Perforce 2014.1
Getting Started with P4V

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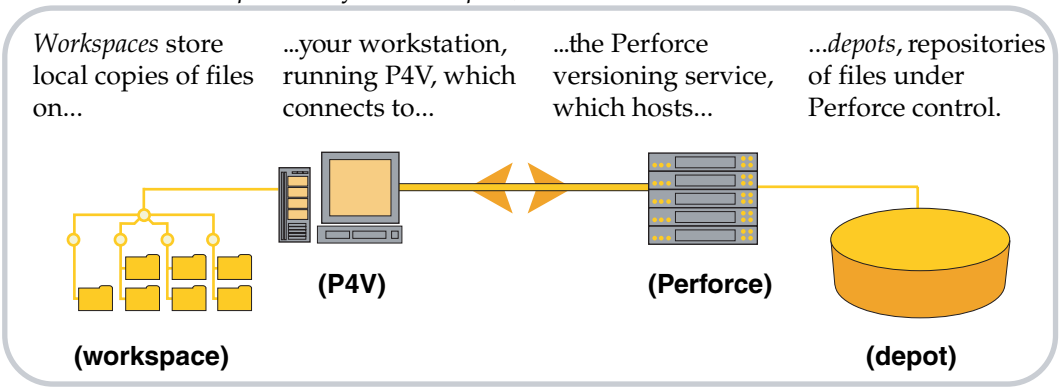
Getting Started with P4V

P4V, the Perforce Visual client, is Perforce's cross-platform graphical user interface. You can use P4V on Windows, Mac, UNIX and Linux computers and benefit from an identical interface regardless of platform. This introductory guide provides some Perforce basics and an orientation to P4V's layout and features. For more details about P4V, consult its online help. To learn more about Perforce, consult the user documentation on our Web site.

To use Perforce to manage files, you typically connect to the Perforce versioning service using an application like P4V. P4V enables you to check files in and out, and perform various other versioning tasks. The following sections tell you how to perform basic versioning with P4V and point out some of P4V's powerful features and shortcuts.

Basic Concepts

P4V connects your computer to the Perforce versioning service and helps you move files between Perforce *depots* and your *workspace*, as shown below.



The definitions for these Perforce terms are as follows:

- Workspace: folders or directories on your workstation where you work on revisions of files that are managed by Perforce.
- Perforce application: P4V (or another Perforce application), running on your workstation, which makes requests from the Perforce versioning service and delivers the results of those requests (files, status information, and so on) to you.

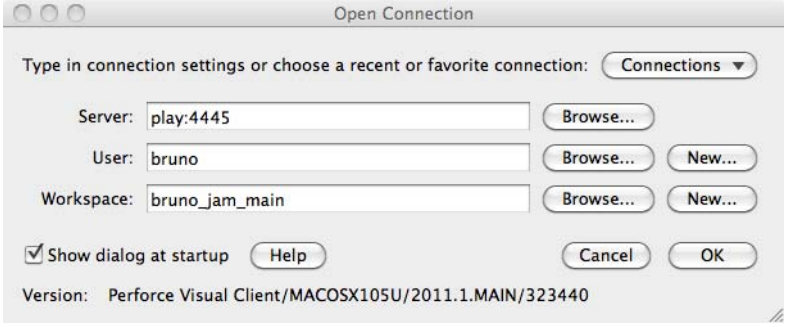
- Service: the Perforce versioning service responds to requests from Perforce applications, maintains depot files, and tracks the state of workspaces.
- Depot: a file repository hosted by the Perforce service. It contains all existing versions of all files ever submitted. Perforce can host multiple depots, but the examples in this guide show a single depot.

Connecting to Perforce

To gain access to your files, you must connect to Perforce. The first time you launch P4V, the Connection Setup Wizard (Mac: Connection Setup Assistant) guides you through the process of configuring a connection, during which you specify the server, user, and workspace. To launch the wizard/assistant in subsequent sessions, choose **Connection > Set Up Connection...**

Alternately, you can configure connection settings on a single dialog, as follows:

