StarDisk
User's Guide

StarTeam®

Borland®
Excellence Endures™

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Chapter 1

Preface

StarDisk enhances Windows Explorer so you can use it as a simple client for an application Server. StarDisk runs under Microsoft Windows 2000 and Windows XP.

With StarDisk, you can perform basic version control operations on the files and folders within a specific project view, after you use StarDisk to map that view to a Windows virtual disk. StarDisk is part of Enterprise and Enterprise Advantage. It is also available separately.

This guide explains how to install and use StarDisk to manage files stored in an application Server repository. It also provides information about the product suite and version control concepts. This guide assumes that users are thoroughly familiar with the operating system of the computer they are using.

If you have an earlier version of StarDisk, you must completely uninstall it before you install the new version of StarDisk.

The online manuals are distributed in Adobe Acrobat (.pdf) format and require the Adobe Acrobat reader, 4.0 or higher, to display them. The installation program for the Adobe Acrobat Reader is located in the \Docs folder of the Installation CD. The free reader is also available from the Adobe's web site (www.adobe.com).

Contacting Borland Support

Borland Software Corporation is committed to providing world-class services in the area of consulting and technical support. We have over 15 years of experience in supporting developers and enterprise customers. Our qualified technical support engineers are prepared to handle your support needs on a case-by-case basis or in an ongoing partnership. Borland provides support worldwide, delivering timely, reliable service to ensure every customer's business success.

For more information about Borland's support services, please see our web site at http://support.borland.com.

From the Web site, you can also access many newsgroups where users exchange information, tips, and techniques. See http://info.borland.com/newsgroups/ for the latest list of free product newsgroups. Also available on the Internet is the Borland Developer Network site at http://community.borland.com. This Borland Community provides access to product specific information, articles, code examples, and news.

When contacting support, be prepared to provide complete information about your environment, the version of the product you are using, and a detailed description of the problem.

For support on third-party tools or documentation, contact the vendor of the tool.

Documentation Conventions

The documentation uses the following conventions.

Choose File > Exit	Indicates a menu selection followed by a submenu selection. The greater-than symbol (**>**) separates the commands to be selected from subsequent menus. For example, “Choose the File > Exit command” means to choose File from the menu bar and then choose Exit from the drop-down menu.
Fixed-Space Font	Text appearing in Courier font represents information that you need to enter and messages from the system.
italics	Syntax appearing in italics represents information that you replace with the names of your files, child folders, etc. Italics are also used for the names of dialogs and books and for emphasis.
Bold	Syntax appearing in bold represents information that you must use exactly as shown (if you use it).
[ ]	Square brackets surround optional syntax.
|	A vertical bar separates mutually exclusive choices in syntax.

Note Identifies supplemental information.

Tip Identifies information on alternative procedures or other helpful but nonessential information.

Important Identifies information that is essential to the completion of a task.

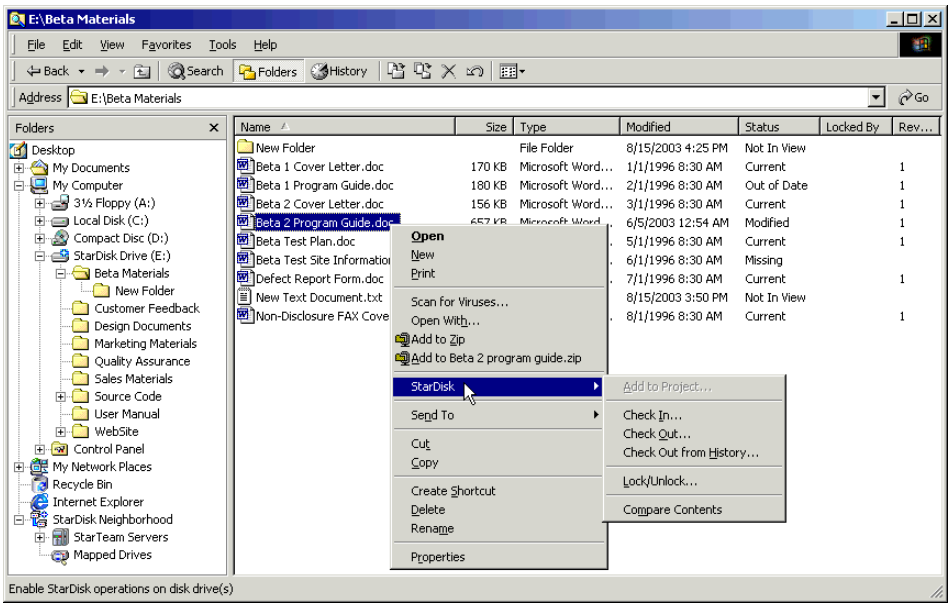
Caution Identifies actions that may result in loss of data or procedures that must be followed to ensure that data is *not* lost.

Chapter

2

Introducing StarDisk

StarDisk enhances Windows Explorer so you can use it as a simple client for an application Server. After you map a specific configuration of a project view to a Windows virtual disk, you can perform basic version control operations on the files and folders within that view. StarDisk also provides tools for comparing and merging files.



You can use StarDisk to participate in a collaborative endeavor. For example, you and coworkers may share responsibility for a set of source code files or legal documents. Your team can use StarDisk, an aplication Server, and other Borland applications to manage corporate assets that are under version control. Each team member's work on a document is saved as a new revision in the Server's repository. Team members can easily obtain the most recent revision (called the tip revision) of any document, access past revisions of that document when necessary, track who did what when, and so on.

Introducing Version Control

It is important to keep track of changes to files—especially when more than one person works on them. Version control is the management and maintenance of file revisions. It enables a user to modify and save copies of files without losing the former revision.

Sometimes, people create their own primitive version control system by saving each revision with a different name, for example, OverheadReport1.doc, OverheadReport2.doc, and so on. A version control application does this work for you. You can use the same name for all the revisions of a file, yet still retrieve older revisions as needed.

The basic version control operations are:

- Placing new files under version control

  When you create a file, you place it under version control so that its history, from one set of changes to the next, is stored and reproducible. Placing a file under version control also makes all its revisions available to others.

- Checking files in and out

  When you check a file out, a copy of the tip revision (the most recent revision controlled by the Server) is placed in the appropriate working folder on your workstation.

  After you modify a file, you check it in. This creates a new revision of that file to be managed by the Server. The new revision becomes available for others to check out and, perhaps, add to or edit.

- Locking/unlocking files

  When you lock a file, you alert others to the fact that you will be making changes to this document. Depending upon how your Server is configured, locking a file can prevent others from modifying the file.

- Reviewing revision history

  Because the Server stores all the revisions of a file, you can locate previous revisions of that file. For example, you may want to retrieve the documentation that was released with a specific product version, or view the product documentation as it existed on a certain date.

Understanding Virtual Disks

StarDisk enhances Windows Explorer so you can use it as a simple client for a Server. You can perform basic version control operations on the files and folders within a specific project view, after you use StarDisk to map that view to a Windows virtual disk.

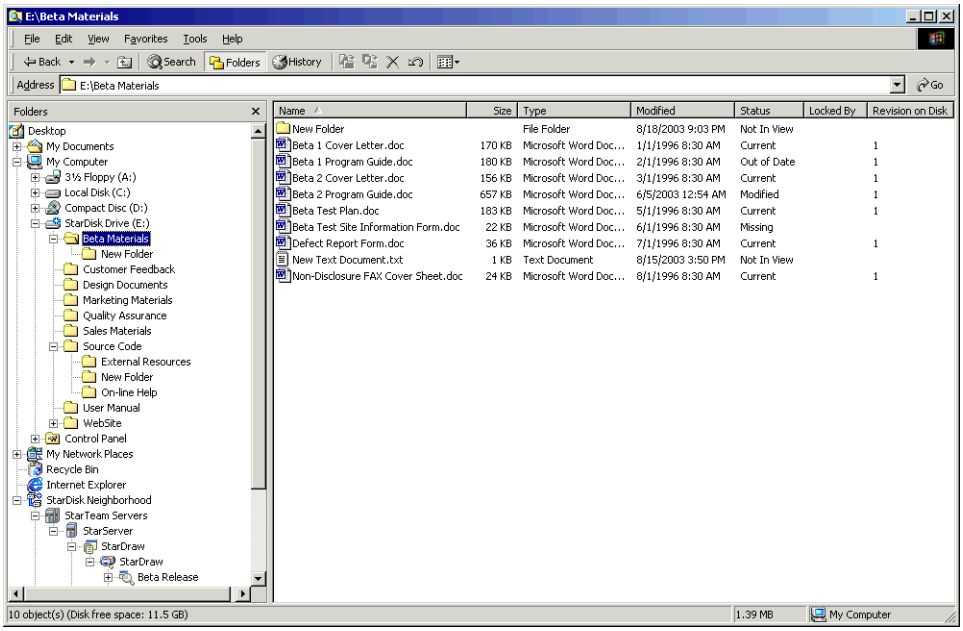
Mapping

Mapping a view (by assigning a drive letter to the view) creates a virtual disk that appears in Windows Explorer. Mapping establishes a connection to a project and its folders and files that are actually located on an application Server. From that virtual disk, you can open folders, check files out, lock them, work on them, and check them back in.

Virtual Disks

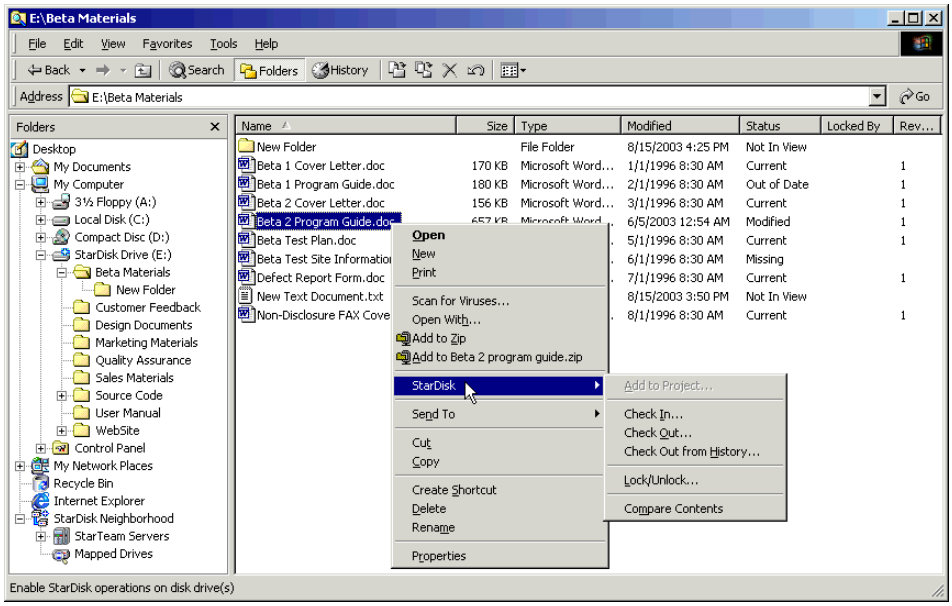
Virtual means *not real* in the sense that the disk is not an actual piece of hardware. A virtual disk is an emulation that appears in Windows Explorer, with a new drive letter. From the virtual disk drive, you can retrieve the files you need from the repository. StarDisk uses removable-disk technology to install its virtual drive.

The figure below shows folders and files mapped to the E: drive, a virtual disk drive.



By default, StarDisk adds three columns of information about files to the Details view in Windows Explorer's right pane: Status, Locked By, and Revision On Disk. You can specify a different set of information that better suits your particular needs. For details, see "Selecting Which Columns of Information to Display" on page 29.

It also adds the StarDisk submenu of commands to the context menu for selected folders and files.



Working Folders

A virtual drive cannot store files, so each virtual folder must have a corresponding working folder. A working folder is the actual location on your workstation where StarDisk files are stored. Working folders appear as normal folders in Windows Explorer; the selected columns of information do not appear in the right pane, and the StarDisk submenu of commands does not appear on the right-click menu for selected

folders and files. If you open a file from the virtual drive, make changes, and then open (the same) file in the working folder, the changes are there because what appears to be two different files is actually the same file—just displayed in two different places.

You use the virtual drive (instead of the working folders) because it enables you to perform version control operations.

Chapter

3

Understanding StarTeam and StarDisk

StarTeam Server and StarDisk are parts of a suite of products that enable you to perform version control, software configuration management, and other processes related to product life cycles.

The Server manages data for all its client applications. The server is maintained by an administrator who is familiar with the complexities and details of server operation. Client applications, such as StarTeam and StarDisk, connect to the server to access that data.

StarTeam is the full-featured client application. It tracks and controls software development operations for the entire life cycle of a software project. Your administrator uses it to create the projects and views that you access from StarDisk.

StarDisk is a virtual file system that extends the functionality of the existing file system and enables you to access files stored on a hard disk as well as any revisions of these files found in the Server's repository. As a client application integrated with conventional Windows applications, such as Windows Explorer and Microsoft Visual InterDev, StarDisk extends the file access of those applications.

With your workstation connected to a computer running the Server, you can perform basic version control operations (such as checking files in and out) using applications you already know. You can also track changes to files and merge the work of other team members with your own.

This guide describes the features and capabilities of StarDisk and explains how to use it in conjunction with the Server.

Understanding StarDisk

StarDisk is a simplified version of the client application which deals only with projects, views, folders, and files. Its most important benefit is that it enables you to perform version control from Windows applications, primarily Windows Explorer. Using StarDisk does not require the training and experience needed to use the full client.

The Server and StarDisk form an easy-to-use solution for the control of any set of files that go through review and revision, such as writing projects, legal cases, and financial analyses.

For example, suppose a writer creates a document file and distributes it to illustrators, technical reviewers, and editors. They give the writer feedback, which is often incorporated in the document file. Then the file may be circulated to still more users. StarDisk facilitates this process by storing every previous revision of the document.

Ensuring that the latest revision of a file is available to the right person at the right time can be difficult. It is not unusual to discover that the writer has made changes to a local copy of the file after the editor has started working on a version stored elsewhere on the network. StarDisk helps prevent such problems. StarDisk provides file status information that lets people who have checked out a file know that a more recent version is now available. StarDisk also helps users recover from mistakes by providing Visual Diff and Visual Merge, which are file comparison and merge utilities.

By using StarDisk, you can map a project view to a virtual disk in Windows Explorer. Then from Explorer, you can check the files in that project view in and out as needed.

Introducing Concepts

Some StarDisk and StarTeam concepts may be new to you. The next few paragraphs explain these concepts.

An instance of the Server controls the storage of your files. Each Server instance runs a server configuration. Here's an overview of the project structure controlled by an instance of Server.

Server

A server is a computer running the Server software. StarDisk enables you to connect to the server. The server controls the repository, which is a storage place for file revision archives, and a database that contains information about files, such as their descriptions, the number of revisions, and so on.

Project

A project is a way to group all the materials needed to accomplish some goal. Large, complex projects have many folders and files that are worked on by many team members. A project is the collection and organization of all these files and folders. A project might contain the files that comprise a software program, a technical publication, a legal case, a financial forecast, a building, an aircraft, or anything involving numerous files, each of which may undergo many revisions as the job progresses.

