Kodak

Microsoft Services for UNIX and NFS

Server and Client Installation and Configuration

Document Number
750-00264B-EN Rev A

07 Jan 2008

Copyright 2008 Kodak. All rights reserved.

This page intentionally left blank.

Revision History

Revision	Date	Author	Comments
0.1	15 Mar 2004	Robyn Lundstrom	Initial Rev.
1.0	16 Jun 2004	Robyn Lundstrom	Initial release
1.1	16 Jun 2004	Robyn Lundstrom	Edited by K. DeCarle. Added Appendix B.
1.2	26 Jun 2004	Robyn Lundstrom	K.D. applied edits as per DocSect editor.
1.3	01 Sep 2004	Amy Chan	Added Appendix C to cover Director and Brisque server mounting procedures.
1.4	04 Sep 2004	Amy Chan	Further edits applied to Appendix C.
1.5	08 Feb 2006	Philip Samaniego	Numerous updates applied by K. DeCarle as per Philip S. Kodak template applied.
1.6	16 Feb 2006	Philip Samaniego	Further updates applied by K. DeCarle as per Philip S.
2.0	04 Apr 2007	Philip Samaniego	Latest Kodak template applied. Updated for Services for NFS. Prelim in Agile (Rev B-A).
2.1	07 Dec 2007	Philip Samaniego	Text updates applied by Janet K.
2.2	10 Dec 2007	Philip Samaniego	Ken D. modified original screen shot for Section 3.2.2, step 5 and replaced in doc. Corrected Rev # (B-A) and date in footer (was 04 Apr 2007). Replaced “Technical Document Template” in headers with the correct document title. Registered trademark symbol ® added to first instance of Kodak in text.
2.3	07 Jan 2008	Philip Samaniego	Ken D. applied Doc Group editor’s edits.

This page intentionally left blank.

Kodak

Microsoft Services for UNIX and NFS
Server and Client Installation and Configuration

CONTENTS

Revision History i

1 Overview 1
- 1.1 Description 1
- 1.2 Scope of This Document 1
- 1.3 Services for UNIX vs Hummingbird 1
- 1.4 Limitations 1

2 Installation Requirements 1
- 2.1 Materials Required 1
- 2.2 System Requirements 2

3 Installation 2
- 3.1 Before You Begin 2
- 3.2 Installing SFU/Services for NFS 3
  - 3.2.1 Installing SFU for Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, and Windows XP Professional 3
  - 3.2.2 Installing NFS for Windows Server 2003 R2 4
- 3.3 Replacing the Default Group and passwd Files 5
- 3.4 Configuring NFS Server 6
  - 3.4.1 Configuring User Name Mapping 6
  - 3.4.2 Creating NFS Shares 8
- 3.5 Configuring NFS Client 9
  - 3.5.1 Adding a New User to the UNIX Server 9
  - 3.5.2 Configuring User Name Mapping 9
- 3.6 Uninstalling SFU 3.5 and Services for NFS 10
  - 3.6.1 Uninstalling SFU 3.5 in Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, and Windows XP Professional 10
  - 3.6.2 Uninstalling Services for NFS in Windows Server 2003 R2 10

4 Appendix A: Default Settings for SFU 3.5 11
- 4.1 NFS Client 11
- 4.2 NFS Server 12
- 4.3 User Name Mapping 14

5 Appendix B: Veritas Storage Replicator Registry Modifications 16

6 Appendix C: Director and Brisque Server NFS Share Volume Configuration 17

6.1 Configuring the NFS Share Volume on the Director Server 17
6.2 Mounting the Director NFS Share Volume on the Brisque Server 19

7 Appendix D: NFS Client Support for Symbolic Links on a UNIX Server 21

This page intentionally left blank.

1 OVERVIEW

1.1 Description

This guide describes the installation and configuration of client and server versions of the Network File System (NFS) connectivity component of Microsoft® Windows® Services for UNIX® (SFU), for use with Kodak® workflow software.

1.2 Scope of This Document

This document is designed to cover Kodak workflows in general. For specific Kodak workflow product configuration instructions, refer to the product documentation.

This document does not apply to non-Kodak systems. Using this guide to install SFU on a non-Kodak system is not recommended.

1.3 Services for UNIX vs. Hummingbird

Windows Services for UNIX 3.5 and Services for NFS® (in Windows Server® 2003 R2) is provided by Microsoft at no charge, and performance is on par with other solutions. The result is a combination of low cost and better integration with Windows. Recent versions of Hummingbird® Maestro™ have had compatibility issues with Kodak workflow software.

1.4 Limitations

Kodak Prinergy® system job homing on a UNIX server is only supported when using SAMBA SMB connectivity. SFU Client can be used only for adding input files from and generation of TIFF output files to the UNIX share.

Kodak Prinergy Archiver is not currently able to archive files that are on a UNIX server when using SFU 3.5 Client. To archive an input file from a UNIX volume, you can copy the file to the job folder and archive it from there.

2 INSTALLATION REQUIREMENTS

2.1 Materials Required

- This document (also available on the installation CD)
- The Kodak SFU Installation CD (651-00532A)—not required for Windows Server 2003 R2 installations
- Windows Server 2003 R2 Disk 2—for Windows Server 2003 R2 installations
- Applicable Kodak workflow software configuration documents

2.2 System Requirements

- Microsoft Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, Windows Server 2003 R2, or Windows XP Professional
- At least 256 MB of RAM (more RAM may be necessary, depending on the workflow software installed on your system)
- 100 MB free hard disk space on the system drive (usually C: or D:)

3 INSTALLATION

3.1 Before You Begin

Note: If Veritas Storage Replicator™, part of Emergency Platemaking Plus (EPM+), is installed on the server on which you plan to install SFU, you must make some registry modifications after installation. For details, see Appendix B.

First, decide whether NFS Client or NFS Server (or both) are needed to satisfy your workflow requirements. For example, Kodak Synapse® Director only requires NFS Server, while Prinergy® only requires NFS Client for accessing input files on UNIX servers. Most common workflows do not require both NFS Server and NFS Client.

Do not install the complete software package if it is not necessary—install only what you require. There are three reasons for this:

1. SFU places a separate network protocol stack on the Windows server. If it is properly configured, there is no reduction in performance or stability of the server. However, leaving one of the components un-configured or mis-configured can cause network problems, poor performance, and (rarely) system crashes.
2. Un-configured services expose possible security holes that could be exploited. Another possibility is exposure to a *worm* virus (SQL Slammer, for example). This is a significant risk in a prepress environment.
3. The amount of post-installation configuration work depends directly on the number of components you are connecting.

Note: Ensure that host names are added in the hosts file in all servers being configured, including the UNIX server.

3.2 Installing SFU/Services for NFS

Before installing Services for UNIX, read Section 3.1*, Before You Begin.*

3.2.1 Installing SFU for Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, and Windows XP Professional

The script **Creo_Installer.cmd** is in the root folder of the Installation CD. You use this semi-automated tool to install (or remove) SFU 3.5 on a Kodak server or workstation. Some post-installation configuration is necessary. The installation procedure is as follows:

1. Insert the SFU Installer CD in the CD-ROM drive.
2. Start **Creo_Installer.cmd**. SFU will install on the system drive.
3. The following message appears:

```
Windows Service For UNIX v3.5 Creo Installer

SFU will be installed in C:\SFU


Please select the components you wish to install:

[1] NFS Client only

[2] NFS Server only

[3] Both NFS Client and NFS Server

[90051] Uninstall SFU (use with caution!)

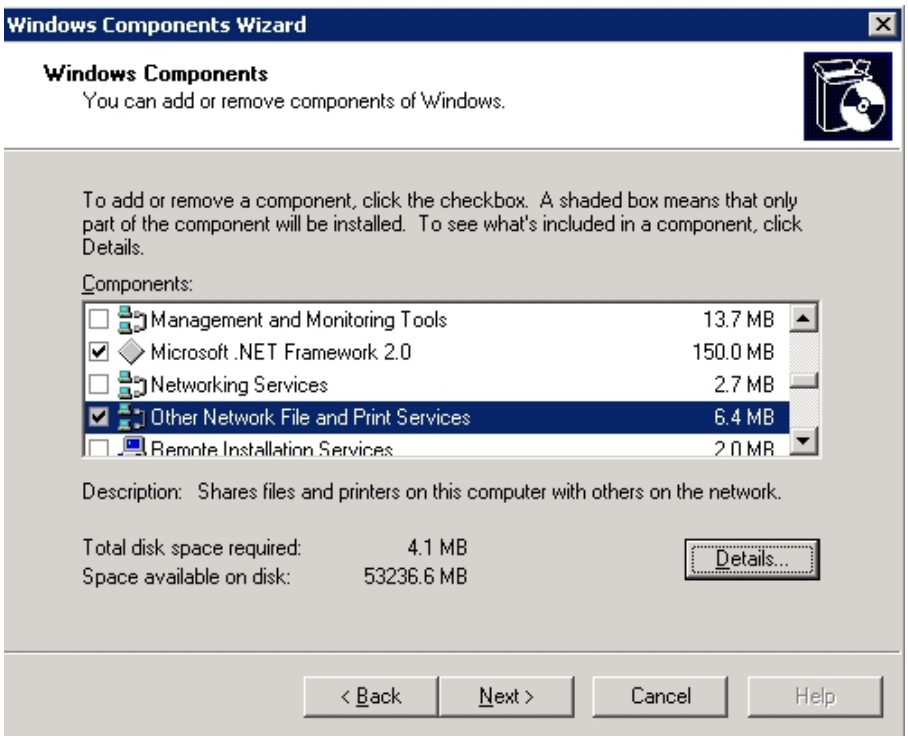

Type in your selection and press ENTER:
```