1. Launch P4V. P4V displays the following connection dialog:



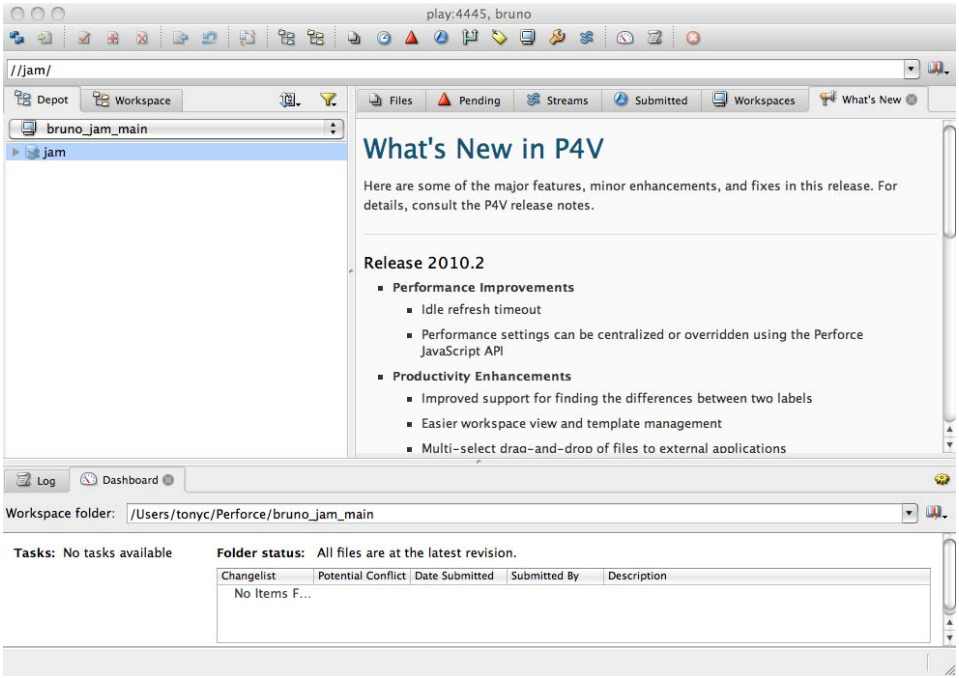
2. Specify the following settings (your Perforce administrator can provide you with this information)
   - Server: the name of the machine that hosts the shared versioning service. You must also specify a TCP/IP port. If you are connecting to Perforce with SSL, use `ssl:`*`hostname`*`:`*`port`*.
   - User: your Perforce user name
   - Password: your Perforce user password, if required.
   - Workspace: the name of your workspace.

     To display a list of existing users and workspaces, click **Browse**. (The server and port must be specified before clicking **Browse**.)

If you have incorrectly specified a server setting, P4V displays a message like the following:

```
Connect to server failed; check $P4PORT.
TCP connect to bigserver failed.
bigserver: host unknown.
```

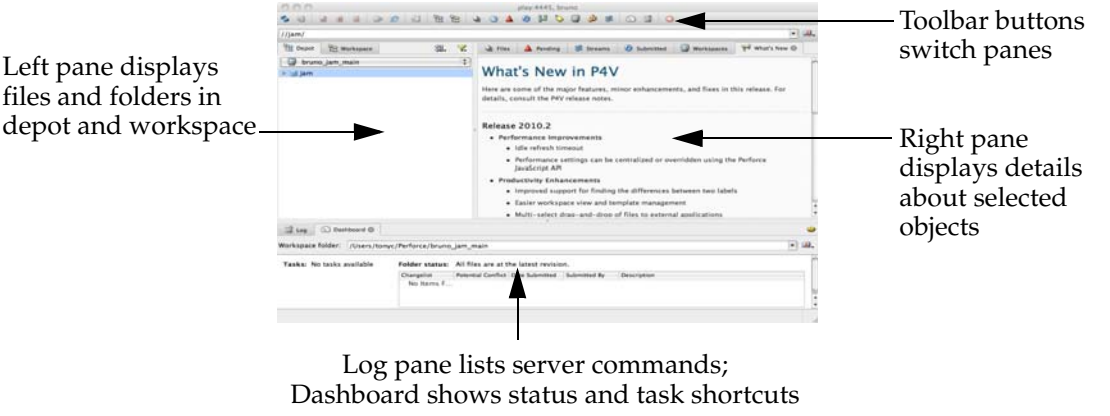
3. To connect, click OK. P4V displays its main screen, as shown in the following figure.



The next section describes the main screen panes.

Navigating the Main Screen

The following figure points out the panes and important features of the main screen. To see what a button or screen element does, hold the mouse cursor over it. P4V displays a descriptive tooltip.

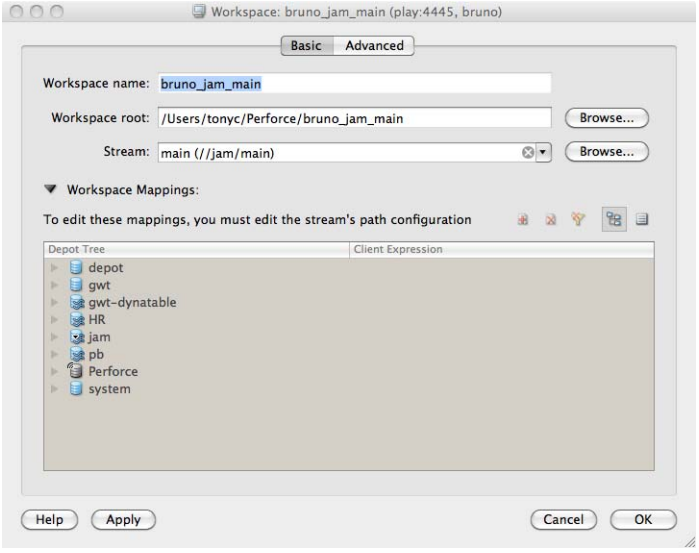


Setting up your workspace

Your Perforce administrator can do this for you, but it's advisable to learn a few important aspects of configuring your workspace, specifically (1) configuring the workspace root directory and (2) configuring the workspace view.

