

Oracle® Collaboration Suite

Using Oracle Files

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Oracle Files is designed as an enterprise file server replacement, with added content management features (for example, versioning) that enable users to collaborate more productively. All content is stored in an Oracle database.

Oracle Files provides:

- Support for file-sharing and collaboration protocols.
- A Web UI, designed for large-scale deployments.
- Workspace-based collaboration.
- Content management features like extensible metadata, versioning, and content-based searching.
- Workflow integration for approval and routing.
- User and administrator options for single file recovery.
- Scalability, reliability, security, and platform independence.

These features and capabilities are designed to help IT managers lower costs through file server consolidation while simultaneously making employees more productive.

This guide provides a high-level overview of Oracle Files concepts, features and functionality.

This guide contains the following topics:

- [Documentation Accessibility](#)
- [Oracle Files Administration Hierarchy](#)
- [Oracle Files End-User Concepts and Features](#)
- [Logging into Oracle Files for the First Time](#)
- [Industry-Standard Protocol Servers](#)
- [Oracle FileSync Client Software](#)

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2 Oracle Files Administration Hierarchy

In Oracle Files there are three levels of administration.

See Also: *Oracle Files Administrator's Guide* for more information about administering Oracle Files

2.1 System Administrator

The System Administrator is responsible for managing the Oracle Files domain, starting and stopping the domain controller, nodes, service and servers, and tuning the system to ensure reliability and performance.

2.2 Site Administrator

The Site Administrator manages Oracle Files Subscribers. Users in one Subscriber do not have access to the content of users in another Subscriber. The Site Administrator creates, modifies, and deletes Subscribers. The Site Administration has a different view in Oracle Files than regular users.

Note: Because Site Administrators must use Single-Sign On (SSO) for Oracle Files, and because of current SSO limitations, you can have only one Oracle Files Subscriber.

2.3 Subscriber Administrator

In Oracle Files, a Subscriber is an organizational entity where users can collaborate on files and folders. Each Subscriber has its own Subscriber Administrator. The Subscriber Administrator, an enhanced user, administers the Subscriber by managing quota, users, and categories, specifying Subscriber settings, and restoring files from the Archive. The Subscriber Administrator has a different view in Oracle Files than regular users.

3 Oracle Files End-User Concepts and Features

This section contains the following topics:

- [File Management](#)
- [Workspaces](#)
- [Trash](#)
- [Searching](#)
- [Categories](#)
- [Versioning](#)
- [Review Process](#)
- [Edit-in-Place](#)
- [File Synchronization](#)

3.1 File Management

Each user has a My Public Files folder where he or she can store files, viewable by all Subscriber users.

Each user has a My Private Files folder where only he or she can access, store, and view files.

Collaborative file management in Oracle Files allows users to:

- Send links to documents instead of attaching documents to e-mails.
- Work collaboratively on one copy of a document, so that changes are immediately available, and users do not overwrite each other's changes.
- Control access to content through Workspace membership.

3.1.1 Public Files and Private Files Folder Quota

A user's Public and Private Files folders are allocated a storage quota by the Subscriber Administrator. The contents of each folder, including the Trash folder, count against allocated quota for that folder. Exceeding allocated quota prevents the user from storing additional content in the folder. A user can, however, request increased quota from the Subscriber Administrator.

See Also: "File Management" in Oracle Files online help for detailed information

3.2 Workspaces

A Workspace is where a selected group of Oracle Files users store and collaborate on files and folders. The content of a Workspace is visible and editable only by its members. A Workspace includes at least one administrator, and can include participants and viewers.

Workspace collaboration features of Oracle Files allow users to:

- Send links to documents instead of attaching documents to e-mails.
- Work collaboratively on one copy of a document -- changes are immediately visible to all members of the Workspace, and users do not overwrite each other's changes.

- Control access to content through Workspace access levels.
- Copy and move Workspace content from one location to another.

3.2.1 Workspace Access Levels

Users can be assigned three levels of access to a Workspace.