4. Select the component(s) you want to install.
5. Press ENTER. A message appears when the installation is completed.

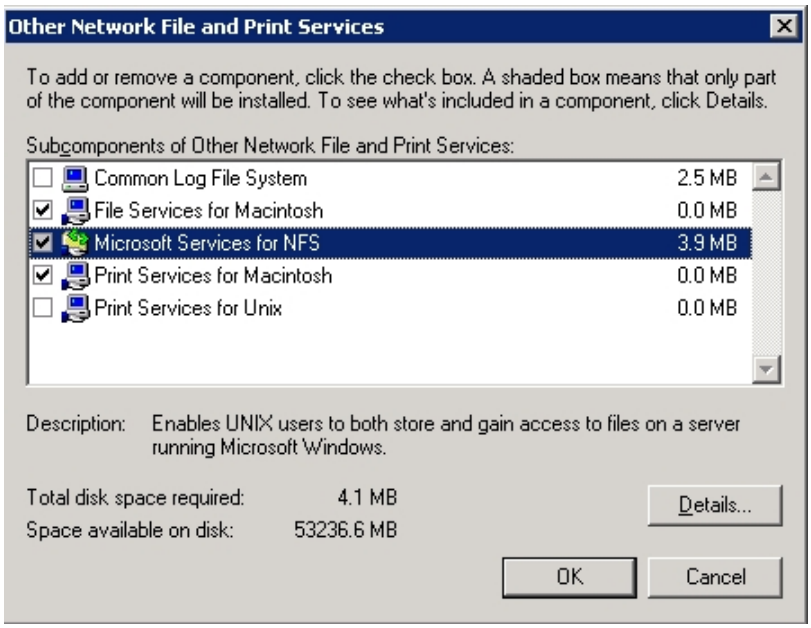
3.2.2 Installing NFS for Windows Server 2003 R2

Use the Add/Remove Windows Components Wizard to install Services for NFS.

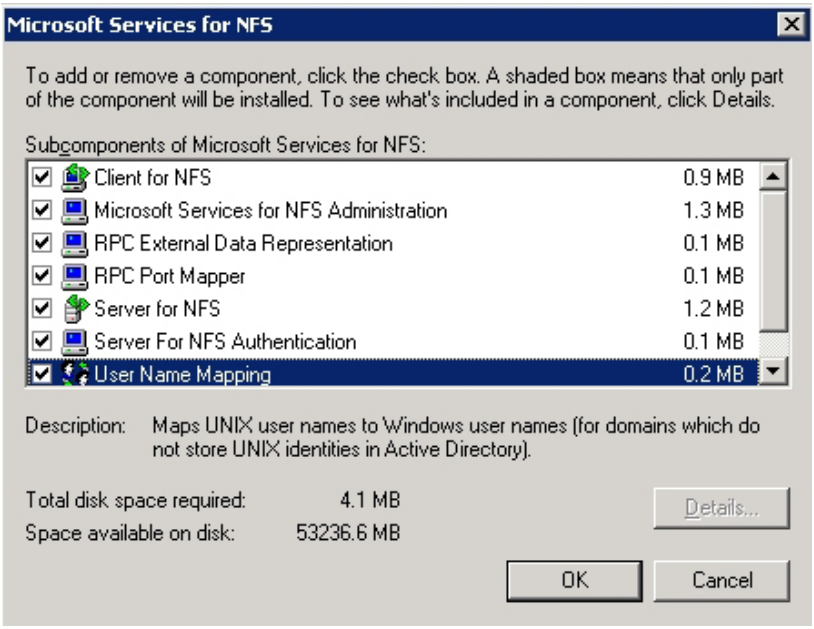
1. Select **Start > Settings > Control Panel > Add or Remove Programs**.
2. In the left pane, click **Add/Remove Windows Components** to start the wizard.
3. From the Windows Components Wizard menu, double-click **Other Network File and Print Services**.



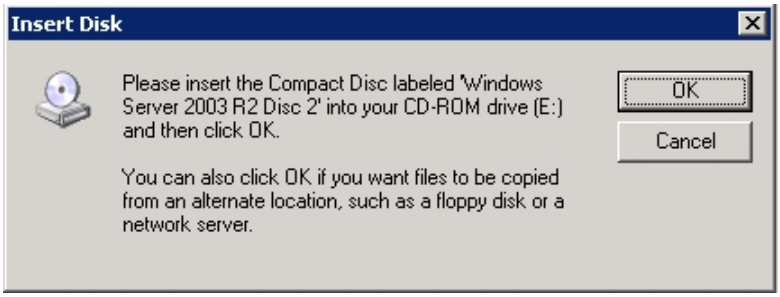
4. In the Other Network File and Print Services dialog box, double-click **Microsoft Services for NFS**.



5. In the Microsoft Services for NFS dialog box, select **Client for NFS**, **Server for NFS**, or both, and select **User Name Mapping** and **Server For NFS Authentication**. All other required components will be automatically selected.



6. Click **OK**.
7. In the Other Network File and Print Services dialog box, click **OK**.
8. In the Windows Components Wizard dialog box, click **Next**.
9. Insert the Windows Server 2003 R2 Disk 2 in the CD-ROM drive (if requested).



10. In the Windows Components Wizard dialog box, click **Finish**.

3.3 Replacing the Default group and passwd Files

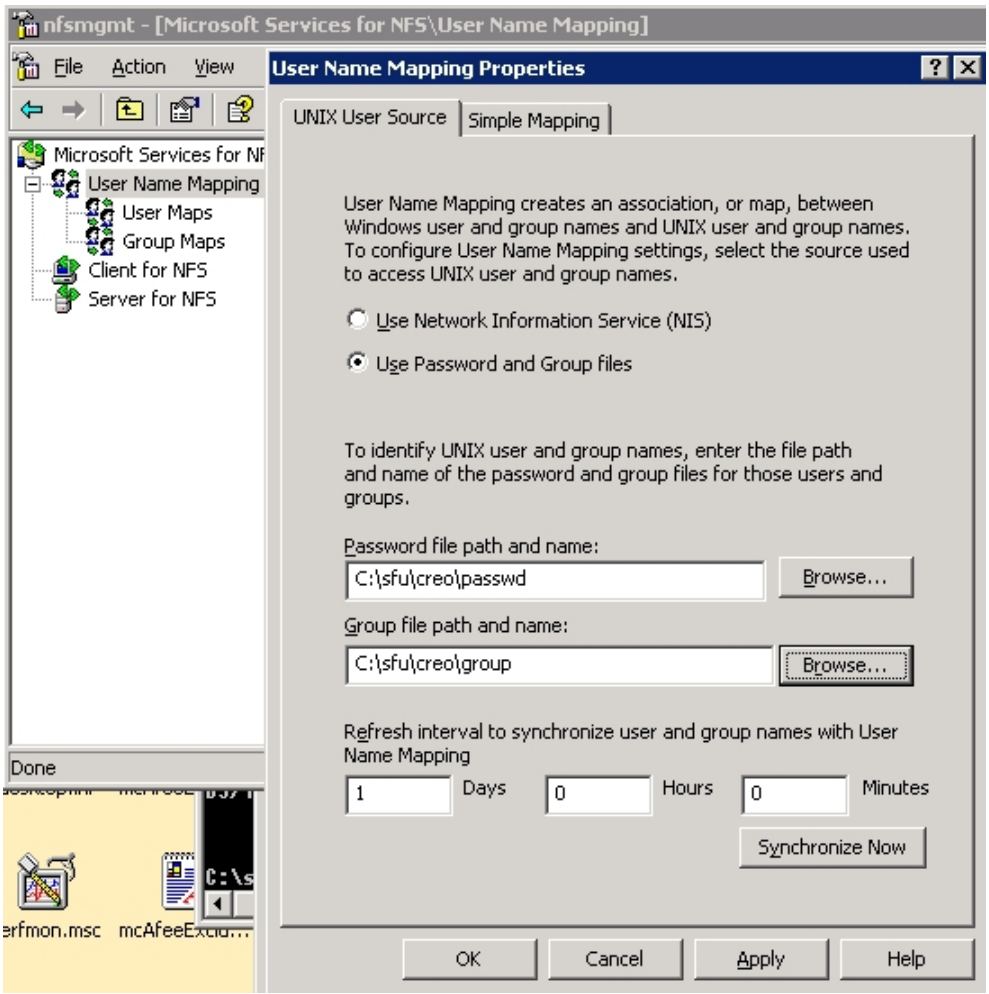
Copy the **passwd** (password) and **group** files from the **/etc** folder on the UNIX server to **<system drive>\SFU\Creo**. Replace the files that are already there. Ensure that you replace both the **passwd** and **group** files.

You can perform this operation using FTP, NFS, SMB, or floppy disks. Instructions are not included here, as the procedure will vary depending on which configuration of UNIX and method of copying that you use.

After copying the **passwd** and **group** files, restart the Windows server.

For Windows Server 2003 R2 only:

1. Start **nfsmgmt.msc**.
2. Right-click **User Name Mapping** and select **Properties**.
3. Select **Use Password and Group Files**.
4. Locate the **passwd** and **group** files to fill in the appropriate information.



5. Click **Apply**, and then click **OK**.

3.4 Configuring NFS Server

If you did not install NFS Server in Section 3.2, proceed to Section 3.5, *Configuring NFS Client.* For screen shots of the default configuration, see Appendix A.

