify your current filter, user ID, and workspace. It also displays the number of items that are currently selected. To:

- Change the display of versioned files in the Content pane, click the Filter list.

- Switch users, click the user ID.

- Set a different workspace, click the Workspace name.

The Status pane consists of the following fields and icons:

Icon	Description
Filter	View all files or filter your view by filename wildcards, locker, version labels, or promotion groups. Retains the last four filters used.
	Toggle between recursive and non-recursive filter modes: - **Recursive:** The Content pane displays all projects, subprojects, and versioned files contained within the item selected in the Project pane. - **Non-recursive:** The Content pane displays only the versioned files contained at the root of the item selected in the Project pane.
	The current user ID displays here. Click the name to switch to another user ID for this project database.
Public Private	The current workspace displays here. Click the workspace name to set a different workspace for this project database. The workspace icon indicates if the workspace is public or private.
[#] of [total] [items] selected	Displays the number of currently selected projects, folders, versioned files, or revisions. For versioned files and revisions, it also displays the total number of versioned files in the project and the number of revisions of a versioned file (for example, 4 of 50 files selected).

Selecting Items

Select items in the Version Manager web client to view information on them, or to perform actions such as check in, get, check out, lock, unlock, or assign a version label. After you have selected the items, click a menu button to perform an action.

To select...	Do this...
The project database	Click the project database in the Project pane.
A project or folder	Click the project or folder in the Project pane.
Multiple projects	Press and hold the SHIFT or CTRL key while clicking the projects in the Project pane. You can only select multiple projects if they belong to the same parent project.

| To select...	Do this...
One or more versioned files	Click the check boxes next to the versioned files in the Content pane. To select all of the versioned files in a project, click the **Select: All** link. When versioned files exist on multiple pages, you can click the **Select: All on this page** to select the versioned files on the current page only. If you navigate to another page after clicking **Select: All**, the selection is canceled.
A revision	Click the radio button next to the revision in the Revision pane.

Moving Items

You can move versioned files between projects or folders within a project database. When you move versioned files, the archives that they reference do not move. The versioned files continue to reference the archives in their original location.

Use the Version Manager desktop client to move other items, such as projects and folders.

To move a versioned file:

1   Select one or more versioned files.

2   On the Edit menu tab, click the **Move** button. The Move File dialog box appears.
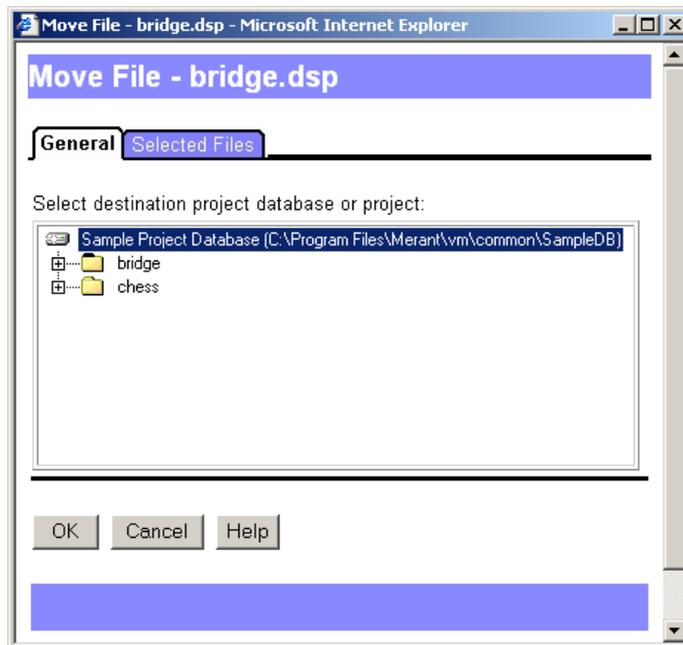
3   Select the destination project or folder in the project navigation tree. To move the file directly beneath the project database or root, select the project database or root.

4   Click **OK**. The versioned file moves to the destination location.

Renaming Items

You can rename a project or 5.3/6.0 folder in the Project pane. The new project name appears in both the Version Manager desktop and web clients, but the actual archive directory name is not changed.

NOTE You cannot rename versioned files or 5.3/6.0 projects.

If the previous workfile location matched the old project name, a new workfile location is set to match the new project name. You check out, copy, and check in files from the new workfile location. Any files checked out before you renamed a project or folder remain in the original workfile location.

To rename a project or folder:

1 Select the project or folder you want to rename.

2 On the File menu tab, click the **Rename** button.

The Rename Project/Folder dialog box appears.
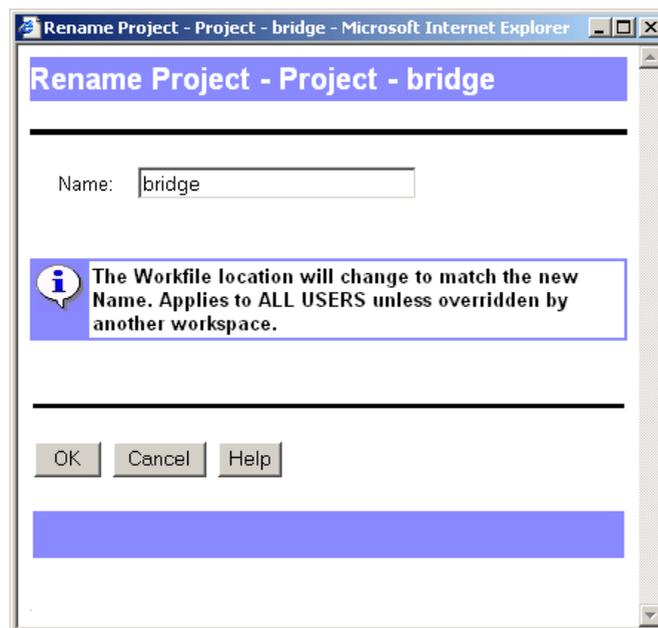
3 Enter the new name in the **Name** field.

4 Click **OK**.

Deleting Items

You can delete projects, 5.3/6.0 folders, and versioned files, depending on your security privileges. You cannot delete 5.3/6.0 projects. All deleted items are removed from both the Version Manager desktop and web clients. However, the archives of the deleted items are not removed from the archives directory. The project configuration file and access control database are also retained.

If you want to recover deleted projects, 5.3/6.0 folders, or versioned files, use Version Manager to import the archives into a project database or project.

To delete a project, folder, or versioned file:

1　Select the item you want to delete. You can select one or more projects, folders, or versioned files.

2　On the File menu tab, click the **Delete** button.

The Confirm Delete dialog box appears.
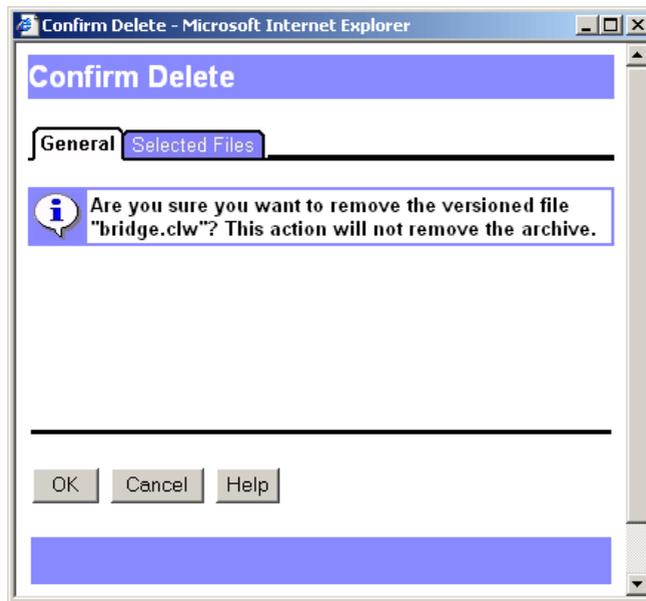

3　Click **OK** to delete the item.

Reviewing Item Properties

You can review the properties of a project database, 5.3/6.0 project root, project, 5.3/6.0 folder, and a versioned file. Properties vary according to the item you select.

If you select a...	You can...
Project database or project	View its contents, configuration file, and archive location. You can also view or change the workfile location, default version, default promotion group, branch version, and base version.
5.3/6.0 project root or project	View its contents and configuration file. You can also view or change the default version, default promotion group, branch version, and base version.
5.3/6.0 folder	View its contents. You can also view or change the workfile location.
Versioned file	View archive information. You can also view or change the workfile location.

To view the properties of an item:

1   Select a project database, project, folder, or versioned file.

2   On the File tab, click the **Properties** button. The Show Properties dialog box appears.
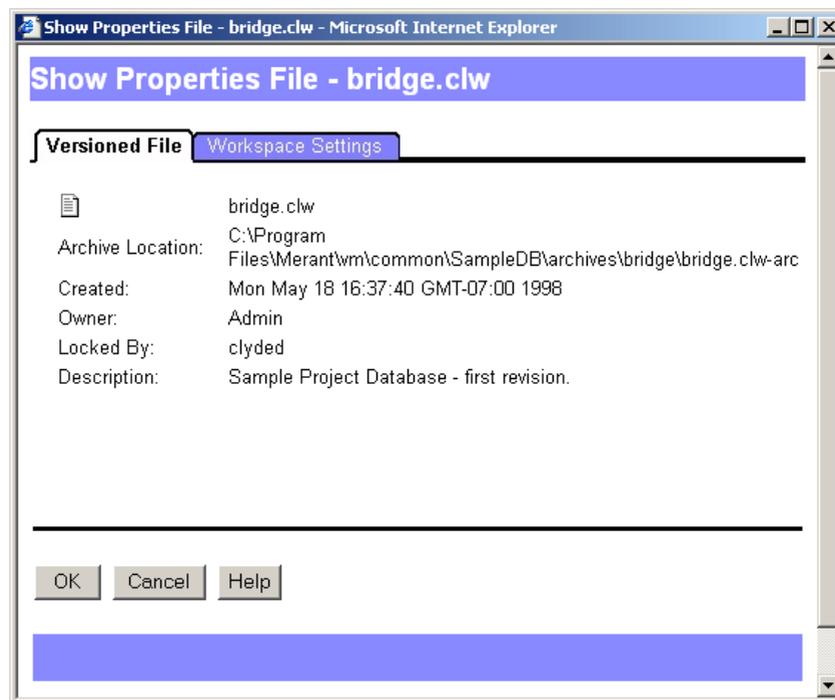
 NOTE The appearance of the Show Properties dialog box varies depending on the type of item you selected.

