Perforce 2008.1
Getting Started with P4V

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Table of Contents

Basic Concepts....5
Connecting to a Server....6
Navigating the Main Screen....8
Setting up your workspace....8
Managing your Files....11
  Getting files from the depot....11
  Checking out files from the depot....12
  Editing files in your workspace....12
  Diffing files to view your edits....12
  Discarding edits by reverting....13
  Checking your edits into the depot....13
  Displaying a file's revision history....15
Graphical Reporting Tools....15
  Viewing file revisions as a diagram....16
  Browsing file revisions using Time-lapse View....17
  Displaying folder history using the folder diff tool....18
Important and Useful Features....19
  Tooltips....19
  Drag and drop....19
  File views....20
  Tearing off tabs....21
  Setting Preferences....21
Migrating from P4Win....22
Next Steps....24

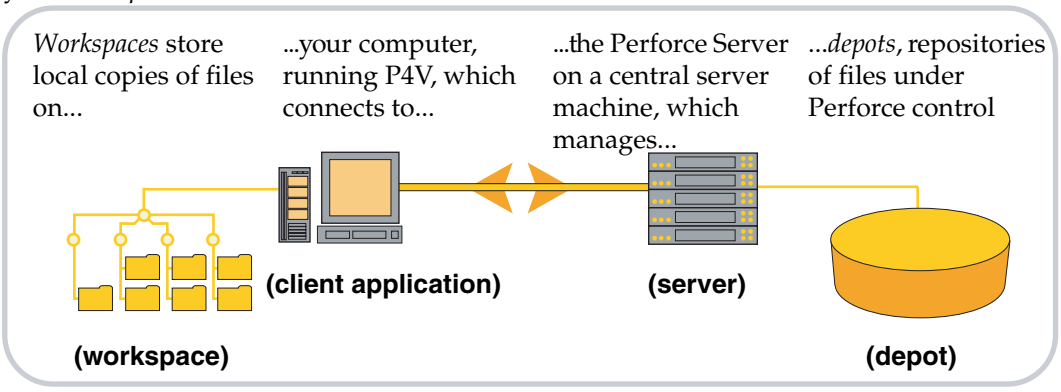
Getting Started with P4V

P4V, the Perforce Visual client, is Perforce's cross-platform graphical user interface. You can use P4V on Windows, Macintosh, 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 a Perforce server using a client program like P4V. P4V enables you to check files in and out, and perform the various other necessary tasks. The following sections tell you how to perform basic tasks and point out powerful features and shortcuts.

Basic Concepts

P4V connects your computer to a Perforce *server* to move files between Perforce *depots* and your *workspace*, as shown below.



The definitions for these Perforce terms are as follows:

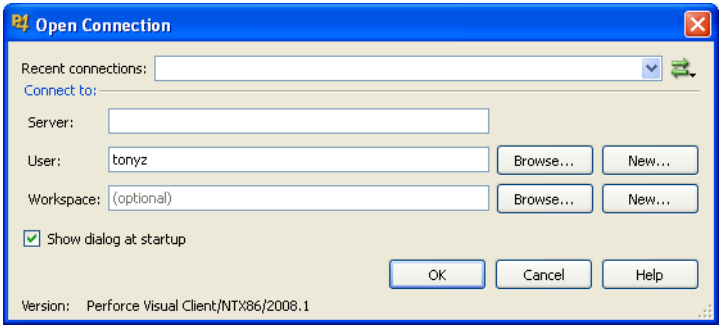
- Workspace: folders or directories on the client computer where you work on revisions of files that are managed by Perforce.
- Client application: P4V (or another Perforce client application), running on your computer, sending commands to the Perforce server and receiving results (files, status information, and so on).

- Server: the program that executes the commands sent by client programs, maintains depot files, and tracks the state of workspaces. The Perforce Server typically runs on a central machine, connected to client machines by the network.
- Depot: a file repository on the Perforce server. It contains all existing versions of all files ever submitted to the server. There can be multiple depots on a single server. The examples in this guide show a single depot.