3.4.1 Configuring User Name Mapping

There are two kinds of user maps: simple and advanced. Simple maps (with map permissions based on user name) are usually insufficient, because they rely on matching user names on both the UNIX and Windows systems. This is something that almost never occurs with Kodak workflow software systems, so you must use advanced maps.

Advanced maps allow permissions mapping between two different user names. For example, **root** can be mapped to allow Administrator permissions.

Note: This section explains how to set up mapping for connection to a Kodak Brisque® workflow system. It can also be used as a template for other workflow products and third-party UNIX servers. To do this, replace the **group** and **passwd** files as described above, and then substitute the user names and group names as appropriate.

SFU 3.5 User Name Mapping for Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, and Windows XP Professional

1. Open the SFU Administration tool: select **Start > Programs > Services for UNIX**.
2. Select **User Name Mapping**.
3. From the upper menu, select **Maps**. The Maps options appear.
4. Open the **Show User Maps** link. The link name changes to **Hide User Maps**. If the users are not listed, click **List Windows Users** and **List UNIX Users**. You may need to select the Windows domain name if you are in a domain environment.
5. In Windows users, select **Administrator**.
6. In UNIX users, select **Scitex**.
7. Click **Add**. The message: `Are you sure you want to set advanced mapping for this account?` appears.
8. Click **OK**. The mapping appears in the mapped users list.
9. Create other user maps if required. For Prinergy, the Araxi service logon account should be mapped to UNIX users, **Scitex**. Select this mapping as the primary map.
10. Open the **Show Group Maps** link. The link name changes to **Hide Group Maps**. If the groups are not listed, click **List Windows Groups** and **List UNIX Groups** to display the group lists.
11. In the Windows group list, select **Administrators**.
12. In the UNIX groups list, select **Scitex**.
13. Click **Add**. A dialog box appears.
14. Click **OK**. The mapping appears in the mapped groups list area.
15. Click **Apply**.

Microsoft Services for NFS User Name Mapping for Windows Server 2003 R2

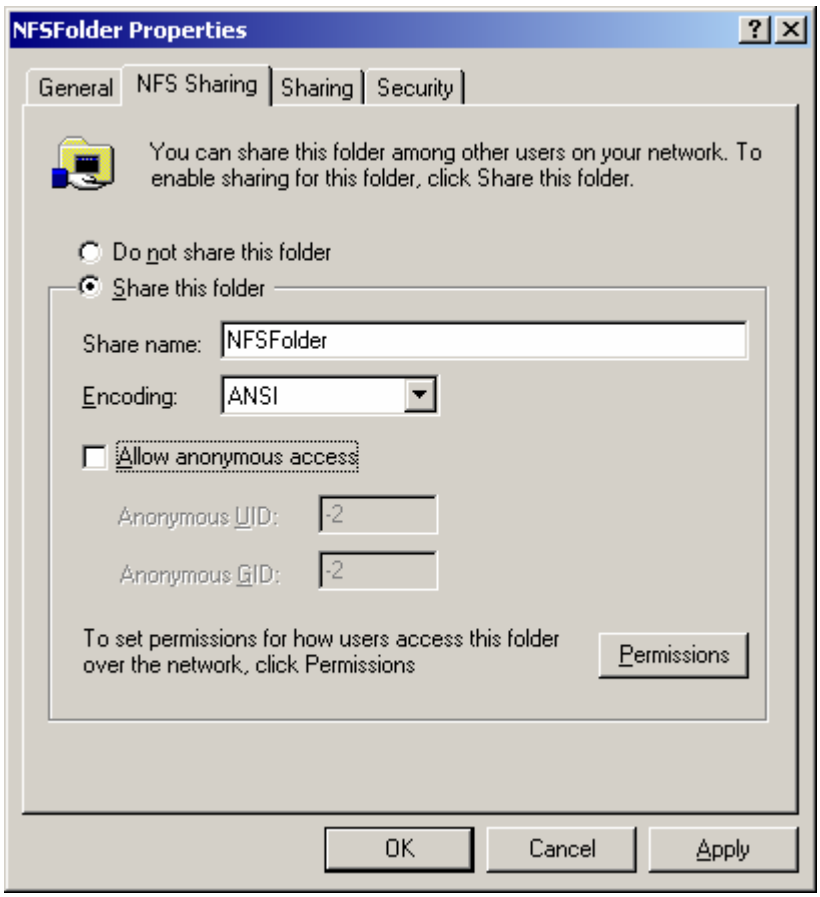
1. Start **nfsmgmt.msc**.
2. Locate **Microsoft Services for NFS > User Name Mapping > User Maps**.
3. Right-click **User Maps** and select **Create Map**.
4. In the Create Advanced User Mapping wizard, select **List Windows Users** and **List UNIX Users**.

5. Select the Windows user and UNIX user that you want to map (**Administrator > Scitex**, for example) and click **Add**. The mapping will appear in the right pane of the **nfsmgmt** window. Add other user mapping if required. For Prinergy systems, the Araxi service logon account should be mapped to the **UNIX user Scitex**. Select this mapping as the primary map.
6. Right-click **Group Maps** and select **Create Map**.
7. In the Create Advanced Group Mapping wizard, select **List Windows Groups** and **List UNIX Groups**.
8. Select the Windows group and UNIX group that you want to map (**Administrator > Scitex**, for example) and click **Add**. The mapping will appear in the right pane of the **nfsmgmt** window. Add other group mapping if required.

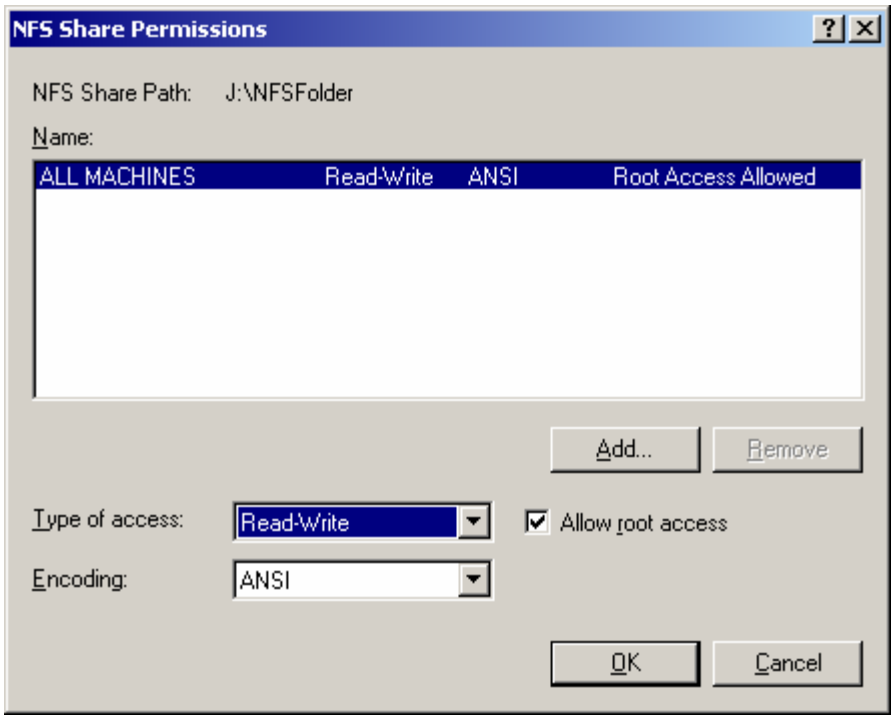
3.4.2 Creating NFS Shares

You create NFS shares (also known as *exports*) as follows:

1. In Windows Explorer, right-click the folder you want to share and select **Properties**.
2. Select **NFS Sharing**.



3. In the **Share name** box, type the share name that you want.
4. If needed, select **Allow anonymous access** and set the **UID** and **GID** appropriately (both should be set to 200 for Brisque access).
5. Click **Permissions**.



6. From the **Type of access** list, select **Read-Write**, and, if necessary, select **Allow root access** (usually not necessary for Brisque® access).

7. Click **OK**, and **OK** again to close both dialog boxes.

3.5 Configuring NFS Client

If you did not install NFS Client in Section 3.2, skip this section.
For screen shots of the default configuration, see Appendix A.

3.5.1 Adding a New User to the UNIX Server

Ideally, Windows should connect to the UNIX server with a unique user name rather than a pre-existing account. This allows for easier administration and rights assignment.

Consult the UNIX documentation or the administrator for the UNIX server for information on how to add a new user and how to administer directory permissions for that specific operating system.

Note: If you are using SFU NFS Client to access Brisque 2.x, 3.x, or 4.x, you *must* create a new user who is a member of the Scitex group. The default accounts may work unreliably or not at all. You can do this through the System Management Interface Tool (SMIT). Consult the Brisque documentation for detailed instructions. This does not apply to using SFU NFS Server only.

3.5.2 Configuring User Name Mapping

See Section 3.4.1, *Configuring User Name Mapping*.

3.6 Uninstalling SFU 3.5 and Services for NFS

3.6.1 Uninstalling SFU 3.5 in Windows Server 2000, Windows 2000 Professional, Windows Server 2003 R1, and Windows XP Professional

Using the Uninstall option in the installation menu uninstalls SFU completely. A full installation and reconfiguration must be performed if you wish to re-install SFU. Do not uninstall SFU at a customer site unless you are qualified to do so and uninstallation is a requirement. To uninstall SFU:

1. Insert the SFU Installer CD in the CD-ROM drive.
2. Run **Creo_Installer.cmd**.
3. The following message appears:

```
Windows Service For UNIX v3.5 Creo Installer
SFU will be installed in C:\SFU


Please select the components you wish to install:
[1] NFS Client only
[2] NFS Server only
[3] Both NFS Client and NFS Server
[90051] Uninstall SFU (use with caution!)


Type in your selection and press ENTER:
```

4. Type `90051`.
5. Press ENTER.
6. Answer **Yes** to any prompts that appear as the uninstallation proceeds.
7. When the uninstallation is completed, select **Yes** to restart the server.

