



NTP Software QFS® for NAS, IBM® N Series Edition Installation Guide

This *Installation Guide* applies to all NTP Software QFS for NAS, IBM N Series editions.

Abstract

This guide provides a short introduction to installation and initial configuration of NTP Software QFS for NAS, IBM N Series Edition from an administrator's perspective. Upon completion of the steps within this document, NTP Software QFS for NAS, IBM N Series Edition will be installed within your enterprise community.

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Introduction

Thank you for your interest in NTP Software QFS for NAS, IBM N Series Edition. NTP Software QFS controls storage for millions of users worldwide. NTP Software QFS for NAS, IBM N Series Edition extends our best-of-breed technology to include the IBM N Series family of products, allowing you to manage Windows and NAS-hosted storage as a seamless whole.

Given the architecture of your filer, NTP Software QFS for NAS, IBM N Series Edition does its job remotely. It is part of NTP Software QFS Family of Products and uses a connector service to create a bridge and include IBM N Series filers as full participants in storage environments controlled by QFS. In light of this approach, you will need to install the NAS connector on one of the Windows 2000 or 2003 machines in your environment. This may be an existing server or workstation, or a standalone system.

To be managed by QFS, your IBM N Series filer must be running version 6.5 or later of the Data ONTAP operating system. NTP Software QFS for NAS, IBM N Series Edition can be used to manage IBM N Series filers, vFilers, and IBM N Series clusters — or any combination of these systems. QFS imposes no restrictions on how you organize or manage your storage. You can impose policies on individual directories, users, and/or groups of users.

Note: If you want to use email-based messaging and notifications, you will need access to an email server as well.

To install QFS on Windows, you need to log in with an ID that has Administrator rights on the machine. You will be installing four different services: the NTP Software Smart Policy Manager service, the QFS service, the NAS Connector service, and the QFS Watchdog service.

The NTP Software Smart Policy Manager service should be installed with a domain user account as its service account so that it can communicate with your mail system and other storage servers with which it may share policies. The QFS service requires a domain user account with local administrative rights on the IBM N Series filer. The NAS Connector service uses this account as well.

Your hardware should be appropriate for the services running on each machine. The connector itself and NTP Software QFS for NAS, IBM N Series Edition impose almost no load on either machine.

Preparing the IBM N Series Filer

Although QFS for NAS does not install any components on the IBM N Series filer, you will need to enable the Data ONTAP fpolicy management service. Follow these steps:

1. Log into the filer with an account that has administrative privileges.
2. At the prompt, execute the following command:
`fpolicy create NTPSoftware_QFS screen`
3. Execute the following command:
`fpolicy enable NTPSoftware_QFS`
4. To verify that CIFS file policies are now enabled, execute the following command:
`fpolicy`

Data ONTAP versions 7.0.6 and 7.2.2 contain a number of fixes that address stability and memory issues related to fpolicy functionality in Data ONTAP.

The Data ONTAP 7.1 release family is currently not supported with fpolicy.

These steps create the configuration that allows QFS to register with and manage your filer. They must be completed before you try to configure QFS. Later in this document, we will show you how to register a file policy server with the filer.

Requirements



NTP Software QFS for NAS, IBM N Series Edition is a two-tier application that requires a machine to run the QFS software as well as a properly configured IBM N Series filer. Each machine used in this architecture must meet the following minimum requirements.

NTP Software QFS for NAS, IBM N Series Edition Server Requirements

NTP Software QFS for NAS is installed on a server in your environment. The hardware must be suitable for our software operation, and our requirements are the minimum necessary. If your server is also hosting antivirus or other programs, your environment's requirements may be greater than those in the following list.

- 1 GHz CPU
- Windows 2000 SP4 or Windows 2003
- 1GB RAM
- 150MB free disk space
- Network interface card

IBM N Series Filer Requirements

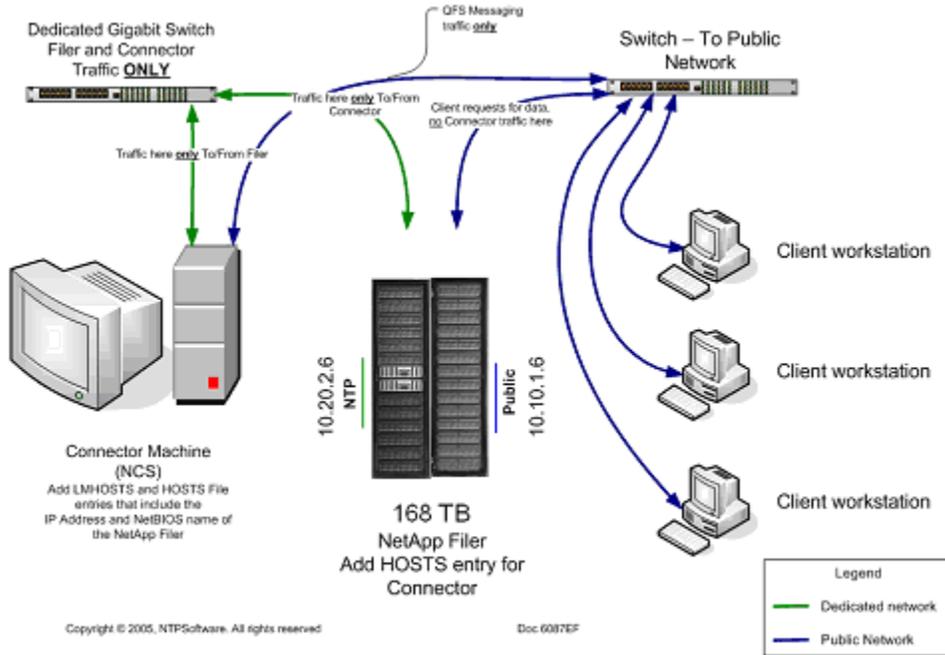
The IBM N Series filer to which NTP Software QFS for NAS, IBM N Series Edition will be connected requires the following:

- Data ONTAP® v. 6.5 or higher
- Network interface card

Note: It is strongly recommended that two network adapters be installed in both the filer and Windows server. The connection between the server and filer should be private — separate from the public network connection. Using a single network adapter will greatly increase the time required to process data, and may cause excessive delays in the environment.

Network Configuration

NTP Software QFS for NAS, IBM N Series Edition Installation Best Practice



!!!!VERY IMPORTANT!!!!

The secondary network connection should be configured as a private and direct connection between the Windows host and the IBM N Series filer.

Installation

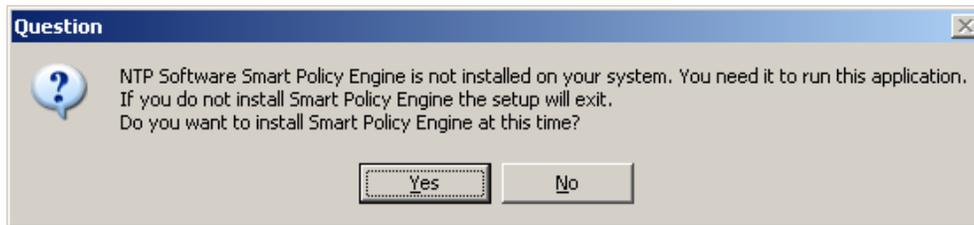
Prior to installing NTP Software QFS for NAS, IBM N Series Edition, NTP Software recommends verifying that the installation server meets the requirements listed in the “Requirements” section of this document.

Installing NTP Software Smart Policy Manager

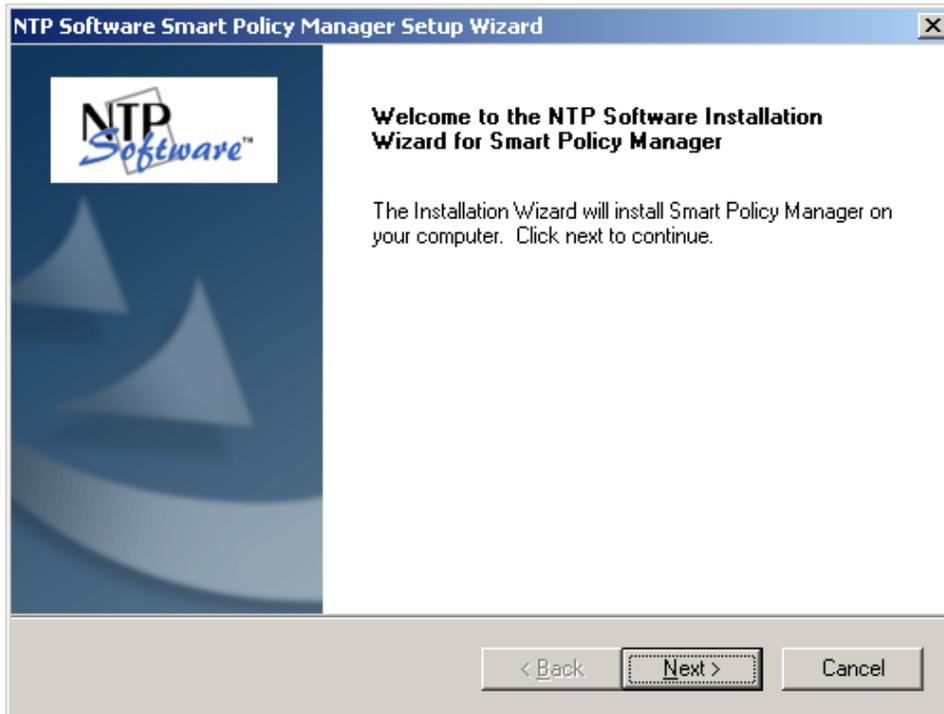
1. Log into your server by using an account with administrator privileges.
2. Place the NTP Software QFS for NAS, IBM N Series Edition CD into the server’s CD-ROM drive. After a few moments, the Installation Wizard’s start window should appear. If the window does not appear, start the installation manually by using Windows Explorer to select your CD-ROM drive and launch **Setup.exe**.