To define a workspace, choose **Connection > New Workspace....** and, when prompted, enter a name for the workspace. To edit your current workspace specification, choose **Connection > Edit Current Workspace...**

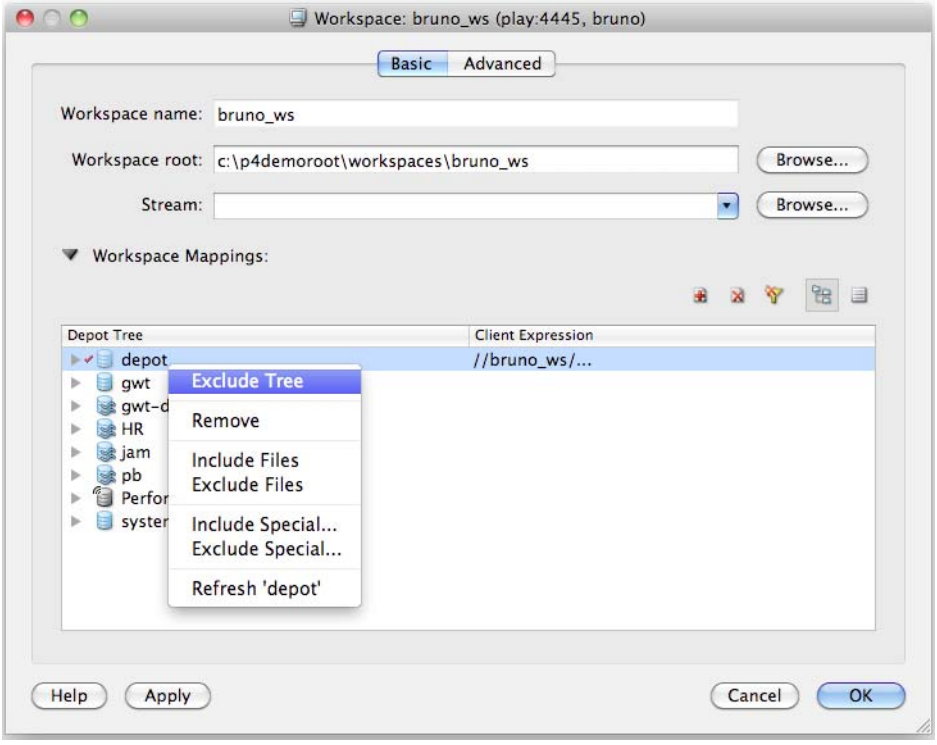
P4V displays the specification details in the lower portion of the right pane; for example:



Root: specifies the location on your workstation under which Perforce stores copies of depot files. Specify a meaningful name, and make sure it's ***not*** set to your computer's root directory!

Workspace Mappings: enable you to restrict the depot files to which you have access. Set the view to ensure that you see only what you need to see.

To display and set the workspace view graphically, click the **Basic** tab. Browse to desired files and folders and context-click to include them or exclude them from the workspace mappings, as shown in the following figure.



Managing your Files

To manage files using Perforce, you typically perform the following sequence of tasks:

1. Get files from the depot.
2. Check out files you need to edit.
3. Edit files.
4. Check in your changes.

The following sections provide details about these and other common file management tasks.

Getting files from the depot

To copy files from the depot to your workspace:

1. In the left pane, click the **Depot** tab.
2. Browse to the folder or file you want to retrieve.
3. Context-click the file or folder. To get the most recent version, choose **Get Latest Revision**. To get an older version, choose **Get Revision...** and specify the version you want.

In the Log pane, P4V displays a message like the following.

```
p4 sync //depot/Misc/manuals/...#head
    //depot/Misc/manuals/recommended_configuration.doc  added  c:\p4cli
ents\bruno-1492\Misc\manuals\recommended_configuration.doc
    //depot/Misc/manuals/triggers.doc  added  c:\p4clients\bruno-
1492\Misc\manuals\triggers.doc
    //depot/Misc/manuals/vendor_branches.doc  added  c:\p4clients\bruno
-1492\Misc\manuals\vendor_branches.doc
    Sync copied 3 files to workspace (including 3 that were added)
    Sync removed no files from workspace
Sync completed with no warnings or errors.
```

In the left pane, note that the files display green dots, indicating that they are present in your workspace: Before you can edit the file, however, you must check it out.

Checking out files from the depot

To check out a file in your workspace:

1. Browse to the desired file in the left pane Depot tab.
2. Context-click the file and choose **Check Out**.

In the Log pane, P4V displays a message like the following:

```
p4 edit //bruno-1492/Misc/manuals/recommended_configuration.doc
    //depot/Misc/manuals/recommended_configuration.doc#1 - opened for
edit
Opened 1 files for edit
```

In the left pane, note that the file displays a red check mark, indicating that you checked it out:

Note that, when you check out a file, Perforce adds it to a *changelist*, which is a list of related files. You can use changelists to group related files, for example, all files that contain changes required to implement a new product feature. To view the changelist, choose **View > Pending Changelists** or click in the toolbar.

Now you're ready to edit your files.

Editing files in your workspace

To edit a checked-out file, double-click it (or context-click it and choose **Open With**, then select the desired application). P4V launches the corresponding editing application. Make changes and save the file.

To select an application with which to open a file, choose **File>Open With>Choose Application.** You can configure editors on the **Preferences** dialog **File Editors** page.

Adding new files to the depot

To add a file to the depot, you must perform two actions. First, you mark the file for add, which places the file in a changelist, and then you submit the changelist, which copies the file to the depot.

To add a file to the depot:

1. In the left pane, click the **Workspace** tab.
2. Browse to the file you want to add. If the file does not reside in the depot, its icon is unmarked .