View

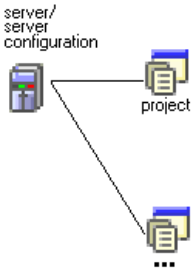
A view, also called a project view, is a way of looking at a project. It enables users to see the parts of the project they need to see, without the confusion of seeing the entire project. Users might use several different views of a single project, or views of several different projects, depending on the files they must use to do their work. Each project has only one root view, which is created automatically when the project is created. The root view may have several child views, each of which may have several child views of their own. A view that has child views can be referred to as a parent view.

StarTeam Folder

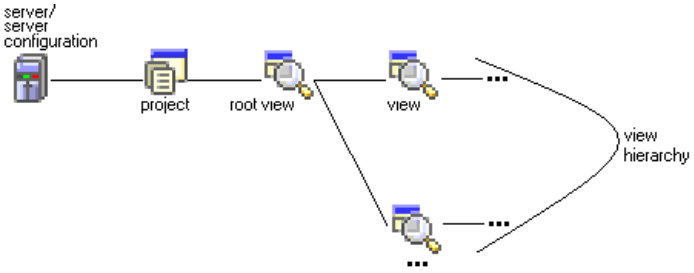
Each view has one root folder. That folder can have any hierarchy of folders. Usually those folders have names that indicate their contents, such as Marketing Materials, Product Documentation, and Source Code.

Putting These Concepts Together

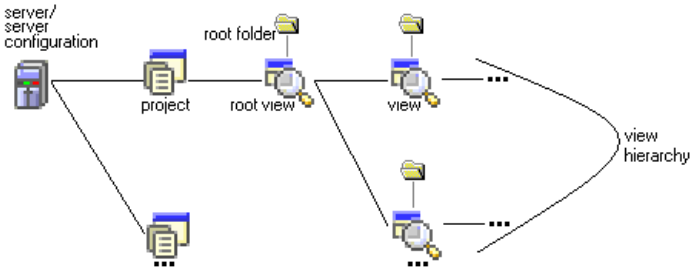
The server can manage any number of projects.



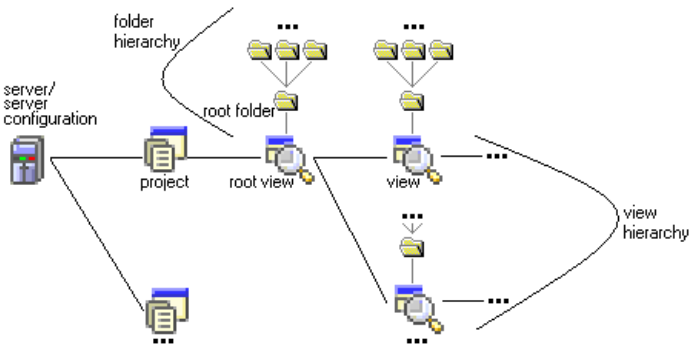
Each project has one root view and any number of child views.



The root view and every child view has one application folder as a root folder.

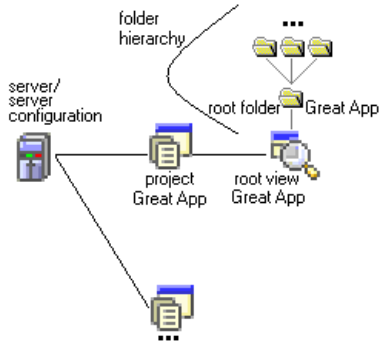


An application root folder can have any hierarchy of child folders. This is called the folder hierarchy.



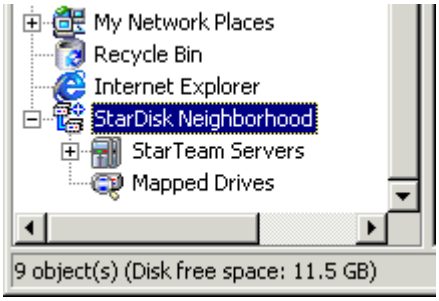
When an administrator creates a project, that project's root view and the root view's root folder are created automatically and given the same name as the project. For example, if the project's name is Great App, the root view's name is initially Great App,

and the root folder's name is initially Great App (although the administrator can change these names).



Using StarDisk Neighborhood

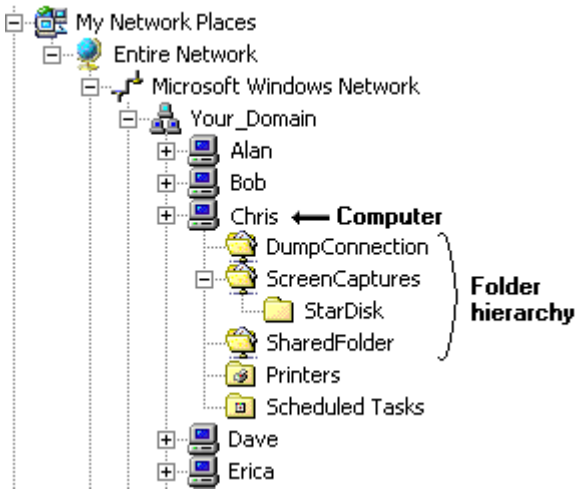
The StarDisk Neighborhood icon appears in Windows Explorer and on your desktop. The following figure shows StarDisk Neighborhood in the left pane of Windows Explorer.



Its look and function is somewhat similar to My Network Places in Windows Explorer, but it has some substantial differences.

My Network Places enables you to browse through and use the computers, printers, and other assets on your network.

When the asset is a computer, you can access its shared folders and files directly from within My Network Places. You can map a network drive, that is, make the contents of a shared folder accessible via a network drive, but mapping is not necessary to access that folder.



Similarly, StarDisk Neighborhood enables you to list the Servers, projects, and views you can access from your workstation. However, StarDisk Neighborhood does not allow you direct access to the folders and files in a project view until that view is mapped to a drive.

You must assign a drive letter on your workstation to that project view. After the view is mapped, you can go to that drive in Windows Explorer and access the folders and files on the server.

If you look at the StarDisk Neighborhood in Windows Explorer, you see the StarServer server (an instance of the Server) and that server's projects: StarDraw, StarFlow Extensions, Web Connect Resources, and WebDev. The StarDraw project's root view is named StarDraw. The view has four child views: Beta Release (which has been mapped to a virtual disk), Release 1.0 Maintenance, Web1, and Web2. It is usual for a project, its root view, and the view's root folder (not shown) to have the same name.

You can also see the same server, project, and views, by opening separate windows from the Windows desktop. To do this:

1. Double-click the StarDisk Neighborhood icon on the Windows desktop to open the StarDisk Neighborhood window.
2. Double-click the StarTeam Servers item to open a window of servers.
3. Double-click a server to open a window of its projects.
4. Double-click a project to open a window containing its root view.
5. Double-click a project root view to open a window containing its child views (if any).
6. Double-click a view that has no child views to open an empty window.

Although StarDisk Neighborhood and My Network Places are somewhat similar, they differ in the following ways:

- My Network Places shows networked computers, folders, and files. StarDisk Neighborhood shows the servers, projects, and views.
- Although a project view has folders and files associated with it, they are not shown in StarDisk Neighborhood. (After you use StarDisk to map a specific configuration of a project view to a Windows virtual disk, that view's folders and files are shown in the virtual disk.)

Mapping Views to Virtual Disks

StarDisk Neighborhood enables you to map a specific configuration of a project view to a virtual disk. The icon for the view changes after the view becomes mapped. StarDisk Neighborhood also provides a Mapped Drives folder that quickly shows the drives corresponding to the mapped project views, so you don't have to search through the entire project hierarchy on each server.

The files appear to be located in the virtual disk created by the mapping process, but they are actually located in working folders on your workstation. For more information, see "Mapping Views" on page 21.

By default, StarDisk adds three columns of information about files to the Details view in Windows Explorer's right pane: Status, Locked By, and Revision On Disk. You can specify a different set of information that better suits your particular needs. For details, see the application.

Overview of Using StarDisk

The general process of using StarDisk is as follows:

- An administrator performs these setup tasks (as explained in the *StarTeam Administrator's Guide*):
  - Installs and configures the Server (including its underlying repository and database).
  - Creates a server configuration and starts it.
  - For each member of the development team, creates a user logon ID and grants the appropriate access rights.
  - If other types of files (such as product requirements, project plans, design specs, or user docs) need to be under source control, creates a project with appropriate top-level project folders.
  - If process rules will be enforced in an existing project, creates them before putting files under source control.
- Members of the development team install StarDisk on their workstations, and "register" it by entering a valid client activation key. For details, see "Installing StarDisk" on page 63.
- Each member of the team must add one or more Server connections to their StarDisk Neighborhood. For details, see "Adding a Server" on page 17.
- Each member of the team must log onto the appropriate server and map a specific configuration of a project view to a StarDisk virtual disk. For details, see "Logging onto a Server" on page 18 and "Mapping a Project View" on page 21.
- Members of the team work with the files and folders on a StarDisk virtual disk, and perform tasks such as:
  - checking out files
  - locking and unlocking files
  - editing files
  - checking in new revisions of files
  - comparing or merging revisions of files
  - adding new files or folders to the project view

  For details, see "Using Virtual Drives" on page 29 and "Using Folders and Files" on page 33.

Important When using StarDisk, the Server must be running. When team members work disconnected, they lose many of the benefits provided by source control. (For example, they won't know if a more current version exists or if someone else has checked out something for editing. So there might be conflicts that have to be resolved.)

- At certain milestones in the lifecycle of the team's work (such as a product release), an administrator creates a branching view (using a full-featured StarTeam client), and team members can work with solutions in the branching view or in the ongoing main view.

Right-click Commands for StarDisk Items

As you use StarDisk, it adds several different types of items to the left pane of Windows Explorer and displays certain information about each item in the right pane. Information about each item can also be displayed in a separate dialog, by right-clicking on an item and choosing the Properties command from its context menu. (For details, see "Using Properties" on page 45.)

StarDisk adds commands to the context menu for the following types of items in Windows Explorer:

- Servers in your StarDisk Neighborhood
- Project views on those servers
- StarDisk Drives (for your mapped project views)
- Folders and files on your StarDisk Drives

The following tables describe each StarDisk command and provide references to more detailed topics about the task you perform with that command.

Right-click Commands for a Server

After you log onto a server in your StarDisk Neighborhood, the following commands are included on its context menu. (continued)

Table 3.1 StarDisk Commands for a Server

Command*	Description
Log Off	Displays a confirmation dialog asking if you want to log off from this server. For more information, see "Logging off from a Server" on page 18.
Change Password	Displays the *Change a Password* dialog, which enables you to change your password for this server. For more information, see "Changing Your Password for a Server" on page 19.

* If you are not currently logged onto the server, these commands are disabled. There is no explicit Log On command; just click on the server and the *Log On* dialog will appear.

Right-click Commands for a Project View

When you are logged onto a server in your StarDisk Neighborhood, you can see its projects and project views. Depending on whether you have mapped a project view to a StarDisk Drive, the following commands are included on its context menu.

Table 3.2 StarDisk Commands for a Project View

Command	Description
Map StarDisk Drive	Displays the *Map View* dialog, which enables you to map a specific configuration of this project view to a StarDisk Drive. \For more information, see "Mapping a Project View" on page 21.
Disconnect StarDisk Drive	Displays a confirmation dialog asking if you want to disconnect the StarDisk Drive for this mapped project view. For more information, see "Disconnecting a Mapped Drive/ View" on page 26.
Mapping Properties	Displays a *Mapping Properties* dialog for this mapped project view, which has the same tabs as the *Map View* dialog. For more information, see "Mapping a Project View" on page 21

Right-click Commands for a StarDisk Drive

After you create a StarDisk Drive (by mapping a specific configuration of a project view), the following commands are included on its context menu.

Table 3.3 StarDisk Commands for a StarDisk Drive

Command	Description
StarDisk > Refresh StarDisk Drive	Refreshes this StarDisk Drive to ensure that its contents and file statuses are up to date. (StarDisk also provides certain options for the automatic refreshing of its drives. For more information, see "Setting Advanced Options for Refreshing Files and Folders" on page 25.)
StarDisk > Disconnect StarDisk Drive	Displays a confirmation dialog asking if you want to disconnect this StarDisk Drive. For more information, see "Disconnecting a Mapped Drive/View" on page 26.
StarDisk > Restore Mapping	Restores the mapping for this StarDisk Drive, after the server connection has been lost. You need to use this command after restarting your workstation.
StarDisk > Select StarTeam Columns	Displays a dialog that enables you to select which file properties will be displayed in the right pane of Windows Explorer (when it is showing the Details view). For more information, see "Selecting Which Columns of Information to Display" on page 29

Right-click Commands for a Folder or File on a StarDisk Drive

The following commands are included on the context menu for a folder or file on a StarDisk Drive. (continued)

Table 3.4 StarDisk Commands for a Folder or File on a StarDisk Drive

Command	Description
StarDisk > Add to Project	Displays the *Add To Project* dialog, which enables you to put new files and folders under version control by adding them to the project view. For more information, see "Adding Folders or Files to the Project View" on page 41.
StarDisk > Check In	Displays the *Check In* dialog, which enables you to check in a new revision of the selected files. For more information, see "Checking In a New Revision of a File" on page 39.
StarDisk > Check Out	Displays the *Check Out* dialog, which enables you to check out either the tip revision of the selected files or the revision corresponding to a specific label, promotion state, or date/time. For more information, see "Checking Out a File Revision Using the Check Out Dialog" on page 36.
StarDisk > Check Out from History	Displays the *Check Out from History* dialog, which enables you to see the history of an individual file and check out one of its revisions. For more information, see "Checking Out a File Revision Using the Check Out from History Dialog" on page 38.
StarDisk > Lock/ Unlock	Displays the *Set Lock Status* dialog, which enables you to set the lock status of the selected files, so other users can determine whether you are working on those files. For more information, see "Locking and Unlocking Files" on page 39.
StarDisk > Compare Contents	Launches the Visual Diff utility to compare your working copy of a file against the tip revision in the repository. For more information, see "Comparing File Revisions" on page 41.

Chapter

4

Connecting to Servers

Before you can map project views and start working with version-controlled files, you must be connected to a running instance of the Server and logged onto it.

Adding a Server

To add a server to your StarDisk Neighborhood, you will need information from your administrator about the server's address and endpoint.

You should also ask your administrator for the user name and password you must use to access the server. However, you won't need the user name and password until you log on (for example, as you map a view from the server to a virtual drive).

To add a server to your StarDisk Neighborhood:

1. Do one of the following:
   - In the left pane of Windows Explorer, expand StarDisk Neighborhood and select Servers.
   - Double-click the StarDisk Neighborhood icon on your desktop, and double-click the StarTeam Servers icon.
2. Double-click the Add Server icon.

   The *StarTeam Server* dialog appears.
3. In the Server Description text box, enter a descriptive name for this server.

   You can use a server description of your choice. The server description is the name that will be shown in StarDisk Neighborhood.
4. Enter or browse for the name of the computer that runs the Server you want to access.