- **Workspace Administrator:** The role of the Workspace Administrator is to manage the Workspace. The management role includes such functions as adding and removing Workspace members, modifying member access, requesting more Workspace quota, and specifying the visibility and Workspace type. The Workspace Administrator has full access to the files and folders of the Workspace, and can unlock files that have been locked by other Workspace members.
- **Participant:** A Workspace participant can edit the contents and properties of files and folders in the Workspace. A Workspace participant can copy and move items to and from the Workspace, and can delete files and folders from the Workspace, and the Workspace's Trash folder.
- **Viewer:** A Workspace viewer is restricted to viewing Workspace files and folders.

3.2.2 Workspace Quota

Each Workspace is allocated a storage quota by the Workspace Administrator. The contents of each Workspace, including its Public and Trash folders, count against the Workspace's allocated quota. Exceeding the Workspace's quota prevents Workspace members from storing additional content in the Workspace. The Workspace's administrators can, however, request increased quota from the Subscriber Administrator.

See Also: "Workspace Management" in Oracle Files online help for detailed information

3.3 Trash

Files deleted in Private and Public folders are moved to Personal Trash. Files deleted in Workspaces are moved to a corresponding Trash folder. A user can request that the Subscriber Administrator restore files that have been emptied from the trash. Content moved to trash counts against quota until trash is emptied.

See Also: "File Management" in Oracle Files online help for detailed information

3.4 Searching

Users can conduct simple or advanced searches. Advanced searching allows users to refine and combine search criteria.

See Also: "Search Options" in Oracle Files online help for detailed information

3.5 Locking

Oracle Files offers three levels of document locking functionality:

- **Manual Lock:** Users can lock and unlock files manually through the Oracle Files Web User Interface. If a file is locked manually, a **Manual Lock** icon displays in the status column for that file, and other Workspace members have read-only access to the file until it is unlocked. When the file is unlocked, the **Manual Lock** icon no longer displays in the **Status** column.
- **Locked for Editing:** A **Locked for Editing** icon displays in a file's status column when a Workspace member is currently editing a file directly from a client application (such as Microsoft Office over Microsoft Web Folders). Until the file is unlocked, other Workspace members have read-only access to the file. When the file is unlocked, the **Locked for Editing** icon no longer displays in the **Status** column.
- **Locked for Review:** Oracle Files locks files automatically when they have been submitted for review to a Review Process (see "[Review Process](#)" on page 5 for more information). If a file is locked for review, the **Locked for Review** icon displays in the **Status** column for that file. When the review process is complete, the file is unlocked and the **Locked for Review** icon no longer displays in the **Status** column.

See Also: "File Management" and "Review Processes and Workflow" in Oracle Files online help for detailed information

3.6 Categories

By associating categories with files or folders and modifying the attributes of a category, users can organize and classify their information. Users can also search for files by category and a category's attributes. The Oracle Files Subscriber Administrator creates categories.

See Also: "Categories" in Oracle Files online help for detailed information

3.7 Versioning

Users can retain a history of file modifications by creating and saving one or more snapshots of a file.

See Also: "Versioning" in Oracle Files online help for detailed information

3.8 Review Process

Using Oracle Files Review Process features, users can submit files for review, and select other users to approve, reject, or review these files.

The Oracle Files Review process is implemented using Oracle Workflow. Using a review process, any Workspace member can submit for review one or more files from their Workspace to other members of their Workspace. A review process ends in the approval or rejection of these files, or can expire or be cancelled prior to their approval or rejection. Members can either be **Approvers** or **Reviewers** of a review process:

- **Approver:** After receiving notification from Oracle Workflow that he or she has been asked to approve one or more files, an Approver must either

approve or reject the files that have been submitted for review. An Approver cannot approve or reject individual files associated with one Review Process, but must approve or reject the files as a whole. The Workspace member, who initiated the Review Process, is notified of its approval or rejection.