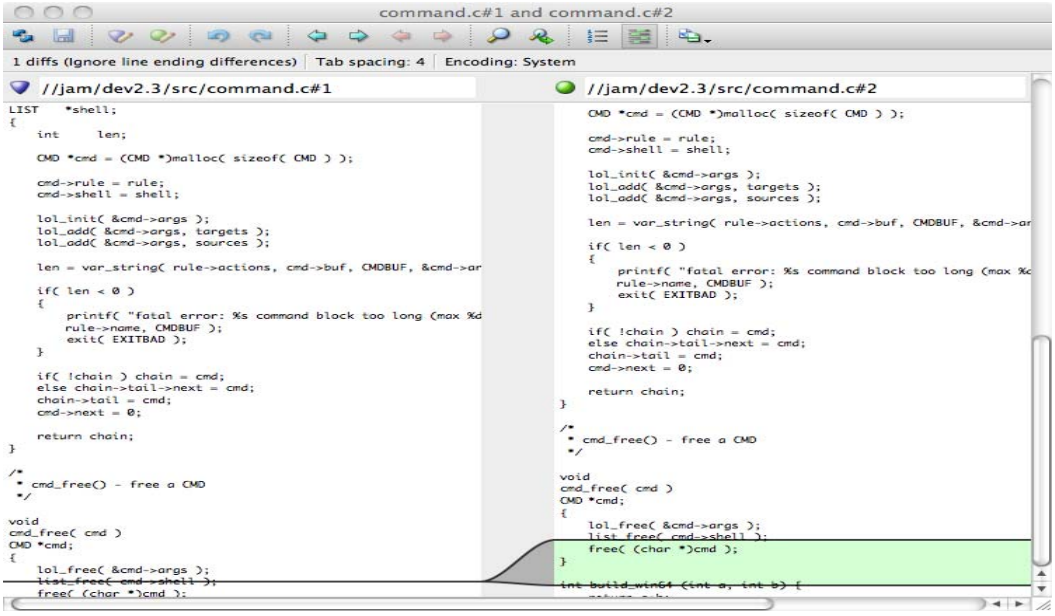
   If you do not see the local file in the **Workspace** tab, choose **Search>Filter Workspace>Show Local Workspace Files**.

3. Context-click the file and choose **Mark for Add**. The file icon displays a red plus sign indicating it is open for add.

4. Submit the changelist containing the file that you marked for add. Context-click the file and choose **Submit...**. The Pending Changelist form is displayed, listing the files in the changelist. (See "Checking your edits into the depot" on page 14.)

Diffing files to view your edits

To enable you to see what changes you've made, you can compare (*diff*) your edited file with the version you checked out. To diff, context-click the checked-out file in the left pane and choose **Diff Against Have Revision**. P4V launches the diff tool, displaying the differences between the two files. For example:



Discarding edits by reverting

If you decide you want to discard your changes:

1. Context-click the file in the left pane and choose **Revert**. P4V displays a warning dialog.

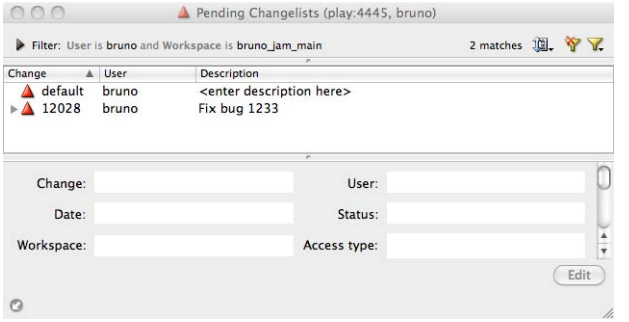
2. Click **OK**. In the Log pane, P4V displays a message like the following:

```
p4 revert //depot/Misc/manuals/recommended_configuration.doc
revert complete. 1 file affected.
```

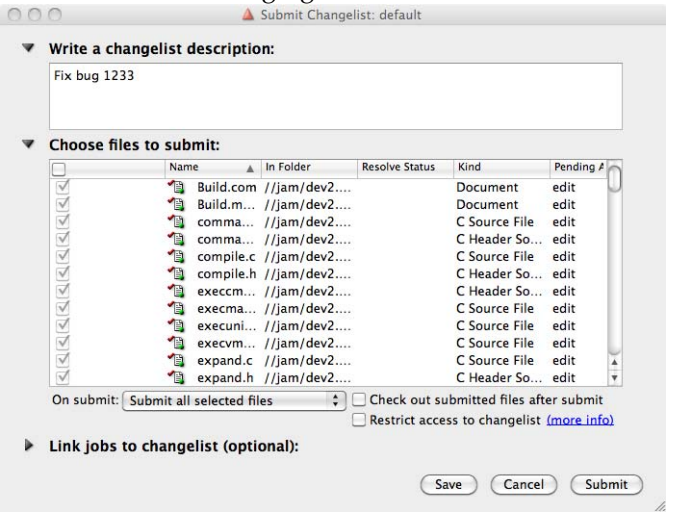
Checking your edits into the depot

To check your changed file into the depot, perform the following steps.