If you downloaded an evaluation copy of NTP Software QFS for NAS, IBM N Series Edition, go to the directory in which the file was downloaded and double-click the **Setup.exe** file.

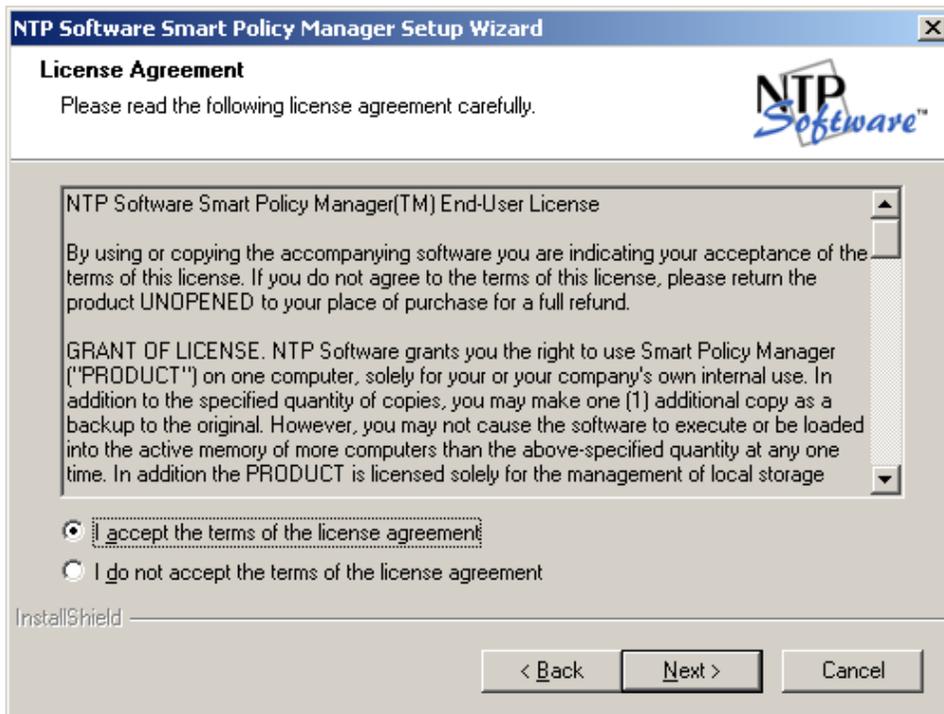
3. If NTP Software Smart Policy Manager is not installed; you will be prompted to install it. Click **Yes** to continue.



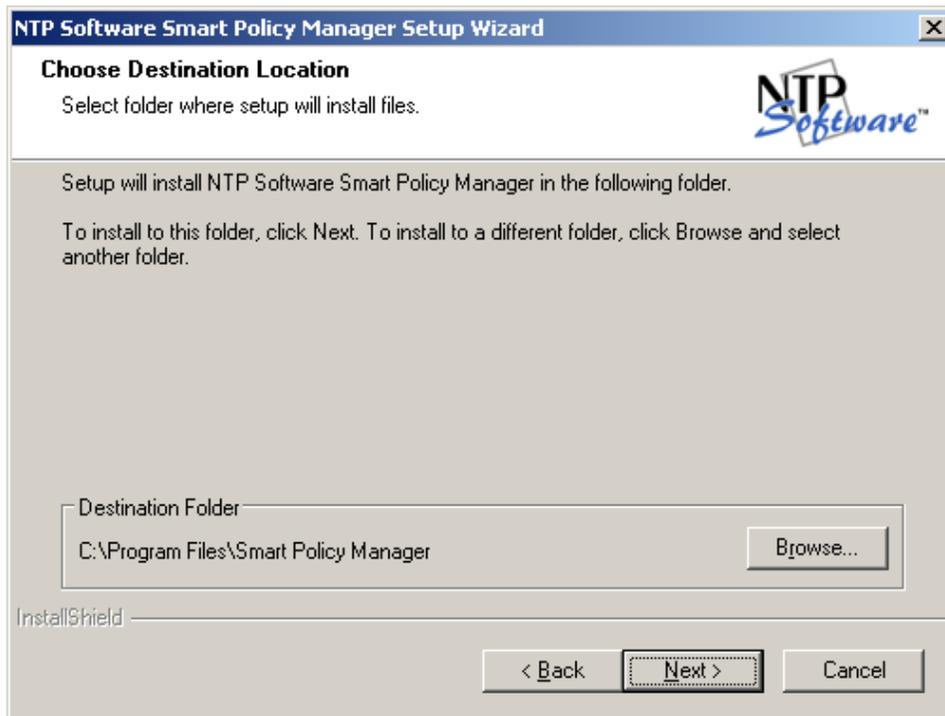
4. The NTP Software Smart Policy Manager Installation Wizard opens. Click **Next** to begin the installation.



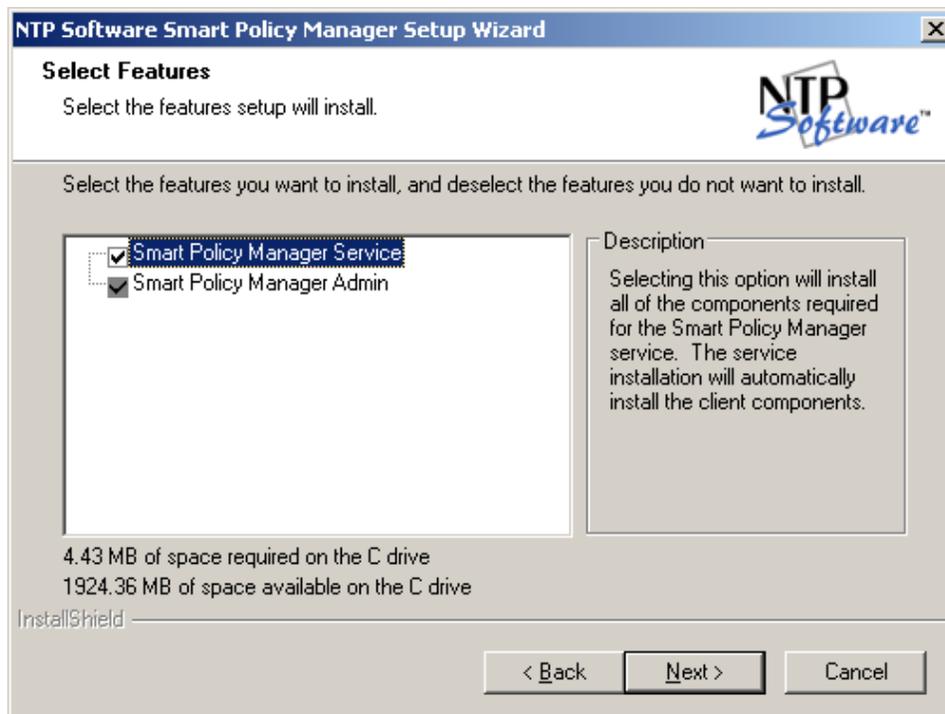
5. Read the end-user license agreement. If you agree to the terms, click **I accept the terms of the license agreement** and then click **Next**. If you do not accept the terms, click **Cancel** to exit the installation.



6. Choose the location where you want to install NTP Software Smart Policy Manager; then click **Next**.



7. Select the components you want to install; then click **Next**.



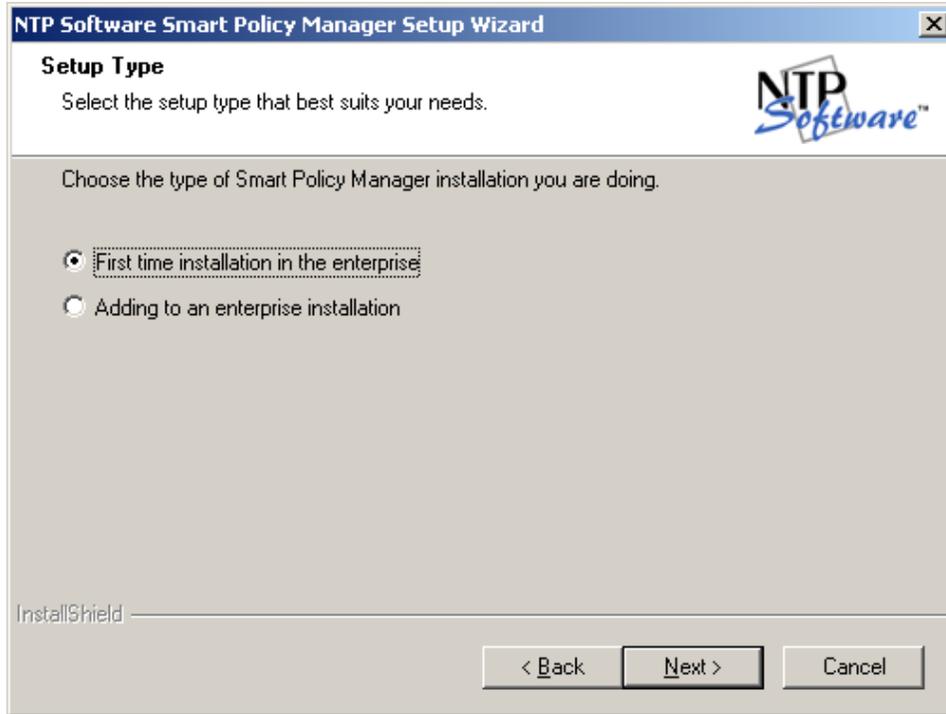
8. You will be prompted for a Windows domain user account to run the NTP Software Smart Policy Manager service. Enter the username and password for a domain user account with administrative rights on the local machine. Click **Next**.