- **Reviewer:** After receiving notification from Oracle Workflow that he or she has been asked to review one or more files, a Reviewer can review the files. He or she can neither approve or reject files that have been submitted for review.

You can also specify that files in a review process be automatically moved to a new location, copied to a new location, versioned, or deleted upon completion of a Review Process.

When you complete the Review Process, the initiator is notified of the approval or rejection of the Review Process.

3.8.1 Custom Review Processes

Your Site Administrator can provide custom review processes, also called workflow processes, to use in Oracle Files. A *workflow designer*, a person with the necessary skills to design a workflow process in Oracle Workflow Builder, creates the custom workflow process, and the Site Administrator registers the custom workflow process with Oracle Files.

You can select any custom workflow process registered by the Site Administrator when you use Review Process functionality in Oracle Files.

See Also: "Review Processes and Workflow" in Oracle Files online help for detailed information

3.9 Edit-in-Place

Using Microsoft Web Folders, a user can open and edit an Oracle Files file and save his or her changes directly back to Oracle Files. When a user opens a file from Microsoft Web Folders to edit in Microsoft Office, the file is automatically locked in Oracle Files. Any changes made to the file are automatically saved back to Oracle Files. When the user closes the file in Microsoft Office, the file is automatically unlocked in Oracle Files. See "["Web Folders Access"](#) on page 11 for information on setting up Web Folders.

See Also: "File Management" in Oracle Files online help for detailed information

3.10 File Synchronization

Oracle FileSync synchronizes all file changes between a local machine and Oracle Files, ensuring that the contents of selected local folders and remote folders match.

See "["Installing Oracle FileSync"](#) on page 18 for instructions on how to install Oracle FileSync. Once you have installed Oracle FileSync, the online help for this application offers detailed instructions for synchronizing local and remote folders.

4 Logging into Oracle Files for the First Time

If you are logging into Oracle Files for the first time, the General User Preferences page appears. On this page, you can begin customizing the way you work with Oracle Files.

When logging in for the first time, you can set the following preferences:

- [Changing Your Password](#)
- [Setting Password Prompting](#)
- [Specifying Items Per Page](#)
- [Enabling or Disabling Your Public Folder](#)
- [Specifying a Display Language](#)
- [Specifying a Time Zone](#)
- [Viewing Quota and Storage](#)

4.1 Changing Your Password

There are two passwords used in Oracle Files, the Single Sign-On (SSO) password and the Files-Specific password.

The Single Sign-On password can be used by all Oracle Applications that use the same SSO server. Therefore, if you log into SSO once, you are logged into each Oracle application that uses Single Sign-On.

The Files-Specific password is used only by Oracle Files, and allows you to access your Oracle Files content through protocols like FTP and AFP. The Oracle Files system administrator determines which protocols use the Files-Specific Password.

4.1.1 Changing Your Single Sign-On Password

1. Click **Preferences** from anywhere in Oracle Files.
The General User Preferences page displays.
2. Click **Password**.
The Password User Preferences page displays.
3. Click **Change Single Sign-On Password**.
4. Enter your existing Single Sign-On password, then enter your new Single Sign-On password, and confirm.
5. Click **Apply** to accept your change and continue working in Password User Preferences.

4.1.2 Changing Your Files-Specific Password

1. Click **Preferences** from anywhere in Oracle Files.
The General User Preferences page displays.
2. Click **Password**.
The Password User Preferences page displays.
3. Enter your existing Files-Specific password, then enter your new Files-Specific password and confirm.

4. Click **Apply** to accept your change and continue working in General User Preferences.

4.2 Setting Password Prompting

The Subscriber Administrator specifies how often you are prompted for your password in Microsoft Web Folders. However, the Subscriber Administrator can provide you with the ability to optionally configure your own password prompting settings in User Preferences.

Note: For this option to function correctly, you must enable cookies in your browser. See "Preferences" in Oracle Files online help for detailed information.