3.6.2 Uninstalling Services for NFS in Windows Server 2003 R2

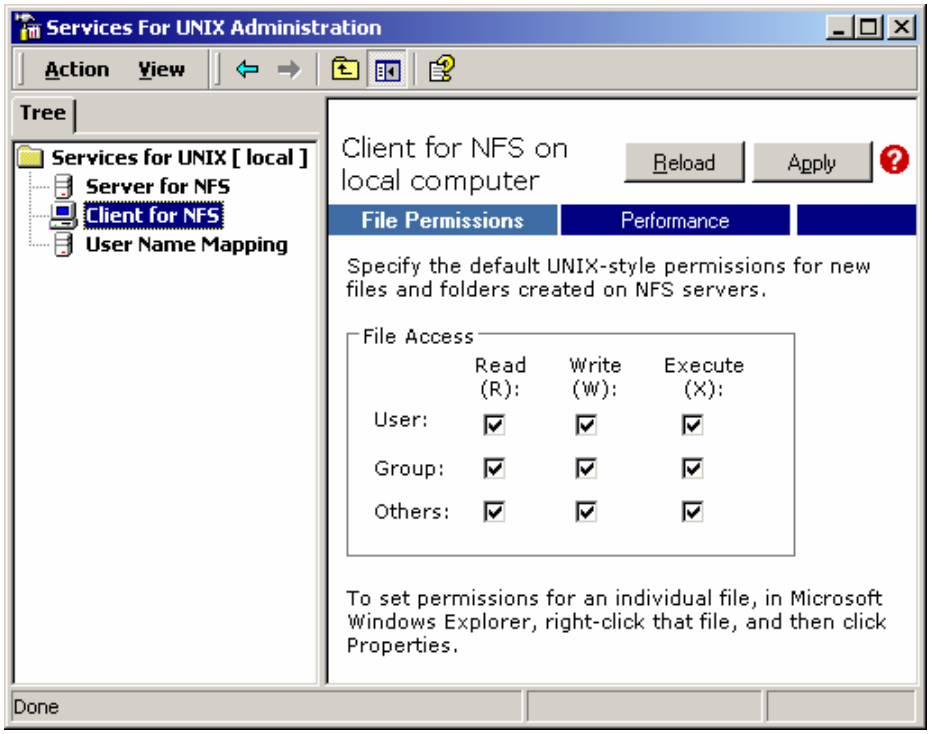
Use the Add/Remove Windows Components Wizard to remove Services for NFS.

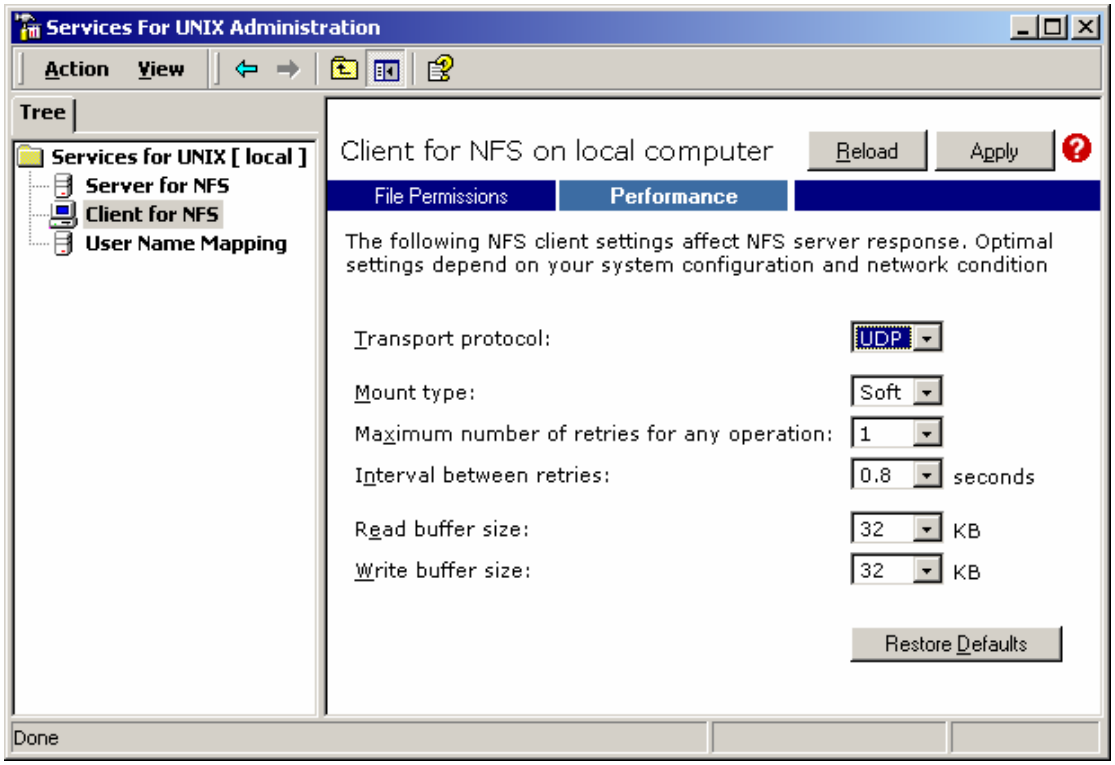
1. Select **Start > Settings > Control Panel > Add or Remove Programs**.
2. Click **Add/Remove Windows Components** to start the wizard.
3. From the Windows Components Wizard menu, double-click **Other Network File and Print Services**.
4. In the Other Network File and Print Services dialog box, clear the **Microsoft Services for NFS** check box.
5. Click **OK** and follow the wizard instructions to finish uninstalling Services for NFS.

4 APPENDIX A: DEFAULT SETTINGS FOR SFU 3.5

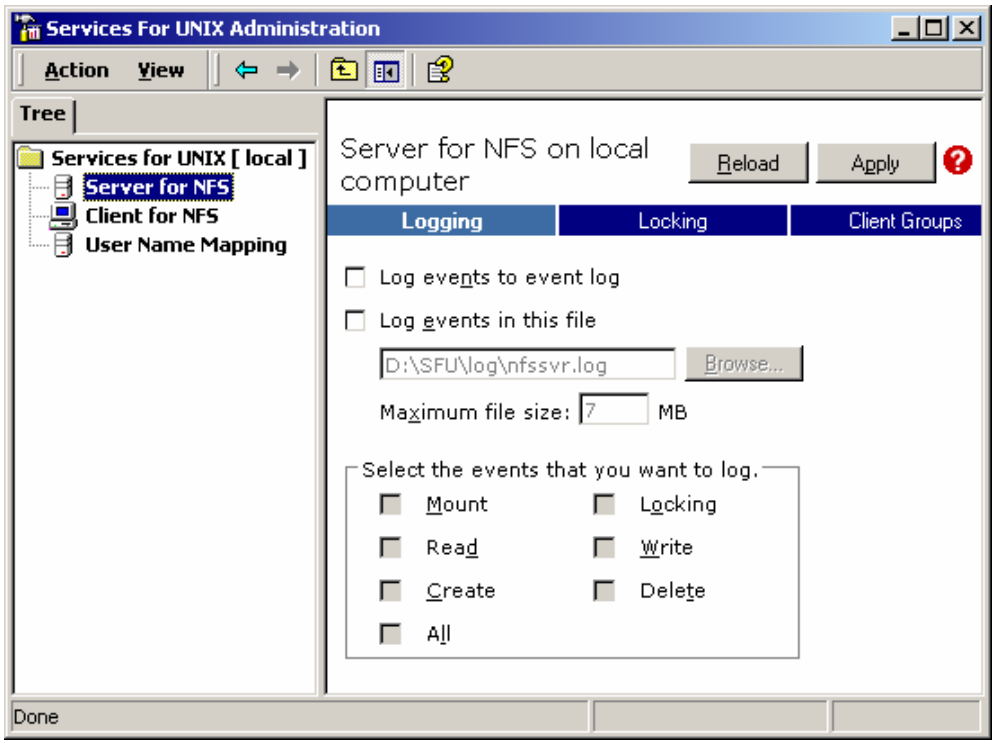
The following screen shots show the default settings for Services for UNIX 3.5.