   You can use an IP address instead of the computer's network name.
5. In the TCP/IP Endpoint text box, enter the correct port number.
6. Click OK. This action adds the server to StarDisk Neighborhood's list of Servers. In Windows Explorer, you can see the added server by expanding the StarTeam Servers item.

To see the columns of information about a Server, Explorer must be show the Details view.

After creating a connection to a specified Server, you must log onto it before you can view its projects.

Logging onto a Server

To see the projects and views on a Server, you must log onto that server. The server must have been previously added to the StarDisk Neighborhood (as explained in "Adding a Server" on page 17).

To log onto a Server, you must have a valid user name and password on that server. If you do not, contact your administrator.

To log onto a server:

1. Double-click the server description, either in Windows Explorer or in a StarDisk Neighborhood\StarTeam Servers window. The *Log On* dialog appears.
2. Enter your user name and password in the appropriate text boxes.
3. Click OK.

After the logon operation has completed, the right pane of Windows Explorer shows the projects on the server.

Note The *Log On* dialog may appear in other circumstances. For example, if you are mapping your first view on a particular server, you must log on as part of the mapping process. If the view is already mapped, but you have rebooted your computer or the server has been restarted, you might be asked to log on as you access the mapped view.

You can expand a project's entry in the left pane to show its view hierarchy.

If Explorer shows the Details view, you can select a project view in the left pane to see some basic information about that view in the right pane. But to see the folder hierarchy and files in a project view, you must map it to a virtual drive. For details, see "Mapping Views" on page 21.

Logging off from a Server

Sometimes you may need to log off from a server. When you log off, you cannot access a project view on that server until you log back on. You no longer see the projects and views for that server in your StarDisk Neighborhood.

Logging off from a server is not the same as disconnecting a drive.

- When a drive is disconnected, StarDisk deletes the virtual disk. (For example, if the E: drive was connected to a StarDraw project view, the E: drive disappears if you disconnect it.)
- After you log off from the server, you can still see the drive, its folders, and its files, check files in and out, and so on. This is because the virtual drive maintains a separate connection to the server.

To log off from a server:

1. Right-click the server description (either in Windows Explorer or in a StarDisk Neighborhood\StarTeam Servers window), and choose the Log Off command from the context menu.
2. In the resulting confirmation dialog, click Yes.

After the logoff operation has completed, Windows Explorer is automatically refreshed to clear the display of the server's projects and views. (To see this server's projects and views again, you must log onto it again.)

Deleting a Server

Occasionally, you might need to delete a server from your StarDisk Neighborhood. For example, your administrator might set up a new server configuration on a different machine, which replaces the previous server. After the previous server is removed from service, you could delete that server from your list.

To delete a server:

1. If you are logged onto the server, log off. (For details, see "Logging off from a Server" on page 18.)
2. Right-click the server description (either in Windows Explorer or in a StarDisk Neighborhood\StarTeam Servers window), and choose the Delete command from the context menu.
3. In the resulting confirmation dialog, click Yes.

Windows Explorer is automatically refreshed to remove that server from your list of Servers in the StarDisk Neighborhood.

Changing Your Password for a Server

StarDisk enables you to change your password for a server.

To change your password for a server:

1. If you are not already logged onto the server, do so now. (For details, see "Logging onto a Server" on page 18.)
2. Right-click the server description (either in Windows Explorer or in a StarDisk Neighborhood\StarTeam Servers window), and choose the Change Password command from the context menu.

   The *Change a Password* dialog appears.
3. Do one of the following:
   - To set a blank password, select the "Set a blank password" check box.
   - To set a non-blank password, enter the new password in both the Password and the Confirm fields.
4. Click OK.
5. Click OK in the resulting message dialog, which informs you that the new password will be valid the next time you log onto the server.

Chapter

5

Mapping Views

Using StarDisk, you can map a specific configuration of a project view to a virtual disk drive. After you map a view to a virtual disk, the folders and files in that view become available for you to work on. You can access virtual drives from either Windows Explorer or My Computer.

Displaying Information About a Project View

Projects and views are created by an administrator. Each view represents part of a project seen from a different perspective. The views you map should include the files you need to work on. If you cannot determine which views to map, ask your administrator for assistance.

Some information about a project view is available from Windows Explorer.

Select a project in Explorer's left pane to display information about that project's root view in the right pane. Select a project's root view in Explorer's left pane to display information about that project's child views (if any) in the right pane.

The information about a project view includes:

- Its name
- Is description
- Who created it
- When it was created
- Its default working folder

The same information is available in a view's *Properties* dialog.

Mapping a Project View

Before you can see or work with the files in a project view, you must map a specific configuration of that view to a virtual disk.

To map a project view:

1 Select the view to be mapped:

- In Windows Explorer, expand the StarDisk Neighborhood tree as needed to see the view you want to map.
- If you open StarDisk Neighborhood from your desktop, double-click the appropriate server to open a window of projects on that server. Continue to open windows as needed, until you see the view you want to map.

You must be logged onto a server before you can see its projects and views. The *Log On* dialog is automatically displayed when necessary.

2 Right-click the project view to be mapped, and choose the Map StarDisk Drive command from the context menu.

The *Map View* dialog appears, with the Drive Letter list box displaying the next available drive letter. (This list box offers only drive letters that are currently available.)

The *Map View* dialog has several tabs: Configuration, Working Folder, Preferences, and Advanced. You might need to ask your administrator for information about the values to use for some of the settings (such as a non-current View Configuration or an MPX profile).

3 (Optional) Select the drive letter from the drop-down list box.

This letter you select becomes the drive letter assigned to the mapped view. It is displayed to the right of the name of the view in the view's tree hierarchy.

4 Specify the view configuration. For details, see "Selecting the View Configuration" on page 22.

5 Specify the working folder for the view's root folder. For details, see "Selecting a Working Folder for the View's Root Folder" on page 23.

6 Specify your preferences for certain options about working with this view. For details, see "Setting View Preferences" on page 24.

7 (Optional) Modify the settings for advanced options about how StarDisk communicates with your Server to refresh the status of files and folders. For details, see "Setting Advanced Options for Refreshing Files and Folders" on page 25.

8 Click OK.

After a view is mapped, its icon changes and a virtual disk (labeled as a StarDisk Drive) appears in Windows Explorer. You can expand the StarDisk Drive to see the folders and files in the mapped project view:

By default, StarDisk adds three columns of information about files to the Details view in Windows Explorer's right pane: Status, Locked By, and Revision On Disk. You can specify a different set of information that better suits your particular needs. For details, see "Selecting Which Columns of Information to Display" on page 29.

All files initially have the status of Missing, which means that they are missing from your workstation (because they have not been checked out from the server to your working folders).

You can also use the My Computer icon on your desktop to find the virtual disk, as well as its folders and files:

Selecting the View Configuration

Projects and views are created by an administrator. Each view represents part of a project seen from a different perspective. The view you map should include the files you need to work on. Usually you map the view's *current configuration* to a virtual drive. However, you can specify a different configuration as part of the mapping. You might

reconfigure the view to display files with a particular label, or files that belong to a particular promotion state, or files that existed at a particular time in the past.

To the Server, any configuration other than the current configuration is read-only. That means if you configure a view to a previous label, state, or time, you cannot add files to the view or check in any changes. You can change the files on the virtual drive, but you can't lock them or check them in to the server. (It is even possible that the current configuration of a view is read-only.)

Note that a StarDisk virtual disk corresponds to a specific configuration of a view. If you need to work with a different configuration of the same view, you must map that other configuration to a separate virtual disk.

The following procedure corresponds to step 4 of the procedure that starts "To map a project view:" on page 22. Because the current configuration is the default, you can skip this section unless you want to roll back the view to a past label, state, or time.

To select a view configuration:

1. In the *Map View* dialog, select the Configuration tab.
2. Select a view configuration option:
   - Current configuration

     This contains the latest revisions of all files.
   - Labeled configuration

     This limits the view to revisions of files with the label that you select from the drop-down list box. If this view has no labels defined for it, this option is unavailable.
   - Promotion state configuration

     This limits the view to revisions of files with the promotion state that you select from the drop-down list box. This option is only enabled when the view has promotion states defined for it.
   - Configuration as of

     This rolls the view back to a specific point in time. It includes everything in the view just prior to the date and time you select. This option defaults to the current date and time, but you can select a date and time in the past (which must be after the time when the view was created).

     1. To specify the date, enter the date or click the button on the right-hand side of the date field to open the calendar.
     2. To specify the time, enter the time or use the spin boxes.

Selecting a Working Folder for the View's Root Folder

A working folder is a location on your workstation that stores the files associated with a mapped view. Working folders store files:

- After you check them out
- While you work on them
- Before you add them to the project
- Before you check them in

During the mapping process, you select a working folder for the view's root folder only. This location becomes the root of all the working folders of all the view's child folders, so long as the child folders have working folders with relative paths. Working folders with absolute (completely specified) paths continue to use their specified locations.

After the view has been mapped, you can check a folder's properties in StarDisk Neighborhood to know exactly where its working folder resides on the workstation. Borland recommends that your team use relative locations for all working folders that will be accessed using StarDisk. Talk to your administrator if you find some working folders have unexpected paths.

Your options for a mapped view's root working folder are:

- Use the default working folders defined for a particular view in the application
- Specify a location of your own choosing
- Use a temporary location (which is deleted when the virtual drive is disconnected)

If you simply want to use the default working folder, you can skip the rest of this section.

Note for Users of both StarTeam and StarDisk

StarDisk's mapping process ignores any alternate working folders you have created using a different StarTeam client.

Important Your default or preferred location for a working folder must be on an existing drive. Beware of typographical errors as you select a working folder. Don't start a working folder's path with the backslash character (\), and don't place working folders on drives created using the DOS command SUBST.

If, from the virtual drive, you try to access a working folder on a non-existing drive, an error message indicates that the drive location is not accessible and that the system has insufficient resources to complete the requested service. If the working folder is on a substituted drive, the error message indicates that the drive location is not accessible and that the folder was moved or removed.

The following procedure corresponds to step 5 in the procedure that starts "To map a project view:" on page 22.

To specify a different working folder for the view's root folder:

1. In the *Map View* dialog, select the Working Folder tab.
2. Select one of the following options:
   - The default working folder (which is the working folder specified in the application and which remains on your workstation after the view mapping is deleted)
   - Your preferred location (which remains on your workstation after the view mapping is deleted)

     Enter or browse for the complete path to this folder. If you specify a folder that does not exist, StarDisk will create the folder for you.
   - StarDisk temporary working folder (which is deleted when the view mapping is deleted)

     StarDisk places the temporary working folder's files in the Temp or Tmp folder for the operating system.

Setting View Preferences

The Preferences tab enables you to control certain options for a StarDisk mapped view. For example, you can determine whether to automatically check out any out-of-date files as they are opened.

The following procedure corresponds to step 6 in the procedure that starts "To map a project view:" on page 22.

To set view preferences:

1. In the *Map View* dialog, select the Preferences tab.
2. (Optional) Limit access to files.
   - Select the Read-only check box to prevent changes to the virtual disk. When this option is selected, you cannot:
   - Change files opened from the virtual drive
   - Create, delete, or rename files or folders on the virtual drive

   Note that when you select the Read-only check box, the “Hide files not in view” check box appears next to it. Select this check box to ignore any files in the working folders that are not under version control, or clear it to see all the files in the working folders.
3. (Optional) Select the “Automatically check out out-of-date files as they are opened” check box to enforce synchronization of the files in your working folders with the repository files.

   When this option is selected, if you open an Out Of Date file, the tip revision is automatically checked out from the repository so you will be working with the latest revision. (If you need to work with an older revision of a file, this option should not be selected.)
4. (Optional) Select the “Automatically lock files opened for editing” check box to lock every file that you save. If you lock files, other users can tell you are working on them.

   You might want to select this option if the project requires files to be locked for check-in.

   Different applications set a file’s Read-only attribute at different times. Therefore, the files may not be locked until you save them. However, enabling this feature is still beneficial. Suppose you open a file to look at it. Then you decide to make a change to that file. As soon as you save the changed file, the file is locked unless another team member has locked the file in the meantime.

   In this case, your attempt to save the file displays the *Save As* dialog. This means your file cannot be saved with the original file name. You can only check-in (or merge) your revision when the file is unlocked. You may need to coordinate your work with the person who has locked the file. To avoid this problem, you can lock the file before you start editing it.

Notes

- You can change most of the view preferences later, by using either the Preferences tab in the mapping properties dialog for a mapped view, or the StarDisk Disk Options tab in the properties dialog for a virtual disk.
- When mapping a large repository, StarDisk can require several moments to complete the task. This delay is normal when you map a virtual drive for the first time, or restore the drive later.
- After the mapping, StarDisk always attempts to reconnect to that drive when you restart your workstation. If the server fails or is down, then you must manually reconnect the drive (using the Restore StarDisk Drive command) later when the server is available.

Setting Advanced Options for Refreshing Files and Folders

The Advanced tab enables you to modify the settings for options that control how StarDisk communicates with your Server to refresh the status of files and folders.

StarDisk looks in its local cache for files and folders that you need. If they are not in the cache, StarDisk retrieves them from the Server. If your Server includes MPX functionality, StarDisk can benefit from its improved performance. (With MPX, the

Server delegates status updates to a separate server, which broadcasts them to MPX-enabled clients.)

The following procedure corresponds to step 7 in the procedure that starts "To map a project view:" on page 22.

To set the options for refreshing files and folders:

1 In the *Map View* dialog, select the Advanced tab.

2 If your Server includes MPX functionality, then you can change the settings for the following options:

- The "Available MPX profiles" drop-down list contains the MPX profiles available on that server. If you are not sure which MPX profile to select, ask your Server administrator.

  The StarTeam Runtime used by StarDisk does not support the Multicast protocol, so you should select a Unicast MPX profile.

- The "Enable StarTeamMPX to monitor changes in the mapped view" check box is automatically selected, so StarDisk can benefit from its improved performance.

- The "Keep using automatic refresh even if MPX is enabled" check box is cleared by default, but you can select it if desired.

  If the MPX functionality is not available later while you are running StarDisk, the other options on this dialog are used for refreshing the files and folders on this virtual disk.

3 Specify the settings for automatically refreshing the statuses of files, by selecting or clearing the "Disable automatic refresh of files in folders" check box, and specifying the refresh interval.

  By default, this check box is cleared so StarDisk can automatically refresh the file statuses at the specified interval.

- If several team members are working on the files in this view, you will want to specify a shorter interval to receive frequent updates.

- If you are the only person working on the files in this view, you probably have the most recent copy and the interval can be much longer.

4 Specify the settings for automatically refreshing the statuses of folders, by selecting or clearing the "Disable automatic refresh of folder hierarchy" check box, and specifying the refresh interval.

  Because this is a time-consuming operation, this check box is selected by default so StarDisk will not automatically refresh the folder hierarchy.

Important When this check box is selected, the virtual drive will not automatically display new folders that another team member has added to the mapped project view. To see those folders, you must manually refresh the folder hierarchy by right-clicking on the StarDisk Drive and choosing the StarDisk > Refresh StarDisk Drive command.