3   View or change the default settings as necessary. See Chapter 4, "Customizing Your Environment" on page 51.

4   Click **OK**.

Filtering Your View

By default, when you select a project database, project, or folder, the Version Manager web client displays all of its associated versioned files in the Content pane. The file filter allows you to customize the Content pane so that only the versioned files that match your filter criteria appear. You can filter your view to display only versioned files that:

- Are locked by specific users or by any user

- Match a wildcard filename pattern

- Match a specified promotion group

- Match a specified version label

- Differ in terms of revision number, modification time, or revision contents between:

  • Two version labels

- Two promotion groups

- A version label and a promotion group

Performing actions on a filtered project If you perform an action (such as a check out) on a project by selecting it in the Project pane, Version Manager performs the action on all files in the project, *including* any files not displayed by the current filter (Note, files in subprojects within the selected project are ignored). To limit an action to only the versioned files displayed by the current filter, select the versioned files in the Content pane and then select the action.

> **NOTE** A filtered view remains in effect until you select a different one. To avoid confusion, you may want to clear a filtered view by returning to the All Files view before going on to other work.

Viewing Files Recursively

By default, the Content pane displays only the versioned files located at the root of the item (project database, project, or subproject) you have selected in the Project pane. Unless you select the recursive view, projects, subprojects, and the files contained within nested projects and subprojects are not displayed.

To switch between recursive and non-recursive views:

1   In the Project pane, select the project database or project that you want to view.

2   Click the **Recursive/Non-recursive** button. The appearance of the button toggles to indicate which filter mode is in effect:

   - **Recursive:** The Content pane displays all projects, subprojects, and versioned files contained within the item selected in the Project pane.

   - **Non-recursive:** The Content pane displays only the versioned files contained at the root of the item selected in the Project pane.

Filtering by Locker

Use this filter to find versioned files locked by specified users or by any user.

To set a Locked By filter:

1   From the **Filter** list on the Status pane, select **Locked By**. The Locked By Filter dialog box appears.

Locked By Filter

Locked by:
⊙ Users: [   ]
○ Any user

OK   Cancel   Help

2   Do one of the following:

■   To display versioned files locked by specific users, select the **Users** option and enter one or more user IDs. Separate multiple user IDs with the delimiter character. The default delimiter is a semicolon (;). For information on setting the delimiter character, see "Specifying a Delimiter for Items Entered in Fields" on page 53.

■   To display all locked versioned files regardless of who has them locked, select the **Any user** option.

3   Click **OK**.

Filtering by Wildcard Filename

Use this filter to find versioned files that match specified wildcard name patterns.

To set a wildcard filter:

1   From the **Filter** list on the Status pane, select **Wild Card**. The Wild Card Filename Filter dialog box appears.

Wild Card Filename Filter

Filename pattern: [   ]

☑ Ignore case

*	Matches zero or more characters
?	Matches one character
[a-z]	Matches a range of characters
[^a-d]	Matches inverse of pattern

[OK]   [Cancel]   [Help]

2   Enter filter criteria into the **Filename pattern** field.

| Use this wild card...	To search for filenames that match...
*	Zero or more characters. For example, if you want to search for all versioned files with a DLL extension, you would enter `*.DLL`.
?	One character. For example, if you want to search for versioned files that had a pattern in the filename, such as `TEST01.DLL`, `TEST02.DLL`, … `TESTXX.DLL`, you would enter `TEST??.DLL`.
[-]	A range of characters. For example, if you want to search for all versioned files that start with A, B, C, or D, you would enter `[A-D]*`.
^	A negative character set matching any character not enclosed (for example, `[^A-D]*` for all file names that do not start with A, B, C, or D).

3   Click **OK**.

Filtering by Version Label

Use this filter to find versioned files that include specified version labels.

To set a version label filter:

1 From the **Filter** list on the Status pane, select **Advanced Filter**. The Advanced Filter dialog box appears.
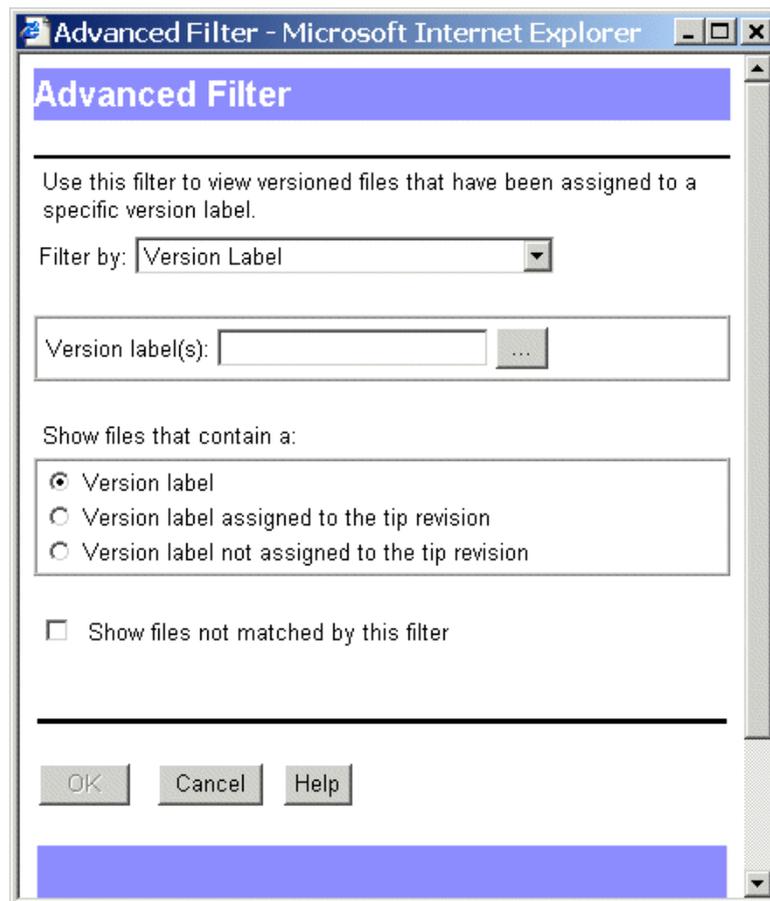
2 Enter the name of the version labels that you want to filter by in the **Version label(s)** field or browse to select them. Separate multiple version labels with the delimiter character. The default delimiter is a semicolon (;). For information on setting the delimiter character, see "Specifying a Delimiter for Items Entered in Fields" on page 53.

> **NOTE** Version labels are case sensitive. Make sure you use the correct case.

3 Select one of the following options to show versioned files that contain the specified version labels in:

■ Any revision: **Version label**.

■ The tip revision: **Version label assigned to the tip revision**.

■ Any revision except for the tip revision: **Version label not assigned to tip revision**.

4 To inverse the logic of the filter, select the **Show files not matched by this filter** check box.

5 Click **OK**.

Filtering by Promotion Group

Use this filter to find files that include specified promotion groups.

To set a promotion group filter:

1   From the **Filter** list on the Status pane, select **Advanced Filter**. The Advanced Filter dialog box appears.

2   Select the **Promotion Group** option from the **Filter by** list.
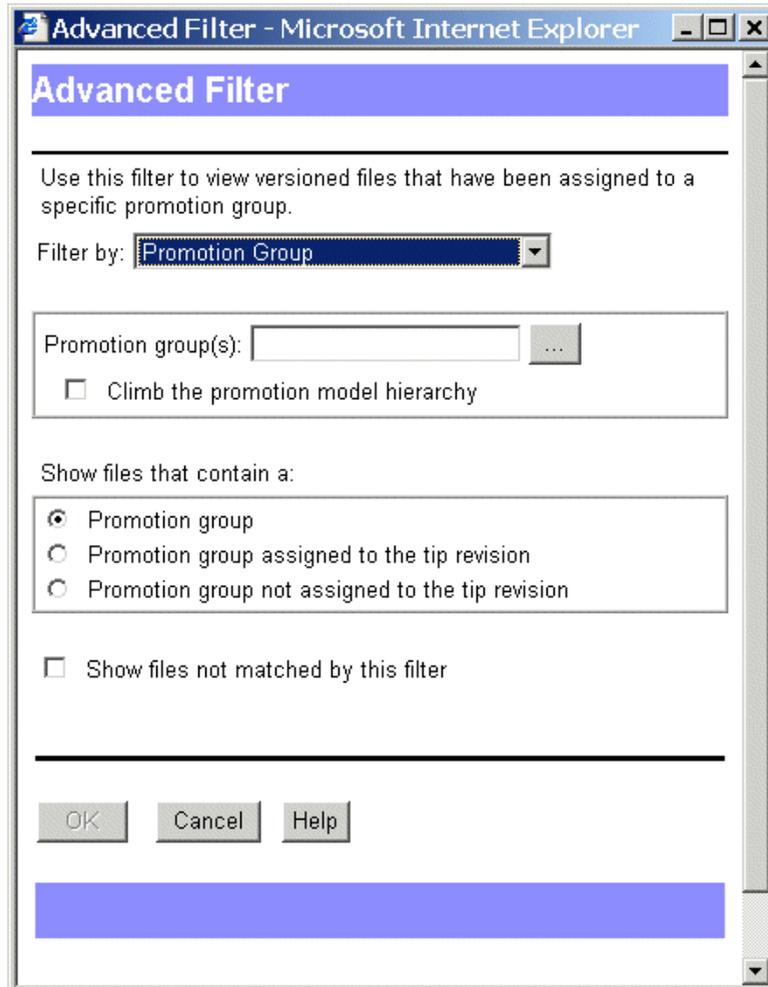
3   Enter the names of the promotion groups that you want to filter by in the **Promotion group(s)** field or browse to select them. Separate multiple promotion groups with the delimiter character. The default delimiter is a semicolon (;). For information on setting the delimiter character, see "Specifying a Delimiter for Items Entered in Fields" on page 53.

4   If the specified promotion group is not found, the filter can search for the next highest promotion group, continuing up the promotion model hierarchy until a match is found or the highest level of the promotion model is reached. To enable this feature, select the **Climb the promotion model hierarchy** check box.

5 Select one of the following options to show versioned files that contain the specified promotion groups in:

- Any revision: **Promotion group**.

- The tip revision: **Promotion group assigned to the tip revision**.

- Any revision except for the tip revision: **Promotion group not assigned to tip revision**.

6 To inverse the logic of the filter, select the **Show files not matched by this filter** check box.

7 Click **OK**.

Filtering by Difference Using Two Version Labels

Use this filter to find versioned files with revisions that differ between two specified version labels.