The screenshot shows a Windows dialog box titled "NTP Software Smart Policy Manager Setup Wizard". The main heading is "Service Account:". Below the heading is the NTP Software logo. The text reads: "Enter the service account the Smart Policy Manager service is to run under." There are three input fields: "Service" with the text "Administrator", "Password:" with a masked password of ten dots, and "Confirm:" with a masked password of ten dots. At the bottom left is the "InstallShield" logo. At the bottom right are three buttons: "< Back", "Next >", and "Cancel".

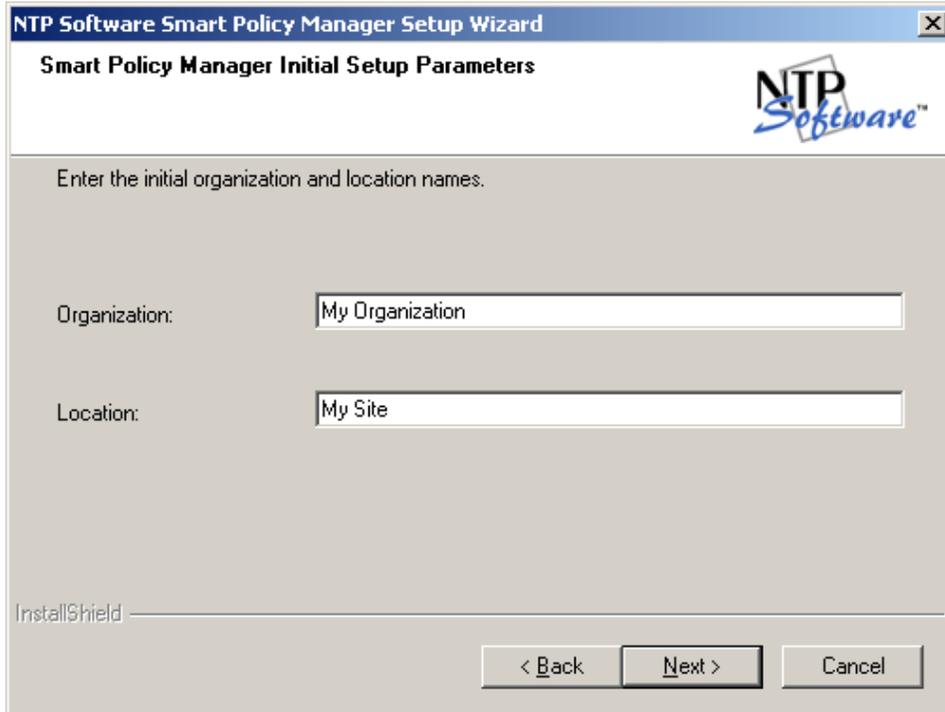
9. Enter the directory name where you want to install the NTP Software Smart Policy Manager database, or just accept the default location. Click **Next**.

The screenshot shows a Windows dialog box titled "NTP Software Smart Policy Manager Setup Wizard". The main heading is "Smart Policy Manager Database Location". Below the heading is the NTP Software logo. The text reads: "Setup will install the Smart Policy Manager database in the following folder." followed by "To install to this folder, click Next. To install to a different folder, click Browse and select another folder." There is a text box labeled "Destination Folder" containing the path "C:\Program Files\Smart Policy Manager\data store" and a "Browse..." button to its right. At the bottom left is the "InstallShield" logo. At the bottom right are three buttons: "< Back", "Next >", and "Cancel".

10. Select the NTP Software Smart Policy Manager installation type for your environment. If installing to a new environment with no prior NTP Software Smart Policy Manager installations, click **Next**. If installing in an environment where NTP Software Smart Policy Manager is already running, choose **Adding to an enterprise installation** and click **Next**.



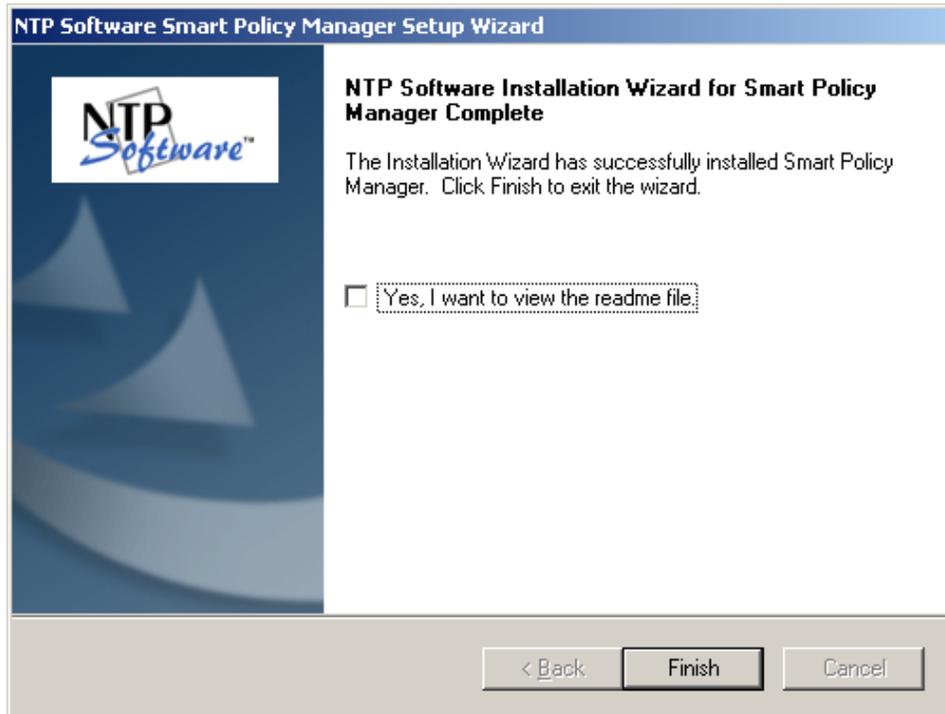
11. Provide NTP Software Smart Policy Manager with a name for your organization and a location name for this NTP Software Smart Policy Manager instance, or accept the default settings. Click **Next**.



12. Review your configuration information. Click **Back** to make any changes; otherwise, click **Next** to begin copying the files.

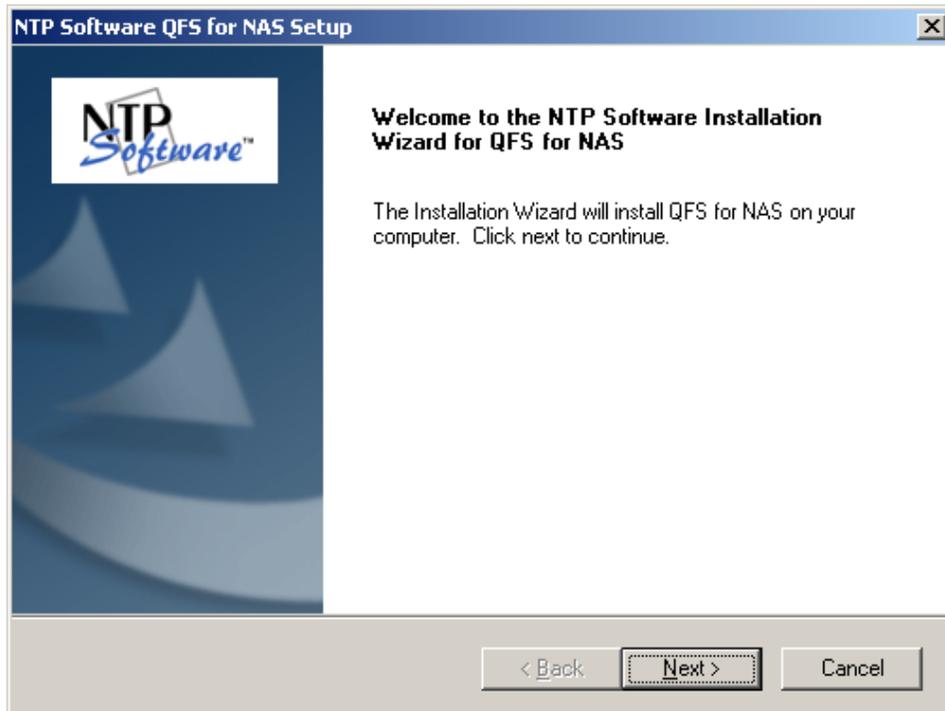


13. If you do not want to view the NTP Software Smart Policy Manager readme file, uncheck the **Yes, I want to view the readme file** checkbox. When you click **Finish**, the QFS for NAS Installer opens.