1. Display pending changelists: click in the toolbar. P4V displays a list of pending changelists, as shown in the following figure. To display the files in a changelist, expand it



2. Double-click the changelist in which your file is open. P4V displays the details, as shown in the following figure.

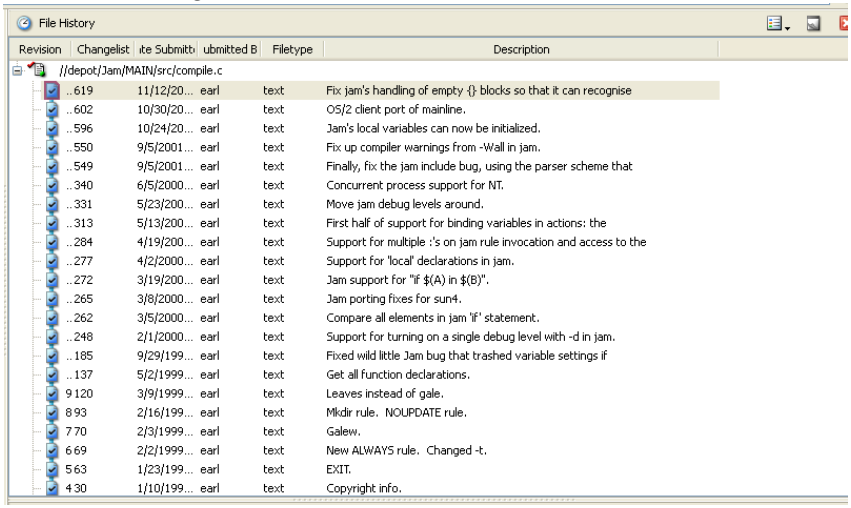


3. Enter a description explaining the changes you made and click **Submit**. The Log pane displays a message confirming that your changelist was submitted, similar to the following.

```
Change 813 submitted.
    submit complete. 1 file affected.
```

Displaying a file's revision history

To view the changes made to a file or folder, context-click the file or folder and choose **File History** or **Folder History**. The history for the selected file or folder is displayed in the right pane. For example, the following figure shows the history of a folder, listing every submitted changelist that affected a file in the folder.



Graphical Reporting Tools

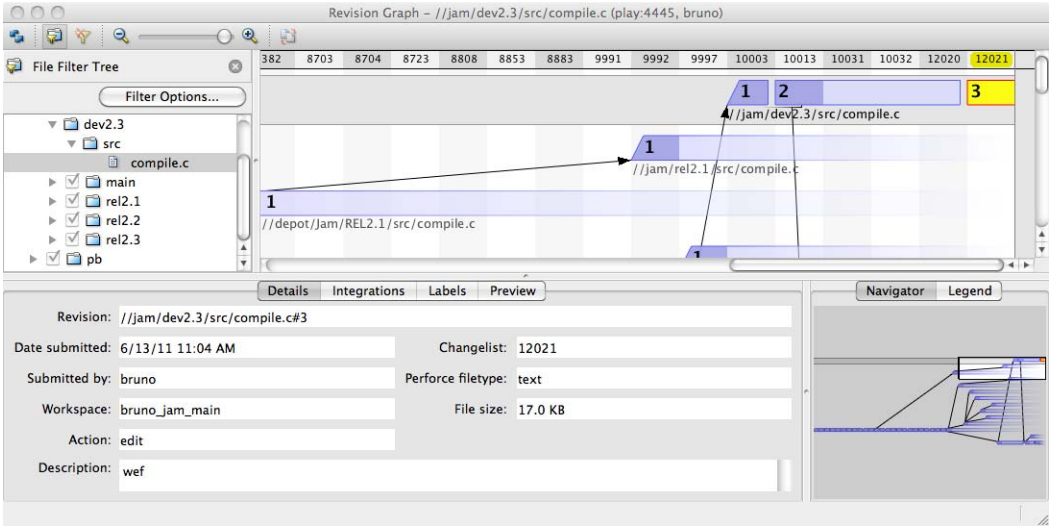
P4V includes several valuable graphical reporting tools:

- Revision Graph: displays a diagram that shows the evolution of a selected file, including files related by branching operations.
- Time-lapse View: shows how the contents of a selected text file changed from revision to revision. You can easily sweep through revision ranges to locate passages of interest and see when they were created and how they changed.
- Folder Diff tool: enables you to see how the contents of a folder changed.

The following sections provide more details about these tools.

Viewing file revisions as a diagram

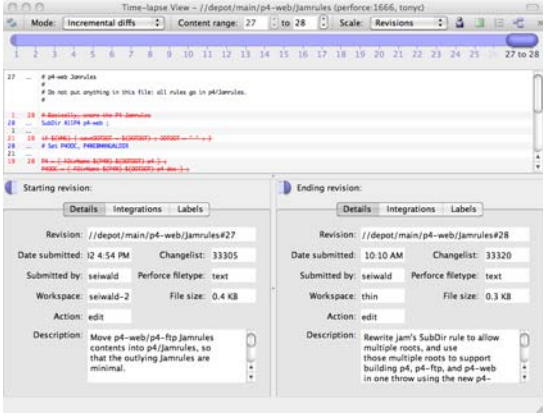
To display the revision diagram for a file, context-click the file in the left pane and choose Revision Graph. P4V launches the tool, which displays a diagram like the following one.



This diagram shows you when the file was created and how it was branched, and enables you to view details about each version submitted to the depot and navigate through the graph using the navigation map. For more details about the information displayed in the revision graph, consult P4V online help.