To set a difference filter using two version labels:

1 From the **Filter** list on the Status pane, select **Advanced Filter**. The Advanced Filter dialog box appears.

2 Select the **Two Version Labels** option from the **Filter by** list.
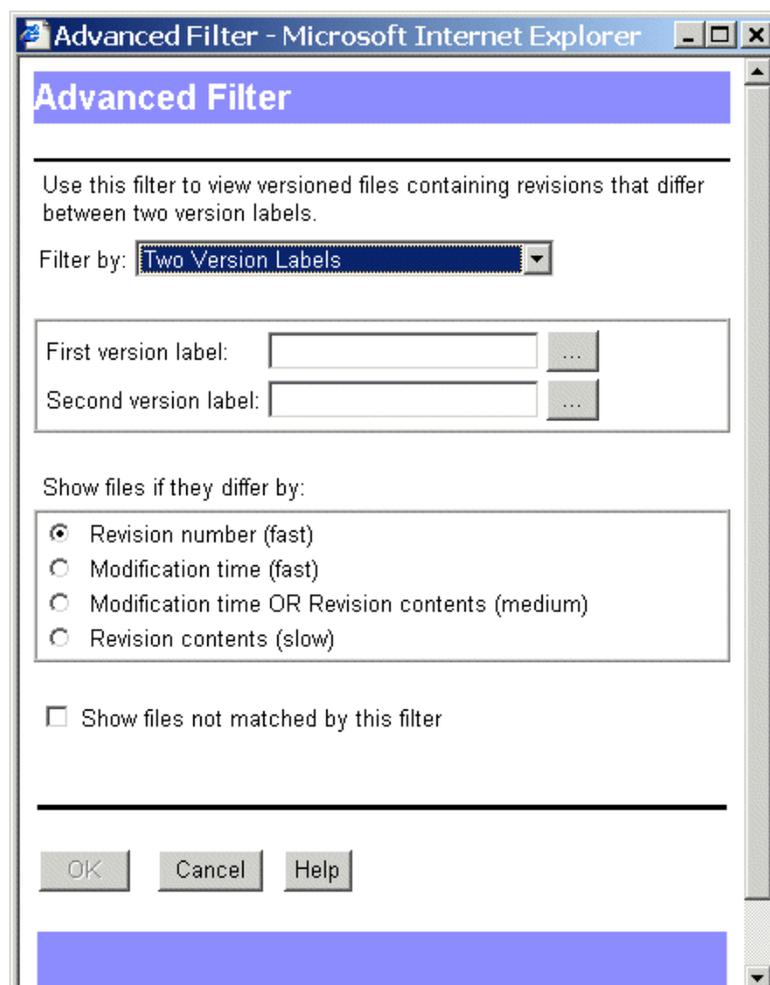
3 Enter the name of a version label that you want to filter by in the **First version label** field or browse to select one.

> **NOTE** Version labels are case sensitive. Make sure you use the correct case.

4 Enter the name of a version label that you want to filter by in the **Second version label** field or browse to select one.

5 Select one of the following options to show versioned files with revisions that differ by:

- **Revision number.**

- **Modification time.**

- **Modification time OR Revision contents:** First compares the modification time of the revisions. If the modification time does not differ, then compares the revision contents. This option takes longer if many revisions have the same modification time.

- **Revision contents:** Compares the contents of the revisions. This option takes the most time.

6 To inverse the logic of the filter, select the **Show files not matched by this filter** check box.

7 Click **OK**.

Filtering by Difference Using Two Promotion Groups

Use this filter to find versioned files with revisions that differ between two specified promotion groups.

To set a difference filter using two promotion groups:

1 From the **Filter** list on the Status pane, select **Advanced Filter**. The Advanced Filter dialog box appears.

2 Select the **Two Promotion Groups** option from the **Filter by** list.
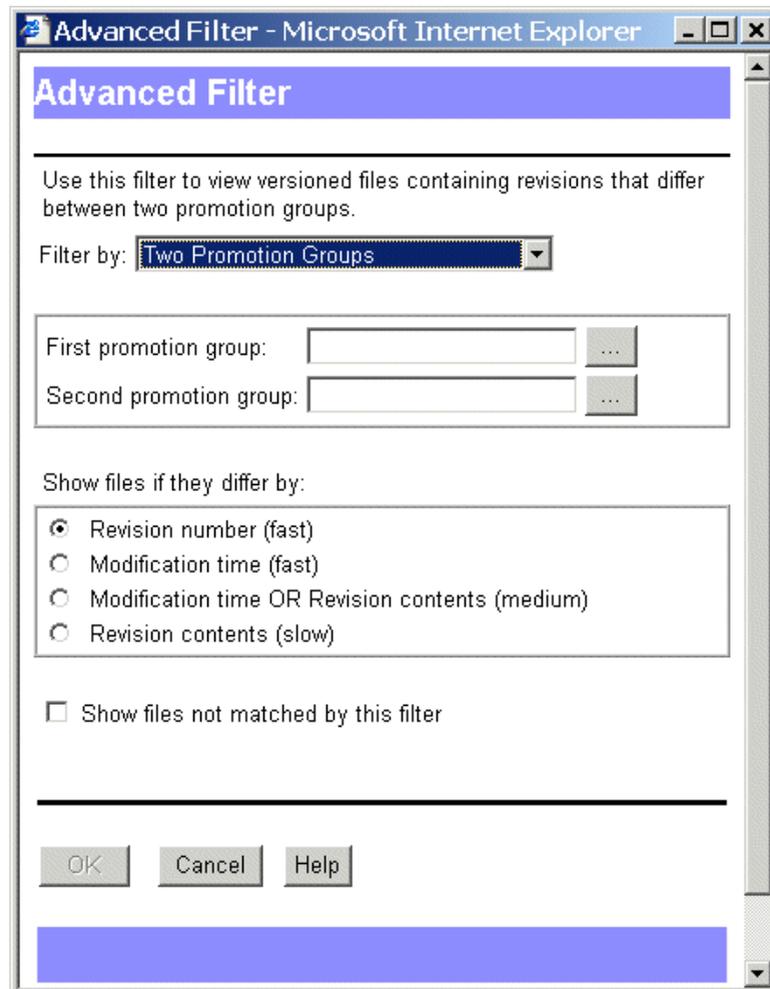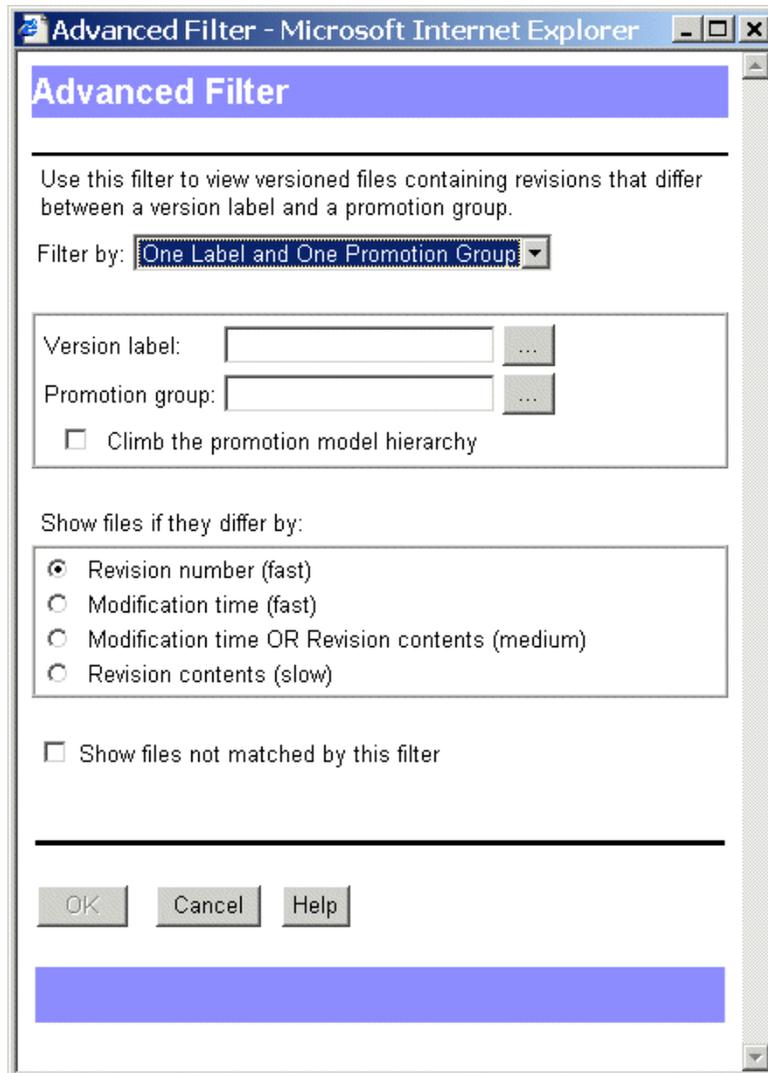

3 Enter the name of a promotion group that you want to filter by in the **First promotion group** field or browse to select one.

4 Enter the name of a promotion group that you want to filter by in the **Second promotion group** field or browse to select one.

5 Select one of the following options to show versioned files with revisions that differ by:

■ **Revision number.**

■ **Modification time.**

■ **Modification time OR Revision contents:** First compares the modification time of the revisions. If the modification time does not differ, then compares the revision contents. This option takes longer if many revisions have the same modification time.

■ **Revision contents:** Compares the contents of the revisions. This option takes the most time.

6 To inverse the logic of the filter, select the **Show files not matched by this filter** check box.

7 Click **OK**.

Filtering by Difference Using a Version Label and a Promotion Group

Use this filter to find versioned files with revisions that differ between a specified version label and a specified promotion group.

To set a difference filter using a version label and a promotion group:

1   From the **Filter** list on the Status pane, select **Advanced Filter**. The Advanced Filter dialog box appears.

2   Select the **One Label and One Promotion Group** option from the **Filter by** list.

3   Enter the name of the version label that you want to filter by in the **Version label** field or browse to select one.

NOTE Version labels are case sensitive. Make sure you use the correct case.

4   Enter the name of the promotion group that you want to filter by in the **Promotion group** field or browse to select one.

5   If the specified promotion group is not found, the filter can search for the next highest promotion group, continuing up the promotion model hierarchy until a match is found or the highest level of the promotion model is reached. To enable this feature, select the **Climb the promotion model hierarchy** check box.

6   Select one of the following options to show versioned files with revisions that differ by:

- **Revision number.**

- **Modification time.**

- **Modification time OR Revision contents:** First compares the modification time of the revisions. If the modification time does not differ, then compares the revision contents. This option takes longer if many revisions have the same modification time.