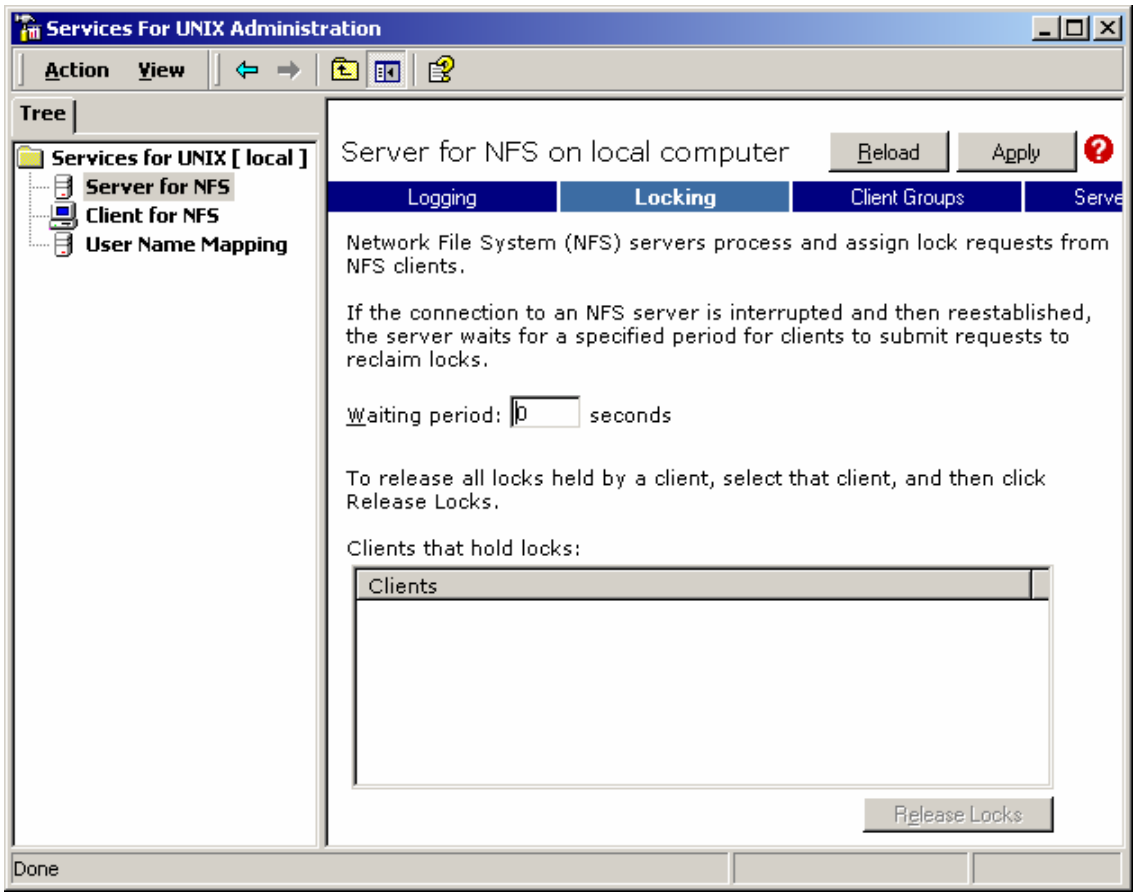
4.1 NFS Client

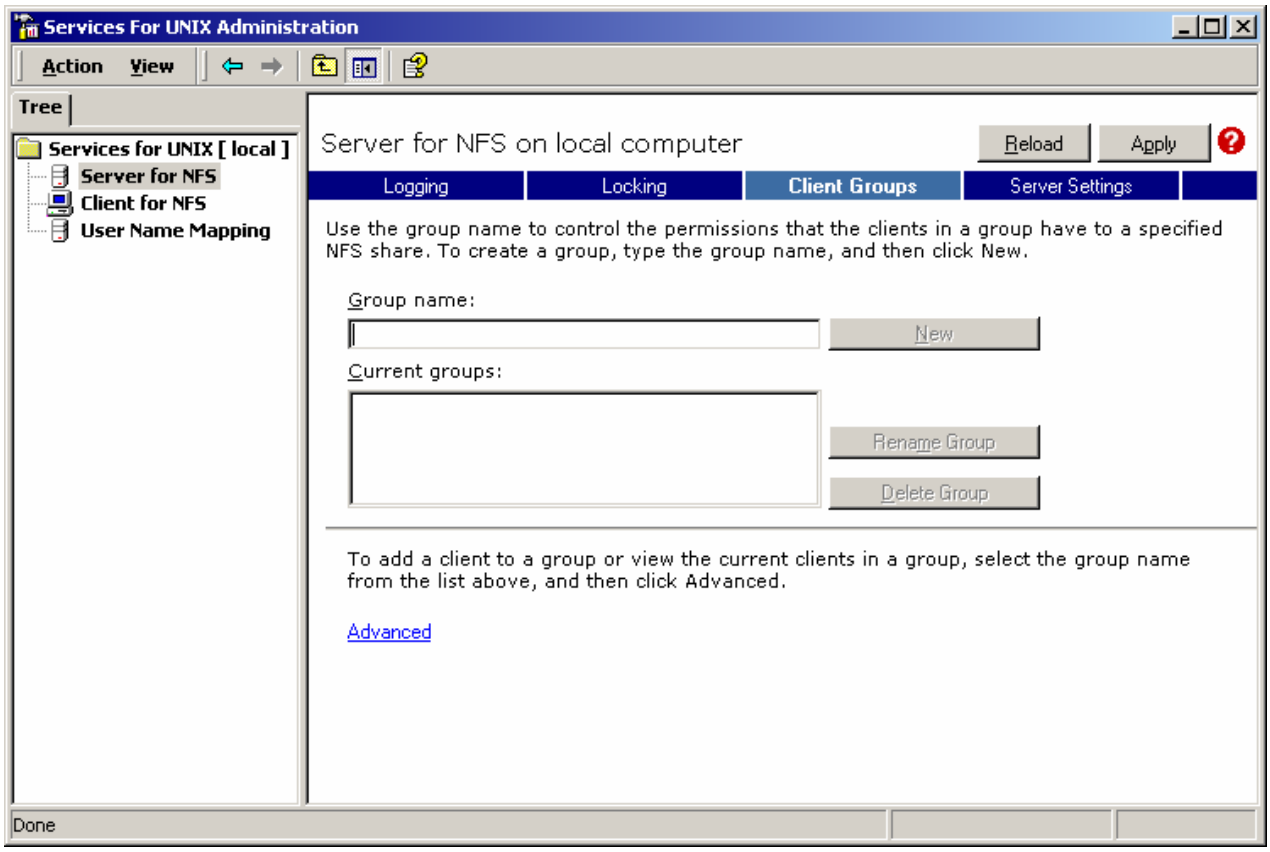


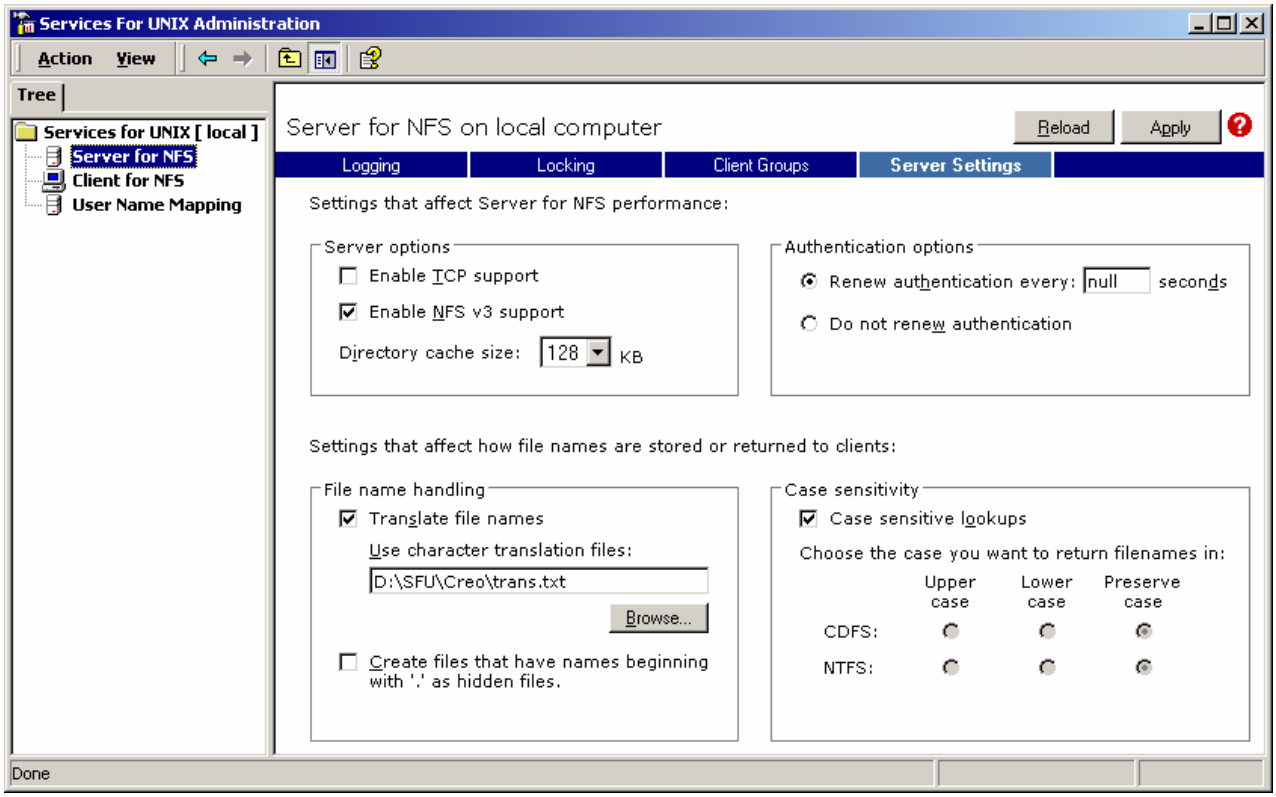


4.2 NFS Server

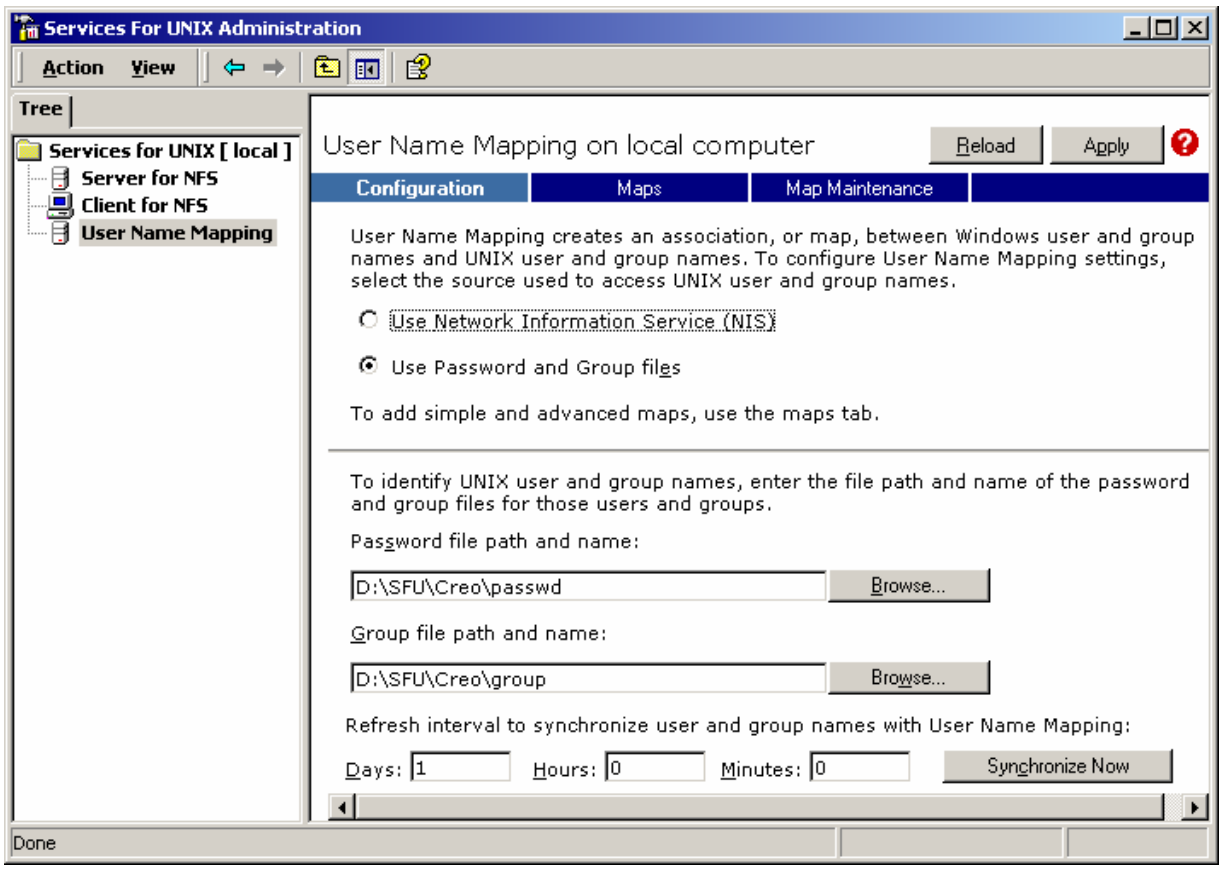


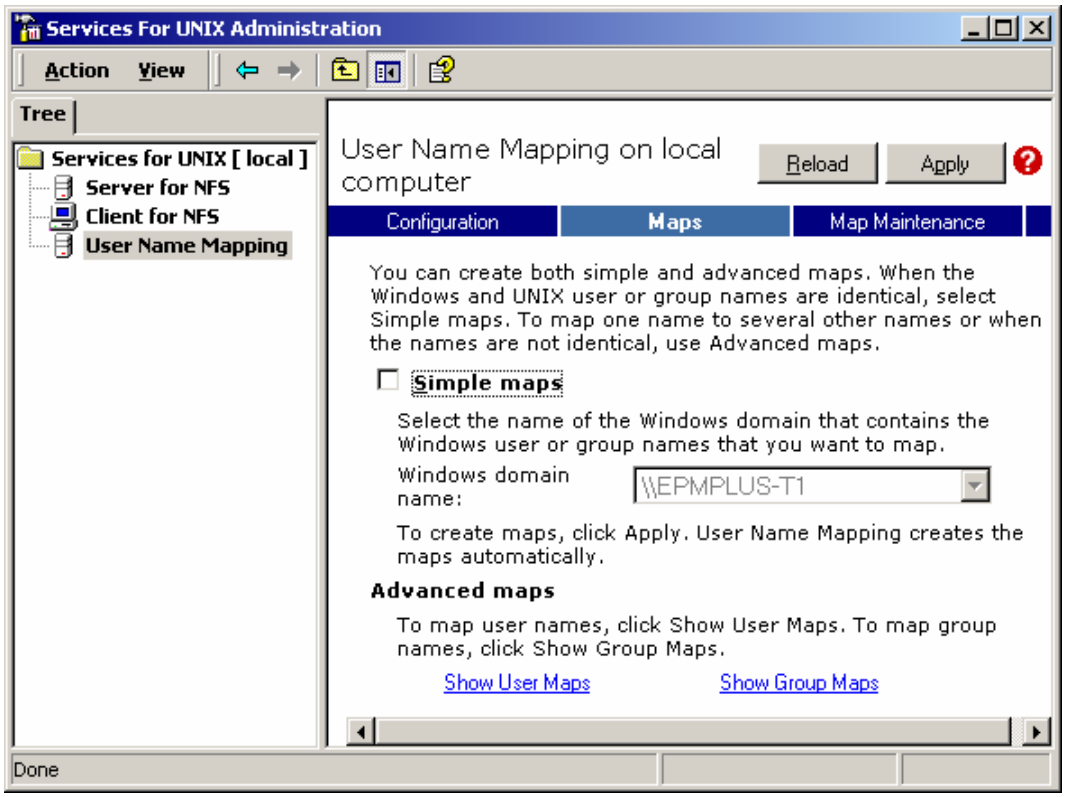


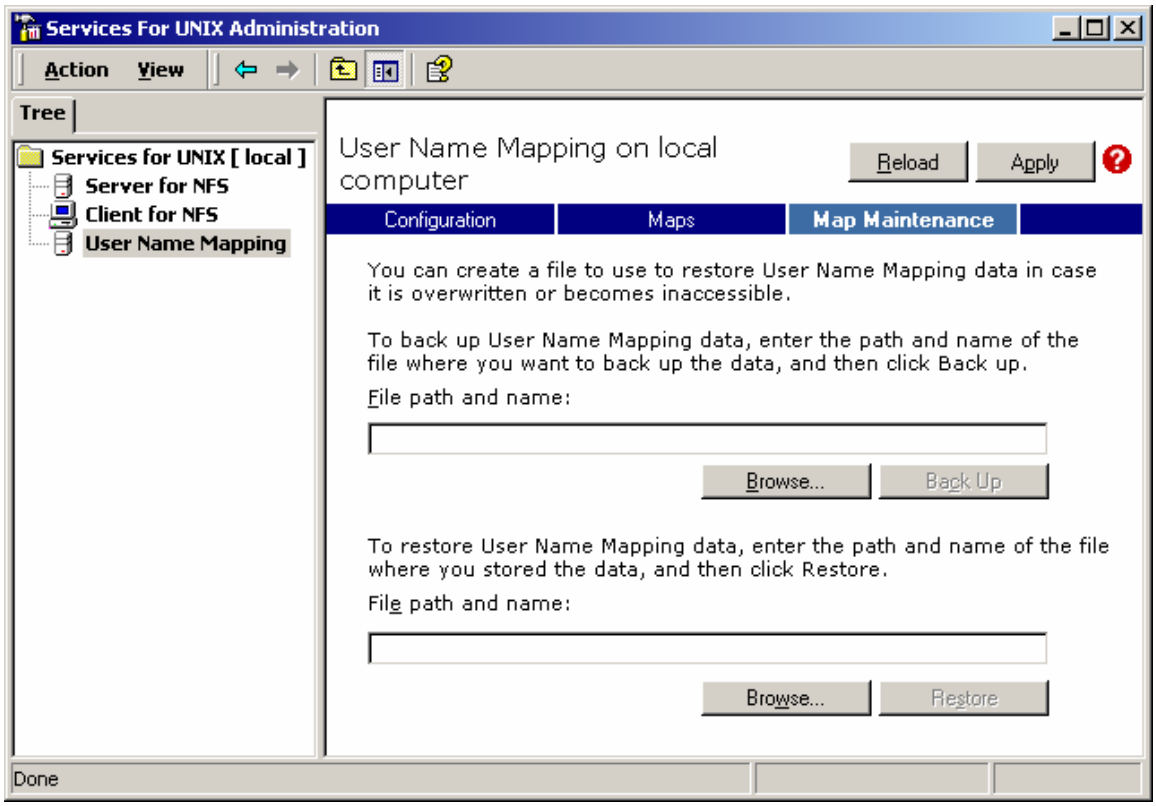

Services For UNIX Administration
Action View
Tree
Services for UNIX [local]
Server for NFS
Client for NFS
User Name Mapping
Server for NFS on local computer
Reload
Apply
Logging
Locking
Client Groups
Server Settings
Use the group name to control the permissions that the clients in a group have to a specified NFS share. To create a group, type the group name, and then click New.
Group name:
New
Current groups:
Rename Group
Delete Group
To add a client to a group or view the current clients in a group, select the group name from the list above, and then click Advanced.
Advanced
Done