Connecting to a Server

To gain access to your depots, you must connect to a server. To connect to a server:

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



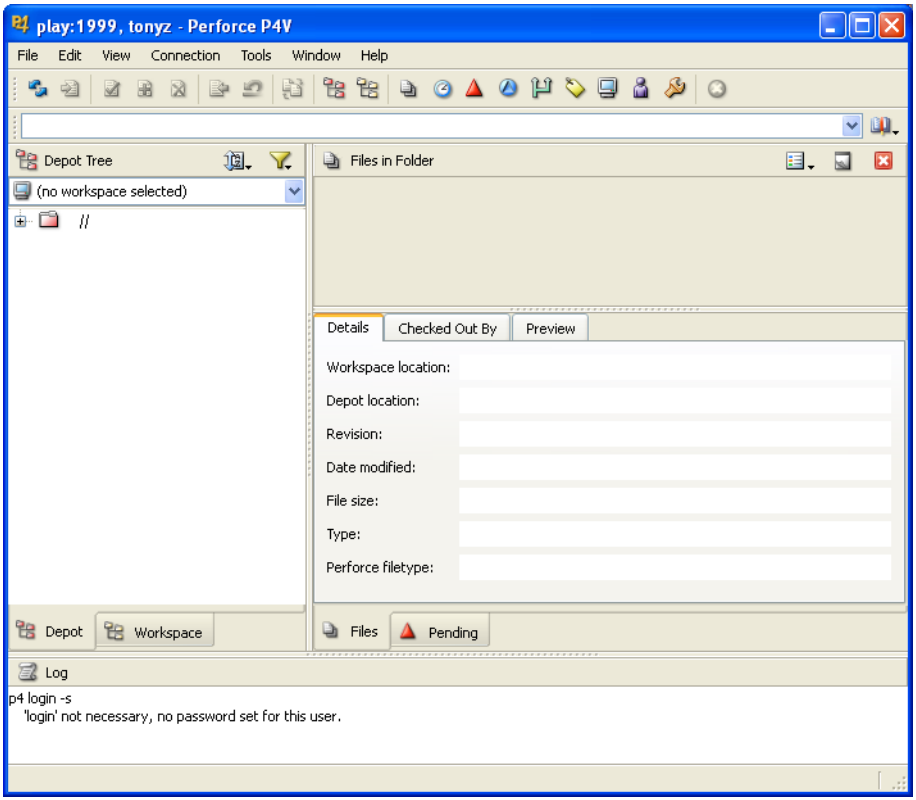
2. Specify the following settings (your Perforce administrator can provide you with this information)
   - Server: the name of the computer where your Perforce server is running.
   - Port: the port number assigned to the server
   - User: your Perforce user name
   - Password: your Perforce user password, if required.
   - Workspace: the name of your client 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.
```

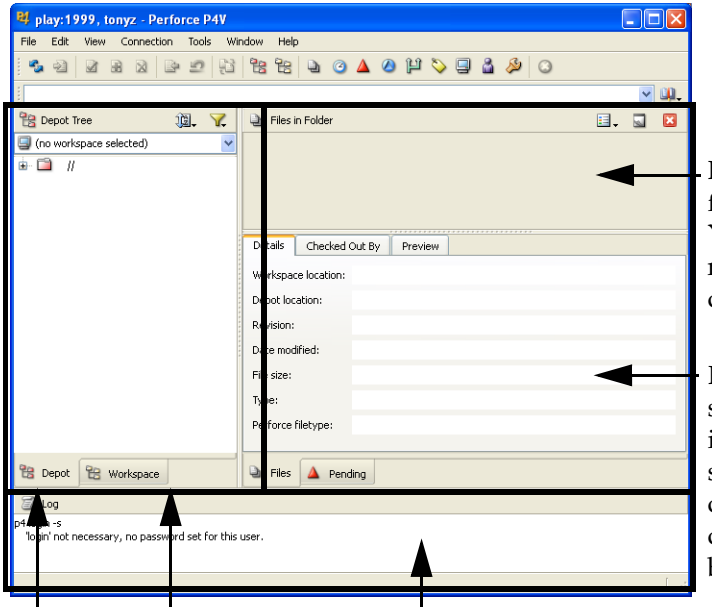
3. To connect, click OK. P4V displays its main screen, as shown in the following figure.



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.



Files in folder: lists the files in the folder you are browsing in the left You can display thumb-nails of image files in this pane by choosing **View> Show Files As.**

Right pane: displays Perforce specifications and file information. To select the specification you want to display, choose the **View** menu item or click the corresponding toolbar button.