- **Revision contents:** Compares the contents of the revisions. This option takes the most time.

7   To inverse the logic of the filter, select the **Show files not matched by this filter** check box.

8   Click **OK**.

Viewing All Versioned Files (No Filter)

To clear a filtered view and display all versioned files, select **All Files** from the **Filter** list on the Status pane.

Chapter 4

Customizing Your Environment

Setting Version Manager Web Client Options

You can specify how many items per page the Serena ChangeMan Version Manager web client displays, how it handles check in/check out/get, whether to include subprojects, and how results dialogs are handled. These options are saved per user ID, allowing them to be retained when you start another Version Manager web client session.

> **NOTE** The options you set in the Version Manager web client do not affect any Version Manager desktop client options you have set.

Default Version Manager Web Client Options

Unless you change the defaults, the Version Manager web client:

- Displays up to 50 items per page.

- Leaves read-only workfiles in the workfile location after a check in.

- Copies a read-only revision when you perform a get.

- Prompts you if a workfile already exists during check out.

- Does not include subprojects in project operations.

- Does not automatically dismiss the Results dialog box after a successful action.

- Uses semicolons (;) to separate multiple entries in dialog box fields.

- Gets or checks out revisions whether or not they are newer than the existing workfiles.

You can change these defaults in the Options dialog box
(Edit | Options | General tab).

Setting Number of Items per Page

You can set the maximum number of files that appear on a
Version Manager web client page at a time. If the number of files exceeds this limit,
multiple pages are used to display the files. From the content pane, you can click the page
number or click Previous or Next to access these pages.

To set the number of items per page:

1 On the Edit menu tab, click the **Options** button. The **Options** dialog box appears with
the General tab active.

2 Enter the maximum number of files to display in the **Number of items per page**
field. The default is 50.

3 Click **OK**.

Specifying a Delimiter for Items Entered in Fields

By default, semicolons (;) are used to separate multiple entries in dialog box fields. The
delimiter character is used in all fields that accept multiple entries.

You need to change the delimiter character if you work with items that use it in their
names. You can set the delimiter to be a comma (,), colon (:), or semicolon (;).

To specify a delimiter character:

1 On the Edit menu tab, click the **Options** button. The Options dialog box appears with the General tab active.

2 From the **Delimiter** list, select one of the following:

- **Comma**

- **Colon**

- **Semicolon** (default)

> **IMPORTANT!** Choose a delimiter character that is *not* present in the items you wish to enter into dialog box fields.

3 Click **OK**.

Defining Check In/Check Out Options

If you find that you usually change the default options when you perform check in/check out/get operations, the Version Manager web client enables you to change these default settings to fit your working style.

To change check in/checkout/get options:

1 On the Edit menu tab, click the **Options** button. The Options dialog box appears with the General tab active.

2 Change the defaults as necessary:

- To delete workfiles from the workfile location after a successful check in, select the **Delete workfile after check in** box.

- To make workfiles writable when you perform a get, clear the **Get read-only revision** box.

- To choose an option other than **Prompt** when a workfile already exists, select **Overwrite** or **Do not overwrite**.

- To get or check out a revision only if it is newer than the workfile, select the **Get only if revision is newer than workfile** check box.

3 Click **OK**.

Including Subprojects in Project Operations

When you perform actions on project databases and projects, the Version Manager web client only performs actions on the versioned items contained directly at the project database or project level. The Version Manager web client does not include versioned files in subprojects as part of its default operation.

If you usually include subprojects when you perform actions on project databases and projects, you can change the default to include subprojects.

To include subprojects:

1   On the Edit menu tab, click the **Options** button. The Options dialog box appears with the General tab active.

2   Select the **Include subproject in project operations** box.

3   Click **OK**.

Dismissing Results Dialog Boxes after Successful Action

By default, the Results dialog box appears after an action is complete to show if the action was successful, or if any errors or warnings occurred. You must click the Close button to dismiss the Results dialog box. If you want the Results dialog box to automatically close after an action is successful, you can change the default behavior.

To automatically dismiss Results dialog box:

1   On the Edit menu tab, click the **Options** button. The Options dialog box appears with the General tab active.

2   Select the **Automatically dismiss results dialogs when action is successful** box.

3   Click **OK**.

If errors occur, the Results dialog box will not automatically close.

Setting Your Default Editor

Setting your default editor specifies which editor Version Manager launches when you click a versioned file in the Contents pane or a revision in the Revisions pane.

Windows   On Windows, Version Manager opens the file in either the editor defined by the Windows file type associations or a specific editor you have selected. By default, Version Manager uses the Windows file type associations. We recommend that you use the Windows file type associations.

> **NOTE** If the wrong application is launched when you double-click a file, correct the Windows file type associations using Windows Explorer (Tools | Folder Options | File Types tab).

UNIX   On UNIX, you must define the location of an editor so that you can launch files for editing or viewing from within Version Manager. The **Use default Windows associations** option is not available to UNIX users.

To set your default editor:

1   On the Edit menu tab, click the **Options** button. The Options dialog box appears with the General tab active.

2   Select the Applications tab.

3   (Windows only) If you want to use the Windows file type associations to launch an editor, select the **Use default Windows associations** check box.

4   In the **Editor Location** field, enter the location of the editor program executable, or click the Browse button to select it.

- (UNIX only) If you specify a non-GUI editor that launches its own window (such as vi), you will need to launch the editor in an xterm or other type of window. For example, in the Editor Location field, you would enter:

  xterm *editor path*

  where *editor path* is the location of your editor.

- (Windows only) If you specify an editor *and* select the **Use default Windows associations** check box, the editor you specified will be used only if Windows cannot find an association.

5   Click **OK**.

Setting Workspace Properties

A workspace is a collection of work settings defined for a project database. You can define multiple workspaces so you can easily switch work settings to match your environment. Each user has one active workspace at a time. The work settings include:

- The workfile locations defined for the project database and its contents.

- The default version used when you do not specify a revision number or version label.

- The base version and branch version used for automatic branching, if enabled.

- The default promotion group used if a promotion model is in effect.

Public or private workspaces
Workspaces can be public or private. A public workspace is typically created by an administrator when a project database is created. Any changes made to a public workspace affect everyone using that workspace. A private workspace is typically created by a user to customize the work settings for the user's personal work environment. Any changes made to a private workspace affect only the user who created it.

Root workspaces
The Root workspace is the default public workspace. It is automatically created every time your administrator creates a project database. You cannot delete or rename the Root workspace. You can only change the settings of the Root workspace if your administrator has assigned you those privileges.

If you do not create or set any other workspaces, the Root workspace is set as the default workspace.

Setting Your Workspace

When start using the Version Manager web client, specify which workspace you want to use. You can also specify whether to make the workspace the default when you start another web or desktop client session.

To set your workspace:

1 On the File menu tab, click the **Set Workspace** button. The Set Workspace dialog box appears.
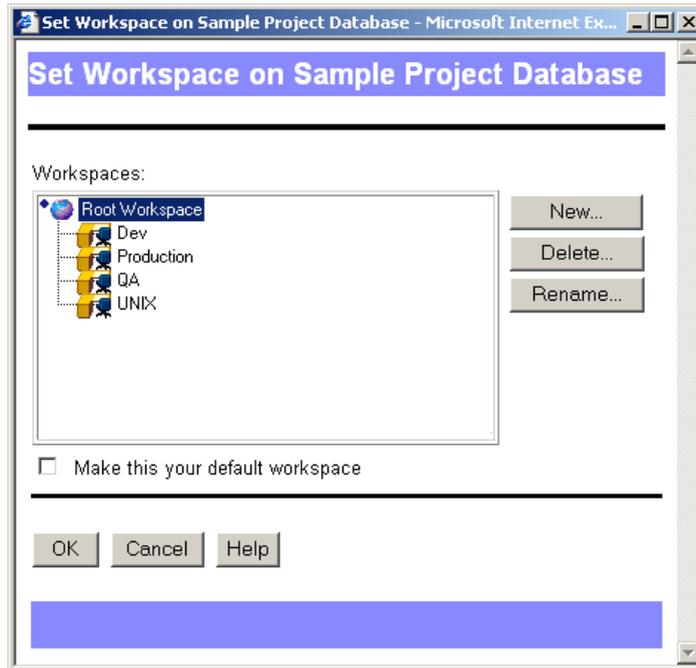
2 Select the workspace from the Workspaces list that you want to use with the project database.

3 To associate this workspace with the project database for subsequent Version Manager web or desktop client sessions, select the **Make this your default workspace** box. Otherwise, this workspace is only active during your current Version Manager web client session.

4 Click **OK**.

Setting Your Workfile Location

The workfile location is the location where you check in and check out workfiles. It is set when the project is first created, and is stored in the workspace assigned to the project database.

You can change the workfile location for any project or versioned file in the project database. Changing the workfile location while in a public workspace changes the workfile location for all users accessing the project using that public workspace. If the workspace is private, then changing the workfile location will not affect other users.

To set a workfile location:

1 Select the project database, project, or versioned file.

2 On the File menu tab, click the **Set Workfile Location** button or click the **Workfile Location** link in the content pane.

The Set Workfile Location dialog box appears.
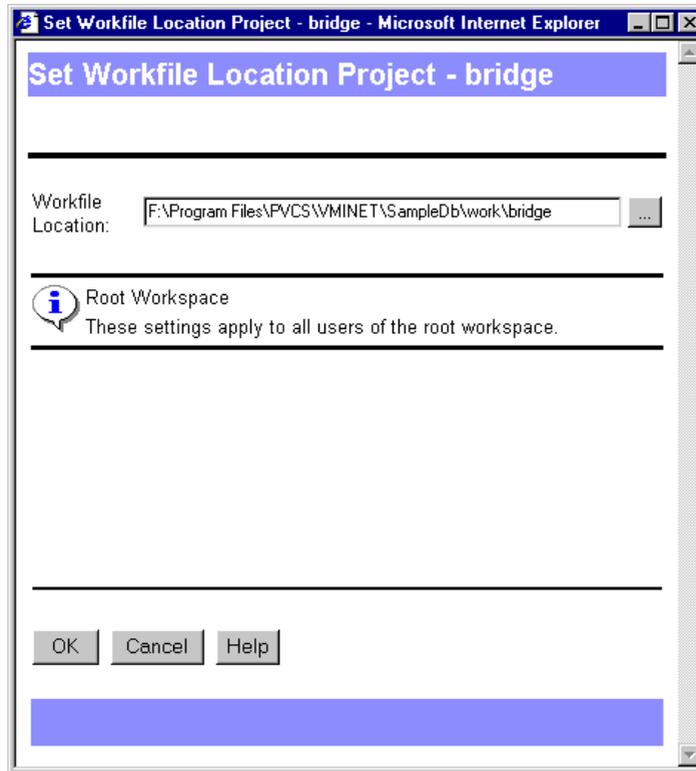
3   Enter or browse to the new workfile location in the **Workfile Location** field.