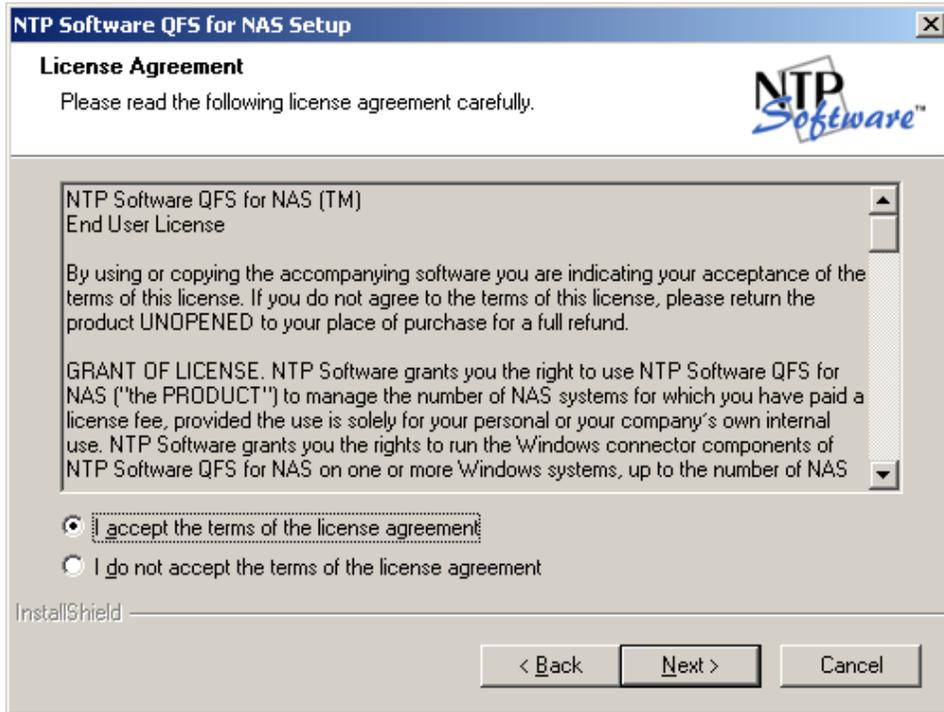


Installing NTP Software QFS for NAS

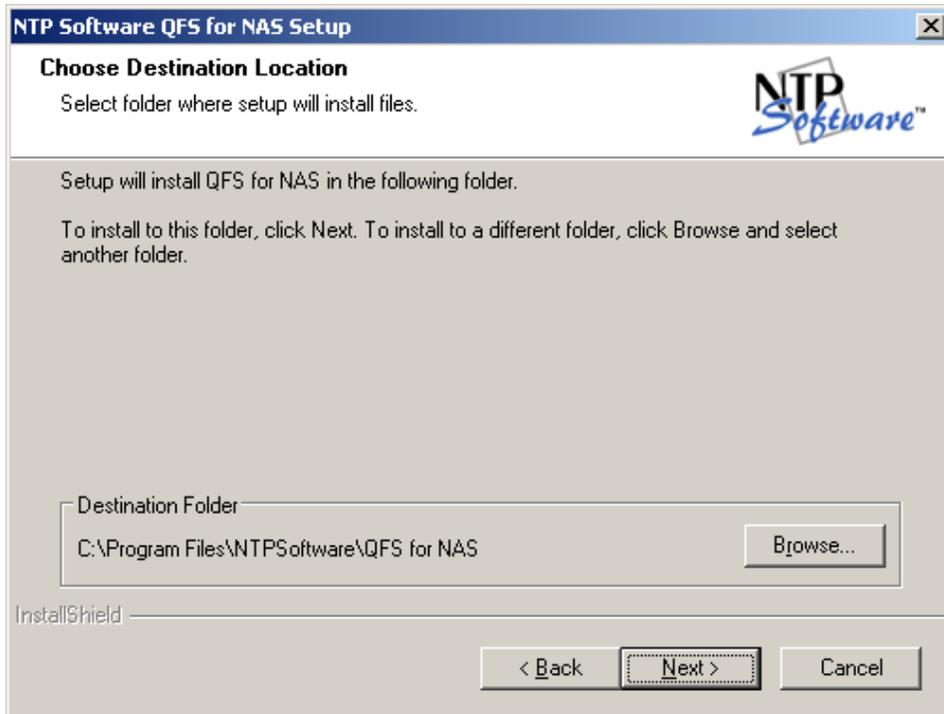
1. When the NTP Software QFS for NAS Installation Wizard opens, click **Next** to begin the installation.



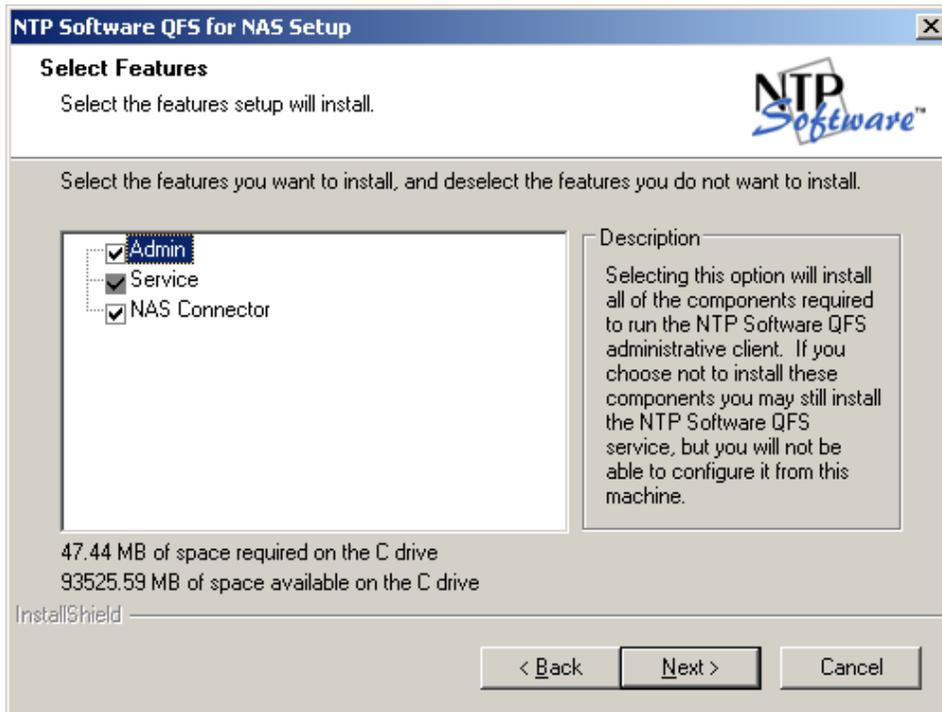
2. Read the end-user license agreement. If you agree to the terms, click **I accept the terms of the license agreement** and then click **Next**. If you do not accept the terms, click **Cancel** to exit the installation.



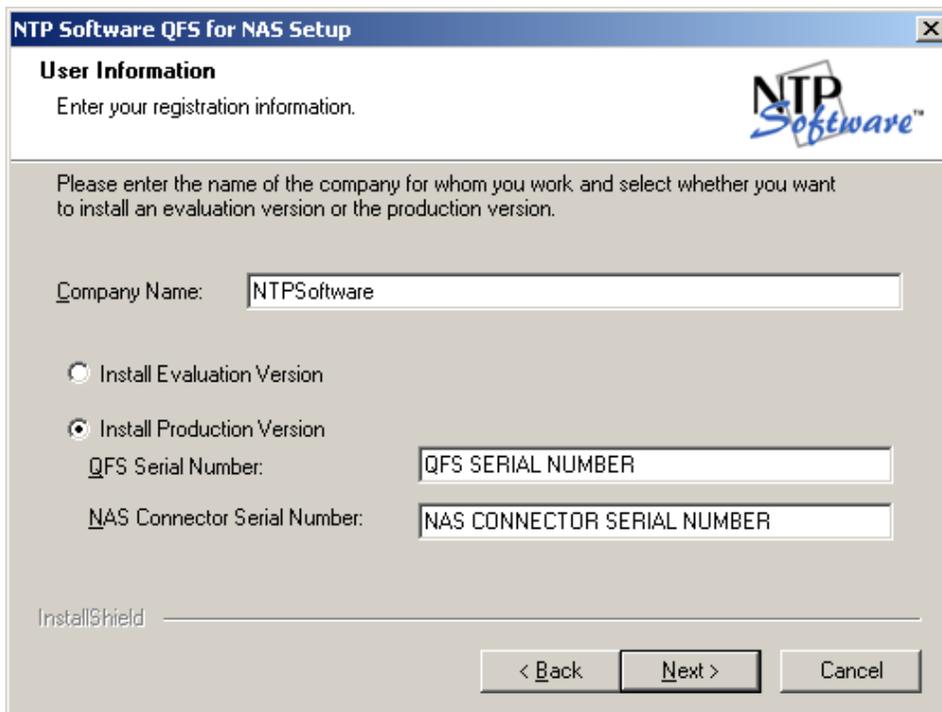
3. Choose the location where you want to install QFS; then click **Next**.