To specify how often you would like Oracle Files to prompt you for a password in Microsoft Web Folders:

1. Click **Preferences** from anywhere in Oracle Files.
The General User Preferences page displays.
2. Click **Password**.
The Password User Preferences page displays.
3. From the Prompt for Password drop-down list, select how often you would like to be prompted for your password in Microsoft Web Folders. Your choices are:
 - Once a Month
 - Once a Week
 - Once a Day
 - Every 8 Hours
 - Every 4 Hours
 - Always
4. Click **Apply** to accept your change and continue working in General User Preferences.

4.3 Specifying Items Per Page

As you continue to work with Oracle Files, the contents of your folders will increase. Each user prefers to view his or her lists of items (files and folders) differently, so in Oracle Files you can specify the number of items (files and folders) you would like to appear on each Browse Files page.

To specify the number of items that appear on a Browse Files page:

1. Click **Preferences** from anywhere in Oracle Files.
The General User Preferences page displays.
2. In the Items Per Page field, enter the number of items (files and folders) that should appear on each Browse Files page.

When specifying a range, consider the size of your screen and the inconvenience of scrolling through long lists. Sometimes it is more manageable to restrict the number of items that appear in each page.

3. Click **Apply** to accept your change and continue working in General User Preferences.

4.4 Enabling or Disabling Your Public Folder

Depending upon your Subscriber default settings, your Public folder can be enabled or disabled. If the option is enabled, you can store files and folders in your Public folder so any other user in the Subscriber can view them from All Public Files. If the option is disabled by the Subscriber Administrator, you cannot enable or disable your Public folder. However, you can request that the Subscriber Administrator modify this setting.

To change your Public folder setting:

1. Click **Preferences** from anywhere in Oracle Files.
The General Users Preferences page displays.
2. Click **Advanced**.
The Advanced User Preferences page displays.
3. In the Public folder section, select **On** to display the folder, or **Off** to hide the folder.

Note: Disabling your Public folder removes your Public folder from All Public Files. Your Public folder is not visible from All Public Files, and you cannot store files in your Public folder.

If you have files stored in your Public Folder, the **disable** option is not available. In order to disable your Public Folder, you must remove all content from the folder.

4. Click **Apply** to accept your change and continue working in General User Preferences.

4.5 Specifying a Display Language

To specify a display language:

1. Click **Preferences** from anywhere in Oracle Files.
2. In the General User Preferences page, from the **Display Language** drop-down list, select a language.
3. Click **Apply** to accept your changes and continue working in General User Preferences.

4.6 Specifying a Time Zone

Specifying your time zone ensures appropriate time stamping of files. When traveling, you can reset your time zone according to your location.

1. Click **Preferences** from anywhere in Oracle Files.

The General User Preferences page displays.

2. Select a time zone from the **Time Zone** drop-down list.
3. Click **Apply** to accept your change and continue working in General User Preferences.

4.7 Viewing Quota and Storage

You can view your quota usage and storage levels in the **Quota Used** field of the General User Preferences page.

Quota is a measurement of your storage usage in Oracle Files. This measurement appears both as a percentage of your quota, and the amount of storage that you use in comparison to your total storage quota.

5 Industry-Standard Protocol Servers

Oracle Files supports a wide range of protocols through its various protocol server implementations, including the following:

- Web Folders is one of the most common protocol access choices for Oracle Files users.
- AFP, the AppleTalk Filing Protocol, enables Macintosh users to use Oracle Files as if it were an AppleShare server. MacOS X and above supports AFP over TCP, which allows AFP services to be made available over the Internet and networks that use TCP/IP as the underlying transport.
- HTTP, the Hypertext Transfer Protocol, is used for Web browser-based access. HTTP has been extended with WebDAV, a protocol designed for Wide Area Networks such as the Internet. Currently, the most widespread WebDAV client is the Web Folders extension to Windows Explorer, also known as Network Places in Windows 2000/XP. See "["Web Folders Access"](#)" on page 11 for instructions on how to set up Web Folders.
- SMB, the Server Message Block protocol, lets you map Oracle Files as a network drive or browse to it through the Network Neighborhood.