4   Click **OK**.

Defining the Default Revision

By default, the latest revision (tip) of the versioned file is used during get, check out, and lock operations. However, you can define the default revision to be a specific version label instead.

To define the default revision:

1   Set the workspace you want to edit.

2   On the File menu tab, click the Properties button. The Properties dialog box appears.

3   Enter a version label in the **Default Version** field and click **OK**.

Enabling Automatic Branching

Automatic branching lets you create a branch automatically from a trunk revision. Then, by default, you operate on the tip revision of that branch whenever you perform an action.

To set up automatic branching, you assign two fixed version labels to the revision from which you want to branch. One version label marks where the branch starts, and the

other marks the tip of the branch. You then specify these version labels in the active workspace.

> **NOTE** Before you set up automatic branching, check with your administrator to make sure you have the necessary security privileges. Also make sure that you coordinate version label names with the rest of your project team.

To enable automatic branching:

1 Select the versioned file(s) for which you want to enable automatic branching.

2 On the Actions menu tab, click the **Label** button. The Version Label dialog box appears.

3 Assign a fixed version label to the revision:

   a Click the **Assign** option.

   b Enter the name of the version label in the **Assign Version Label** field. For example, Rel1.0 Base.

   c Enter the revision number in the **To revision** field.

   d Click **OK**.

This version label becomes the Base Version.

4 Repeat steps 2 and 3 to assign another fixed version label to the revision. For example, Rel1.5 Branch.

This version label becomes the Branch Version.

5 Select the project or project database that contains the versioned file(s).

6 On the File menu tab, click the **Properties** button. The Properties dialog box appears.

7 On the Workspace Settings tab:

   a Enter the version label for the branch version in the **Default Version** field. This is the label you assigned in Step 4 (for example, Rel1.5 Branch).

   b Enter the version label for the branch version in the **Branch Version** field. This is the label you assigned in Step 4 (for example, Rel1.5 Branch).

    c Enter the version label for the base version in the **Base Version** field. This is the label you assigned in Step 3 (for example, Rel1.0 Base).
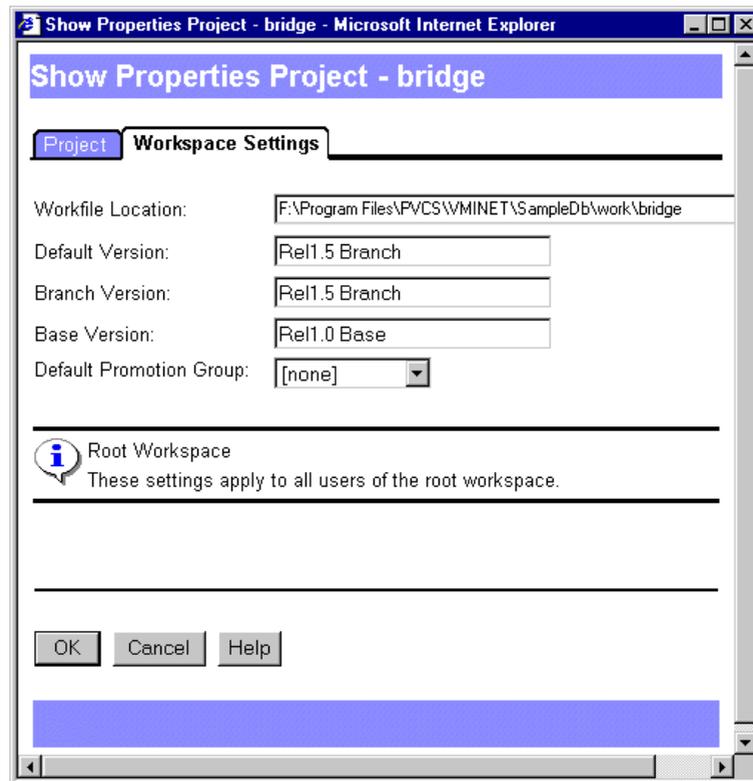
8 Click **OK**.

The Version Manager web client creates the branch when you check out the revision and then check it back in. The branch version label floats with the tip of the branch.

Defining the Default Promotion Group

You can only check out revisions to the lowest-level promotion groups reserved for development. Regardless of what promotion level a revision has reached, when you check out and lock a revision, you must assign the revision to the lowest-level promotion group to continue development.

If you have multiple promotion groups for development, the Version Manager web client prompts you to select which promotion group you want to assign to the revision you are checking out or locking. In the following example, you would choose between Dev and Bug_fix.

If you find that you are checking out revisions to the same lowest-level promotion group each time, you can specify which lowest-level promotion group to use by default. You specify the default lowest-level promotion group in the workspace.

To define the default promotion group:

1   Set the workspace you want to edit. See "Setting Your Workspace" on page 56.

2   On the File menu tab, click the **Properties** button. The Properties dialog box appears.

3   Select the lowest-level promotion group from the **Default Promotion Group** list.

4   Click **OK**.

Chapter 5

Comparing Files

About Comparing Files

Side-by-side comparisons

Serena ChangeMan Version Manager allows you to select two text files and compare them side-by-side to see the additions, deletions, and changes made to the files. You cannot compare binary files.

Compare revisions and workfiles

The Show Differences option (Actions | Difference) allows you to compare:

- A revision and a workfile

- Revisions in a single versioned file

- Revisions in two different versioned files

- Two workfiles

View only

The Show Differences option provides a quick comparison of two files. You cannot print or save the comparison.

Viewing Differences

To view the differences between files:

1   Select the versioned file(s) or revision(s) that you want to compare. You can select any text files.

NOTE To compare revisions located in different projects (but within the same project database), select the project database. You cannot compare revisions located in different project databases.

2 Select Action tab | Difference. The Show Differences dialog box appears.
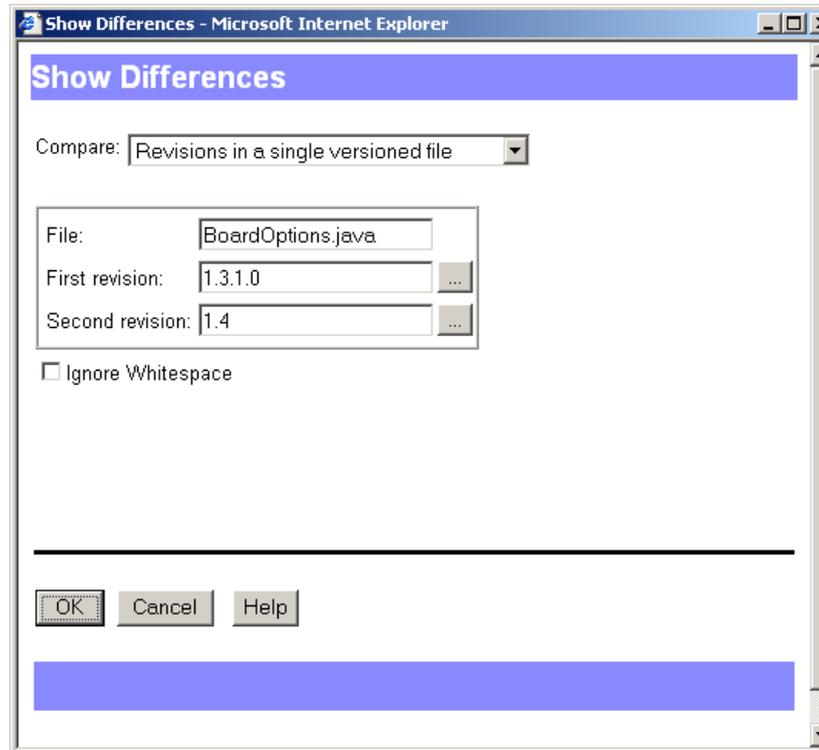
NOTE The appearance of the Show Differences dialog box varies depending on the type of comparison you select.

3 Select the type of comparison that you want to perform in the **Compare** drop-down menu.

To compare...	You must specify...
A revision and a workfile	A versioned file and revision number, and a workfile
Revisions in a single versioned file	A versioned file and revision number, and a second revision number
Revisions in different versioned files	Two versioned files and two revision numbers
Workfiles	Two workfiles

4 To change the revision (or file, if comparing workfiles) selected as the first file, edit the field or click the Browse button.

5 To change the revision (or file, if comparing workfiles) selected as the second file, edit the field or click the Browse button.

6 Select the **Ignore white space** check box if you want to ignore trailing, intervening, and leading white spaces, tabs, and form feeds.

7 Click **OK.** The Merant Merge Tool is launched with the two files side-by-side in separate panes.
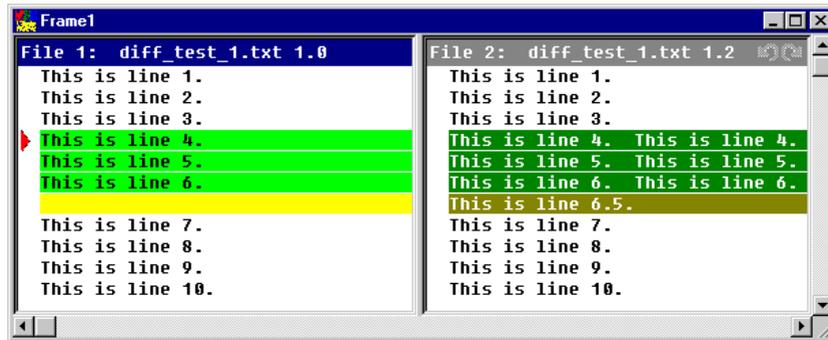
8 To view the differences, scroll through the files and compare the colored text blocks.

Windows users can also click the Next Difference button ( ) to jump directly to the next difference.

Interpreting Difference Results

Types of differences

File 1 is used as the base file. File 2 is compared to File 1. Differences between the files are categorized into additions, deletions, and changes.

- **Additions** are the lines of text that were added to File 2. These lines of text are not in File 1.

- **Deletions** are the lines of text that were deleted from File 2. These lines of text are in File 1.

- **Changes** are the lines of text that were modified in one of the files.