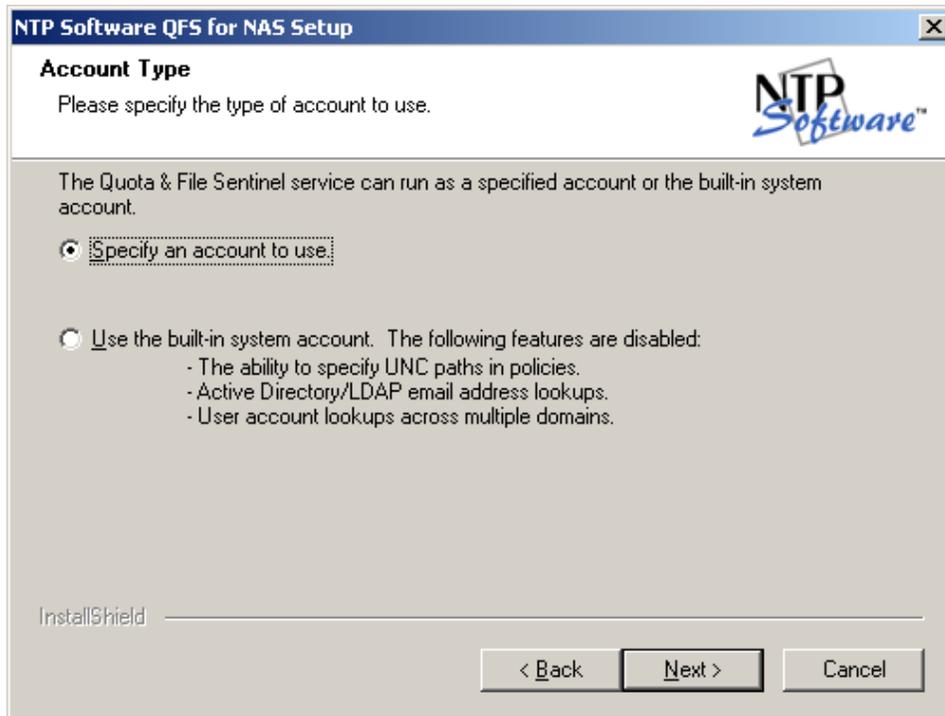
4. Select the components to be installed on the local machine. The Admin component allows for administration of the QFS service. The NAS Connector component is required if this machine will need to communicate with a filer for quota management purposes.



5. Provide your company name, the serial number for QFS, and the serial number for the NAS Connector. Click **Next**.

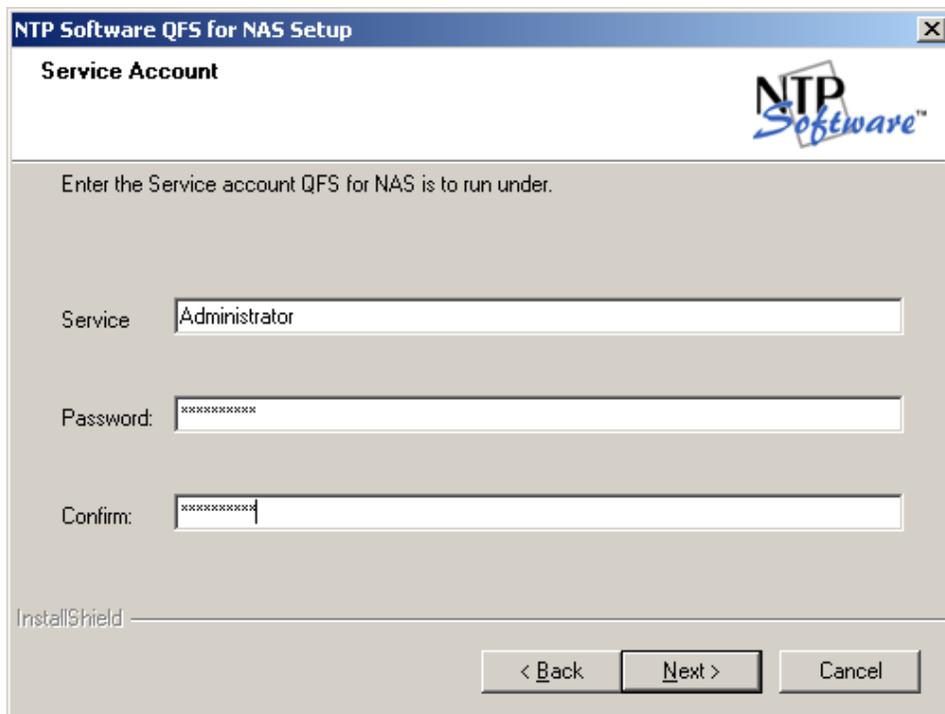


6. Specify the account type to be used. Click **Next**.



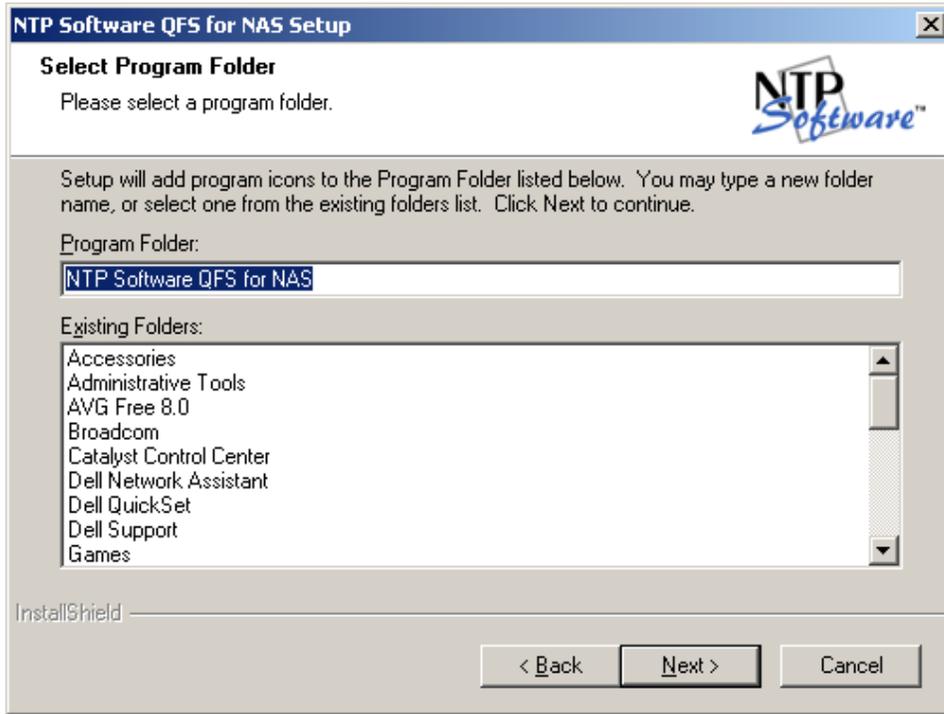
The screenshot shows a dialog box titled "NTP Software QFS for NAS Setup" with a close button (X) in the top right corner. The main heading is "Account Type" and the instruction is "Please specify the type of account to use." The NTP Software logo is in the top right. Below the instruction, it says "The Quota & File Sentinel service can run as a specified account or the built-in system account." There are two radio button options: "Specify an account to use" (which is selected) and "Use the built-in system account. The following features are disabled:" followed by a list: "- The ability to specify UNC paths in policies.", "- Active Directory/LDAP email address lookups.", and "- User account lookups across multiple domains." At the bottom left is the "InstallShield" logo. At the bottom right are three buttons: "< Back", "Next >", and "Cancel".

7. If specifying an account, enter a username with local administrative privileges. This account will be used to log in and enforce quotas. Click **Next**.

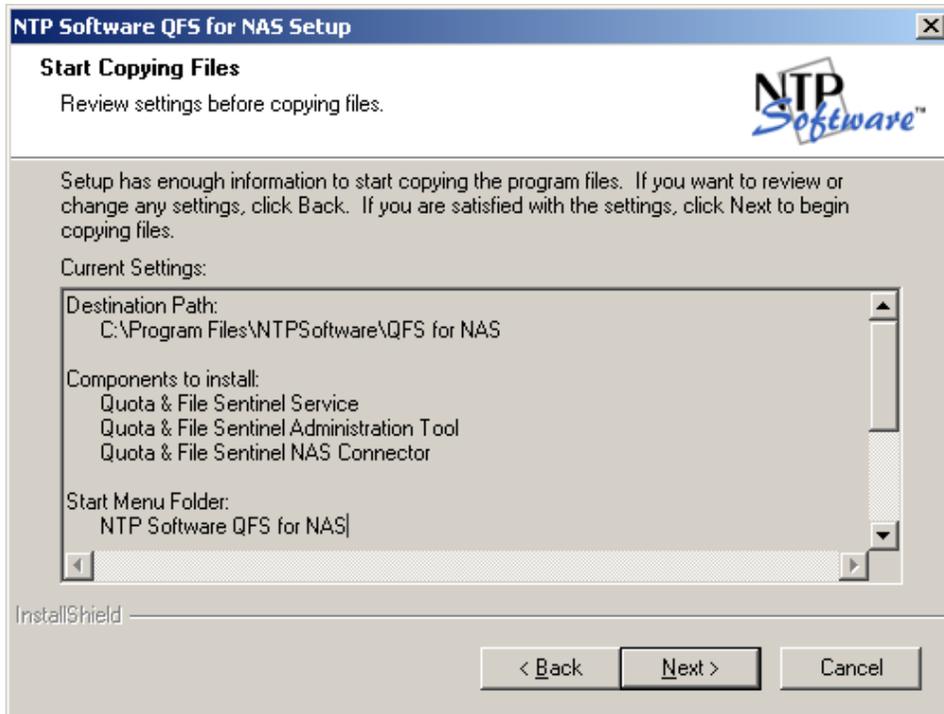


The screenshot shows a dialog box titled "NTP Software QFS for NAS Setup" with a close button (X) in the top right corner. The main heading is "Service Account" and the instruction is "Enter the Service account QFS for NAS is to run under." The NTP Software logo is in the top right. Below the instruction, there are three input fields: "Service" with the text "Administrator", "Password:" with masked characters "XXXXXXXXXX", and "Confirm:" with masked characters "XXXXXXXXXX". At the bottom left is the "InstallShield" logo. At the bottom right are three buttons: "< Back", "Next >", and "Cancel".