Note: SMB protocol support is provided by the Oracle Files SMB server when Oracle Files is running on UNIX or Linux. When Oracle Files is running on Windows, SMB protocol support is provided by the Oracle Files NTFS server, due to the differing architectures of Windows versus UNIX.

- NTFS, the NT File System (for Windows NT and Windows 2000), allows you to map a local drive to the Oracle Files repository on the server machine.
- FTP, the File Transfer Protocol, is used for file transfers across Wide Area Networks such as the Internet.
- NFS, the Network File System, is a mechanism for mounting remote file systems on UNIX platforms.

Users can connect to Oracle Files using protocols appropriate to their platform. For example, Mac users can connect to Oracle Files as if it were an AppleShare

server, Windows users can map a network drive or connect using Web Folders, and UNIX clients can connect using NFS.

Note: Some protocols, such as FTP and AFP, send unencrypted passwords over the network. Oracle Internet Directory users should use an Oracle Files-specific password for these protocols for greater security.

The NFS, NTFS, and SMB protocols share the limitation that versioned documents are opened in read-only mode and cannot be deleted, moved, or renamed. This is because some applications, including Microsoft Office applications, save files by first saving the data to a temporary file, deleting the original file, and then renaming the temporary file to the original name. If a document is versioned, this will result in the loss of previous versions.

The following sections provide additional information about client access to Oracle Files.

- [Web Folders Access](#)
- [AppleTalk Filing Protocol \(AFP\) for Macintosh Clients](#)
- [HTTP \(Web Browser\) and WebDAV Access](#)
- [SMB/NTFS Access](#)
- [FTP Access](#)
- [NFS \(Network File System\) Protocol](#)

5.1 Web Folders Access

Web Folders is one of the most common protocol access choices for Oracle Files users. To set up access to Oracle Files via Web Folders, perform the following tasks:

5.1.1 Install Web Folders (If Necessary)

To install Web Folders:

Note: Web Folder functionality is automatically installed with Microsoft Windows 2000 and Microsoft Windows XP.

1. Open the Control Panel by clicking **Start > Settings > Control Panel**.
2. Select **Add/Remove programs**.
3. Select **Internet Explorer** and click **Add/Remove**.
4. Select **Add a Component**.
5. Click **OK**.
6. Scroll through the list of components and select **Web Folders**.
7. Complete the Windows Update process.

5.1.2 Set Up Web Folders

To set up Web Folders:

1. In Windows NT, open **Windows Explorer**.
In Windows 2000/XP, open **My Network Places**.
2. In Windows NT, open the **Web Folders** folder and double-click **Add Web Folder**.
In Windows 2000/XP, double-click **Add Network Place**.
3. Follow the wizard directions.
Specify the URL in the following format:
`http://fileserver.mycompany.com/content`
4. When connected, enter your user name, password, and specify a name for the Web Folder.

Once your Web folder is set up, your Oracle Files Web Folder is listed in the Web Folders folder or in the Network Places folder.

5.2 AppleTalk Filing Protocol (AFP) for Macintosh Clients

Oracle Files includes an AFP 2.2-compliant AppleTalk Filing Protocol (AFP) server. A MacOS X client can use the AFP server as if it were an AppleShare server. The steps required to connect to the AFP server depend on the MacOS on the client. MacOS X clients use the **Go** menu from the desktop, as detailed below.

The Chooser does not exist in MacOS X. Clients should connect using the new **Go** menu, as follows:

1. Select **Go** from the menu.
2. Select **Connect to Server**. A dialog box appears.
3. Enter the address of the Oracle Files middle-tier computer running the AFP Server in URL format:

`afp://computer_name`

The AppleShare icon appears on the client desktop.