Left pane: displays files and folders. The Depot tab displays files in the Perforce server, and the Workspace tab displays files in the workspace on your computer

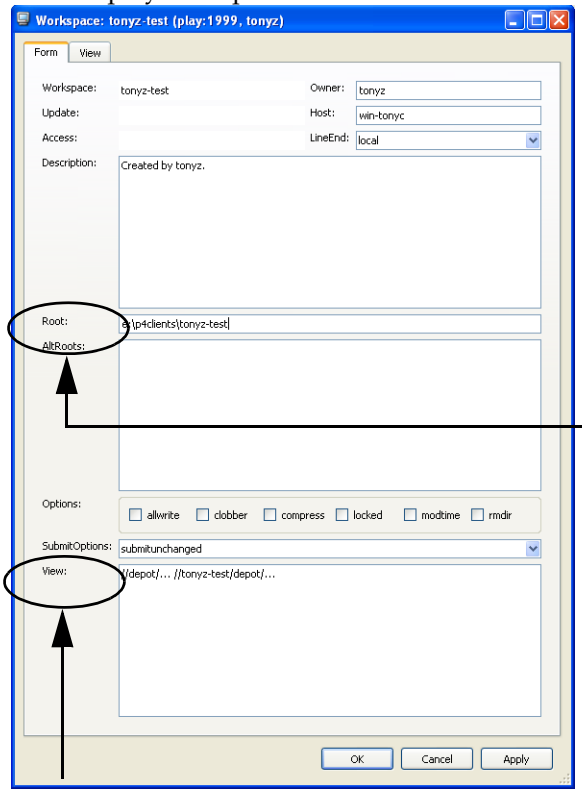
Log pane: displays the Perforce commands that P4V issues, plus error messages and results.

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 client root directory and (2) configuring the client view.

To define a workspace, choose **Connection > New Workspace....** To edit your current workspace specification, choose **Connection > Edit Current Workspace...**

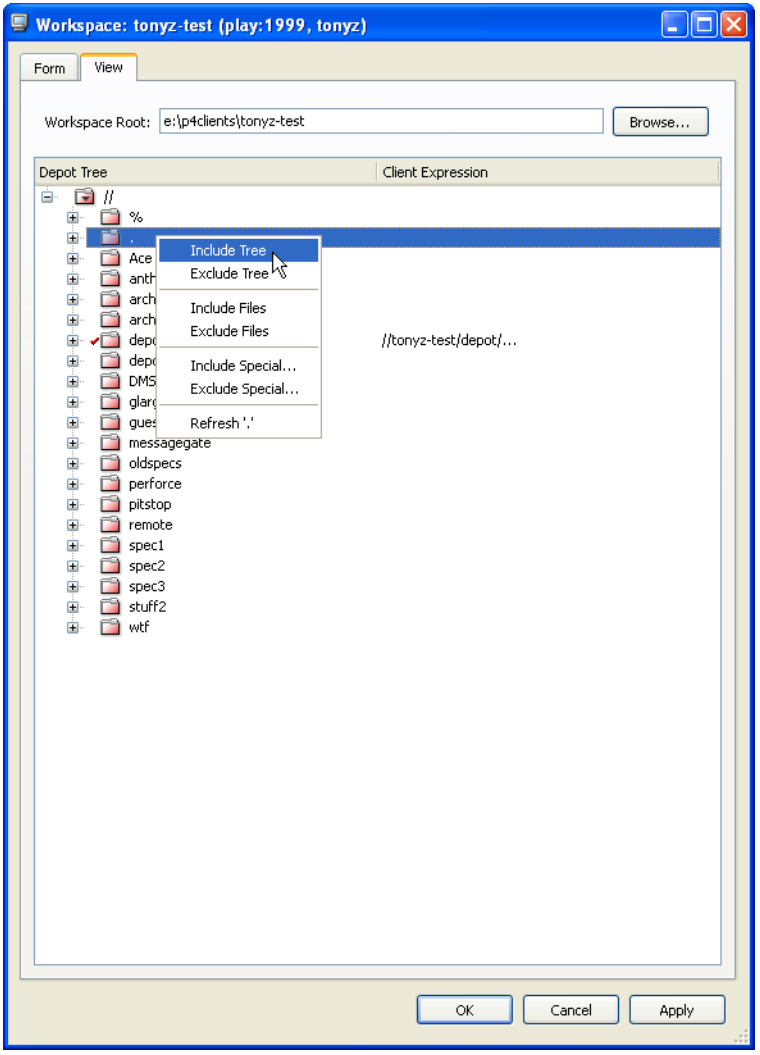
P4V displays the specification details in the lower portion of the right pane; for example:



View: enables 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.

Root: specifies the location on your computer 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!

To display and set the client view graphically, click the **View** tab. Browse to desired files and folders and context-click to include them or exclude them from the client view, 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 //my-test-workspace/main/bark
//depot/main/bark#2 - added as c:\p4clients\my-test-workspace\main\bark
sync complete. 1 file affected.
```