Browsing file revisions using Time-lapse View

To browse the changes made to a text file, context-click the file in the left pane and choose **Time-lapse View**. P4V launches the utility, which displays a screen like the following one.



Slider: move to sweep through revisions

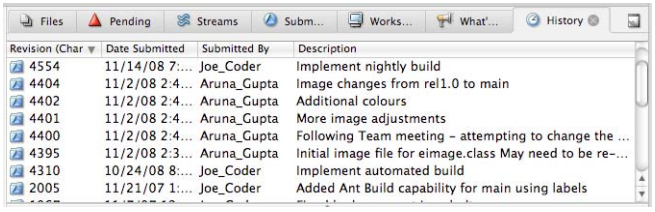
Change detail: shows text that has been added, changed, or deleted in a revision

Using Time-lapse View, you can sweep through all revisions of the file using the slider, noting when changes were made and who made them. Again, for details, consult P4V online help.

Displaying folder history using the folder diff tool

The folder diff tool enables you to see how the contents of a folder have changed: which files have been added, changed, or deleted. To view changes to a folder:

1. Context-click the folder in the left pane Depot or Workspace tab and choose **Folder History**. In the right pane, P4V lists changelists that affected the folder, for example:

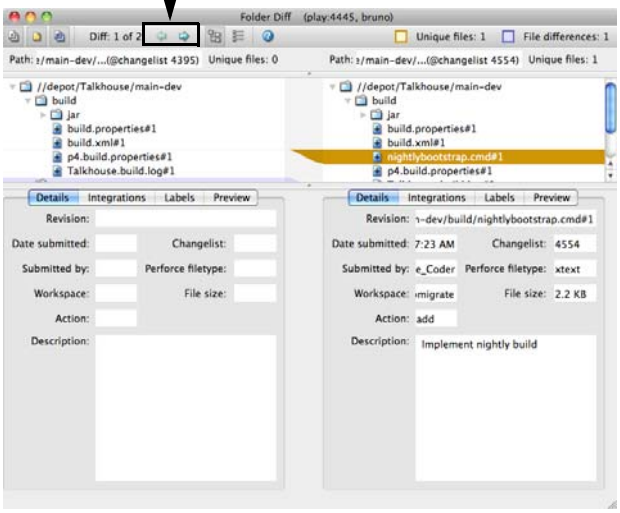


Revision (Char	Date Submitted	Submitted By	Description
4554	11/14/08 7:...	Joe_Coder	Implement nightly build
4404	11/2/08 2:4...	Aruna_Gupta	Image changes from rel1.0 to main
4402	11/2/08 2:4...	Aruna_Gupta	Additional colours
4401	11/2/08 2:4...	Aruna_Gupta	More image adjustments
4400	11/2/08 2:4...	Aruna_Gupta	Following Team meeting – attempting to change the ...
4395	11/2/08 2:3...	Aruna_Gupta	Initial image file for eimage.class May need to be re-...
4310	10/24/08 8:...	Joe_Coder	Implement automated build
2005	11/21/07 1:...	Joe_Coder	Added Ant Build capability for main using labels

2. To display the changes that occurred between two revisions of a folder, drag and drop one of the revisions on the other.

P4V displays the changes as shown in the following figure. This example shows that, between the selected revisions, a file was edited and checked in. File highlights are color-coded to indicate additions, changes, and deletions. Expand folders and scroll to locate changes of interest. To skip to the next or previous change, click the right and left arrows.

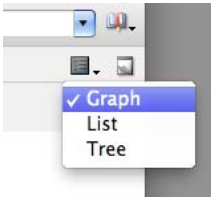
Click these arrows to browse changes.



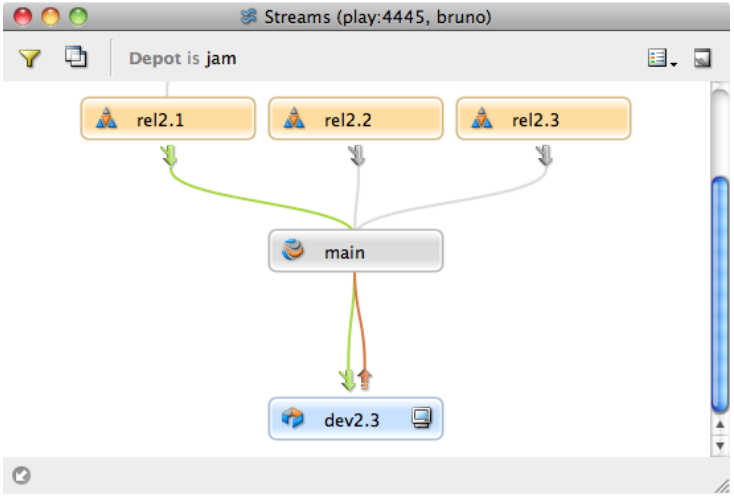
Viewing Streams

Perforce streams are "branches with brains," a containerized approach to managing bodies of related files such as codelines. If your organization uses streams, you'll see streams depots in the Depot pane. Streams depots look like this: . To display the streams in the depot:

1. Click the Streams toolbar button: . The Streams tab is displayed.
2. To display a diagram of the stream hierarchy, choose the graph view:



3. Choose the streams depot that you want to view. P4V displays the stream graph, which shows the parent/child relationships and status of the streams; for example:



For detailed information about streams in P4V, consult the online help. For general information, see *Introducing Perforce*, the *P4 User's Guide* and the *Perforce Command Reference*.