5.3 HTTP (Web Browser) and WebDAV Access

Use the following URL to access Oracle Files with HTTP, WebDAV, and Oracle FileSync on UNIX or Windows NT/2000 server platforms:

`http://server_name:7778/files/content`

Note: The port number varies depending on whether Web Cache is configured. If Web Cache is configured, the value is typically 7777 for UNIX clients, or 80 for Windows clients. If you are accessing Oracle Files with WebDAV on a Windows XP client, you must specify port 80 in the URL.

The URL is required for access from:

- Web browser
- DAV applications, such as Web Folders
- OracleFileSync utility

5.4 SMB/NTFS Access

SMB, the Server Message Block protocol, lets you map Oracle Files as a network drive or browse to it through the Network Neighborhood.

The Oracle Files server provides SMB protocol support when Oracle Files is running on UNIX or Linux. When Oracle Files is running on Windows, SMB protocol support is provided by the Oracle Files NTFS server, due to the differing architectures of Windows versus UNIX.

The following restrictions apply to SMB/NTFS access:

- Use the syntax `\servername\myhome` or `\servername\allpublic` to map a directory.
- Use an existing Oracle Files user name and password when connecting.
- You cannot have multiple SMB/NTFS mappings as different users to folders on the same server.

This is a limitation of the Windows operating system.

See the *Oracle Files Administrator's Guide* and the documentation for your operating system.

5.5 FTP Access

FTP, the File Transfer Protocol, is used for file transfers across Wide Area Networks such as the Internet.

The most lightweight protocol, FTP can move large amounts of data faster than the other protocols. For bulk operations, such as migrating from an existing system, FTP is the protocol of choice. You need to use either command line FTP or a GUI FTP client for this step.

To FTP your files into Oracle Files, the following requirements must be met:

- An FTP client must be installed on your local computer.
- You must know the port number for FTP, which was specified during Oracle Files configuration.
- An account on the Oracle Files server must already exist.

5.6 NFS (Network File System) Protocol

Oracle Files provides an NFS protocol server that is certified for use with several NFS clients, including:

- Solaris 2.8 and Solaris 2.9
- Red Hat Linux Adv. Server 2.1 (Kernel 2.4.9-e.16)
- Windows NT and 2000 Clients using Hummingbird Maestro NFS

If the Oracle Files NFS server is configured as the primary NFS server, then UNIX clients (Solaris 2.8, Solaris 2.9, and Red Hat Linux Adv. Server 2.1) can access the server using the standard NFS mount command, as shown in [Table 1](#).

Table 1 Mount NFS Server (Configured as Primary NFS Server)

Syntax	Example
<code>mount host:files_pathname mount_point</code>	<code>mount fileserv:home /data/files</code>

If the Oracle Files NFS server is configured as the secondary NFS server, or if the Oracle Files NFS server is not on the standard port number, Solaris clients must specify the `public` option and Linux clients must specify the mount port, as described in ["Solaris 2.8 and Solaris 2.9 Clients" on page 14](#) and ["Red Hat Linux Adv. Server 2.1 and Red Hat Linux 8.0 Clients" on page 15](#).

Other caveats apply to Hummingbird Maestro clients, as detailed in ["Linking an NFS Directory Using the NFS Maestro Network Access Tool" on page 15](#).

5.6.1 NFS Server Limitations

Permission mode bits used by native UNIX NFS are not used by the Oracle Files NFS protocol server. Instead, as it does with other protocol servers, Oracle Files NFS uses access control lists (ACLs) to control access.

In addition, the Oracle Files NFS server does not support the following:

- UNIX symbolic and hard links
- UNIX `chown`, `chgrp`, and `chmod` commands

Use the command-line utilities to change the owner and access control list for a file.

- UNIX lock manager

Handles returned by the Oracle Files NFS server are not compatible with the UNIX lock manager. Applications requiring UNIX lock manager services do not work with Oracle Files NFS server.

NFS clients cannot access the checked-out version of a versioned document. To avoid potential conflicts, the Oracle Files NFS server does not allow access by NFS clients to the checked-out version of a versioned document.