Services For UNIX Administration
Action View
Tree
Services for UNIX [local]
Server for NFS
Client for NFS
User Name Mapping
Server for NFS on local computer
Reload
Apply
Logging
Locking
Client Groups
Server Settings
Settings that affect Server for NFS performance:
Server options
Enable TCP support
Enable NFS v3 support
Directory cache size: 128 KB
Authentication options
Renew authentication every: null seconds
Do not renew authentication
Settings that affect how file names are stored or returned to clients:
File name handling
Translate file names
Use character translation files:
D:\SFU\Creo\trans.txt
Browse...
Create files that have names beginning with '.' as hidden files.
Case sensitivity
Case sensitive lookups
Choose the case you want to return filenames in:
Upper case
Lower case
Preserve case
CDFS:
NTFS:
Done

4.3 User Name Mapping






Services For UNIX Administration
Action
View
Tree
Services for UNIX [local]
Server for NFS
Client for NFS
User Name Mapping
User Name Mapping on local computer
Reload
Apply
Configuration
Maps
Map Maintenance
You can create a file to use to restore User Name Mapping data in case it is overwritten or becomes inaccessible.
To back up User Name Mapping data, enter the path and name of the file where you want to back up the data, and then click Back up.
File path and name:
Browse...
Back Up
To restore User Name Mapping data, enter the path and name of the file where you stored the data, and then click Restore.
File path and name:
Browse...
Restore
Done

5 APPENDIX B: VERITAS STORAGE REPLICATOR REGISTRY MODIFICATIONS

Double-Take works with SFU, but if Veritas Storage Replicator—part of Emergency Platemaking Plus (EPM+)—is installed on the server on which you plan to install SFU, you must make some registry modifications. Otherwise, after you install SFU, one of two things will happen:

- Veritas Storage Replicator (VSR) will not start and will report the following error message: `The dependency service or group failed to start (NobleNEt Portmapper or portmap)`.
- Services for NFS will not start because `portmap` could not start.

When SFU is installed first, VSR will successfully use the portmapper provided by Microsoft and will work properly. However, if VSR is installed first, the Microsoft portmapper tries to assert itself. This causes a conflict, and the VSR services to fail to start. One system cannot have two portmappers running.

The following procedure will allow VSR to run on the Microsoft portmapper:

1. Confirm that SFU is on the system: select **Start > Programs > Windows Service for UNIX**.
2. From **Programs > Administrative Tools > Services**, select **Noblenet Portmapper for TCP Service**, right-click, and select **Stop**. This may stop other services that are dependent on Noblenet Portmapper.
3. Change the Noblenet Portmapper for TCP Startup Type to **Manual** (default is **Automatic**).
4. Using **regedt32** (not regedit), locate **HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\ENL** and delete the **DependOnService** value. (The ENL does not need a portmapper.)
5. Locate **HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\RxRsa** and edit its **DependOnService** value. Change NoblenetPortmapper to **portmap**. Ensure that the order remains the same and do not add or remove any lines.
6. Copy **winrpc32.dll** from **C:\Program Files\Common Files\VERITAS Shared\Vsr** to **C:\Program Files\VERITAS Storage Replicator**. This file must reside in both locations.
7. Restart the server.

Note: In some cases, after SFU is installed on a server with VSR, server desktop response slows down. The workaround procedure is:

1. Uninstall VSR and SFU.
2. Reinstall SFU and restart the server.
3. Reinstall VSR.

If the server is a primary, reinstall and configure VSR using the instructions in the VSR installation procedure.

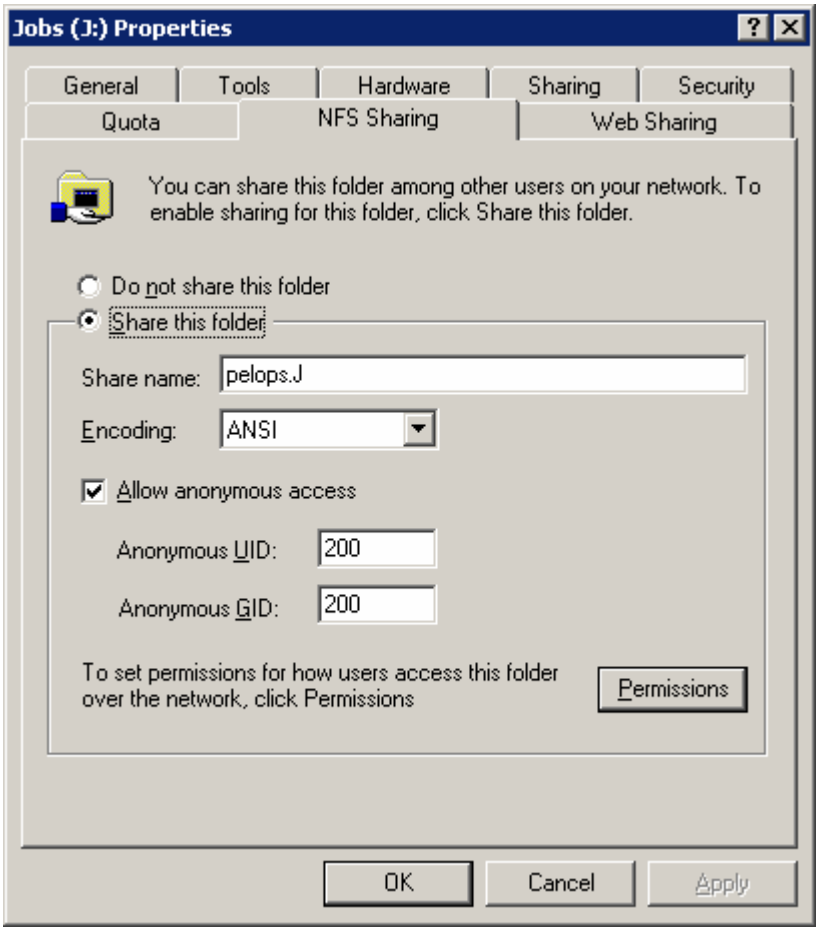
6 APPENDIX C: DIRECTOR AND BRISQUE SERVER NFS SHARE VOLUME CONFIGURATION

Section 6.1 describes how to configure an NFS share volume on the Prinergy Director server for Brisque, so you can home jobs on it. After you have correctly configured the NFS share volume, the procedure in Section 6.2 describes how to use the Brisque client to mount the NFS share volume. You must perform this procedure after the SFU software has been installed successfully on the Director server.

6.1 Configuring the NFS Share Volume on the Director Server

1. On the desktop, double-click **My Computer**.
2. In the My Computer directory, right-click the **Jobs (J:)** drive and select **Properties**.
3. Select **Properties > NFS Sharing**.
4. In **Share name**, type the Director server name: **<server name.J>**. In the example below, the share name **<pelops.J>** has been created for the Director server **pelops**.

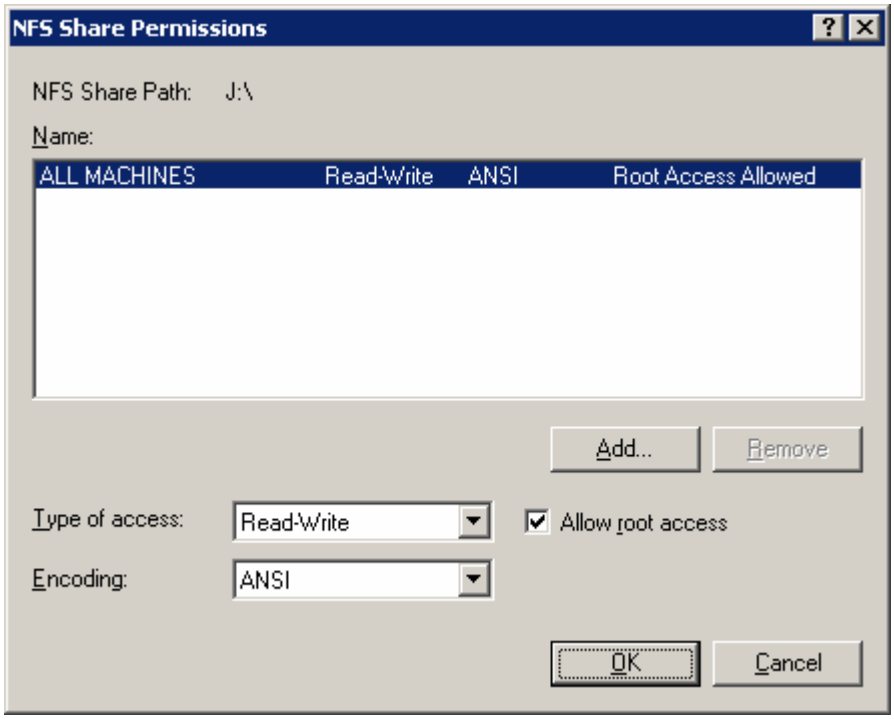
   Ensure that the other NFS Sharing settings are as shown:



5. Click **Permissions**.

The NFS Share Permissions dialog box appears.