Disconnecting a Mapped Drive/View

You don't need to disconnect drives before you shut down or reboot your computer. However, you might choose to disconnect the drive because you are no longer working in the view mapped to it, or you need to map a different configuration of a currently mapped view.

Disconnecting a drive does not remove any files from the working folders on your hard drive—unless you selected a temporary working folder for the drive. You may have many files checked out from the view to working folders. If you want to delete them, do

so manually before disconnecting the drive. Deleting them from the virtual drive also deletes them from the working folders on your workstation.

To disconnect a mapped drive/view:

1 In Windows Explorer, do one of the following:

- Right-click on the StarDisk Drive, and choose the StarDisk > Disconnect StarDisk Drive command from the context menu.
- Right-click on the mapped project view or the mapped drive (within the StarDisk Neighborhood), and choose the Disconnect StarDisk Drive command from the context menu.

2 Click OK in the resulting message dialog.

StarDisk removes the mapped drive/view from your workstation, so it is no longer visible in Windows Explorer or My Computer.

Restarting Your Workstation While a Drive is Mapped

If you restart your workstation while a virtual drive is mapped to an application view, StarDisk does not automatically reconnect to the Server and restore the mapping for the virtual drive. Before you can work on the files mapped to that drive, you must right-click on the virtual drive (in the left pane of Windows Explorer) and choose the StarDisk > Restore Mapping command from the context menu.

Chapter

6

Using Virtual Drives

StarDisk enables you to use conventional Windows applications to access and manage files that are under the application's version control.
You use StarDisk to map a project view to a virtual drive. Then you can access any file on that drive from Windows Explorer or any other Windows application, even though you haven't checked the file out.

With StarDisk, you can open files directly with associated Windows applications. For example, if you have a Microsoft Word for Windows .DOC file, you can double-click the file in Windows Explorer to open it in that application.

StarDisk adds commands to the standard Windows Explorer menu so you can manage files stored on the virtual drive. For example, the StarDisk submenu provides file check-in and check-out commands. StarDisk also adds columns to Windows Explorer's right pane so that you can view selected information about the files.

Selecting Which Columns of Information to Display

By default, StarDisk adds three columns of information about files to the Details view in Windows Explorer's right pane: Status, Locked By, and Revision On Disk.

- The **Status** column indicates the file status (such as Out Of Date, Current, Modified, and so on) of your working copy of a file, relative to the tip revision stored on the server. For an explanation of each status, see "Understanding File Statuses" on page 33.
- The **Locked By** column indicates who (if anyone) has locked a file, so you can coordinate your work with that person. File locks can prevent users from overwriting each other's work when they check in a new revision of a file. The details of locking and unlocking are explained in "Locking and Unlocking Files" on page 39.

  If you use both StarDisk and a StarTeam client, be aware that this represents an exclusive lock, rather than a non-exclusive lock. (A full-featured client offers non-exclusive locking, but StarDisk offers only exclusive locking.)
- The **Revision On Disk** column indicates which revision of a file was checked out as your working file.

StarTeam maintains other information about a version-controlled file, and StarDisk enables you to display a different set of information that better suits your particular

needs. This is a two-stage process, where you first use a StarDisk command to open a dialog where you select which columns of information are available for display in Windows Explorer, and then you use an Explorer command to open a *Column Settings* dialog where you specify the actual contents and appearance of the columns in its right pane.

Note Depending on how Explorer is configured, you will probably need to specify the column settings for each folder on the StarDisk Drive.

To select which columns of information to display:

1. Make sure that Windows Explorer is showing the Details view in its right pane.
2. In the left pane of Windows Explorer, right-click on a StarDisk Drive and choose the StarDisk > Select StarTeam Columns command from the context menu.

   The *Select File Properties to Display in Explorer* dialog appears, showing the available properties.

   These properties correspond to the file fields (both common and advanced) that can be displayed in the upper pane of the full client. For detailed information about these file fields, see the *StarTeam User's Guide*.
3. Select which information you want to display as columns in the right pane of Windows Explorer:
   - To add a column, select a property in the left pane and click the Add button.
   - To remove a column, select a property in the right pane and click the Remove button.

   (Although the properties are listed in alphabetical order on this dialog, you can change their order later in Explorer's *Column Settings* dialog.)
4. When you are finished, click OK.

Modifying Explorer's Column Settings

After performing certain StarDisk operations (such as selecting a different set of information to be displayed, or adding a new folder to the mapped project view), you must modify Explorer's column settings so the correct information will be displayed.

To modify Explorer's column settings:

1. In the left pane of Windows Explorer, select the desired folder on a StarDisk drive.
2. Do one of the following:
   - From the menu bar, choose the View > Choose Columns command.
   - In the right pane of Windows Explorer, right-click on a column heading and choose the More command from the context menu.

   The *Column Settings* dialog appears.
3. Review the list of available columns and make sure the correct ones are selected.
   - If you added more columns of information, some of them (starting from the end of the alphabetically-ordered list in StarDisk's dialog) might not be selected in this dialog.
   - If you removed some columns of information, they will not appear in this dialog but some other unwanted columns (such as Company Name) might be selected.
4. Review the order in which the columns will appear, and adjust it if necessary. (The topmost entry in this list will be the leftmost column in Explorer's right pane.)
   a. Select a column that will be shown in Explorer.

b Click the Move Up or the Move Down button to adjust that column's order of appearance.

5 (Optional) Specify the width (in pixels) of the selected column by typing an integer number into the box.

6 When you are finished, click OK.

The specified information displays in the right pane of Windows Explorer.

Displayed Files and Folders

StarDisk maps a project view using both the repository (where the Server stores file revisions) and the working folders on your hard drive as sources. After mapping a view, the virtual drive that appears in your Explorer window displays the following:

- All the files and folders (in the view) that are currently in the working folders on your workstation. The status of each file is the status it has in the working folder.

  Any file in a working folder that is not part of the view has the status Not In View.

- All the files and folders (in the view) that are missing from the working folders.

  When files in the view do not have a corresponding working file, StarDisk displays their status as Missing, and automatically checks them out as needed. For example, if you open a missing file from a missing folder, StarDisk creates the folder's working folder on your workstation, then copies the tip revision of the file to that folder.

Deleting Files and Folders from Virtual Drives

You cannot physically delete folders from virtual drives, but you can delete a working folder from your workstation at its actual location.

Deleting a file from the virtual drive deletes that file from the file's working folder (where it actually resides). However, it does not remove that file from the repository. Files deleted from the virtual drive reappear when you refresh the virtual drive. However, they have the status Missing because the working folder no longer has copies of those files.

Deleting files and folders that are not in the view deletes them permanently from your workstation. They are lost because they were not under version control.

Renaming Files on Virtual Drives

If you rename a file, StarDisk will no longer recognize it as a file under version control. The file has a new name on the virtual drive and in the working folder, but StarDisk indicates the file with the old name is Missing and that the new file with the new name is Not In View.

However, if your administrator renames the file in the application, you can check out the file with the new name. In this way, the file gets a new name but still retains its history (all the revisions checked in with the old name and all the information about them). However, you may still have a copy of the file with its old name and with the status Not In View.

Renamed Folders

If a folder is renamed in the application but its working folder remains the same, you must refresh the StarDisk virtual drive to see the change. Right-click the drive (in

Explorer's left pane) and choose the StarDisk > Refresh StarDisk Drive command from the context menu. If you are using Internet Explorer, this is sufficient. If you are using Windows Explorer, you often need to also refresh Explorer (using its View > Refresh command).

If a folder's working folder is changed from the application, StarDisk is affected. The files in the old working folder are no longer recognized as application project files. You must check the files out to the new folder location.

Refreshing the Virtual Drive

Refresh the virtual drive to update the files and folders on the drive. Right-click the drive (in Explorer's left pane) and choose the StarDisk > Refresh StarDisk Drive command from the context menu. If you are using Internet Explorer, this is sufficient. If you are using Windows Explorer, you often need to also refresh Explorer (using its View > Refresh command) to update the folders.

Chapter

7

Using Folders and Files

StarDisk enables you to perform a number of version control operations on folders and files in a mapped project view. These operations on files and folders must be performed from a StarDisk virtual drive, not from the corresponding working folder.

When you open a Missing file, StarDisk automatically copies the file's tip revision to your workstation. StarDisk also provides an option (which is not selected by default) to "Automatically check out out-of-date files as they are opened", and an option to "Automatically lock files opened for editing". For more information, see "Setting View Preferences" on page 24.

This chapter explains how to:

- Check out a revision of a file
- Lock and unlock files
- Check in a new revision of a file
- Compare or merge file revisions
- Add files to the project view
- Add folders to the project view

Understanding File Statuses

A file's status is the state of the working file (in your working folder) relative to the most recently checked-in version of the same file in the repository. The status indicates what you might want to do to the file, and determines what StarDisk can and cannot do to it. For example, if a file's status is Out Of Date, you might want to check out the tip revision so your working file will be Current. If a file's status is Modified, you probably want to check in a new revision of the file so your changes will be stored on the server where they will be available to other team members.

This section describes the various statuses a file might have, and explains how each of the statuses occurs.

Current	Your working file is the same as the tip revision (the most recently checked in revision) in the repository.
Modified	You have modified the working file, but you have not checked it in. When you check it in, it becomes a revision, and its status changes to Current—unless you delete the working file as you check it in. (In that case, the status becomes Missing.)
Out of Date	Your working copy of this file is an older revision than the tip revision. This can occur when several people work on the same file. If you set the "Automatically check out out-of-date files" option when mapping the drive, files with the status Out of Date are checked out when they are opened.

How does a file get the status "Out of Date?"

- If you check out a file from the repository to your working folder, your file's status is Current.
- If another worker checks out the same file to his or her working folder, that file's status is Current.
- If the other worker changes his or her copy of the file, that file's status will be modified, while your file's status is still Current.
- If the other worker checks his or her modified file back into the repository, his or her file's status is Current, while your file's status becomes Out of Date.

Merge	Your working file should be merged with another revision. This is similar to an Out of Date status, except your working file has been changed. Your working file and the tip revision need to be merged so that the new material from each file can be combined into a revision that includes both your changes and the other user's changes. For more information about merging files, see "Comparing and Merging Files" on page 49

How does a file get the status "Merge"?

- If you check out a file from the repository to your working folder, your file's status iscurrent.
- If another worker checks out the same file to his or her working folder, his or her file's status is Current.
- If the other worker changes his or her copy of the file, his or her file's starus is Modified, while your file's status is still Current.
- If you change your copy of the file, his or her file's status is modified, while your file's status is also modified.
- If the other worker then checks his or her modified file back into the repository, his or her file's status is Current, while your file's status is merge.

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Missing	The file is missing from your working folder, even though it is in the repository. If you try to open this file, StarDisk can automatically check it out.
Not in View	The file is in your working folder, but is not under version control. That is, it is not in your view of the repository. You might want to delete it from your working folder, or add it to the project.
Unknown	This file status means you have a file in your working folder with the same name as a file in the repository. However, the file in your working folder was not checked out of the repository. You cannot check it in or out except by force.

Whenever you right-click a file to choose a command from the context menu, Windows opens the file (which forces StarDisk to check it out). This can be confusing when a file's status changes unexpectedly from Missing or Out of Date to Current. For example, the file's status of Missing or Out of Date changes to Current when you view the *Properties* dialog. This is true even when the "Automatically check out out-of-date files as they are opened" option is not selected.

Understanding the Effects of Status on File Operations

As you and other members of your team work with files that are under version control, the status of a file changes after certain operations. Different people can have different statuses for the same file, because a file's status is calculated for each person's working copy of the file relative to the tip revision stored in the server's repository. For more information, see "Understanding File Statuses" on page 33.

During a check-out, you copy a revision of a file from the repository to a working folder. Checking in a file places a new revision in the repository. In many cases, a file's status affects the check-in or check-out process.

The following table summarizes the relationship between file status and the check-in and check-out operations for StarDisk. A successful check-in or check-out operation changes the status of your working file to Current (unless you checked out a historical revision or deleted the working file as part of the operation). (continued)

Table 7.1 Effects of File Status on Check in and Check Out Operations

Status	Check In	Check Out
Current	No considerations.	No considerations.
Merge	Starts Visual Merge unless you force the check-in.	Not allowed unless you force the check-out.
	The status Merge means that someone else has checked in this file after your last check out. You don't have their changes in your working file, and someone's changes will be lost unless the files are merged.	Your changes will be lost if you check out this file.
Missing	Not applicable. If a file has the status Missing, it is not in your working folder, so there is nothing to check in.	Automatic on opening. If a file has the status Missing, it is automatically checked out when you open it in an appropriate application. You can also check the file out manually.

Table 7.1 Effects of File Status on Check in and Check Out Operations (continued)

Status	Check In	Check Out
Modified	No considerations. Unless someone else has the file locked, you can check in the file.	Not allowed unless you force the check-out. Your changes will be lost if you check out this file, because it overwrites the working file in your working folder.
Not In View	Not applicable. A file with the status Not in View cannot be checked in. You can add it to the project with the StarDisk > Add to Project command.	Not applicable. A file with the status Not in View is not in the repository, so there is nothing to check out.
Out Of Date	Not allowed unless you force the check-in. Checking in an Out Of Date file means that the tip revision no longer has the changes made to the file after your working copy became Out Of Date.	No considerations. Checking out an Out Of Date file makes your working file Current. Depending on the settings for the view preferences, StarDisk may automatically check out Out Of Date files for you as you open them in an appropriate application.
Unknown	Not allowed unless you force the check-in. If the file's status is Unknown, the consequences of this action are also unknown. Your working file becomes the tip revision in the repository. This is not recommended unless you have compared your working file to the tip revision and believe your working file should be checked in.	Not allowed unless you force the check-out. If the file's status is Unknown, the consequences of this action are also unknown. Your working file is overwritten by the tip revision in the repository. Borland recommends comparing your working file with the tip revision before performing the check-out.

Tip You may be able to merge the tip revision and your working file by using the application in which the file was created (such as Word for Windows). If the file is a text file, try a check-in operation instead and use Visual Merge.

Checking Out a Revision of a File

After a project view is mapped, its icon changes and a virtual disk (labeled as a StarDisk Drive) appears in Windows Explorer. When you first expand the StarDisk Drive to see the folders and files in the newly mapped project view, all the files have the status of Missing, which means that they are missing from your workstation.

To work with a file, you must check out a particular revision of a file from the server to your working folders. Most of the time you will check out the tip revision of a file, but occasionally you might need to check out a historical revision.

Tip If you double-click a Missing file, StarDisk automatically checks out the tip revision of the file to your workstation so it can be opened. This enables you to quickly start working with the file, without having to first explicitly check it out.

Checking Out a File Revision Using the Check Out Dialog

When you check out a file, a copy of the file is placed in the appropriate working folder on your workstation. You'll typically be working with the file's tip revision, which is the current revision most recently checked in to the repository by anyone. However, you

can also check out the revision of a file corresponding to a specific label, promotion state, or date/time.

To check out a file revision (using the *Check Out* dialog):

1. From Windows Explorer's right pane, select one or more files and folders. (If you select a folder, all the files in it can be checked out.)