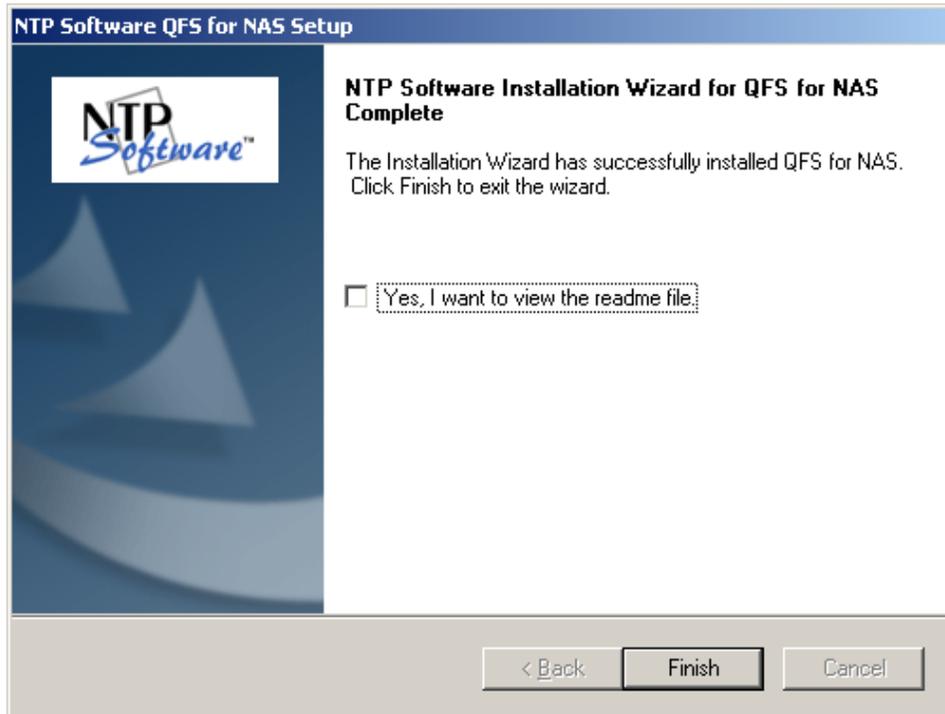
8. Select the program folder to host the NTP Software QFS for NAS, IBM N Series startup group. Click **Next**.



9. Review your components and NAS connector information. Click **Back** to make any changes; otherwise, click **Next** to begin copying the files.

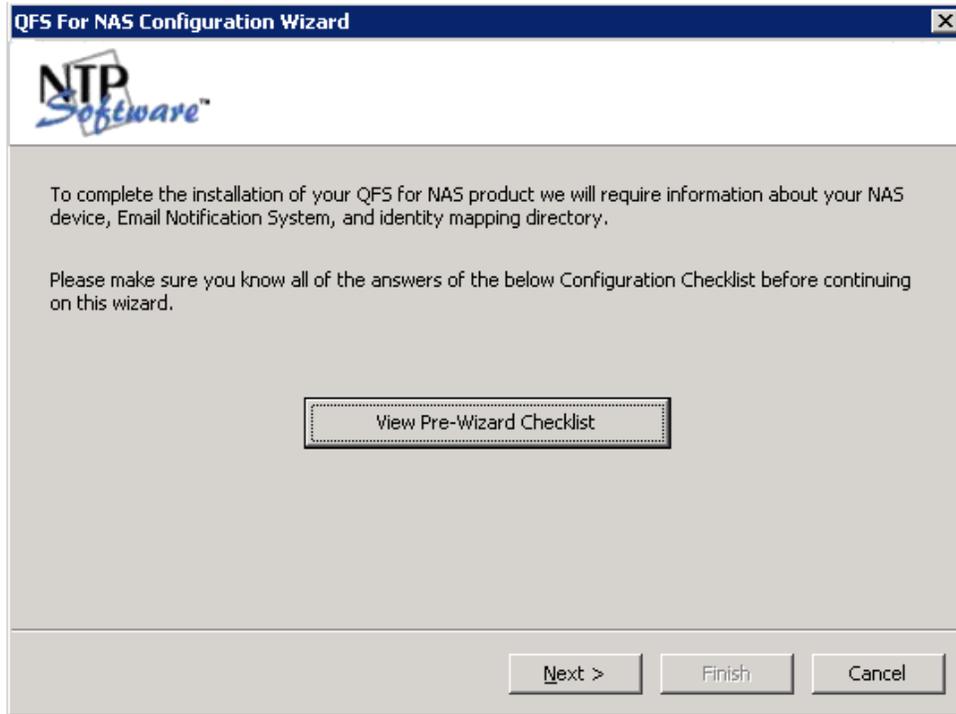


10. If you do not want to view the NTP Software QFS for NAS readme file, uncheck the **Yes, I want to view the readme file** checkbox. When you click **Finish**, the NTP Software QFS for NAS, IBM N Series Edition configuration wizard will open.

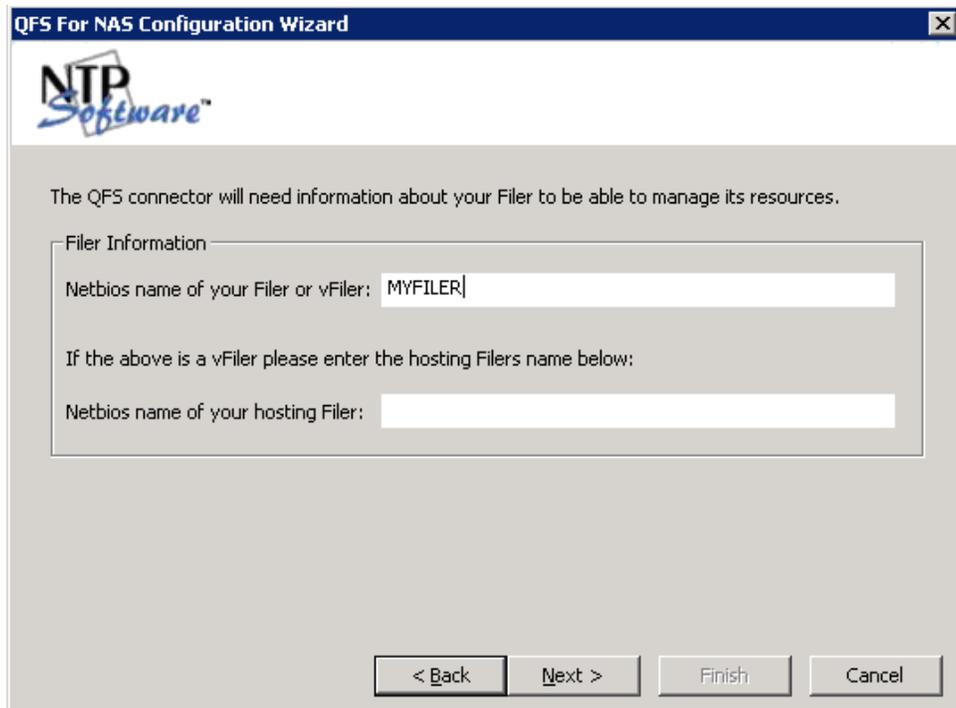


NTP Software QFS for NAS, IBM N Series Configuration Wizard

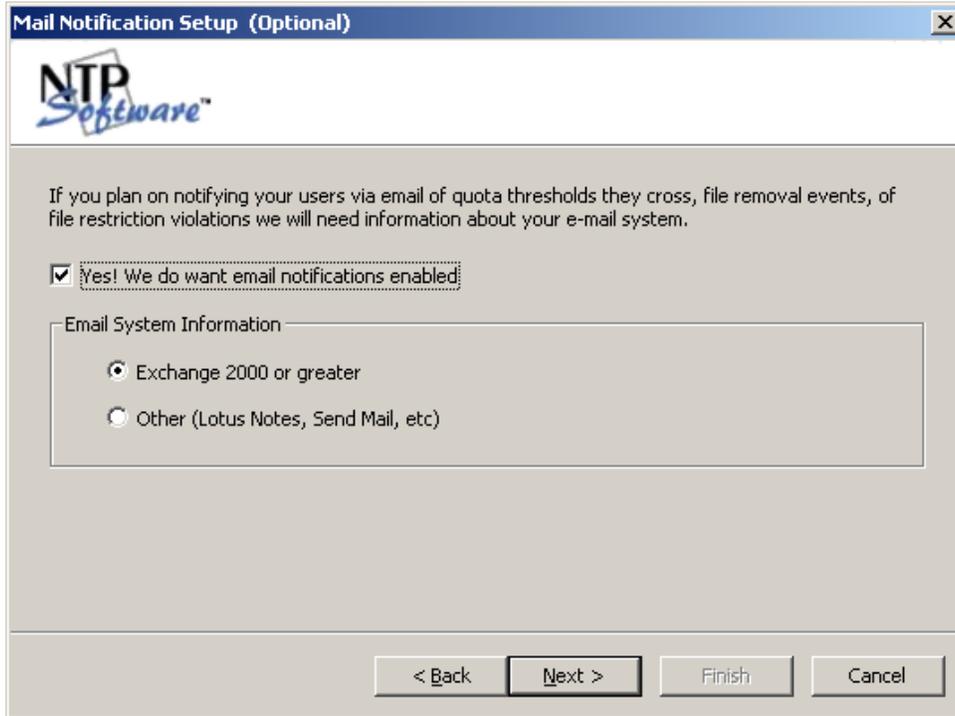
1. Click the **View Pre-Wizard Checklist** button and gather the required information before continuing. Click **Next**.