Placeholders

Placeholders are the blocks of colors used to identify the types of differences between the files. Each difference type (additions, deletions, and changes) has two placeholders (or colors) assigned to it: one for selected one for unselected.
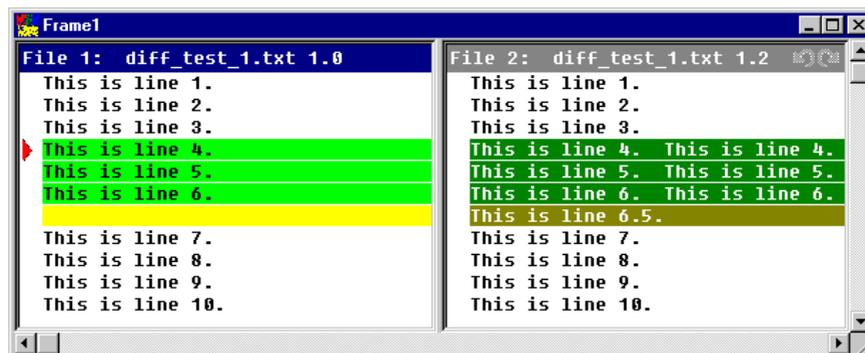
Windows users

Windows users have the option of changing the colors of the placeholders. To change the colors, from the Merant Merge Tool, click the Configuration button ( ) and select the Colors tab.

Windows users also have the option of displaying a color legend to help identify what each placeholder stands for. To display the color legend, from theMerant Merge Tool, click the Color Tips button ( ). The Color Tips dialog appears.
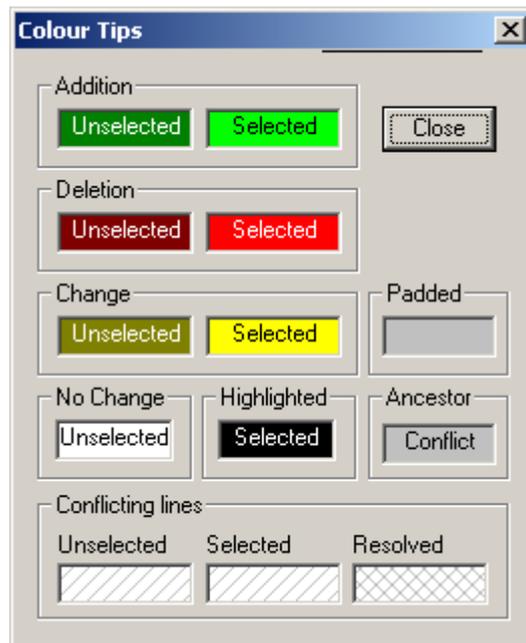
Difference Examples

The following examples show how the differences between two files can vary depending on the file you select as File 1 (the base file).

Example 1   This example shows two revisions from the same versioned file. Version 1.0 was selected as File 1 (base file) and version 1.2 was selected as File 2.
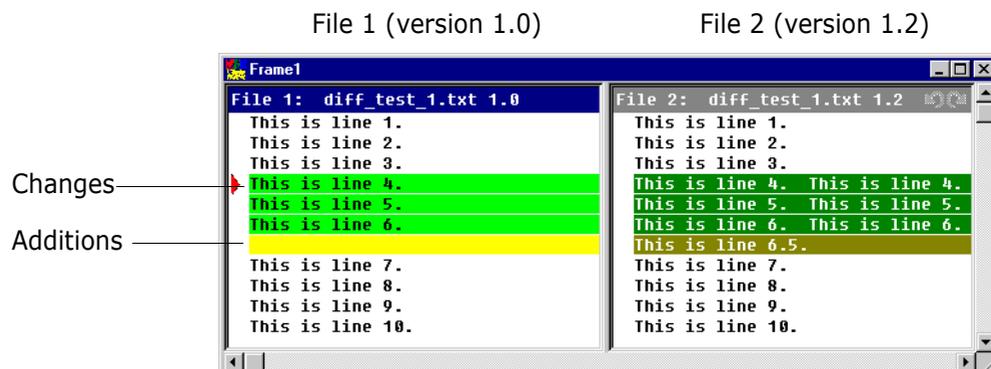
Lines 4, 5, and 6 have been changed and are highlighted as one block of differences. These differences are identified by change placeholders. Line 6.5 was added to File 2 and is highlighted as another block of differences. These differences are identified by addition placeholders.

Example 2   Using the same files above but reversing the order of the files, you get the following results.

File 1 (version 1.2)   File 2 (version 1.0)
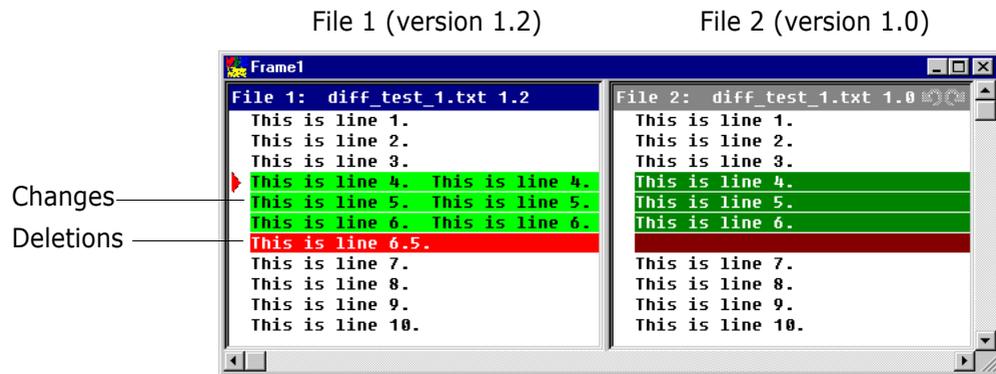
Lines 4, 5, and 6 are still highlighted as differences and identified by change placeholders. However, the added line, line 6.5, is now in File 1 (the base file) but no longer in File 2. This difference is identified by deletion placeholders.

Chapter 6
Merging Files

About Merging

What is merging?   Merging is the process of comparing the differences between two (or more) text files, or revisions of text files with a common base file, accepting or rejecting the differences between them, and combining the changes into a new text file.

You cannot compare or merge binary files.

Why merge files?   Merging is useful for parallel development. It enables you to combine the work performed on a branch of development and integrate it back into the main line of development.

Types of merges   Serena ChangeMan Version Manager allows you to perform a variety of merges. You can merge:

- A revision with a workfile

- Revisions within a single versioned file

- Revisions in different versioned files

- Workfiles

Windows users   Version Manager for Windows can perform N-way (unlimited) merges. Although you can select only three files (one base and two branch files) from within Version Manager, you can perform an N-way merge once the Serena ChangeMan Merge Tool is launched. For information on how to perform N-way merges, please see the Serena ChangeMan Merge Tool online help.

UNIX users   Version Manager for UNIX can perform two-way (a base file and a branch file) merges. N-way merges are not supported on UNIX.

Merging Terms and Definitions

The following table is a list of basic merge terms and definitions:

Term	Definition
Base or Ancestor	The base file from which other files are derived.
Branch or Derivative	The result obtained by making changes in the base file.
Output or Target	The final merged file.
Addition	A line of text added to a branch file. This line of text is not in the base file.
Deletion	A line of text deleted from a branch file. This line of text is in the base file.
Change	A line of text that was modified in one of the branch files. The content of this line of text differs between the branch file and the base file.
Conflict (Windows only)	A line of text that was modified in multiple branch files. The content of this line of text differs between the branch files and the base file.

> **NOTE** In UNIX, *changes* are treated as *conflicts* and must be resolved by the user.

The Merge Process

The merge process consists of:

- Locking the tip of the branch or trunk where you want to check in the output (target) file

- Selecting a base file (ancestor) as a reference point

- Selecting a revision branch file (derivative)

- Entering an output (target) file name

- Resolving conflicts between the base and branch files by either accepting or rejecting the changes made

- Saving the changes made to the output (target) file

- Checking in the output file

Selecting a Base File

A base file is the file that you want to use as your point of reference. It is usually the branch point—the revision from which a branch begins (typically off the main trunk of development).

If you are merging revisions that are located in different branches or versioned files, the base file you select should be the revision or file that is the latest file to be created which is a common ancestor to *all* of the revisions that you want to merge.

IMPORTANT! UNIX Only:

If you are merging or comparing revisions on a branch to revisions on a trunk on UNIX, you should set the base file to the latest revision on the trunk, then select the latest revision on the branch as the branch file.

The closer the content of the base file is to that of the files you are merging, the fewer conflicts you will have to resolve. For example, if you want to merge the changes from revision 1.2.1.2 with revision 1.4.1.1, you would use revision 1.2 as the base file. You could use revision 1.1 or 1.0 as the base file, but we recommend using the revision that is closest to the files you are merging.

Merging Files in Windows or UNIX

To merge files:

1 Lock the tip of the branch or trunk where you want to add the results of the merge.

2 Select the versioned file(s) or revision(s) that you want to merge.

When selecting files to merge, consider the following:

- The order in which you select the files determines which file will be the base and which the branch file(s). The first file that you select is the base file; the second and (on Windows only) third files that you select are the branch files.

- The items you select (project, versioned file, or revision) affect the initial options that appear.

NOTE You can change the options when the Show Merge dialog box appears.

- (UNIX only) To merge a trunk and branch revision, you must set the base file to the tip revision on the trunk, and the branch file to the tip revision on the branch.

- To merge revisions located in different projects (but within the same project database), select the project database. You cannot merge revisions located in different project databases.

- (Windows only) If you want to merge just two files, enter the same file in the **Base** and **Branch 1** fields; use the **Branch 2** field for the second file.

3 Select Actions | Merge. The Show Merge dialog box appears.
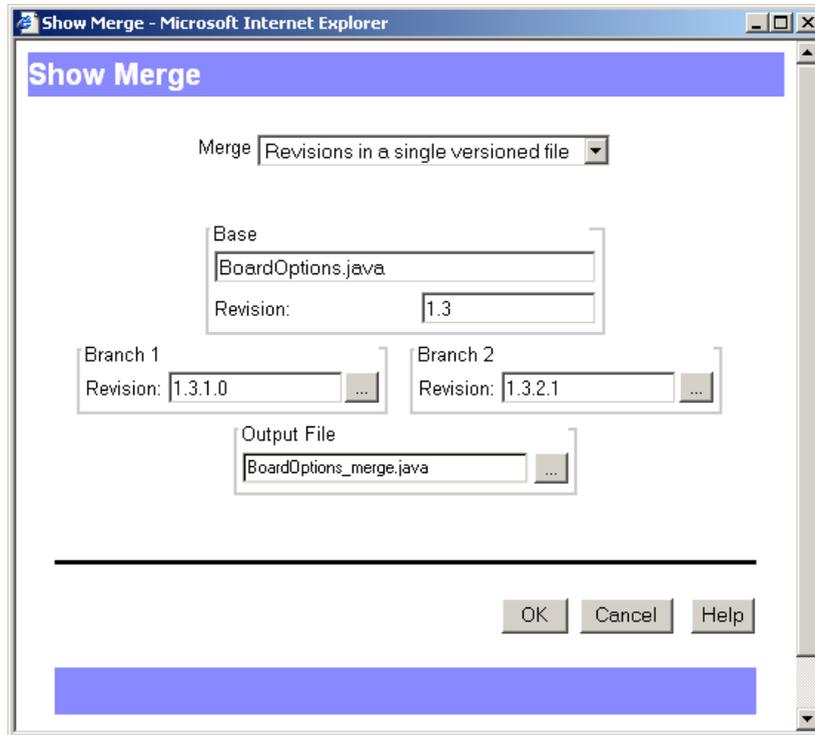
NOTE The appearance of the Show Merge dialog box varies depending on the type of merge you select.