   If you want to check out all the files in a folder (and its child folders), select the folder in the left pane of Windows Explorer.

2. Right-click within the selection, and choose the StarDisk > Check Out command from the context menu.

   The *Check Out* dialog appears.

3. (Optional) Select the "Force check-out" check box to check out the files from the repository and overwrite the files in your working folders, regardless of their status.

4. (Optional) Select the "Check-out out-of-date files only" check box to check out only the selected files with the status Out Of Date.

   This is an alternative to the automatic check-out option explained in "Setting View Preferences" on page 24.

5. Indicate which revision of the files you want, by selecting one of the following options:

   - Current revision, to check out the most recent revision of each selected file.
   - Label, to check out the revision of each of the selected files that has a specific view label or revision label. (If a selected file does not have the label, no revision is checked out for that file.)
   - Select the label from the Label drop-down list box.
   - Promotion, to check out the revision based on a specified promotion state.
   - Select the promotion state from the Promotion drop-down list box.
   - As of, to check out the revision that was the latest at the specified date and time.

     1. To specify the date, enter the date or click the button on the right-hand side of the date field to open the calendar.
     2. To specify the time, enter the time or use the spin boxes.

6. (Optional) If you want to check out the files to a different folder and path, select the To check box and then enter the path to (or browse for) the new folder.

7. Select a lock status:

   - Unlocked, to indicate that the files are not locked by you.
   - Exclusive, to indicate that you have locked the files (because you don't want anyone else to modify them).
   - Keep current, to indicate that each file's lock status will not change. For example, if a file is already locked by you, it stays locked by you.

8. (For folders only) Select the "Recursively check out files from child folders" check box to check out all the files that can be checked out from the folder's children.

9. Click OK.

10. To display the updated file statuses in the right pane of Windows Explorer, choose its View > Refresh command.

Note When you ask for an icon, Windows Explorer often opens additional files that it suspects has that icon. Therefore, when you check out an .ico, .exe, or .bmp file, you may get more files than expected.

Checking Out a File Revision Using the Check Out from History Dialog

Sometimes you want to return to an older revision of some file or search it for something that shouldn't have been deleted. It is easy to check out past revisions; however, finding the revision you need may be difficult. Finding the correct revision is easier if the revision comments made when it was checked in are thorough and useful. Otherwise, you might have to check out several revisions before you find the one you need.

You might also be able to find the correct revision of a file by specifying a label, promotion state, or date/time. See "Checking Out a File Revision Using the Check Out Dialog" on page 36.

You can also check out a file revision from the History list box on the StarDisk file's *Properties* dialog. See "Checking Out a File Revision from the Properties Dialog" on page 38.

To check out a historical file revision (using the *Check Out from History* dialog):

1. Right-click a file and choose the StarDisk > Check Out from History command from the context menu. The *Check Out from History* dialog appears.
2. Select the revision to be checked out.
3. (Optional) If you want to check out the file to a different folder and path, select the To check box and then enter the path to (or browse for) the new folder.

Note — If the "Automatically check out out-of-date files as they are opened" option has been selected as one of the properties for the virtual disk, you can check out an earlier revision only to a new location (using the To check box).

4. Click OK. StarDisk performs a fast check-out of the revision, in which the *Check Out* dialog does not appear.
5. To display the updated file statuses in the right pane of Windows Explorer, choose its View > Refresh command.

Checking Out a File Revision from the Properties Dialog

Normally you check out the tip revision of files using the StarDisk > Check Out command on the context menu. A historical revision of a file can be checked out using the StarDisk > Check Out from History command. You can also check out any revision of a file from its *Properties* dialog.

To check out a file revision from the *Properties* dialog:

1. Right-click a file and choose the Properties command from the context menu.

   The *Properties* dialog appears.
2. Select the StarDisk tab.

   The revisions are listed (from most recent to oldest) in the History list box.
3. Right-click the revision you want to check out, and choose the Check Out Selected Revision command from the context menu.

   The revision you selected is immediately checked out. A message lets you know when the check-out operation has been completed.
4. Click OK to close the message dialog.
5. When you have finished viewing the file's properties, click OK to close the *Properties* dialog.

6 To display the updated file statuses in the right pane of Windows Explorer, choose its View > Refresh command.

Locking and Unlocking Files

Locking a file makes other users aware that you are modifying the file. You unlock the file when you no longer need it. If you will be the only person using this file, you can keep it locked through several check-ins. Often you will lock or unlock a file as part of the check-in or check-out process, instead of using the *Set Lock Status* dialog.

Tips

- You can lock a Missing file, in which case the tip revision of the file is automatically checked out to your workstation.
- If a project view requires files to be locked before you can check in a new revision, you might want to select the option to “Automatically lock files opened for editing”. (This option is located on the StarDisk Disk Options tab of the *Properties* dialog for a StarDisk virtual disk, or on the Preferences tab of the mapping properties dialog for a mapped project view.)

To lock or unlock files:

1 From Windows Explorer’s right pane, select one or more files and folders. (If you select a folder, all the files in it can be locked or unlocked.)

If you want to lock all the files in a folder (and its child folders), select the folder in the left pane of Windows Explorer.

2 Right-click within the selection, and choose the StarDisk > Lock/Unlock command from the context menu.

The *Set Lock Status* dialog appears.

3 Select a lock status:

- Unlocked, to indicate that the files are not locked by you.
- Exclusive, to indicate that you have locked the files (because you don’t want anyone else to modify them).

4 (For folders only) Select the “Recursively lock files in child folders” check box to lock all the files in the folder’s children.

5 Click OK.

6 To display the updated lock statuses in the right pane of Windows Explorer, choose its View > Refresh command.

Note

If you do not have the necessary access rights, a message dialog appears.

Click Continue if you want to continue trying to lock or unlock the other selected files. Click Cancel if you want to cancel the entire lock or unlock operation, and then click OK in the resulting message dialog.

Checking In a New Revision of a File

After you edit your working copy of a file and save the changes on your workstation, the file’s status will be Modified. To store your changes on the server where they can be accessed by other team members, you check in the modified file.

When you check in a file, a new revision of that file is added to the repository. After it is checked in, the new revision is available for other users to check out (and perhaps add to or edit).

Depending on the options set for the project, you might have to lock a file (or select a process item) before you can check it in.

To check in new revisions of files:

1. From Windows Explorer's right pane, select the files or folders you want to check in. (If you select a folder, all the modified files in it can be checked in.)

If you want to check in all the modified files in a folder (and its child folders), select the folder in the left pane of Windows Explorer.

1. Right-click within the selection, and choose the StarDisk > Check In command from the context menu.

   The *Check In* dialog appears.

2. Do one of the following:

   - In the Comment text box, provide a generic comment or reason why you are checking in these files. This comment is stored in the repository.
   - To provide a separate comment for each file during the check-in process, select the "Prompt for a comment (check-in reason) for each file" check box.

3. (Optional) Select the "Force check-in" check box to check in each working file, regardless of its status. For example, you can check in a file whose status is Out Of Date even though a newer file exists.

4. (Optional) Select the "Delete working files" check box to delete the corresponding working files from their working folders.

   You still see these files listed on the virtual drive, but their status becomes Missing.

5. Select a lock status. The files will have this status after the check-in.

   - Unlocked, to indicate that the files are not locked by you.
   - Exclusive, to indicate that you have locked the files (because you don't want anyone else to modify them).
   - Keep current, to indicate that the lock status of each file will not change.

6. (For folders only) Select the "Recursively check in files in child folders" check box to check in all the files that can be checked in from the folder's children.

7. (Optional—unless required by the project) Select the "Link and pin process item" check box to link the files you are adding to a change request, requirement, or task.

   If the project requires the use of process items, this check box is preselected for you.

8. If you have not previously selected the active process item, you must do so now:

   a. Click Select.

      The *Select Process Item* dialog appears.

   b. Specify the type of process item to be linked to the files, by selecting one of the following tabs:

   - Change Request
   - Task
   - Requirement

   c. Specify the scope of the items that are shown, by selecting one of the following option buttons:

   - List linked items
   - List all permitted items
   - List all permitted items assigned to me

   d. Select the process item from the list.

   e. Click OK to return to the *Check In* dialog.

9 (Optional) Select the “Mark selected process item as fixed/finished/complete” check box to ensure that the revision of the process item to which the files are linked has its status changed.

10 Click OK.

A progress dialog is displayed while a new revision of each file is being checked in to your server.

11 If you are checking in multiple files and you selected the “Prompt for a comment (check-in reason) for each file” option, another dialog appears for each file so you can enter its check-in comment.

In each of these dialogs, enter the revision’s check-in comment and click OK.

12 To display the updated file statuses in the right pane of Windows Explorer, choose its View > Refresh command.

Comparing File Revisions

You can use the Visual Diff utility provided with StarDisk to compare the copy of the file in your working folder against the most recently checked-in revision in the repository. This is especially useful for text files, but it can also be helpful with binary files—especially if your main concern is whether the two revisions of the file are identical. For more information about Visual Diff, see “Comparing and Merging Files” on page 49.

To compare the working file with the current revision:

- Right-click a file and choose the StarDisk > Compare Contents command from the context menu.

StarDisk starts Visual Diff, which either lets you know that the two revisions are identical, or displays the two text files so that you can review their differences.

Merging File Revisions

Although StarDisk provides file locking and communication tools to prevent team members from working on files simultaneously, it is not always possible to prevent these working collisions. One team member may begin to make changes before locking a file, only to later realize that another team member has locked it and made changes as well. Or a team member working off-site might change an out-of-date file without realizing that there is a newer revision stored in the repository.

StarDisk provides the Visual Merge utility so you can combine the changes in these files (if they are text files), so that no work is lost. It merges an outdated working file with the most recently checked-in revision, by comparing the two “new” revisions with the revision on which the outdated file was based (that is, the revision that was checked out to create the working file).

For binary files, Visual Merge makes the same three-way comparison, but you cannot edit the file from within StarDisk. You can only choose which of the two revisions of the file to use as the “merged” file. StarDisk starts Visual Merge as part of the check-in or check-out process if the file’s status is Merge. The various ways to merge files are explained in “Comparing and Merging Files” on page 49.

Adding Folders or Files to the Project View

As you work with the files and folders in a mapped project view, you might need to create a new file or even a new folder. After creating the new file or folder on your virtual drive, you must put it under version control by adding it to the project view. To

successfully complete this operation, you must have the access rights to add folders in that project view and to add files in the selected folders.

A new file that is not under version control has the status of Not In View when it is shown in the right pane of Windows Explorer:

The StarDisk tab on that file's *Properties* dialog shows only the working file. (For a file that is under version control, that tab also shows many other properties.)

Note Before you add a file to the project view, make sure no application has the file open. Otherwise, a sharing violation occurs.

A new folder that is not under version control has the status of Not In View when it is shown in the right pane of Windows Explorer:

The StarDisk tab on that folder's *Properties* dialog shows only the working folder. (For a folder that is under version control, that tab also shows the folder's description and who created it.)

When you put a folder under version control, by default all of its child folders and files are also put under version control.

To add folders or files to the project view:

1. On a StarDisk Drive, select one or more folders or files that are not in the project view, as indicated by the status of Not In View. (You can select one folder from Windows Explorer's left pane, or multiple folders or files from the right pane.)
2. Right-click within the selection, and choose the StarDisk > Add to Project command from the context menu. The *Add To Project* dialog appears.
3. (Optional) Do one of the following:
   - In the Description text box, enter a description to be used for all the folders and files.
   - To provide a different description for each folder and file, select the "Prompt for a unique description for each file or folder" check box.
4. By default, the "Add files compliant with folder's exclude list" check box is selected, so the exclude list for an existing folder (which is specified using a full-featured client) will be used to determine which types of files can be added to that folder. If you want to ignore the exclude list and add every Not In View file, clear this check box.
5. (Optional) Select the "Delete working files" check box to delete the working files from the working folders. (The files will still be visible on the virtual drive but their statuses will be Missing.)
6. By default, when you put a folder under version control, all of its child folders and files are also put under version control. If you are adding a folder to the project view, you can exclude some of the folder's files or child folders using the following options:
   - If you don't want to add the files in each folder to the newly created folder, clear the "Add files in folders being added" check box.
   - If you don't want to add the children, grandchildren, and so on for each of the folders, clear the "Recursively add child folders" check box.

     When the "Recursively add child folders" check box is cleared, the "Add files in child folders at the same time" check box is disabled.
   - If you don't want to add the files in any of the child folders, clear the "Add files in child folders at the same time" check box.
7. When adding files, select a lock status:
   - Unlocked, to indicate that the files are not locked by you.
   - Exclusive, to indicate that you have locked the files (because you don't want anyone else to modify them).

8. (Optional—unless required by the project) Select the “Link and pin process item” check box to link the files you are adding to a change request, requirement, or task.

   If the project requires the use of process items, this check box is preselected for you.

9. If you have not previously selected the active process item, you must do so now:

   a. Click Select. The *Select Process Item* dialog appears.

   b. (Optional) Select one of the option buttons that control which items are listed, and click Refresh.

   c. Specify the type of process item to be linked to the files, by selecting one of the following tabs:

      - Change Request
      - Task
      - Requirement

   d. Select the process item from the list.

   e. Click OK to return to the *Add Files* dialog.

10. (Optional) Select the “Mark selected process item as fixed/finished/complete” check box to ensure that the revision of the process item to which the files are linked has its status changed.

11. Click OK. A progress dialog displays while the folders and files are being added to the project view.

12. If you selected the “Prompt for a unique description for each file or folder” check box, StarDisk displays the *Description* dialog once for each folder and file so you can enter a description for it.

    In each of these dialogs, enter the file’s description and click OK.

13. To update the information displayed in Windows Explorer or Internet Explorer after adding a folder to the project view, right-click the virtual drive and choose the StarDisk > Refresh StarDisk Drive command from the context menu.

14. To display the updated file statuses in the right pane of Windows Explorer, choose its View > Refresh command.

The default columns of information are not automatically displayed in the right pane of Windows Explorer for a folder that was just added to the project view. To display those columns in Explorer’s right pane, perform the procedure in “Modifying Explorer’s Column Settings” on page 30.

Chapter 8

Using Properties

StarDisk adds several new types of items to Windows Explorer, such as the servers, projects, and views in the StarDisk Neighborhood. Each type of item has certain properties which are shown in Explorer's right pane and in a *Properties* dialog.

The files and folders in a StarDisk virtual disk have all the standard properties, plus some additional StarDisk properties.

Displaying Properties

Displaying a *Properties* dialog enables you to learn more about the selected item.

To display the properties of an item:

- Right-click the item (StarDisk Neighborhood, a server, a project, a view, a virtual disk, a folder, or a file) in Explorer, and choose the Properties command from the context menu.

The appropriate *Properties* dialog appears.

Important A project view that has been mapped to a StarDisk virtual disk has an additional set of properties which are displayed in a separate dialog (instead of on additional tabs in a standard *Properties* dialog). To display these additional properties for a mapped project view, right-click on that view in Explorer, and choose the Mapping Properties command from the context menu.