Versioned documents cannot be deleted, moved, or renamed. Some applications, including Microsoft Office applications, save files by first saving the data to a temporary file, deleting the original file, and then renaming the temporary file to the original name. If a document is versioned, this process results in the loss of previous versions.

5.6.2 Solaris 2.8 and Solaris 2.9 Clients

If the Oracle Files NFS server is running as the primary NFS server on the host, users can enter the standard mount command as shown in [Table 1](#). If the Oracle Files NFS server is the secondary NFS server on the host, you must explicitly include the port number in the mount command:

```
mount nfs://host:port/files_pathname /mount_point
```

For example:

```
mount nfs://filesserver:2049/home data/files
```

Alternatively, you can use the following command:

```
mount -o port=port,public host:files_pathname mount_point
```

For example:

```
mount -o port=2049,public filesserver:home /data/files
```

5.6.3 Red Hat Linux Adv. Server 2.1 and Red Hat Linux 8.0 Clients

If the Oracle Files NFS server is running as the primary NFS server on the host, users can enter the standard mount command as shown in [Table 1](#). If the Oracle Files NFS server is the secondary NFS server on the host, you must explicitly include the port number in the mount command:

```
mount -o port=port,mountport=portno1 host:files_pathname mount_point
```

For example:

```
mount -o port=2049, mountport=4048 filesserver:home /data/files
```

5.6.4 Windows Clients

While client access to NFS is available on all UNIX operating systems, Windows systems require additional client software. Hummingbird Maestro NFS is a Windows client certified for use with Oracle Files NFS Server.

- Windows 2000 users who want to connect to Oracle Files NFS Server must use Hummingbird Maestro NFS 7.0.
- Windows NT users who want to connect to Oracle Files NFS Server can use Hummingbird Maestro NFS 6.0 or later.

See the *Oracle Collaboration Suite Release Notes* for other NFS client applications and version numbers supported by Oracle Files.

Note: Enter the fully-qualified host name (for example, `hostname.yourcompany.com`) in the Windows client network configuration for the NFS client. Move the NFS client to the top of the list (network access in Network control panel, if you have more than one NFS client installed) to ensure that its driver is used for the connection.

5.6.4.1 Linking an NFS Directory Using the NFS Maestro Network Access Tool

Before using the Hummingbird NFS Maestro client to access the Oracle Files NFS server, check that the NFS Maestro client is properly configured.

1. From the NFS Maestro folder, start the NFS Network Access tool. The NFS Network Access dialog appears.
2. Enter the host name of the Oracle Files NFS server and the path name in the Network Path field using the following format:

```
\\\hostname\pathname
```

3. In the Authentication Details area, enter the UNIX user name and password for accessing the Oracle Files NFS server. Select **System/UNIX Authentication** as the Authentication Protocol.
4. Set the following Miscellaneous values:
 - **DOS-style sharing:** Deselect DOS-style file sharing unless you have the HCLNFSD daemon running on the NFS server computer. HCLNFSD is required for DOS-style file sharing. If the HCLNFSD daemon is not running on the NFS server, response times in accessing files will be unacceptable.
 - **UNIX lock manager:** Deselect UNIX lock manager if it is checked. The Oracle Files NFS server is not compatible with the UNIX lock manager.
 - **CD-ROM:** Deselect this box if it is selected. This is used for CD-ROM or other read-only file systems.
5. Click **Advanced** to display the Advanced Connection Properties dialog.
6. Select **Preserve Case for Filename Case**.
7. If the Oracle Files NFS server is running as a secondary NFS server, change the value of **NFS Port number** from the standard port (2049) to the alternate port number that the Oracle Files NFS server is using.
8. To use TCP instead of UDP for connection to the NFS server, select **Use TCP**. TCP uses the standard NFS port 2049. Do not select this box if the Oracle Files NFS server is running on an alternate port.