4 Select the type of merge that you want to perform from the **Merge** drop-down menu.

To merge...	On Windows you must specify...	On UNIX you must specify...
A revision and a workfile	A base file and revision number, a branch revision number, and a branch workfile	A base file and revision number, and a branch workfile
Revisions in a single versioned file	A base file and revision number, and two branch revision numbers	A base file and revision number, and a branch revision number
Revisions in different versioned files	A base file and revision number, and two branch files with revision numbers	A base file and revision number, and a branch file and revision number
Workfiles	A base workfile and two workfiles	A base workfile and a branch workfile

5 To change the revision (or file, if merging workfiles) selected in the **Base** group, click the Browse button.

NOTE UNIX Only:

To merge a trunk and branch revision on UNIX, you must set the base file to the tip revision on the trunk.

6 To change the revision (or file, if merging workfiles) selected in the **Branch 1** (Windows) or **Branch** (UNIX) group, click the Browse button.

> **NOTE** UNIX Only:
>
> To merge a trunk and branch revision on UNIX, you must set the branch file to the tip revision on the branch.

7 (Windows only) To change the revision (or file, if merging workfiles) in the **Branch 2** group, click the Browse button.

8 Enter the name of the output (target) file in the **Output File** field, or click the Browse button to select an existing workfile.

> **NOTE** If you enter an output filename without entering a path, the output file will be created in the BIN directory within your Version Manager installation directory. If the filename already exists in the selected location, the old file will be overwritten.

9 Click **OK**. On Windows, the base file and branch files appear in the Frames window and the results of the merge appear in the Output File window.
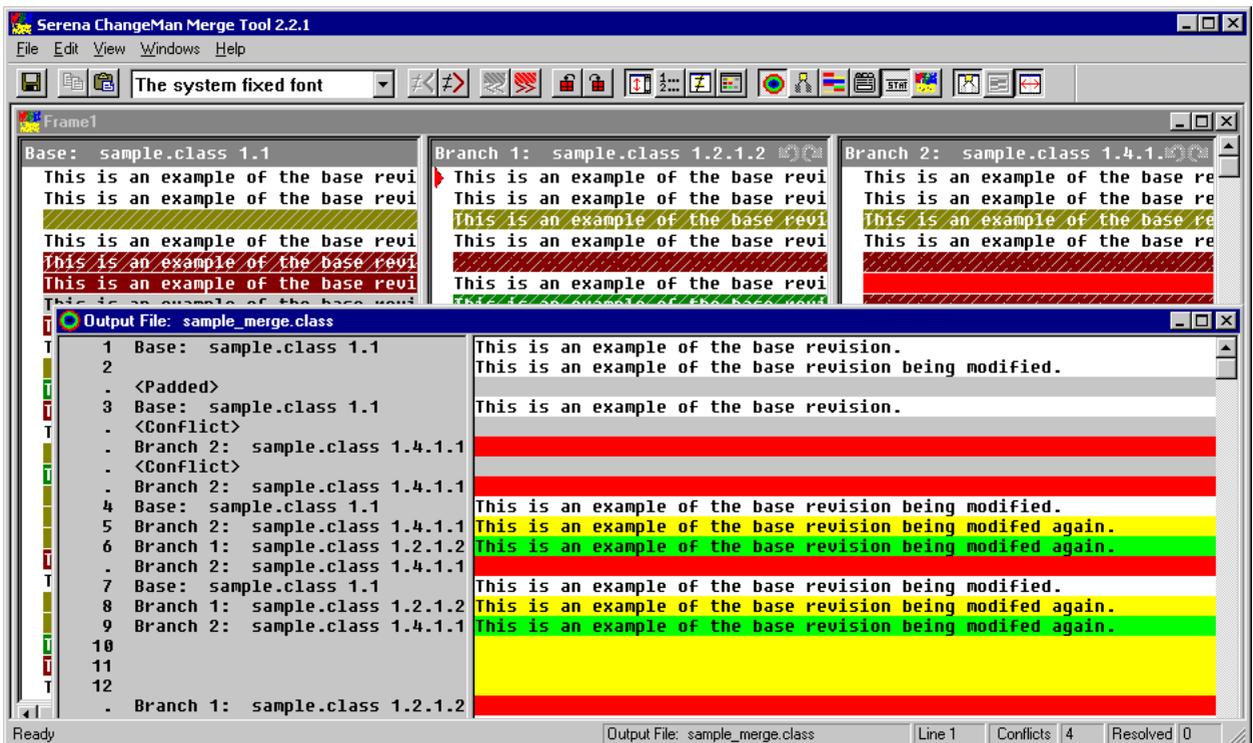
On UNIX, the base file and branch file appear in the Merge Tool window.
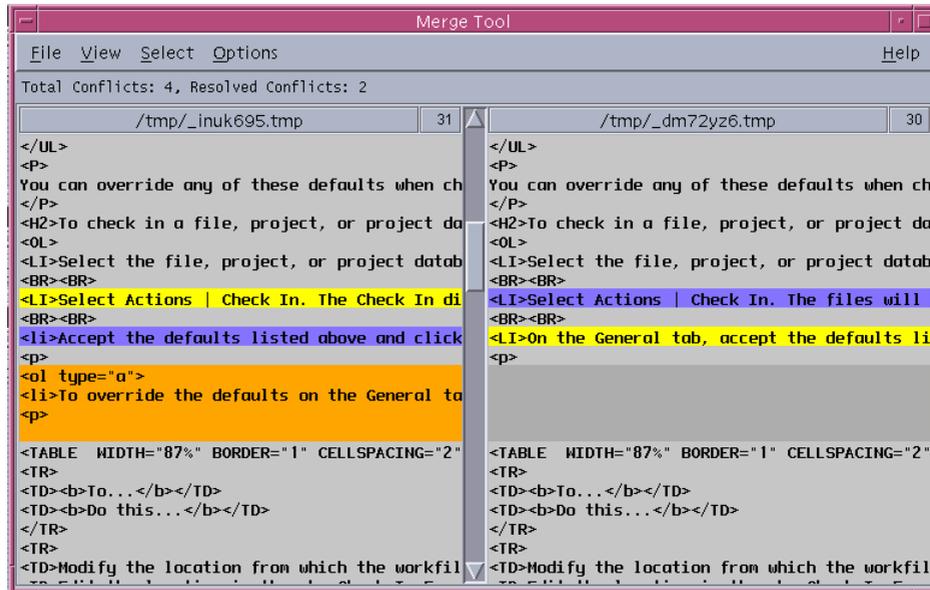
10   Resolve the conflicts between the base and branch files. For information on how to resolve the conflicts, see one of the following:

- "Resolving Conflicts Between Files in Windows" on page 79

- "Resolving Conflicts Between Files in UNIX" on page 79

11   To save the results of the merge to an output file, do one of the following:

- On Windows, select File | Save Target.

- On UNIX, select File | Save As and click **OK**.

> **NOTE** You do not need to re-enter the output path or filename.

12   Open the output file and review it. If you are satisfied with the results of the merge, check the output file into the tip of the branch or trunk you selected in Step 1.

Interpreting Difference Results in Windows

Types of differences   The file that you select as the base file is used as the basis of the output file. Branch 1 and branch 2 are compared against the base file. Differences between the base and branch files are categorized as additions, deletions, and changes.

- **Additions** are the lines of text that were added to a branch file. These lines of text are not in the base file.

- **Deletions** are the lines of text that were deleted from a branch file. These lines of text are in the base file.

- **Changes** are the lines of text that were modified in one of the branch files. The content of these lines of text differ between the branch file and the base file.

- **Conflicts** are the lines of text that were modified in multiple branch files. The content of these lines of text differ between the branch files and the base file.

Placeholders

Placeholders are the blocks of colors used to identify the types of differences between the files. Each difference type (additions, deletions, and changes) has two placeholders (or colors) assigned to it: one for selected and one for unselected.
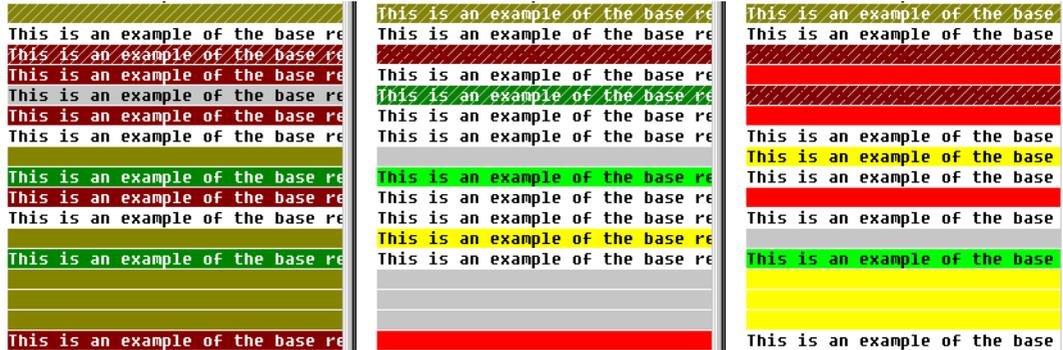
Displaying a color legend
You can display a color legend to help identify what each placeholder stands for. To display the color legend, from the Serena ChangeMan Merge Tool, click the Color Tips button ( ). The Color Tips dialog box appears.
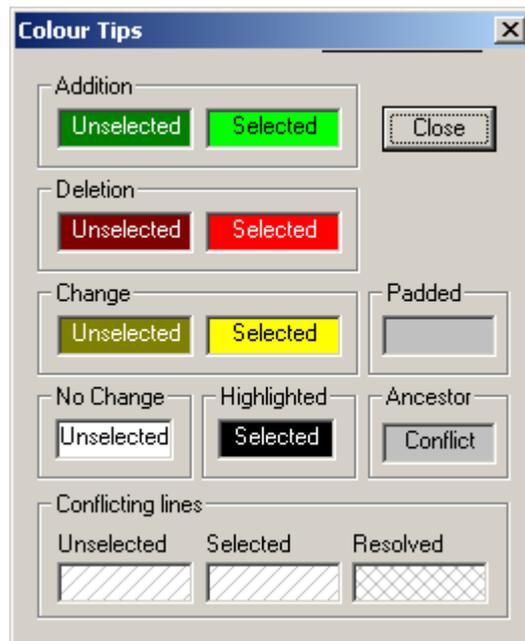
Changing Placeholder Colors

To change the colors of the placeholders:

1   Click the Configuration button ( ).

2   Select the Colors tab.

3   Click on the background or text color that you want to change.

Background color   Background color

Current color   Current color

Text Color   Text Color
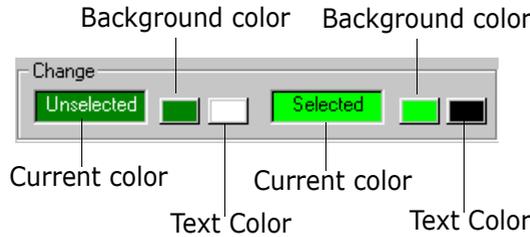
4   Select a new color from the color palette and click **OK**.