The following table summarizes the information that each *Properties* dialog presents.

Table 8.1 Properties Dialog Descriptions

Properties Dialog for:	Description
StarDisk Neighborhood	Displays information about StarDisk, such as build number, copyright statement, and who the product is licensed to. (This information is read-only.) This dialog also enables you to register StarDisk (or extend your evaluation period). For details, see "Registering StarDisk" on page 64.
Server	Displays the server's description, network address, and endpoint. (This information is read-only when you are logged on to that server.)

Table 8.1 Properties Dialog Descriptions (continued)

Properties Dialog for:	Description
Project	Displays the project's name, creator, date and time of creation, and description. (This information is read-only.)
View	Displays the project view's name, creator, date and time of creation, default working folder, and description. (This information is read-only.)
Mapped View	A mapped view has the standard properties for a project view, and some additional properties (which are displayed by choosing the Mapping Properties command from the context menu). The standard *Properties* dialog displays the project view's name, creator, date and time of creation, default working folder, and description. (This information is read-only.) The *Mapping Properties* dialog has the same tabs as the *Map View* dialog explained in "Mapping Views" on page 21. However, this properties dialog does not enable you to change the working folder.
Virtual Disk	A StarTeam folder (on a StarDisk virtual disk) has the standard properties for a folder, and some additional properties which are displayed on the StarDisk tab. The StarDisk tab displays the folder's working folder, creator, and description. (This information is read-only.)
Folder	A StarTeam folder (on a StarDisk virtual disk) has the standard properties for a folder, and some additional properties which are displayed on the StarDisk tab. The StarDisk tab displays the folder's working folder, creator, and description. (This information is read-only.)
File	A file in a folder on a StarDisk virtual disk has the standard properties for a file, and some additional properties which are displayed on the StarDisk tab. (The information on this tab is read-only.) For a file that is under version control, the StarDisk tab displays the file's: ■ Status ■ Working file ■ Locker ■ Creator ■ Revision number (of your working file) ■ Description ■ Revision history. You can easily check out any revision of a file by right-clicking on its entry in the revision history list and choosing the Check Out Selected Revision command. For a file that is not under version control, the StarDisk tab displays only the file's working file.

Reviewing File Properties

A file's *Properties* dialog shows various information about that file.
For a file that is under version control, certain additional information is shown on the StarDisk tab. This information includes the file's status, locker, and revision number, which is usually also displayed in Windows Explorer.

By default, StarDisk adds three columns of information about files to the Details view in Explorer's right pane: Status, Locked By, and Revision On Disk. You can specify a different set of information that better suits your particular needs. For details, see "Selecting Which Columns of Information to Display" on page 29.

To review the properties of a file on a StarDisk virtual disk:

1. Right-click a file and choose the Properties command from the context menu. The *Properties* dialog appears.
2. Select the StarDisk tab.

   This tab displays certain information about the selected file.

   - For a file that is in the view, various information is displayed (including the file status, locker, and revision number).
   - For a file that is not in the view, the only property listed is its path.
3. Click OK.

Chapter

9

Comparing and Merging Files

Visual Diff and Visual Merge are utilities that help you locate and manage changes between files and file revisions. Both utilities can be run from the Windows Start menu, the command line, and within StarDisk.

Visual Diff is a two-way text comparison utility that compares text files, two different revisions of text files, binary files, and folder contents. It compares the two side-by-side. Visual Diff starts when you compare file revisions. (See “Comparing File Revisions” on page 41 for more information.)

Visual Merge is a three-way merge utility that can merge text files or binary files. Visual Merge automatically starts when you check in or check out a file that has the status of Merge.

As an example of how Visual Merge works, suppose two users check out the same text file from the server. They both then modify that file on their workstations. Three similar files now exist:

- The revision originally checked out to both workstations.
- The file as modified by user number 1.
- The file as modified by user number 2.

When user number 1 checks in the new revision, the status of user number 2’s file becomes Merge, alerting user number 2 to the problem. When user number 2 checks in his or her file, Visual Merge compares user number 1’s work to the original file in one pane, user number 2’s work to the original file in the second pane, and suggests a merged file in the third pane. By suggesting this merged file, no work needs to be lost.

Comparing the Visual Merge and Visual Diff Utilities

The following example illustrates the differences between the Visual Merge and the Visual Diff utilities.

Revision 1 of an autoexec.bat file contained the following lines:

```
set temp=c:\windows\temp
path=c:\;c:\windows\command;c:\windows;
c:\dos\doskey
c:\mouse\mouse
C:\TOOLKIT\GUARD
set pvxfid0=T111
```

Two users check it out and modify it in different ways. Revision 2 is the autoexec.bat file created by the first user to check the file back in. It now has one additional line about qbackup:

```
set temp=c:\windows\temp
path=c:\;c:\windows\command;c:\windows;c:\dos
c:\dos\doskey
c:\mouse\mouse
C:\TOOLKIT\GUARD
set pvxfid0=T111
set qbackup=c:\qbackup\data
```

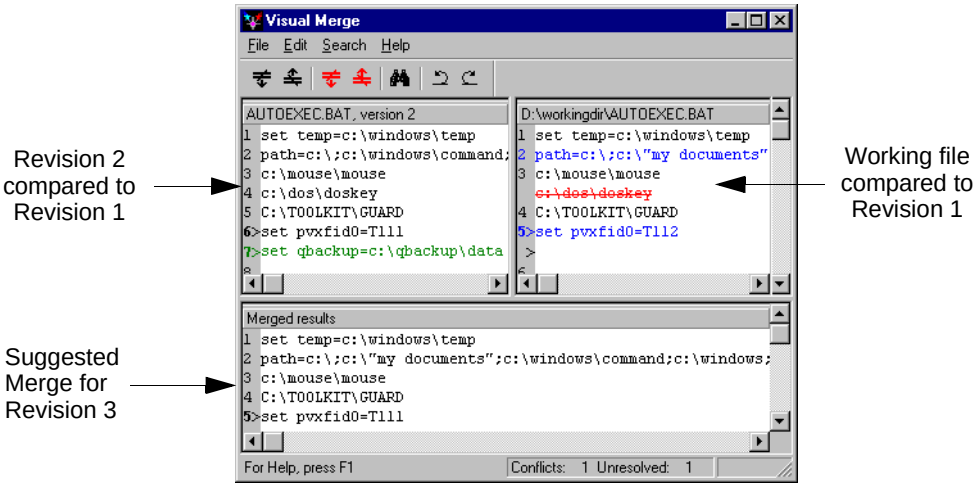
As the second user attempts to check in the file, the status of the file in his or her working folder has changed from Current to Merge. StarDisk is indicating that the file has changed after the second user checked out a copy of it.

This copy of the autoexec.bat file, the second user's working file, contains the following:

```
set temp=c:\windows\temp
path=c:\;c:\"my documents";
   c:\windows\command;c:\windows;c:\dos
c:\mouse\mouse
C:\TOOLKIT\GUARD
set pvxfid0=T112
```

The `doskey` line has been deleted, and the `path` and the `set pvxfid0` lines have been changed.

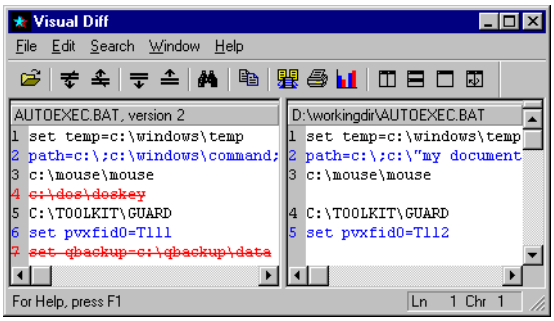
After the second user attempts to check in the file and StarDisk performs a merge, Visual Merge displays three variations of the file in separate panes:



- The upper left pane shows Revision 2 (the first user's checked-in work) compared to Revision 1. Line 7 is green to indicate that it has been added.

- The upper right pane shows the second user's working file (which has not been checked in yet) compared to Revision 1. The `doskey` line is red and struck through because it was deleted. The `path` and the `set pvxfid0` lines are blue because they have changed.
- The bottom pane, Merged results, shows an attempt to resolve these changes. Because it could not resolve line 5 of the lower pane (the line to `set pvxfid0` to either `T111` or `T112`), you must resolve it.

If you use Visual Diff to compare Revision 2 and the remaining working copy, it determines how they differ from each other. Because Revision 2 has neither a `doskey` or a `qbackup` line, Visual Diff assumes these lines were both deleted from the second working copy. Visual Diff identifies that the `path` and the `set pvxfid0` lines have been changed. However, Visual Diff doesn't identify any lines as added because all the lines in the remaining working copy were in Revision 2.



Using Visual Merge

You can access Visual Merge:

- As a stand-alone utility with a graphical user interface.
- As a stand-alone utility at the command line.
- When you are checking a file in or out that has the Merge status.

You can use Visual Merge with either text or binary files. However, its use with binary files is limited.

If you force the check-in of a file with a Merge status, the changes made in all the revisions of this file after you checked it out will be overwritten.

Using the Stand-alone Utility

To access Visual Merge as a stand-alone utility with a graphical user interface:

1 Select Start > Programs > StarTeam > StarDisk > Visual Merge.

The *Visual Merge Info* dialog appears.

Visual Merge is a three-way comparison utility which merges all lines that have no conflicts. Conflicts are defined as lines that have been changed in both files (or file revisions) so Visual Merge cannot determine automatically what changes to retain in the merged file.

2 You must provide the paths to all three files being compared:

a In the "Common ancestor file" text box, enter or browse for the common ancestor of the other two files, the one to which each of them will be compared.

b In the "First file" text box, enter or browse for one of the two files.

c In the "Second file" text box, enter or browse for the other of the two files.

3 In the “Result file” text box, enter or browse for the file that will store the merged file that results from the three-way comparison and your editing.

4 Click OK to start the merging process.

To access Visual Merge as a stand-alone utility from the command line:

- At the command line, use the following syntax:

vismerge	[**-am** |**-amt** |**-at**] [**-iw**] *ancestor_file_path first_file_path second_file_path* [*result_file_path*] [*ancestor_caption*] [*first_file_caption*] [*second_file_caption*] If you do not use the -am, -amt, or -at option, the Visual Merge window opens and you must perform all merging. Nothing is automatic.
-am	Causes Visual Merge to automatically merge all lines without conflicts; then the Visual Merge window opens so you can check the result file.
-amt	Causes Visual Merge to automatically merge all lines without conflicts and then terminates if there are no conflicts. The Visual Merge window opens only if there are conflicts in the result file.
-at	Causes Visual Merge to automatically merge only non-conflicting changes. The Visual Merge window never opens. If there are no conflicts, the merged result is saved to the result file. Otherwise, the command terminates.
-iw	(Optional) Causes Visual Merge to ignore whitespace. For example, if one file has two tabs where the other file has eight spaces, the tabs and spaces are considered equivalent.
ancestor_ file_path	The path to the common file upon which both of the files to be merged is based.
first_ file_path	The first of two files to be used in the merge.
second_ file_path	The second of two files to be used in the merge.
result_ file_path	(Optional) The path to the file that will store the merged results. When this option is not used, the merged text file (if one is created) becomes standard output. That means you can see the merged text in the DOS window or redirect that text to another file, for example: `vismerge -am common.txt file1.txt file2.txt > result.txt`
ancestor_ caption	(Optional) Title for the bottom pane in Visual Merge (preceded with “Derived from”). It is recommended that you use the name of the ancestor file as the caption.
first_file_ caption	(Optional) Title for the upper left pane in Visual Merge. It is recommended that you use the name of the file specified by the first_file_path option.
second_file_ caption	(Optional) Title for the upper right pane in Visual Merge. It is recommended that you use the name of the file specified by the second_file_path option.

Using Visual Merge When Checking In or Checking Out a File

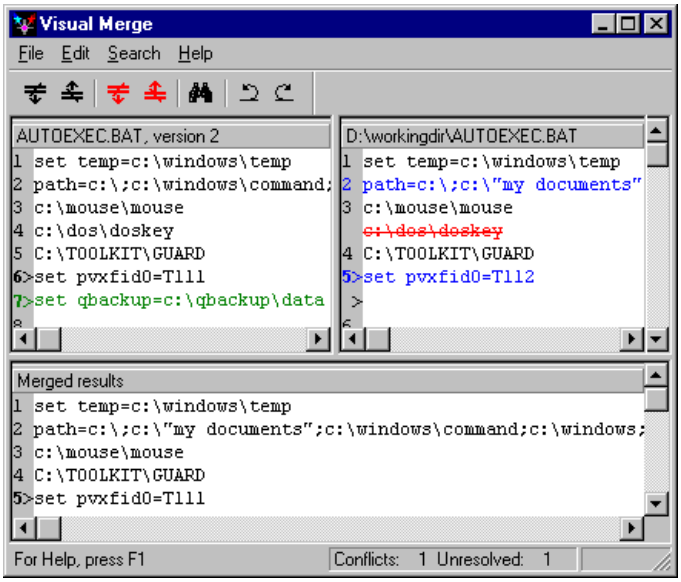
Whenever you check in or check out a text file that has the Merge status, StarDisk asks if you want to merge that file. If you click Yes, StarDisk starts Visual Merge. Click No or Cancel to stop the check-in or check-out operation.

After you edit the file, perhaps with the help of the other user whose changes are in danger of being lost, you continue the check-in or check-out operation.

Using the Visual Merge Main Window for Text Files

The Visual Merge main window consists of a menu bar, a tool bar, and three panes. The panes display the two files to be merged and a suggested merged file. The two

files to be merged appear in the upper left and upper right panes. Each pane shows how its file differs from the revision it is based on.



The differences are shown in color. The default colors are as follows:

- Black. Matching blocks of text are displayed in black.
- Red. Deleted blocks of text appear in red and struck through.
- Green. Inserted blocks of text appear in green.
- Blue. Changed blocks of text appear in blue. Text that is similar but not identical is considered to be changed.

Note If you change the colors in Visual Merge, Visual Merge checks the background color for the system to ensure that there are no color conflicts. If it is the same as one of your colors, Visual Merge uses the system text color instead.

The suggested merged file appears in the lower pane and uses no identifying colors. This is the only pane you can edit. From the upper two panes, you can only copy text.

If you right-click on a changed, new, or deleted block of text in one of the upper panes, Visual Merge displays the following context menu:

Choosing one of these commands alters the text in the lower pane. For example, suppose you have a block of changed text (blue, by default). This block appears in blue in both of the upper panes, but they are not identical blocks. One of the two blocks also appears in the lower pane. (Visual Merge deduces which change is the desired one.)

- If you right-click one of the changed blocks and choose the Apply Both Changes command from the context menu, your block of text and the corresponding text in the other upper pane are both displayed in the lower pane. One of the changes was already there, but now you have both.
- If you right-clicked the changed block and chose the Apply Change command from the context menu, your block of text would have been added to the lower pane, replacing the text that was already there. Depending on which pane you clicked, your block of text may be replacing itself or replacing the corresponding text from the other upper pane.
- Had you chosen the Remove Change command, the selected block of text would have disappeared from the lower pane.