In the left pane, note that the file displays a green dot, indicating that it is present in your workspace:

Now the file resides in your workspace. If you want to edit the file, you must first check it out.

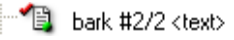
Checking out files from the depot

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 //my-test-workspace/main/bark
//depot/main/bark#2 - opened 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

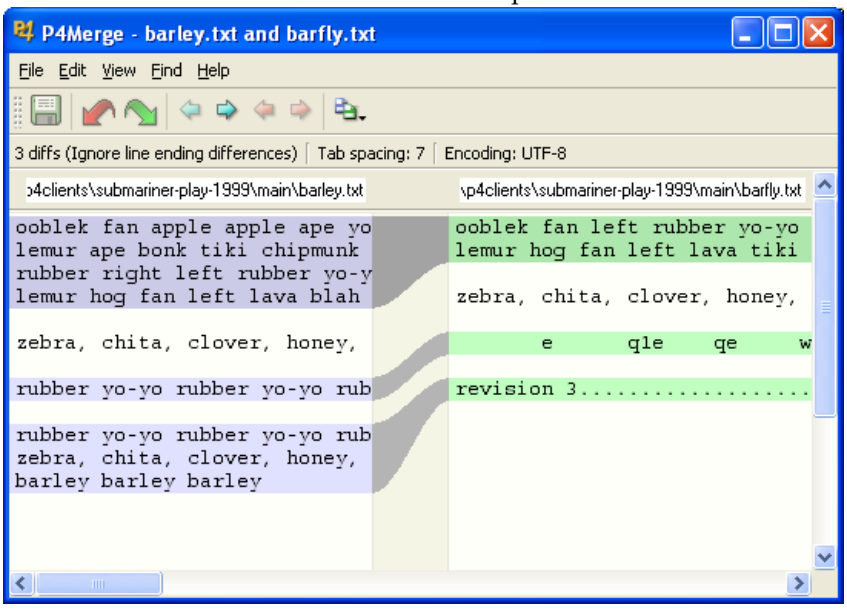
To edit a checked-out file, double-click it (or context-click it and choose **Open With...**, then select the desired application). P4V launches the corresponding editing application. Make changes and save the file.

To select an application with which to open a file, choose **File>Open With...>Choose Application.** Note that you can configure editors for different file types by choosing **Edit > Preferences...** and clicking the **Editors** tab.