Conflicts

Conflicts occur when the content of a line in multiple branch files differ from the content of the line in the base file.

By default, conflicts appear as blocks of text that are shaded with slashes (/ / /). When you resolve a conflict, the slashes remain on the selected block of text while the unselected conflict blocks (which are now resolved) are shaded with Xs (XXX).

Unresolved conflict

Unselected (/ / /)   Unselected (/ / /)   Unselected (/ / /)

Resolved conflict

Unselected (XXX)   Selected (/ / /)   Unselected (XXX)
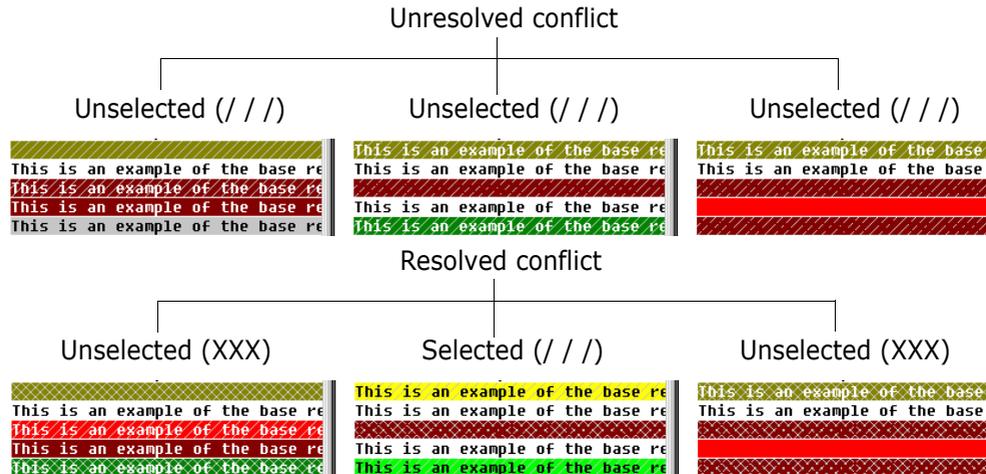
Changing Conflict Shading

To change the shading of the conflicts:

1   Click the Configuration button ( ).

2   Select the Colors tab.

3   Choose a shading pattern from the appropriate **Conflicting lines** drop-down menu.

Unselected   Selected   Resolved
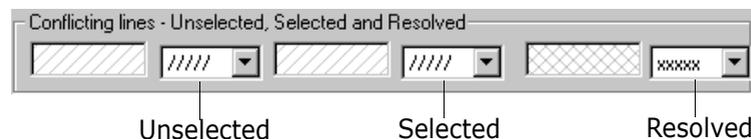
Interpreting Difference Results in UNIX

Types of
differences

The file that you select as the base file is used as the basis of the output file. The branch file is compared against the base file. Differences between the base and branch files are categorized as additions, deletions, and changes.

- **Additions** are the lines of text that were added to the branch file. These lines of text are not in the base file.

- **Deletions** are the lines of text that were deleted from the branch file. These lines of text are in the base file.

- **Changes** are the lines of text that were modified in the branch file. The content of these lines of text differ between the branch file and the base file.

> **NOTE** In UNIX, *changes* are treated as *conflicts* and must be resolved by the user.

Placeholders

Placeholders are the blocks of colors used to identify the types of differences between the files. Each difference type (additions, deletions, and changes) has two placeholders (or colors) assigned to it: one for selected and one for unselected.
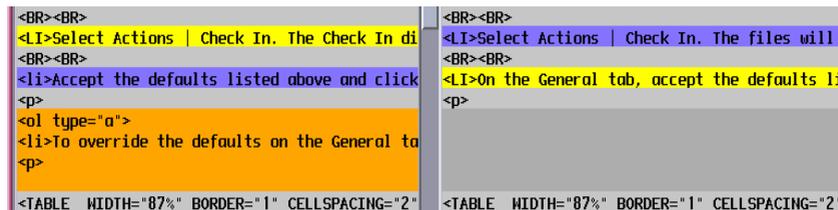
Displaying a color
legend

You can display a color legend to help identify what each placeholder stands for. To display the color legend, from the Serena ChangeMan Merge Tool, select Help | Color Legend.
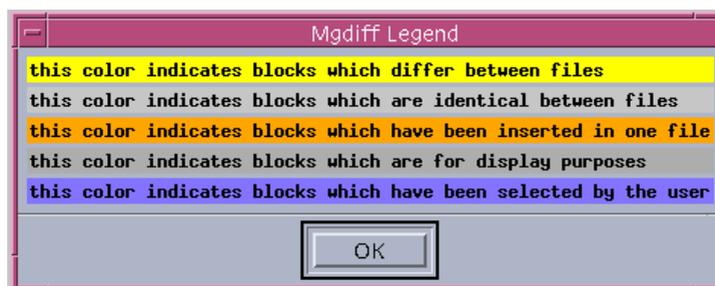
Changing Placeholder Colors

To change the colors of the placeholders, edit the `Mgdiff Legend` file with a text editor. This file is located in the `/bin/app-defaults` directory where you installed Version Manager.

Resolving Conflicts Between Files in Windows

By default, the Serena ChangeMan Merge Tool automatically inserts all of the additions, deletions, and changes into the output (target) file, but not the conflicts. Before you can successfully merge revisions, you must resolve all conflicts.

On Windows, a conflict occurs when a line of text differs between multiple branch files and the base file. The Serena ChangeMan Merge Tool cannot determine which block to select, so you must resolve the conflict by choosing which block of text you want in the output file.

> **NOTE** To resolve conflicts, you must be able to identify the differences between the base and branch files. For information on how to identify the additions, deletions, and changes between base and branch files, see "Interpreting Difference Results in Windows" on page 75.

To resolve conflicts between the base and branch files:

1   From the Frames window in the Serena ChangeMan Merge Tool, click the Next Conflict button ( ) to jump to the next conflict block.

2   Resolve conflicts by right-clicking the block of text that you want to appear in the output (target) file. The conflict block that you select changes color and the shading of the unselected files changes to resolved.
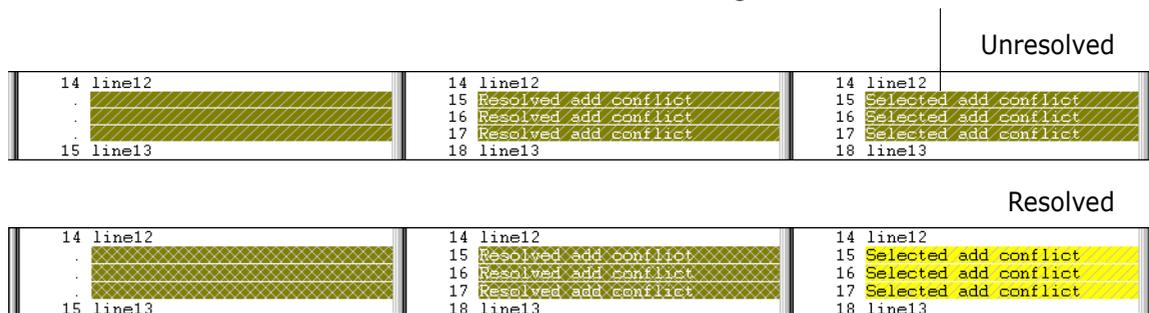
3   Repeat steps 1-2 until all conflicts have been resolved.

4   Check the contents of the output (target) file. Make sure that you have merged the appropriate content into the output file.

5   Select File | Save Target to save the output (target) file.

Resolving Conflicts Between Files in UNIX

By default, the Serena ChangeMan Merge Tool automatically inserts all of the additions and deletions into the output (target), but not the changes. Before you can successfully merge revisions, you must resolve all conflicts (changes).

On UNIX, a conflict occurs when a line of text has been modified in the branch file so that the content of this line of text differs between the branch file and the base file. The Serena ChangeMan Merge Tool cannot determine which block to select, so you must resolve the conflict by choosing which block of text you want in the output file.

NOTE On UNIX, *changes* are treated as *conflicts* and must be resolved by the user.

NOTE To resolve conflicts, you must be able to identify the differences between the base and branch file. For information on how to identify the additions, deletions, and changes between base and branch files, see "Interpreting Difference Results in UNIX" on page 78.

To resolve conflicts between the base and branch file:

1 From the Merge Tool window, scroll to a conflict block.

2 Resolve the conflict by clicking the block of text that you want to appear in the output (target) file. The conflict block that you select changes color.
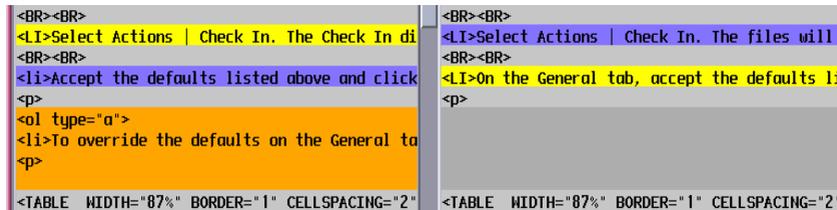
3 Repeat Steps 1-2 until all conflicts have been resolved.

4 Select File | Save As and click **OK** to save the output (target) file. You do not need to reenter the output path or filename.

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