The behavior is slightly different for added and deleted blocks of text, but Visual Merge still deduces the most logical choice. For example, if you right-click a deleted block of

text (red, by default) and choose the Remove Change command, the deleted block is inserted into the lower pane. You are removing the deletion.

Searching Text Files

Visual Merge's Find command locates the next instance of the search string in the pane where you have placed the cursor. Visual Merge also keeps all three panes synchronized so that the same string (or its approximate former location) appears in all three panes.

To find text:

1. Do one of the following:
   - Choose the Search > Find command.
   - Click the Find icon on the toolbar.

   The *Find* dialog appears.
2. Enter the string to be located in the Find What text box. Visual Merge remembers the search string until you enter another one or until you close the application.If you want to locate the text exactly as you entered it with regard to case, select the Match Case check box.
3. If necessary, specify a direction for the search.
4. Click Find Next.
5. To locate the next instance of the text, choose the Search > Find Next command. To search in another pane, change panes.

Note You can search for the next or previous set of differences using either the Search menu from the Visual Merge menu bar or the toolbar buttons. Visual Merge finds the lines and positions them at the top of each pane.

To find the next or previous difference:

- Do one of the following:
  - Choose the Search > Next Difference command.
  - Click Next Difference (black icon) on the toolbar.
  - Choose the Search > Previous Difference command.
  - Click Previous Difference (black icon) on the toolbar.

In addition, you can search for the next or previous set of conflicts, which are lines that have changed and need your intervention to prevent data from being lost.

To find the next or previous conflict:

- Do one of the following:
  - Choose the Search > Next Conflict command.
  - Click Next Conflict (red icon) on the toolbar.
  - Choose the Search > Previous Conflict command.
  - Click Previous Conflict (red icon) on the toolbar.

Customizing Visual Merge

You can customize Visual Merge to control the appearance of its toolbars, line numbers, colors, and so on.

To customize Visual Merge:

1. Choose the Search > Options command. The *Options* dialog appears.
2. Select the Display tab or the Color tab at the top of the dialog.
   - Select the Display tab to change the appearance of the main window and text in the panes. You can change the tab settings and the font, control the toolbar and status bar, and turn line numbers on or off.
   - Select the Color tab to change the default colors for deleted, changed, inserted, and matching text.
3. When you are finished, click OK.

Exiting Visual Merge

After you edit the file, perhaps with the help of another user whose changes are in danger of being lost, you must decide whether to save the merged file. If you are checking in the file, you must also decide whether to check in the merged file or only replace the working file.

To exit Visual Merge:

1. Choose the File > Exit command.

   Visual Merge asks if you want to save the file. In the same message dialog, Visual Merge also notifies you if the file has unresolved conflicts. For example:
2. Do one of the following:
   - Click Yes to exit Visual Merge and start the process of saving the merged file as your working file.
   - Click No to exit Visual Merge with the working file you had prior to starting Visual Merge. The status of the working file remains Merge.
   - Click Cancel to return to Visual Merge and continue editing.
3. After you exit Visual Merge, if the merged file will change your working file, you are asked whether to overwrite the working file.

   Do one of the following:
   - Click Yes, to have the merged file overwrite the working file. The status of the working file becomes Modified.
   - Click No, to stop the process of saving the merged file as your working file. The status of the working file remains Merge.
4. If you were checking in the file and clicked Yes (in the previous step) to overwrite your working file, you are asked whether to complete the check-in operation.

   Do one of the following:
   - Click Yes to check in the merged file.

     The status of the working file becomes Current.
   - Click No or Cancel to stop the check-in operation.

     The status of the working file remains Modified. (If you clicked Cancel, you might need to perform an Update Status operation to see that the status really is Modified.)

Using Visual Merge for Binary Files

The merge operation can be performed on binary files as well as text files. The utility performs the three-way comparison of your working file, the tip revision, and their

common ancestor revision. However, when using Visual Merge for binary files, note that:

- You do not use the Visual Merge main window.
- You must decide whether to continue with your working file or the tip revision.

Note It may be more convenient to merge two files' contents using the application in which they were created. For example, Microsoft Word and FrameMaker both offer comparison utilities.

To merge binary files:

1. Select a file with the Merge status.
2. Start a check-in or check-out operation. If the files are binary files, the *Merged results* dialog appears.

   The Status field indicates whether the source file, target file, or both have changed (in comparison to their common ancestor).
3. Decide which of the two files' contents to use as the merged file by selecting Use Source Contents or Use Target Contents from the Merge Results drop-down list box.

   If both files have changed, you might prefer to compare the two files in the application in which they were created and merge the two together as one file there.
4. Click OK to create the merged file, or click Cancel to avoid creating a merged file at this time.

Note If you are checking the file in, you can check in the merged file or replace the current working file. If you are checking the file out, the merged file replaces your current working file.

Using Visual Diff

Visual Diff is a two-way comparison utility that compares text files, binary files, and folder contents. You can access Visual Diff:

- As a stand-alone utility with a graphical user interface
- As a stand-alone utility at the command line
- By requesting a comparison of two revisions (or a revision and a working file) in StarDisk

To access Visual Diff as a stand-alone utility with a graphical user interface:

1. Select Start > Programs > StarTeam > StarDisk > Visual Diff.

   The *Visual Diff* window opens.
2. Do one of the following:
   - Choose the File > Open Files command.
   - Choose the File > Open Folders command.

   The *Open* dialog appears.
3. Select the first file or folder to be compared and then click Open.

   Another *Open* dialog appears.
4. Select the second file or folder to be compared and then click Open.

Note Visual Diff compares text files or folder contents and displays them in the Visual Diff main window. For binary files, Visual Diff tells you whether the two files are identical or not.

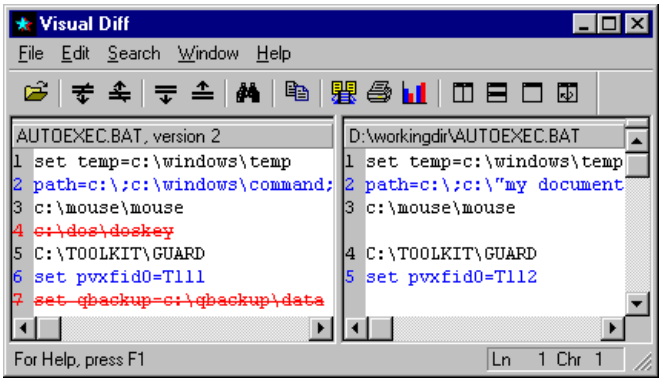
To access Visual Diff as a stand-alone utility from the command line, enterthe following at the command line:

visdiff *first_file_path second_file_path*

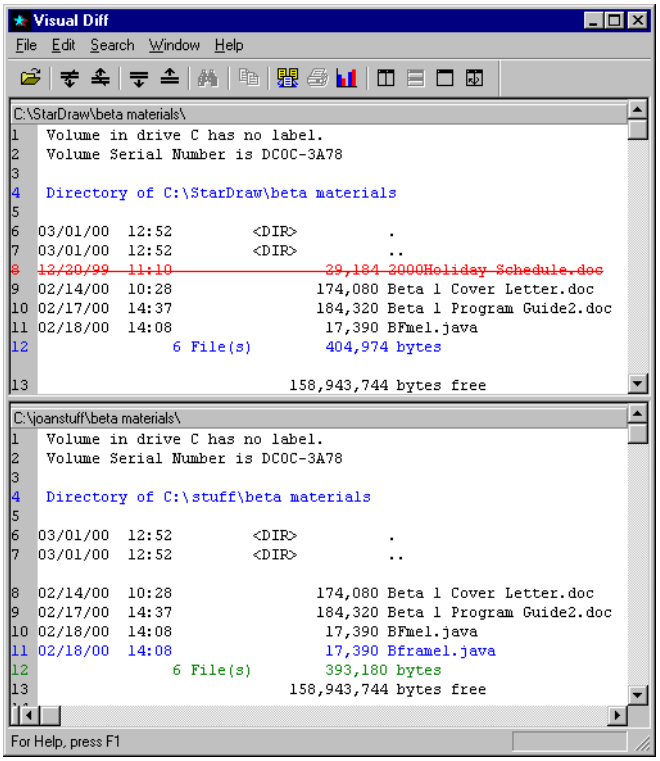
Using the Visual Diff Main Window

The Visual Diff main window consists of a menu bar, a tool bar, and two panes. You can display the compared files in the panes, either side-by-side or one on top of the other, or in a merged view in a single-pane window.

The following figure shows the side-by-side comparison of two text file versions. For details about the comparison, see “Comparing File Revisions” on page 41.



The next figure shows the up-and-down comparison of the contents of two folders. It treats the folder contents as text, showing what lines are the same, different, and so on.



Manipulating the Window Splitter Bars with the Mouse

In addition to using the Window menu options and the toolbar buttons to change the display options for the files, you can also manipulate the splitter bar with the mouse.

When in use, the splitter bar divides the Visual Diff main window. When not in use, the horizontal splitter bar is located above the vertical scroll bar and the vertical splitter bar is located to the left of the horizontal scroll bar.

Mouse operations include:

- Drag the splitter bar that separates the two panes to reproportion those panes.
- Drag the splitter bar that separates two panes to a window edge to remove the split and show the files together in a single pane.
- Drag the vertical splitter bar onto a window that is not split or is split horizontally to split the window vertically.
- Drag the horizontal splitter bar onto a window that is not split or is split vertically to split the window horizontally.
- Double-click a splitter bar that is not in use to activate it.
- Double-click a splitter bar that is in use to deactivate (remove) it.

Comparing Files and Viewing Differences

Whether you launch Visual Diff from within StarDisk or open it as a stand-alone application, Visual Diff automatically compares the two files or revisions as soon as you identify them. The first file that you select appears on the left and the second file appears on the right.

If you access Visual Diff from within StarDisk to compare two revisions of the same file, the older file is on the left and the newer file is on the right.

The file in the left pane (initially, the first file you selected) is compared to the file in the right pane (initially, the second file you selected). Text in the first file but not in the second is marked as deleted. Text in the second file, but not in the first file is marked as added.

If you selected the files in an inappropriate order, you can change the comparison order. This changes which pane displays which file. Text formerly marked as deleted will now be marked as added, and so on.

To change the comparison order, either choose the Window > Switch Comparison Order command, or click the Switch Comparison Order icon on the toolbar.

If there are no differences between the files, Visual Diff displays a message stating that the files are the same and does not display them.

After Visual Diff compares and displays the files, the differences are shown in color. The default colors are as follows:

- Black. Matching blocks of text are displayed in black.
- Red. Deleted blocks of text appear in red and struck through. Deleted text appears in the left pane only.
- Green. Inserted blocks of text appear in green. Inserted text appears in the right pane only.
- Blue. Changed blocks of text appear in blue. Similar, but not identical, text is considered changed.

Note If you change the colors in Visual Diff, Visual Diff checks the background color for the system to ensure that there are no color conflicts. If it is the same as one of your colors, Visual Diff uses the system text color instead.

When the compared files are shown in a single pane, any matching, deleted, or inserted lines are shown only once in their appropriate color. Changed lines appear twice (in blue).

In the following example, the first line is from the file selected first or the older revision and is struck through. The second line is from the file selected second or the newer revision.

~~set pvxfid0=T111~~ (older revision)
set pvxfid0=T112 (newer revision)

Searching Text Files

Visual Diff's Find command locates text strings in the active pane. Visual Diff keeps both panes synchronized so that the same string (or its approximate former location) appears in both panes.

You can also search for the next set of matching or non-matching lines or the previous set of matching or non-matching lines, using either the Search menu from the Visual Diff menu bar or the toolbar buttons. Visual Diff locates the lines and positions them at the top of each pane.

To find text:

1. Do one of the following:
   - Choose the Search > Find command.
   - Click the Find icon on the toolbar.

   The *Find* dialog appears.
2. Enter the string to be located in the *Find What* text box. Visual Diff remembers the search string until you enter another one or until you close the application.
3. If you want to locate the text exactly as you entered it with regard to case, select the Match Case check box.
4. If necessary, specify a direction for the search.
5. Click Find Next.
6. To locate the next instance of the text, use the Search > Find Next command. To search in another pane, change panes.

To find the next or previous difference, do one of the following:

- Choose the Search > Next Difference command.
- Click the Next Difference icon on the toolbar.
- Choose the Search > Previous Difference command.
- Click the Previous Difference icon on the toolbar.

To find the next or previous match, do one of the following:

- Choose the Search > Next Match command.
- Click the Next Match icon on the toolbar.
- Choose the Search > Previous Match command.
- Click the Previous Match icon on the toolbar.

Merging Compared Files

When you merge two files or revisions to create a new file, the system uses a series of characters to delineate text rather than using colors. After the files are merged, you must delete extraneous text manually.

Key to Reading Merged File:

#######	Separates changed lines from the rest of the text. Both revisions of the changed lines are shown, separated by ~~~~~~~.
-------	Separates deleted lines from the rest of the text.
+++++++	Separates inserted lines from the rest of the text.

The following is an example of a merged text file.

```
@ECHO OFF
C:\WINDOWS\NET START
######################### 1 Line(s) Changed ##########
C:\DOS\SMARTDRV.EXE /X
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
C:\DOS\SMARTDRV.EXE 1024 /X

##################################################
PROMPT $p$g
PATH c:\windows;c:\dos;c:\mach32
---------- 1 Line(s) Deleted ---------------------
SET DIRCMD=/oen
--------------------------------------------------
REM Set location for temp files.
######################### 1 Line(s) Changed ##########
SET TEMP=C:\DOS
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
SET TEMP=C:\TEMP
##################################################
++++++++++++++++++++++ 1 Line(s) Inserted +++++++++
SET TMP=C:\TEMP
++++++++++++++++++++++++++++++++++++++++++++++++++
```

To merge compared files:

1. Open and compare the files.
2. Do one of the following:
   - Choose the File > Merge Files command.
   - Click the Merge icon on the toolbar.

   The *Save Merged File As* dialog appears.
3. Select a folder in which to store the file, then name the file and then click Save.

Visual Diff creates the new file and, if the editing option is set, opens it in Windows Notepad or the text editor of your choice.

Customizing Visual Diff

You can customize Visual Diff to control the appearance of its toolbars, line numbers, colors, and so on.

To customize Visual Diff:

1. Choose the Search > Options command. The *Options* dialog appears.
2. Select one of the tabs at the top of the dialog.
   - Select the Display tab to change the main window's appearance and the display of text in the panes. You can:
     - Change the tab settings

- Change the font
- Display only the differences
- Turn line numbers on or off
- Show or hide the toolbar or status bar

- Select the Color tab to change the default colors for matching, replaced, inserted, and deleted text.
- Select the Merge tab to determine when to view a merged file and with what editor.
- Select the Compare tab to ignore case, whitespace, and/or end-of-line differences during a search.

  For Windows clients, the end-of-line marker (EOL) is a carriage return/line feed combination; for UNIX platforms, it is a line feed. Ignoring the EOL enables you to compare files from different platforms without having every line perceived as different.