6. Ensure that the settings are as shown:



7. Click **OK**.

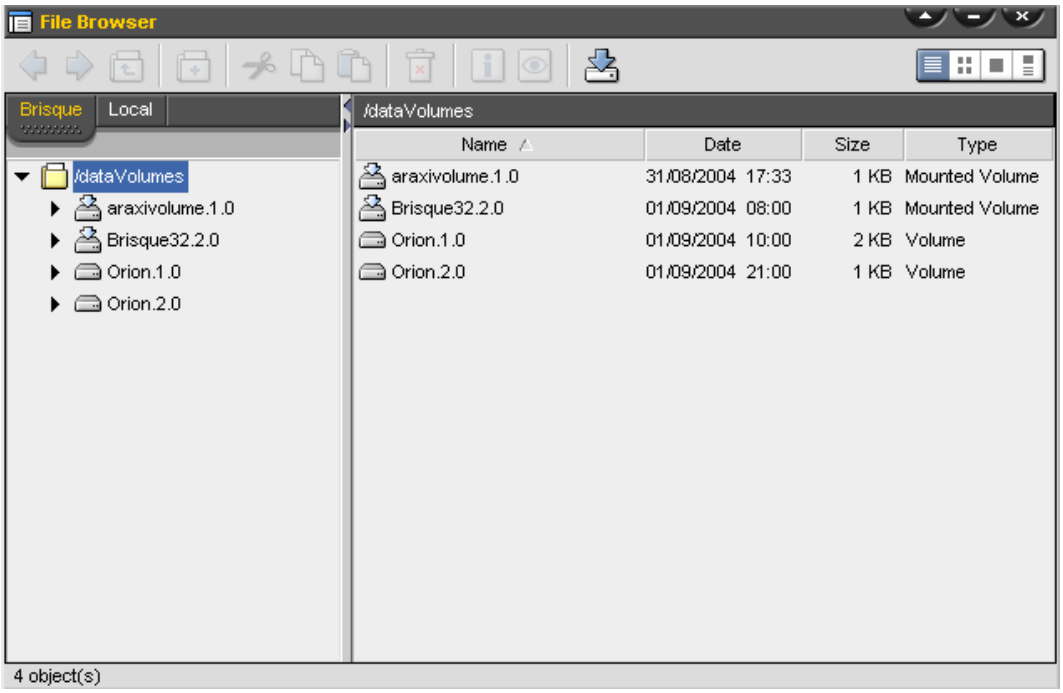
Note : You do not need to restart the computer for the changes to take effect.

6.2 Mounting the Director NFS Share Volume on the Brisque Server

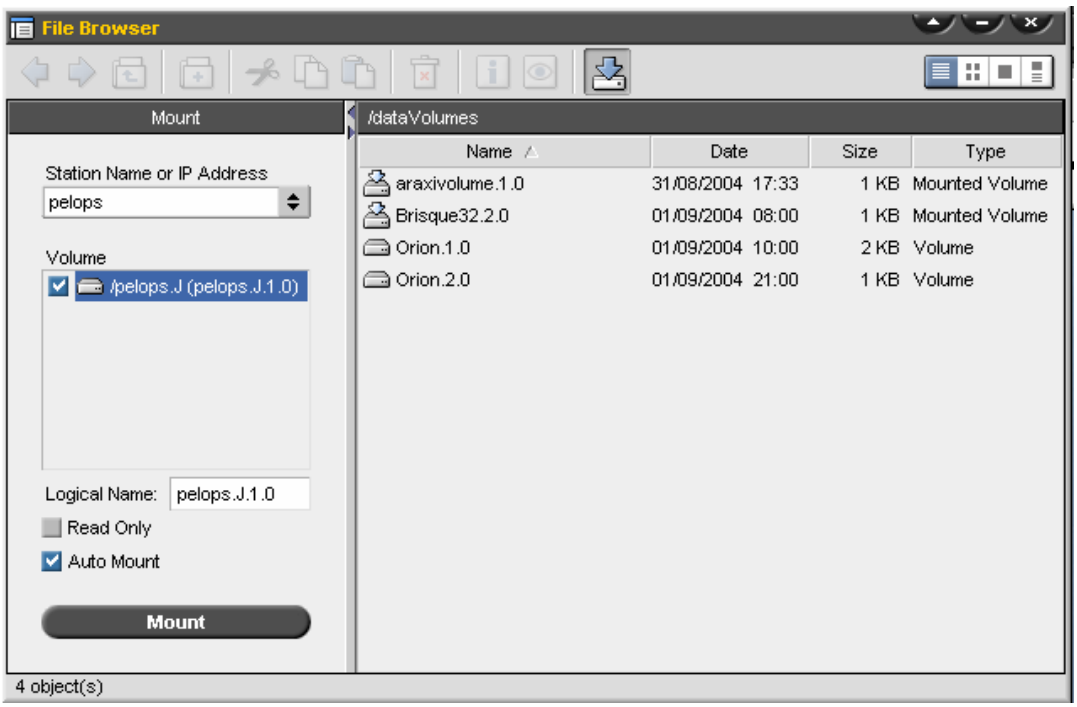
The examples in this procedure describe how to mount the NFS share volume (**pelops.J**) created in Section 6.1.

1. On the Brisque client, click the file browser icon.

   The File Browser window appears.



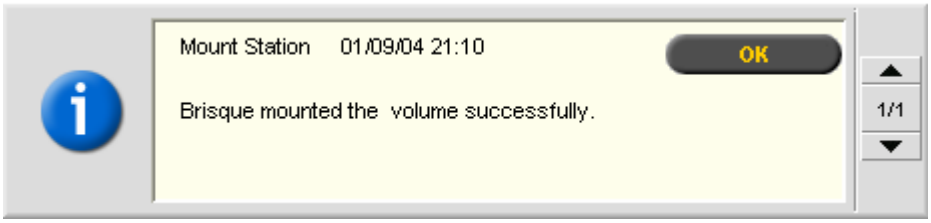
2. Click the **Mount** icon. The Mount section opens in the left File Browser pane.
3. In the Mount section, type the Station Name or IP address of the Director server.



4. Press ENTER.
5. Check the appropriate NFS share **Volume** on the Director server (pelops.J, in this example).

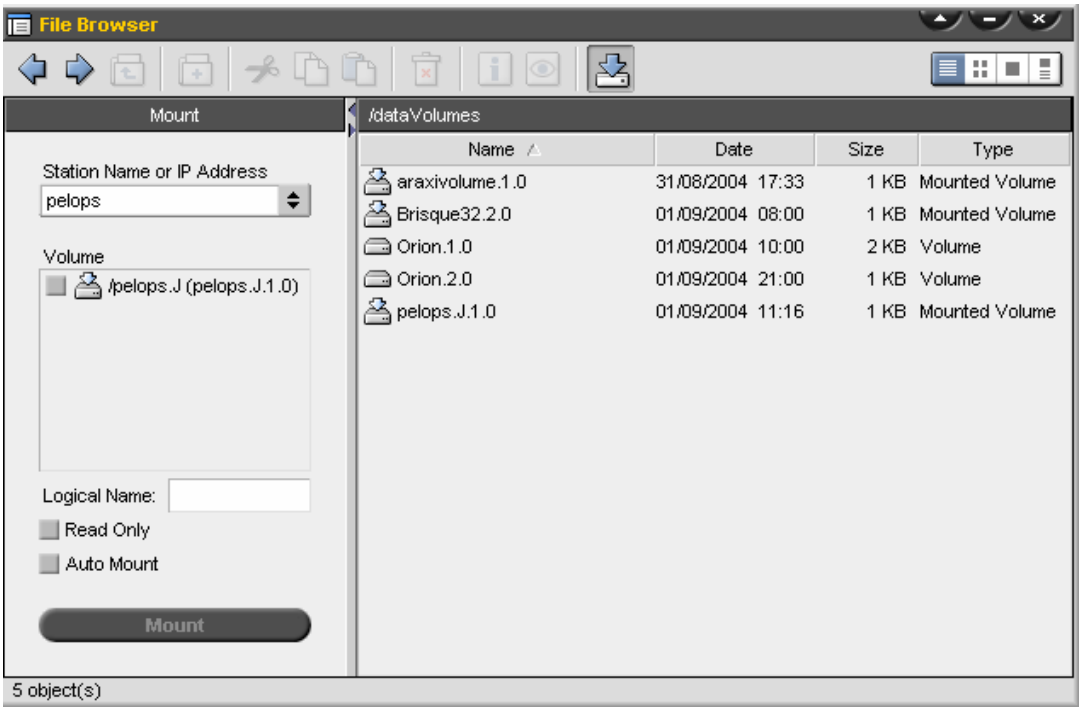
   Note: The Brisque server automatically assigns a prefix <**1.0**> to the names of dataVolumes. For example, the name of the pelops.J dataVolumes NFS share will be <**pelops.J.1.0**>.
6. Check **Auto Mount**.
7. Click **Mount**.

   The Mount Station success message appears.



8. Click **OK**.

   The mounted volume appears in the /data Volumes list.



Note: You do not need to restart the computer for the changes to take effect.

7 APPENDIX D: NFS CLIENT SUPPORT FOR SYMBOLIC LINKS ON A UNIX SERVER

To support symbolic links within NFS exports, you must create the following registry values on the Windows server that is running NFS Client:

- **HKLM\SOFTWARE\Microsoft\Client for NFS\CurrentVersion\Users\Default\ Defaults\MountSymlinkTargetShare = 1 (DWORD)**
- **HKLM\SOFTWARE\Microsoft\Client for NFS\CurrentVersion\Default\ DisplayAllLinks = 1 (DWORD)**

Renaming folders from the Windows client when the folder is in a symbolic link folder that is two or more levels deep sometimes does not work. For example, you may not be able to rename folders in **/folder1/Jobs** located at **/folderA/folderB/folder1/Jobs**.

To work around this problem, reset the symbolic link as **/folderA/folderB/folder1**. This will allow you to rename folders in **/folder1/Jobs**.