5.6.4.2 Linking an NFS Directory Using the Command Line If the Oracle Files NFS server is the primary NFS server on the host, you can mount Oracle Files using the following Maestro command-line syntax:

```
nfs link drive: \\host\pathname username
```

For example:

```
nfs link n: \\ifsserver\home scott
```

If the Oracle Files NFS server is the secondary NFS server on the host, you must specify the Oracle Files NFS server port number in the command line:

```
nfs link drive: \\host\pathname username /n:port
```

For example:

```
nfs link n: \\ifsserver\home scott /n:4049.
```

The `nfs link` command uses the default values configured for the NFS Maestro Client, unless you specify options listed in [Table 2](#).

Table 2 Maestro Command-Line Options

Option	Meaning	Usage Note
/L:s	Use DOS-style sharing,	Requires that the HCLNFSD daemon run on the server.
/L:	Disables locking.	Use this parameter if the server does not have the HCLNFSD daemon running.

Table 2 (Cont.) Maestro Command-Line Options

Option	Meaning	Usage Note
/M:p	Preserve case of file names	
/A:u	Use System/UNIX authentication	Always use this setting.
/T	Use a TCP connection instead of a UDP connection (optional).	TCP connections always use port 2049. Do not use this option unless the Oracle Files NFS server is running on port 2049 (the default).

Problems are often caused by incorrect port numbers. If the HCLNFSD daemon is not running on the server, then DOS-style locking and sharing must be disabled on the client.

5.6.4.3 Maestro Error Messages Table 3 lists some common error messages and other Maestro client problems.

Table 3 Maestro Error Messages

Problem	Corrective Action
"Access denied by server" message	Check that the correct port number is being used for the Oracle Files NFS server. A TCP connection uses the standard NFS port (2049). Do not use this option if the Oracle Files NFS server is running on an alternate port.
"Authorization Error" message	The user name and password are invalid. Specify a UNIX user name and password that are valid on the authentication server.
"Bad Network Name" message	Verify that the host name and path name are specified correctly. If they are, then use the NFS Maestro Rpcinfo tool and verify that the NFS server (process number 100003) is running on the host.
Maestro client appears to hang	Verify that the HCLNFSD daemon is running on the server computer. If it is not, either start the daemon (if possible), or verify that DOS-style sharing and UNIX lock manager have been deselected in the Maestro client settings. For the Maestro command line, specify the <code>/L:</code> command-line option when linking to disable locking. You can check all current mapped drives by using Maestro's <code>nfs use</code> command.
"Network Timeout or HCLNFSD/PCNFSD not running on Host" message	Verify that the default authentication server has been configured correctly in the NFS client. Verify that the HCLNFSD daemon is running. Perform the verifications listed for the "Bad Network Name" message.
<code>nfs link</code> command hangs	Verify that the correct host name and port number are specified and that the Oracle Files NFS server is running.
"NFS service not responding" error message	Verify that the correct host name and port number are specified and that the Oracle Files NFS server is running.
"Permission denied" error message	Verify that the host name and path name are specified correctly. Verify that the port is correctly specified for the Oracle Files NFS server.

6 Oracle FileSync Client Software

In addition to using the networking protocols or client applications native to the Windows operating system, Windows users can install and use Oracle FileSync to keep local directories on a desktop machine and folders in Oracle Files synchronized.

6.1 Installing Oracle FileSync

Oracle FileSync is a Windows client application that enables users to keep files synchronized between their local machine and Oracle Files. To install Oracle FileSync, follow these steps:

1. Save and exit all Windows applications.

If you have a previous release of Oracle FileSync software installed, deinstall it by using **Add/Remove Programs** in the control panel.

2. Log in to Oracle Files and click **Help**.
3. The main online help page displays.
4. Click the link in the Oracle FileSync section.
5. Save the install executable to your hard drive.
6. Double-click `FileSync.exe` to run the installation program.
7. Follow the instructions and accept the default values. The application is installed on the Windows client machine in the following directory:

`C:\Program Files\Oracle\Oracle 9iFS FileSync`

8. To start the Oracle FileSync application, select **Oracle FileSync** from the Windows **Start > Programs** menu.