3 When you are finished, click OK.

Appendix

A

Installing StarDisk

StarDisk enables you to use conventional Windows applications (such as Windows Explorer) to access and manage files that are under version control.

StarDisk System Requirements

StarDisk has the following minimum system requirements.

Operating System	Hardware	Other Software
Microsoft Windows 2000 with Service Pack 1 or higher; or Microsoft Windows XP (Home or Professional edition)	■ Intel Pentium Processor ■ 64 MB of RAM ■ 20 MB disk space ■ Access to a CD-ROM drive [2] ■ SVGA or higher resolution monitor ■ A mouse or other compatible pointing device	■ TCP/IP (Sockets)[1] ■ Adobe Acrobat Reader 4.0 or higher

1. The Server configurations use the TCP/IP protocol. StarDisk maintains its own list of servers, and you must configure it to access those servers.
2. Required for installation purposes. Optional if you will be installing from a server over a network.

Installing StarDisk

You must have Windows administrative privileges to install StarDisk. This is because StarDisk includes a driver and makes changes to the Windows registry that require administrative privileges.

If you have already installed a previous version of StarDisk on this computer, you must completely uninstall it before installing this version.

To uninstall a previous version of StarDisk:

1. Choose Start > Programs > StarTeam > StarDisk > Uninstall.
2. In the resulting *Confirm File Deletion* dialog, click Yes.
3. In the resulting *Remove Programs From Your Computer* dialog, click OK (after the uninstall has completed).
4. Click OK in the resulting dialog that recommends restarting your computer to remove any files that were in use.
5. Restart your computer.

To install StarDisk:

1. Close all other Windows applications.
2. If you have an earlier version of StarDisk, you must completely uninstall it before you install the new version of StarDisk.
3. Insert the compact disc into your CD-ROM drive.

   The *Borland(R) StarTeam(R) CD Launcher* window should appear automatically.
4. If the window doesn't appear, you can display it by:
   a. Choosing Start > Run.
   b. Typing `x:\setup.exe` (where x: is the drive letter of your CD-ROM drive), then press Enter.
5. Click the Install Products button.

   The window's content changes to list all the products on the CD.
6. Click the entry for Borland(R) StarDisk(TM).
7. Follow the installation instructions on the screen.
8. Restart your computer.

Registering StarDisk

Before using StarDisk, you must "register" it by entering a valid client activation key.

To register StarDisk:

1. Do one of the following:
   - Open Windows Explorer and select StarDisk Neighborhood.
   - From the desktop, double-click the StarDisk Neighborhood icon.

     The StarDisk Neighborhood window appears.
2. Double-click the Register StarDisk icon.

   The *Activation Keys* dialog appears.
3. Do one of the following:
   - To register an evaluation copy, click Close.

     You can extend the evaluation period by contacting www.borland.com/company/contact/where_to_buy.html for an evaluation extension key.
   - To register a licensed copy, do the following:
     1. Click Register.
     2. In the resulting *Client Activation Key* dialog, enter a valid client activation key in the text box, then click OK.

3 In the *Activation Keys* dialog, click Close.

Before Using StarDisk

In addition to installing the StarDisk components on your workstation, you must:

- Know the address and endpoint for at least one Server, so that you can tell StarDisk where and how to locate the server.

  The administrator should be able to give you the information about the server that you need.

- Have the ability to log on to at least one server.

  The administrator will let you know your user name and password for the Server.

- Be able to use a full-featured client to display the folders and files of interest to you. (Note that you do not need to run the application on your workstation.)

- These views are generally created by the Administrator.

- Have access rights to the project, view, folders, and/or individual files that you will be using that are controlled by that server. These rights are granted by the Administrator.

Appendix

B

Administering StarDisk

Team members can use StarDisk to access the same project information that other team members access using a StarTeam client, if:

- They are users of the Server they need to access.
- That server has at least one project view that contains folders and files of interest to them.
- They have the correct access rights for the items they need to access on that server.

The administrator makes the above possible by administering the server properly. For details, see the *StarTeam Administrator's Guide*.

In addition, the administrator might need to help team members install StarDisk on their workstations and add servers to their StarDisk Neighborhood.

Appendix

C

Glossary

archive	The folder tree within a hive that contains unique file revisions.
ASCII file	Any files with no null characters are considered text files. All other files are binary files. ASCII text file names often end in .txt.
attribute	File attributes are those native to your operating system.
binary file	Any file that is not strictly an ASCII text (.txt) file. Binary files may contain programs or data in machine code (binary). Examples of binary files include: executable (.exe and .dll) files; word processing or desktop publishing files (.doc for Word for Windows, .fm for FrameMaker); spreadsheet files (.xls for Excel); object files (.obj); and bitmap files (.bmp). Any files with no null characters are considered text files. All other files are binary files.
check in	To store a new revision of a file in the repository. Check-in is possible if the file is not locked by someone else.
check out	To retrieve a revision of a file from the repository.
child view	A view that is contained within another view is a child view. A project might have many layers of views including parent views and grandparent views, and so forth, as many layers as necessary to organize the data.
client	A client or workstation is a computer connected to another computer used as a server. Also refers to the software for such a workstation.
configuration	See view configuration.
Current	A file status. The version of the file in the working folder is the same as the most recent version checked in to the repository.
current configuration	A view configuration. The current configuration shows all the tip revisions of files.
database	A location in the repository that stores information about the project files. This information includes revision numbers, file ownership, who locked the file and so forth.
exclusive	Locking a file as Exclusive indicates to other users that you don't want anyone else working on that file.
file status	File status is the state of your working file relative to the tip revision in the repository. The file statuses are: Not in View, Missing, Current, Merge, Modified, Out of Date, and Unknown. For a discussion of file statuses, see "Understanding File Statuses" on page 33 and "Understanding the Effects of Status on File Operations" on page 35.

folder	A container that may contain files as well as other folders (called child folders or subfolders). Folders enable operations to be conducted on groups of files (the contents of the folder) rather than on each file individually. Also known as directories.
folder hierarchy	The hierarchy of folders as they appear in the project view within the StarTeam client. When you map a view, the folder structure on the virtual disk matches the folder structure you see in StarTeam. This may not match the working folder structure on your workstation.
forced	You can force a check-in or check-out even though a file is locked. Forcing a check-in may overwrite another team member's work.
history	A file's history is the collection of revisions ordered by time. The Check Out From History option shows you the entire revision history of a particular file. You can select the revision you want and check it out to your working folder.
label	A View label is a time stamp that is created when a view is created. It enables you to roll back the view to that time and see every item in the view as it was at the time that view was created. View labels also define Promotional states. A Revision label is used with a particular set of files within a view. For example you might attach a revision level to a group of files you check in and out together.
labeled configuration	A view configuration. The labeled configuration shows only the files with the label you choose. *See label.*
lock	File locking is a technique to inform other users that you are working on a file. Depending on the project options that your administrator has set, you might have to lock a file before you can check it in. You can lock or unlock files manually with the *Lock/Unlock* command, or you can do so while checking files in or out from the repository. See "Locking and Unlocking Files" on page 39.
Locked By	Locked By is one of the file parameters displayed by default in the right pane of Windows Explorer. It identifies the user who locked the file.
map	Mapping a drive means to create links between a workstation (where the drive is mapped) and the server (where the files reside) such that a drive letter appears in the Windows Explorer without any hardware being added to the workstation. The links enable access to files on the server as if those files were on the workstation. Such a drive is called a Virtual Drive.
Merge	A file status. The working file has been modified; however, the revision upon which it was based has also been modified and checked in by another team member. To avoid losing the changes made to both the working file and the latest revision, the working file must be merged with the revision. If this is a text file, the Visual Merge utility starts when you check it in. You can force a check-in (or check-out) of this file, but be careful. You might overwrite another team member's files and lose data.
Missing	A file status. A file with this status is not in the working folder, but is in the repository. When you open a missing file, StarDisk automatically checks out the tip revision of the file.
Modified	A file status. The working file, based on the latest revision, has been changed, but not checked in. Check it in with the StarDisk > Check In command on the Windows Explorer context menu.
Not In View	A file status. A file that is in the working folder, but not under version control, that is, not in the repository. You might want to add it to the view, that is, add it to the repository, or you might want to delete it from the working folder.
Out Of Date	A file status. The working copy is an old version of the file. The file has been revised and checked in (probably by someone else) after the last time you checked it out. If you select StarDisk's "Automatically check out out-of-date files" option for a mapped project view, the tip revision of an out-of-date file is automatically checked out when you open the file.

parent view	A view that contains another view is a parent view. The view contained within a parent view is a child view. A project might have many layers of views including grandparent views and grandchild views and so forth, as many layers as necessary to organize the data. The Root view is the view of a project that includes all folders and files in the project. The Root view is the top most view. It has no parent view.
project	A project is a way of organizing and managing related files. A project may be any large, complex job that evolves as files are revised by team members over time. A product, a publication, a legal case, or any similar task with many files may become a project. In StarTeam, a project can have one or more views of those files.
promotional model	The promotional model is one way to organize the files in a project. A project passes through various temporary states from the initial idea to completion. You might choose promotional states such as Development, Edit, Test, Release, and so forth to keep track of the progress of various aspects of a project.
promotion state	A temporary state of a project, such as Development, Edit, Test, and so forth. A view label assigned to a promotion state defines that state. That label can change as the project progresses toward completion.
promotion state configuration	A view configuration. A Promotional model is one in which the view contains only the items in the specified promotional state. For example, the view might only show only the parts of the project that are in development, or the parts in Beta test.
Properties dialog	In addition to the standard property information found in Windows Explorer *Properties* dialog, the various items in StarDisk Neighborhood or a StarDisk virtual drive have additional special properties. For details, see “Using Properties” on page 45.
recursively check out files in child folders	This is the process StarDisk follows when the “Recursively check out files in child folders” option is selected. StarDisk searches every child folder, beginning with the selected folder, for files to be checked out and then checking them out. Recursion means doing the same process over. In a tree-structured file system the root folder might contain files and folders. These folders are child folders of the root folder. Each of these child folders may contain their own child folders and so forth as the folder hierarchy branches over and over. In each child folder, there is the possibility that this folder is the last folder in the branch, in which case that search is completed. There is also the possibility that this folder is not the last, but it contains more child folders of its own, in which case the search must continue. The software continues its search for files in child folders until all child folders have been searched.
removable disk	When a computer starts, disk drives are “installed” so the operating system can connect with them. Ordinary physical drives, those with fixed media, are installed differently than drives with removable media. Removable (media) drives use small software programs called device drivers that enable the operating system to connect with them. StarDisk uses the same device-driver technology to install its virtual drives. Thus, a StarDisk virtual disk drive appears in Windows Explorer as a “StarDisk Drive”. If you right-click on the drive, a context menu appears offering you options such as Eject and Format. Because there is no media to format or eject, selecting these options has no effect on the drive. These virtual drives enable you to access files that are actually located on the server.
repository	A repository is a storage place. The repository is located on one or more servers running the Server software. The database and archives of a particular server configuration are stored in the repository. The archive contains the files in a special format. The database contains information about the files and their revisions as well as tasks, topics, change requests, and so forth that pertain to the files.
revision	Also called version. Any of the copies of a file stored by the application Server. When a file is checked out it becomes a working file that you can modify. When you check it back in, the working file becomes a new revision. A number or designation is associated with each revision.

Revision On Disk	Revision On Disk is one of the file parameters displayed by default in the right pane of Windows Explorer. Revision on disk is the revision number of the file revision in your working folder. No number appears if the file has the status Missing.
revision label	A Revision label is used with a particular set of files within a view. For example, you might attach a revision level to a group of files you check in and out together.
root folder	The folder that includes the entire project. All other folders are child folders of the root folder. The root folder is the parent of all other folders. The root folder has no parent folder. See view.
root view	The view that includes the entire project. Created when the project is created. All other views are child views of the root view, and the Root view has no parent view. The Root view is the parent of all other views. See view
server	A computer running the Server software. The server controls the repository, which includes all files, and the database, which contains information about those files. When you check out a file, it comes from the repository to your computer. When you check in a file it goes from your computer to the repository.
StarDisk	StarDisk is a virtual file system that enables you to use conventional Windows applications (such as Word, Excel, and so forth) to access and modify files stored in the application on a server.
StarDisk Neighborhood	StarDisk Neighborhood shows you the structure of the servers, projects, and views that you can access through StarDisk. You cannot actually access the files through StarDisk Neighborhood. You must map one of the views in StarDisk Neighborhood to a virtual disk on your workstation to access the files. See view, virtual disk.
status	See file status.
text file	A file that is strictly an ASCII text (.txt) file. Not a binary file. Any files with no null characters are considered text files. All other files are binary files.
tip revision	The most recent revision of a file.
Unknown	A file status. A file with this status is in the working folder, and has the same name as a file in the view, that is, in the repository. However, this file was not checked out from the repository. It can't be checked in or out—unless forced.
unlock	To unlock a file is to make it available to other team members. Typically, if you are revising a file you lock it to advise others it is under revision. See lock.
version control	The management and maintenance of multiple versions of the same files in an archive. The archive includes information about each version of the file. Team members can retrieve these files, modify them, and check them back into the application. This enables tracking of modifications, and reconstruction of previous configurations.
view	A view is a way of looking at a project. It contains a collection of folders, each of which groups a number of files together. A view is a way to simplify a project by showing only the data you need to do your work. For example, if you are an accountant working on a software project, you need a financial view of the project, and you don't need to see marketing brochures or developers' source code. Similarly, the project could also have marketing and development views. Views can also represent the project at different stages. For example, a software development project may go from release 1.0 to release 1.5 to release 2.0. Each of these could have its own view or series of views.
view configuration	A view is configured to contain certain folders and certain revisions of files, such as files with the status Current, files as of a particular date or a particular revision level, or files of a particular promotional state.
view label	A view label is a time stamp that is assigned when a view is created. It enables you to roll back the view to that time and see every item in the view as it was at the time that view was created. View labels also define promotional states. A promotional view label might be assigned or changed when a product reaches a milestone.

virtual	Virtual means “not real,” in a physical sense. For example, computers often use virtual memory. It is not “real” memory in the sense that there are no physical memory chips. It is storage on a disk drive that acts just like physical memory. StarDisk maps project views to virtual disk drives. Such a drive is not new hardware; it is a software structure on an existing hard drive. The virtual drive acts like a new drive. You can write to it, read from it, make folders (directories) and child folders (subdirectories). In other words, it looks and acts like a real drive.
virtual disk	A virtual disk drive is created whenever you map a view from StarDisk Neighborhood to your computer. From the virtual disk drive, you can access the files available in the project view using your familiar Windows programs such as Word, Excel, and so forth.
working file	Any file in a working folder can be considered a working file. Often, you have checked out the file for modification. When checked in, a working file becomes a revision. When checked in, a working file becomes a revision.
working folder	The working folder is a folder (usually on your workstation) where you put the files that you are working on. These may be files that have been checked out, but have not been checked back in yet. They could also be new files that have not been added to the project yet. StarDisk assigns default working folders, but you can assign others.
working folder hierarchy	The hierarchy of working folders as they appear on your workstation. (This could differ from the folder hierarchy.)

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