2. Enter the name of your filer or vFiler. If using a vFiler, enter the name of the hosting filer. Click **Next**.

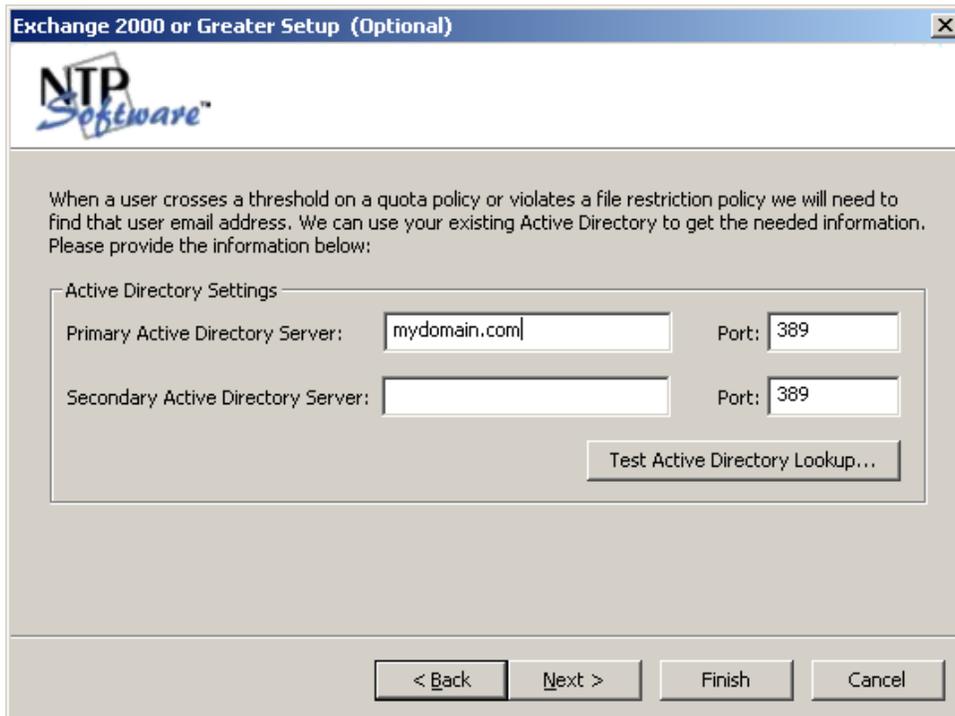


3. If you do not want to send email notifications to users when a quota status changes, uncheck the **Yes! We do want email notifications enabled** checkbox. Select which email system your environment uses. Click **Next**.



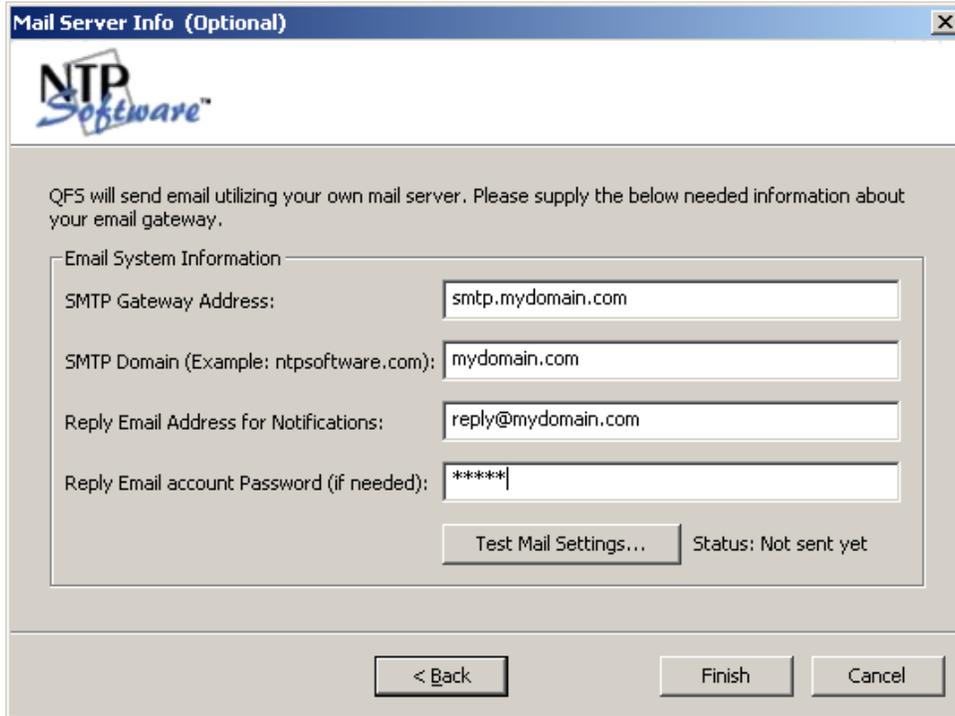
The dialog box is titled "Mail Notification Setup (Optional)" and features the NTP Software logo. It contains the following text: "If you plan on notifying your users via email of quota thresholds they cross, file removal events, of file restriction violations we will need information about your e-mail system." Below this is a checked checkbox labeled "Yes! We do want email notifications enabled". Underneath is a section titled "Email System Information" with two radio button options: "Exchange 2000 or greater" (selected) and "Other (Lotus Notes, Send Mail, etc)". At the bottom are four buttons: "< Back", "Next >", "Finish", and "Cancel".

4. Enter the name of your Active Directory server. (Optional: Enter a second server, if desired.) Click the **Test Active Directory Lookup** button and test at least one email address to verify connectivity. Then click **Next**.



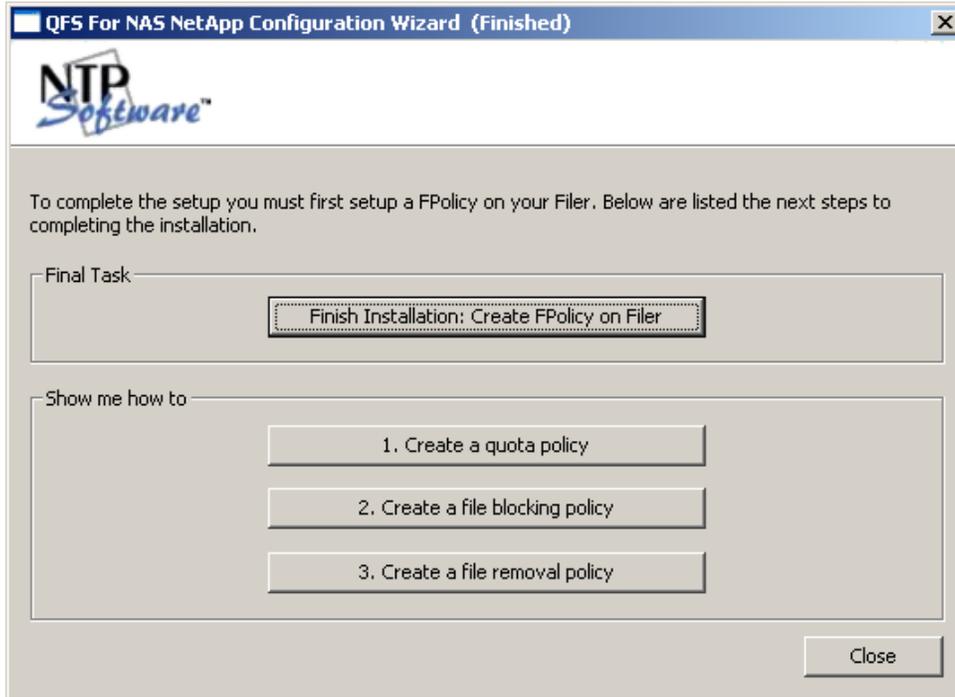
The dialog box is titled "Exchange 2000 or Greater Setup (Optional)" and features the NTP Software logo. It contains the following text: "When a user crosses a threshold on a quota policy or violates a file restriction policy we will need to find that user email address. We can use your existing Active Directory to get the needed information. Please provide the information below:". Below this is a section titled "Active Directory Settings" with two rows of input fields. The first row is for the "Primary Active Directory Server" with the text "mydomain.com" and a "Port" field containing "389". The second row is for the "Secondary Active Directory Server" with an empty text field and a "Port" field containing "389". A "Test Active Directory Lookup..." button is located to the right of the secondary server fields. At the bottom are four buttons: "< Back", "Next >", "Finish", and "Cancel".