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 P4Diff, displaying the differences between the two files. For example:



Discarding edits by reverting

If you decide you want to discard your changes:

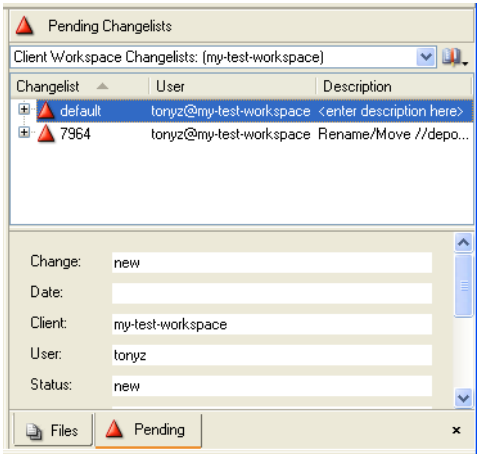
1. Context-click the file in the left pane and choose **Revert**. P4V displays a warning dialog.
2. Click **OK**. In the Log pane, P4V displays a message like the following:

```
p4 revert //my-test-workspace/main/bark
revert complete. 1 file affected.
```

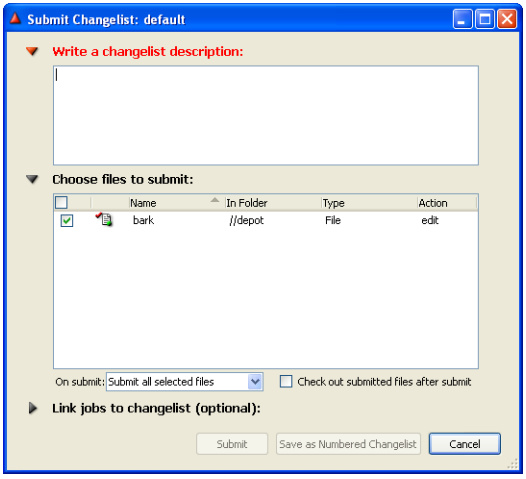
Checking your edits into the depot

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.