Important and Useful Features

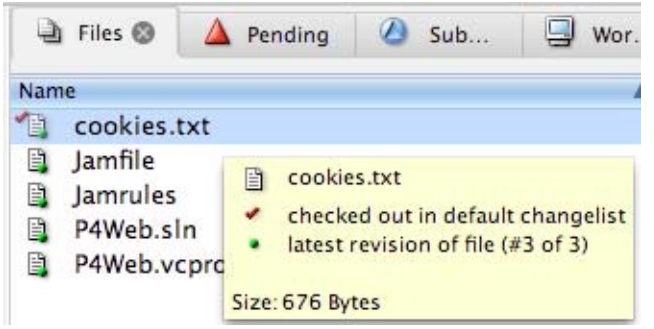
Among the many features provided by P4V, the following are especially useful:

- Tooltips: to get more information about an object, place your mouse cursor over it. P4V displays a popup dialog containing more details.
- Drag and drop: P4V includes numerous drag and drop shortcuts for common operations.
- File views: P4V enables you to preview graphics files using thumbnails.
- Tear off windows: to create a separate window displaying a specification you want to keep on display, you can tear it off.

The following sections provide more details.

Tooltips

P4V provides tooltips for many objects on the screen. For example, to display the status of a file, hold the mouse cursor over the file in the left pane. P4V displays a tooltip like the following one.



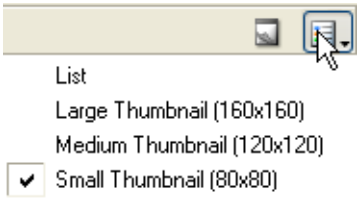
Another example: to display a changelist description, click in the toolbar and hold the mouse cursor over the changelist in the right pane. There are tooltips for all the P4V buttons, too.

Drag and drop

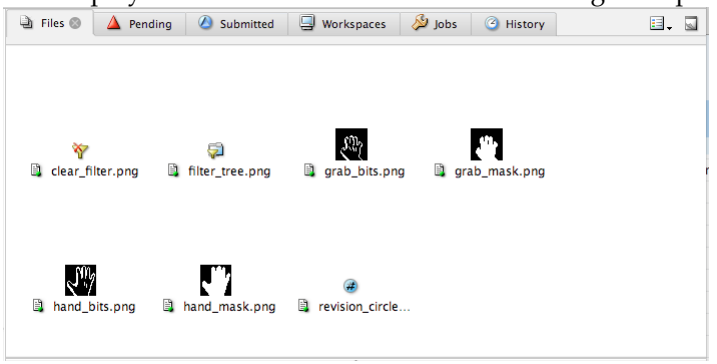
P4V provides drag and drop shortcuts for common tasks. Drag and drop can simplify operations on large groups of files. For example, to check out all the files in a folder, drag the folder to a changelist. To diff two files, drag one to the other. For details about drag and drop shortcuts, refer to the P4V online help.

File views

If you use Perforce to manage graphics files, P4V's thumbnail views enable you to preview the files. To display thumbnails, click the Files tab in the right pane, then select the desired thumbnail size from the title bar.

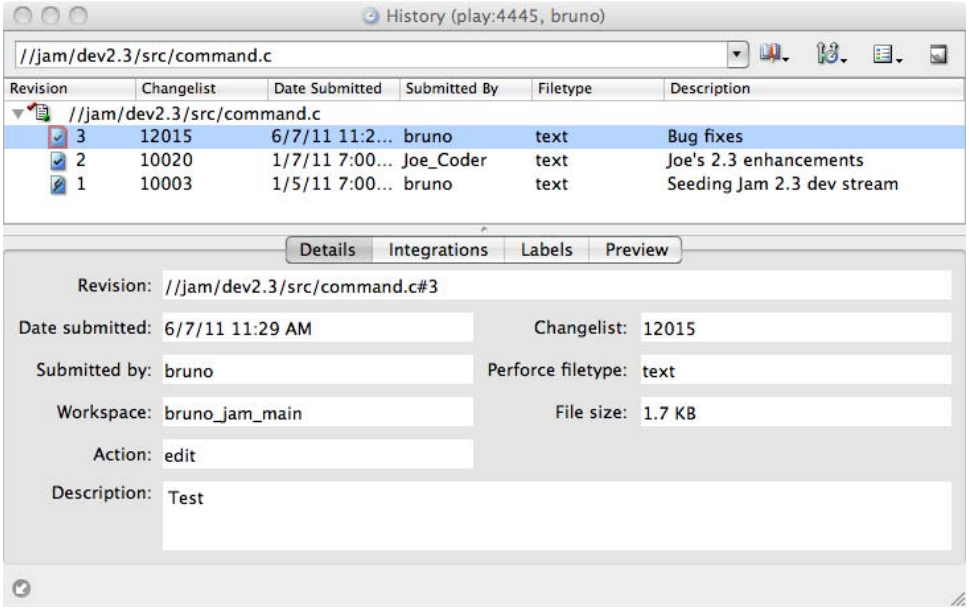


P4V displays thumbnails as shown in the following example.