5. Enter the SMTP gateway, the SMTP domain, and the email address to use for notifications. Enter any password(s) required for your environment. Click **Test Mail Settings** to verify that the information is correct. Then click **Finish**.



The dialog box is titled "Mail Server Info (Optional)" and features the NTP Software logo. It contains the following text: "QFS will send email utilizing your own mail server. Please supply the below needed information about your email gateway." Below this is a section titled "Email System Information" with four input fields: "SMTP Gateway Address" (smtp.mydomain.com), "SMTP Domain (Example: ntpsoftware.com):" (mydomain.com), "Reply Email Address for Notifications:" (reply@mydomain.com), and "Reply Email account Password (if needed):" (*****). A "Test Mail Settings..." button is located below the password field, with a "Status: Not sent yet" label to its right. At the bottom of the dialog are three buttons: "< Back", "Finish", and "Cancel".

6. Click the **Finish Installation: Create FPolicy on Filer** button to see how to create the fpolicy and link the filer to QFS for NAS. Review the remaining information by clicking through the buttons in the lower half of the window. When finished, click **Close**.

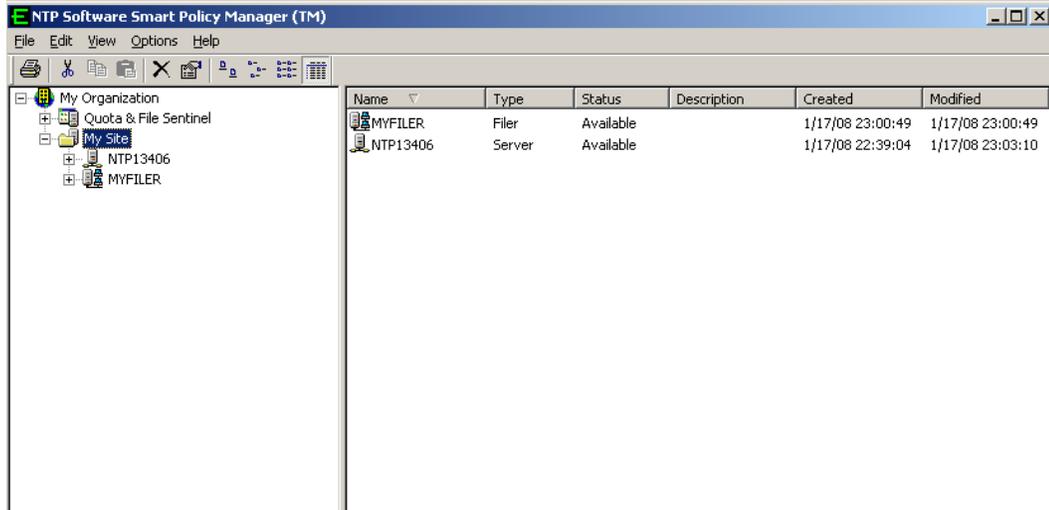


The dialog box is titled "QFS For NAS NetApp Configuration Wizard (Finished)" and features the NTP Software logo. It contains the following text: "To complete the setup you must first setup a FPolicy on your Filer. Below are listed the next steps to completing the installation." Below this is a section titled "Final Task" with a button labeled "Finish Installation: Create FPolicy on Filer". Below that is a section titled "Show me how to" with three buttons: "1. Create a quota policy", "2. Create a file blocking policy", and "3. Create a file removal policy". A "Close" button is located at the bottom right of the dialog.

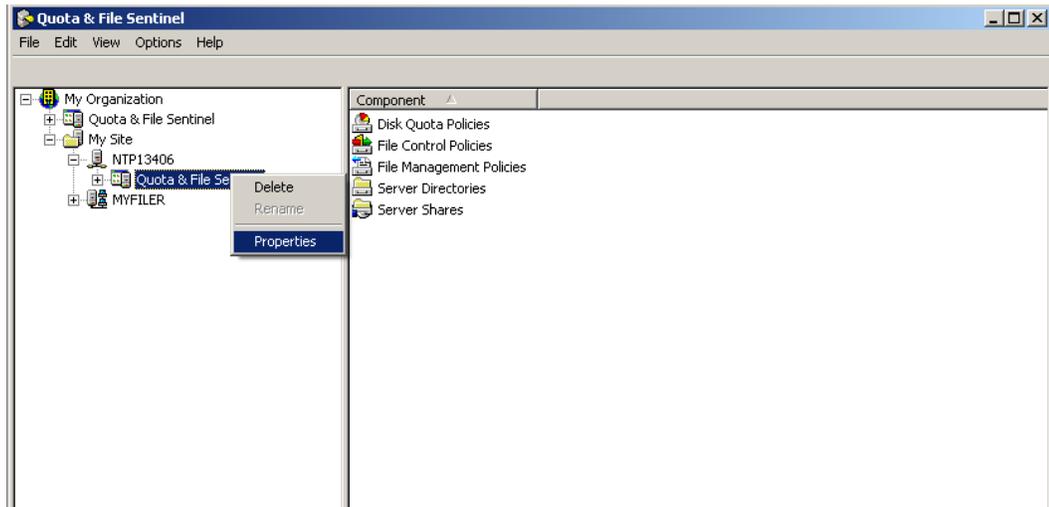
Adding the IBM Filer to QFS for NAS Admin

Before you can use NTP Software QFS for NAS, the filer must be added to the NTP Software Smart Policy Manager hierarchy. Follow these steps to add the filer:

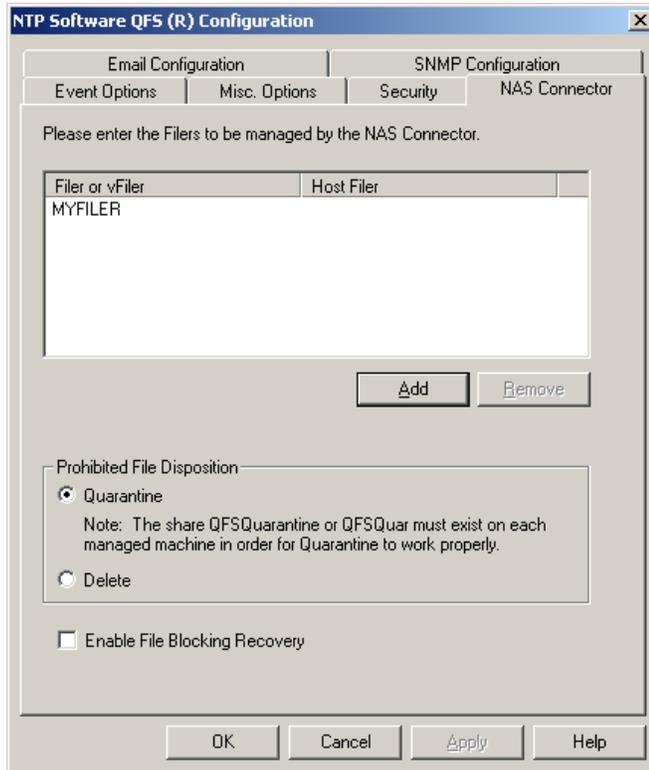
1. Click **Start > All Programs > NTP Software QFS for NAS > NTP Software QFS for NAS Admin**.
2. In the hierarchy presented, expand the location name you entered earlier. The default location is **My Site**. Your filer is listed in the right pane, below the server on which QFS is installed.



3. In the left pane, expand the server on which QFS is installed, and right-click **Quota & File Sentinel**. From the pop-up menu, choose **Properties**.



4. Click the **NAS Connector** tab. Your filer should be listed; if it is not, click **Add**.



5. Enter the name of your filer or vFiler. If you are using a vFiler, select the **This is a NAS vFiler** checkbox, then enter the Hosting NAS Filer name. Click **OK**.



Verifying Registration with the Filer

To verify that the filer has been associated with QFS, follow these steps:

1. Log onto the filer.
2. Run **fpolicy** to view fpolicy settings.

Your filer and the associated policies should be displayed.

```
File policy NTPSoftware_QFS (file screening) is enabled.
File screen servers          P/S Connect time (dd:hh:mm) Reqs  Fails
-----
10.30.3.52      \\NTP13406      Pri   02:18:54           0     0

Operations monitored:
File open,File create,File rename,File close,File delete
Directory rename,Directory delete
Above operations are monitored for CIFS only

List of extensions to screen:
???
```

For Additional Information

See the *NTP Software QFS Family of Products User Manual*, reference # 5887EF, for more details on the information provided in this guide.

About NTP Software

NTP Software is the worldwide leader in user-focused, policy-based storage management. We create platform-independent products that enable companies to automatically control the compliance, access, quotas, content, and lifespan of their users' stored files. NTP Software solutions also gather the analysis and planning data necessary for both short- and long-term decision making, providing everything necessary to actively control all aspects of a user's relationship with local and shared storage.

NTP Software Professional Services

For further assistance with NTP Software QFS for NAS, IBM N Series Edition, contact your NTP Software representative at 800-226-2755 or 603-622-4400.

NTP Software offers end-to-end consulting and training services to assist in the deployment and configuration of your storage management solution. Our Professional Services staff includes certified instructors for Microsoft and NTP Software systems as well as other technologies.

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