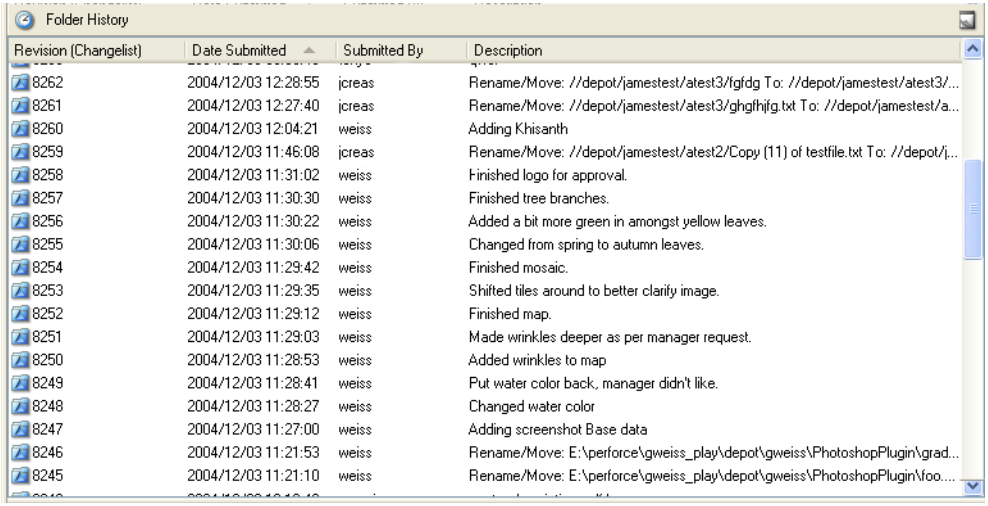


3. Enter a description explaining the changes you made and click **Submit**. The Log pane displays a message confirming that your changelist was submitted, similar to the following.

```
Change 7941 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

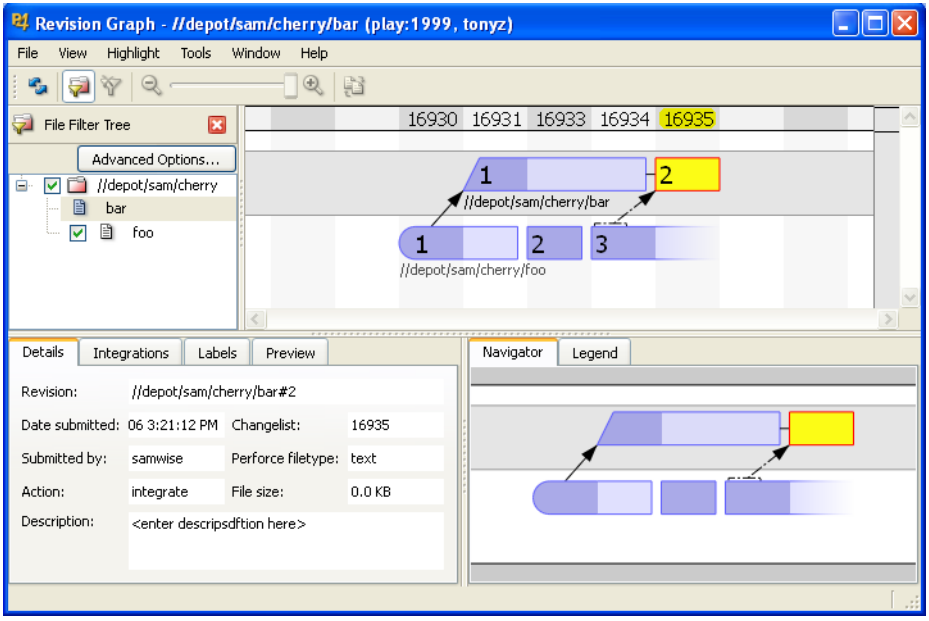
P4V includes several valuable graphical reporting tools:

- 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

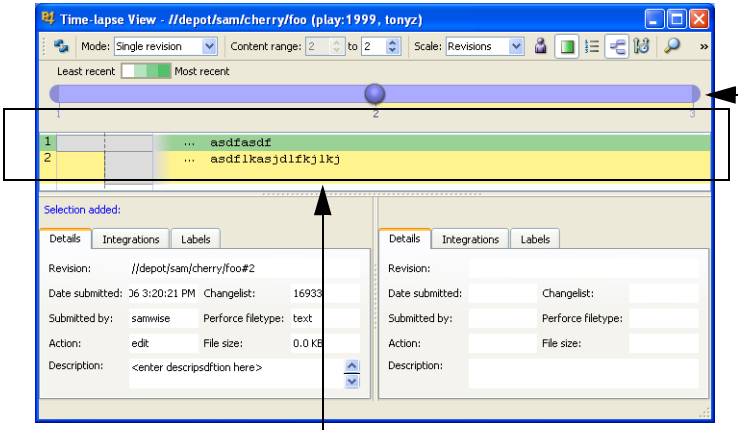
To display the revision diagram for a file, context-click the file in the left pane and choose Revision Graph. P4V launches the tool, which displays a diagram like the following one.



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

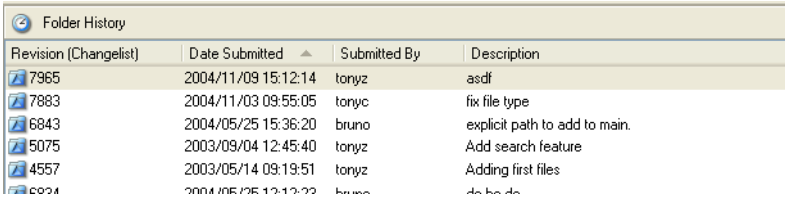
Change detail: shows text that has been added, changed, or deleted in a revision

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

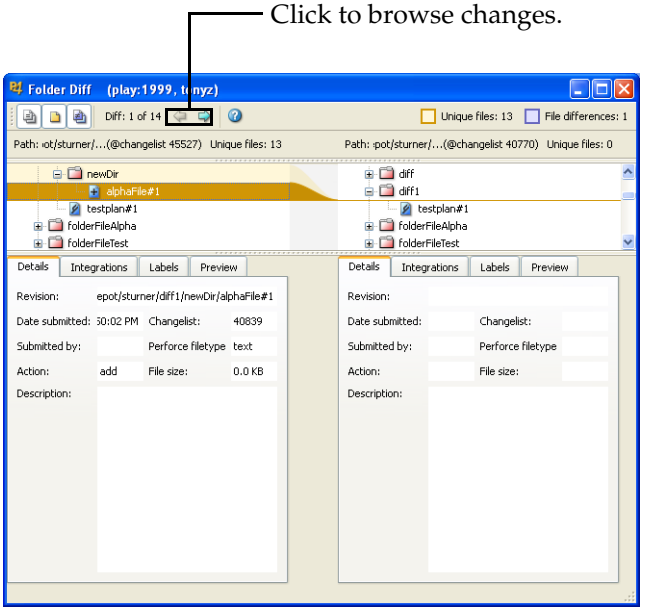
The folder diff tool enables you to see how the contents of a folder have changed: which files are added, changed, or deleted. To view changes to a folder:

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:



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.



Important and Useful Features

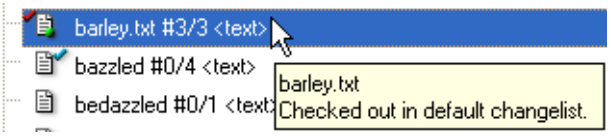
Among the many features provided by P4V, the following are especially useful:

- 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.



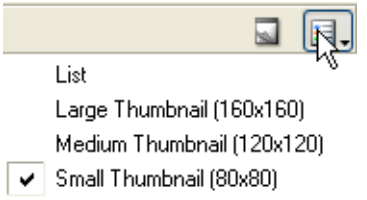
Another example: to display a changelist description, click in the toolbar and hold the mouse cursor over the changelist in the right pane. There are tooltips for all the P4V buttons, too.

Drag and drop

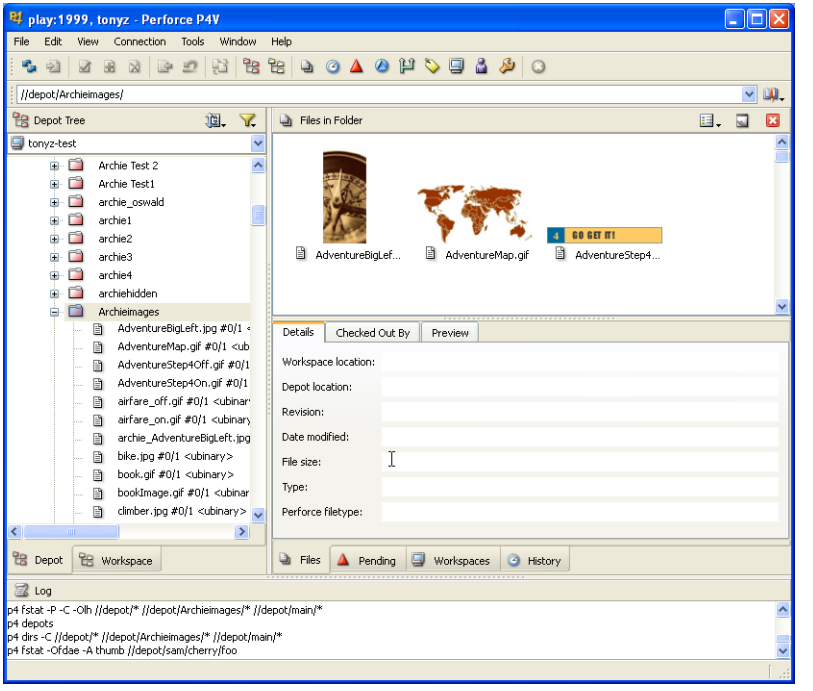