Undocking tabs

To keep a tab open, you can undock it. For example, context-click a file and choose File History, then choose **Window > Undock Tab**. P4V opens it in a separate window, as shown in the following figure.



To restore it to the main window, choose **Window > Dock Window**.

Setting Preferences

To configure P4V, edit its preferences (Mac: **P4V > Preferences**, Windows: **Edit > Preferences**). The **File Editor** page enables you to associate applications with file types, overriding any operating system associations. The **Diff** and **Merge** pages enable you to configure external applications, in case you prefer tools other than those that are bundled with P4V.

Launching P4V Components from the Command Line

If you are a Perforce command line client user who occasionally uses P4V for certain functions, like viewing the Revision Graph or the Stream Graph, you can use P4VC, a command-line tool included with P4V that enables you to launch discrete P4V components from the command line without having to open a full P4V instance. For more information, type `p4vc help` in the command line.

Migrating from P4Win

If you're moving from P4Win to P4V, here's a list of equivalent operations to help you in your transition.

P4Win Menu Item	Menu	P4V Menu Item	Menu	Notes
Add to Source Control...	File	**Mark for Add**	Actions	Applies only to files in the Workspace Tree
Annotate File...	File	**Time-lapse View**	Tools	Graphical annotation tool
Diff 2 Files, Folders or Revisions	File	**Diff...**	Tools	
Diff Client File vs. Depot File	File	**Diff...**	Tools	Or context-click on file and choose: **Diff Against Have Revision**
Explore	File	**Show in>Explorer**	File	
Integrate Using Filespec or Branchspec	File	**Integrate...**	Actions	
Open for Delete	File	**Mark for Delete**	Actions	
Open for Edit	File	**Check Out**	Actions	
Properties	File	**Files in Folder**	View	File properties are displayed in the Details pane at the bottom of the Files in Folder view
Remove from Client	File	**Remove from Workspace**	Actions	
Rename	File	**Rename/Move...**	Actions	

P4Win Menu Item	Menu	P4V Menu Item	Menu	Notes
Revision History...	File	**History**	View	Alternatively context click on file and choose File History
View File…	File	**Open**	File	Alternatively context click on file and choose Open
Check Consistency	File>More	**Reconcile Offline Work...**	Actions	Applies only to folders in the Workspace Tree
Auto Resolve...	File>Resolve	**Resolve…**	Actions	
Interactively... [Resolve]	File>Resolve	**Resolve…**	Actions	
Schedule File for Resolve	File>Resolve	**Get Latest Revision**	Actions	
Sync to Head Revision	File>Sync	**Get Latest Revision**	Actions	
Sync...	File>Sync	**Get Revision...**	Actions	
Find File Matching Pattern…	Edit	**Find File...**	Edit	
Find File Under Selected Folder...	Edit	**Find File...**	Edit	
Bookmarks	View	**Bookmarks**	Tools	
Client View of Depot	View	**Depot Tree**	View	Restrict to client view by choosing: **View>Filter Depot>Tree Restricted to Workspace View**
ClientSpecs	View	**Workspaces**	View	

P4Win Menu Item	Menu	P4V Menu Item	Menu	Notes
Describe	(any specification menu)	**Go To...**	Edit	Navigate directly to desired specification
Entire Depot	View	**Depot Tree**	View	Show the entire depot by choosing: **View>Filter Depot>Entire Depot Tree**
Local View of Client Tree	View	**Workspace Tree**	View	
Show Deleted Depot Files	View	**Show Deleted Depot Files**	View>Filter Depot	
Favorite Connections	Settings	**Favorite Connections**	Connection	
Logout	Settings	**Log Off**	Connection	
Options...	Settings	**Preferences...**	Edit	
Port Client User History	Settings	**Open Recent**	Connection	
Switch Port Client User...	Settings	**Open Connection...**	Connection	
Set Password for (current user)...	User	**Change Password...**	Connection	
View Users	User	**Administration**	Tools	Superusers can manage users and groups from within P4V

Next Steps

This guide helps you to start working with files using P4V and points out important basic features, but P4V enables you to do much more: create jobs, branch groups of files, and handle file conflicts that arise in team development settings.

Perforce administrators can perform administrative operations by choosing **Tools > Administration**. Using the Administration tool, superusers can manage users and groups, along with their access to files and folders within the depot. Some administrative functions must still be performed using the Perforce command-line client (`p4`). For details, see the *Perforce Command Reference* and the *Perforce System Administrator's Guide*.

To become expert with P4V:

- Consult the P4V online help and read the Perforce user documentation available from the Perforce Web site.
- Use tooltips.
- Pay attention to the file icons and decorations in the left pane. The decorations and icons display a great deal of information about the type and status of a file.
- Start reading the Log pane.
- Learn drag and drop shortcuts to simplify operations on large sets of files.
- Use P4V views and filtering features to enable you to selectively display information.

To get the whole picture, read the P4V online help, *Introducing Perforce* and the *Perforce System Administrator's Guide*. The guides, which are available from the Perforce web site, describe the full set of features that the Perforce Server provides. Perforce Technical Support is always ready to help you, and there's a thriving community of Perforce users active on the `perforce-user` mailing list and the Perforce Forums. Consult our web site for details.