P4V provides drag and drop shortcuts for common tasks. Drag and drop can simplify operations on large groups of files. For example, to check out all the files in a folder, drag the folder to a changelist. To diff two files, drag one to the other. For details about drag and drop shortcuts, refer to the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

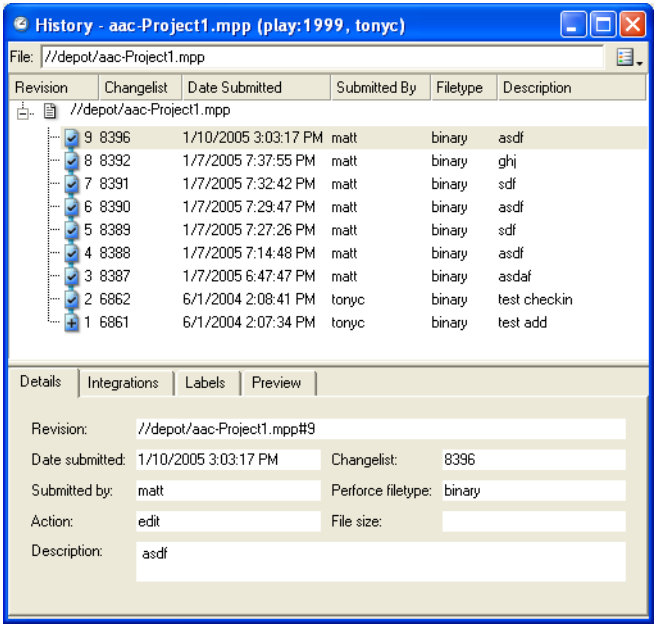


P4V displays thumbnails as shown in the following example.



Tearing off tabs

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



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

Setting Preferences

To configure P4V, choose **Edit > Preferences**. The tabbed **Preferences** dialog is displayed. In particular, the **Editor** tab enables you to associate applications with file types, overriding any operating system associations. The Diff and Merge tabs enable you to configure external applications, in case you prefer tools other than those that are bundled with P4V.

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	P4V Menu Item
Changelist>Describe…	**Edit>Go To...**
	Use **Go To** to display any type of specification (job, branch, and so on).
Edit>Find File Matching Pattern…	**Edit>Find File…**
Edit>Find File Under Selected Folder…	**Edit>Find File…**
File>Add to Source Control…	**File>Mark for Add**
	Applies only to files in the Workspace Tree
File>Diff 2 Files, Folders or Revisions	**Tools>Diff...**
File>Diff Client File vs. Depot File	**Tools>Diff...**
	Or context- click on file and choose **Diff Against Have Revision**
File>Explore	**File>Show in Explorer**
File>Integrate Using Filespec or Branchspec	**File>Integrate...**
File>More>Check Consistency	**Tools>Reconcile Offline Work...**
	Applies only to folders in the Workspace Tree
File>Open for Delete	**File>Mark for Delete**
File>Open for Edit	**File>Check Out**
File>Properties	**View>Files in Folder**
	File properties are displayed in the Details pane at the bottom of the Files in Folder view
File>Remove from Client	**File>Remove from Workspace**
File>Rename	**File>Rename/Move…**
File>Resolve>Auto Resolve…	**File>Resolve…**
File>Resolve>Interactively… [Resolve]	**File>Resolve…**
File>Resolve>Schedule File for Resolve	**File>Get Latest Revision**

P4Win Menu Item	P4V Menu Item
File>Revision History…	**View>History** Alternatively context click on file and choose **File History**
File>Sync>Sync to Head Revision	**File>Get Latest Revision**
File>Sync>Sync...	**File>Get Revision…**
File>View File…	**File>Open**
Settings>Favorite Connections	**Connection>Favorite Connections**
Settings>Logout	**Connection>Log Off**
Settings>Options…	**Edit>Preferences…**
Settings>Port Client User History	**Connection>Open Recent**
Settings>Switch Port Client User…	**Connection>Open Connection…**
User>Set Password for (current user)…	**ConnectionChange Password…**
View>Bookmarks	**Tools>Bookmarks**
View>Client View of Depot	**View>Depot Tree** Restrict to client view by choosing **View>Filter Depot>Tree Restricted to Workspace View**
View>ClientSpecs	**View>Workspaces**
View>Entire Depot	**View>Depot Tree** Show the entire depot by choosing **View>Filter Depot>Entire Depot Tree**
View>Local View of Client Tree	**View>Workspace Tree**
View>Show Deleted Depot Files	**View>Filter Depot>Show Deleted Depot Files**

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 superusers can perform administrative operations by choosing **Tools > Administration**. Using the Administration tool, superusers can manage users and groups, and 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. For details, read the P4V Shortcuts help topic.
- 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-users` mailing list. Consult our web site for details.