

SNMS

The Adic logo consists of the word "adic" in a white, lowercase, sans-serif font, centered within a solid red rectangular background.

StorNext[®] Management Suite

Installation Guide

SNMS 2.3

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Introduction

StorNext Management Suite (SNMS) is a scalable, high performance, data management solution that ensures the long-term safety and recoverability of data in SAN environments, while optimizing the use of storage resources. The result is high speed data sharing, improved productivity, and reduced network bottlenecks.

SNMS contains the StorNext Storage Manager (StorNext SM) and the StorNext File System (StorNext FS).¹ StorNext FS primarily provides Fibre Channel (FC) connections (but also supports other types of connections) in a serverless environment that enables heterogeneous clients to access data and share files. Although StorNext FS is the core file system technology used in SNMS, ADIC supports StorNext FS as a standalone product.

Intended Audience

This guide is intended for system administrators and service personnel that would install the SNMS and StorNext FS software.

How This Book is Organized

To accommodate the installation and configuration differences between SNMS and StorNext FS, this guide is divided into three main chapters: *Installing SNMS*, *Installing StorNext FS on UNIX*, and *Installing StorNext FS on Windows*.

If you purchased the SNMS product, follow the instructions in the *Installing SNMS* chapter. The chapter also guides you through the steps for adding a file system, so you do not need to follow the instructions for installing StorNext FS in the other chapters of this guide.

If you purchased the StorNext FS product, and depending on your operating system, follow the instructions in either the *Installing StorNext FS on UNIX* or the *Installing StorNext FS on Windows* chapters. The chapters only explain how to install the file system, so if you decide to purchase the SNMS product at a later time, you will need to contact your ADIC sales representative or ADIC Technical Assistance Center (ATAC) for assistance.

¹StorNext SM consists of two components formerly known as FileServ (TSM) and VolServ (MSM). StorNext SM provides high-performance file migration and management services, and manages automated and manual media libraries, including library volumes. StorNext FS consists of a single component, formerly known as CentraVision (DSM).

This guide provides basic setup and installation procedures for using SNMS and StorNext FS.

Explanation of Symbols

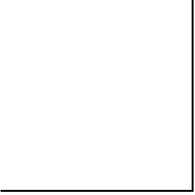
The following symbols indicate important information.

Symbol	Description	Definition	Consequence
	WARNING:	Advises you to take or avoid a specified action	Failure to take or avoid this action could result in physical harm to the user or hardware
	CAUTION:	Advises you to take or avoid a specified action	Failure to take or avoid this action could result in loss of data
	NOTE:	Indicates important information that helps you make better use of the software	No hazardous or damaging consequences

Conventions

The conventions used throughout this book are listed below.

Convention	Example
For all UNIX-based commands, the # prompt is implied, although it is not shown.	<pre>/usr/cvfs/bin/cvlabel -l is the same as # /usr/cvfs/bin/cvlabel -l</pre>
Screen text, file names, program names, and commands are in Courier font.	<pre>mkdir -p <mount point></pre>
The root prompt for UNIX is shown as a number symbol.	<pre>tar xvf <filename></pre>
Site-specific variables are enclosed within brackets < > .	<pre>chmod 777 <mount point></pre>
Pressing Return or Enter after each command is assumed.	
A menu name with an arrow refers to a sequence of menus.	<pre>Programs > StorNext File System > Help</pre>
Red Hat and SuSE are inclusive whenever Linux is mentioned.	



SNMS

Installing SNMS

You can install the StorNext Management Suite (SNMS) software on a server that uses an SGI IRIX, Sun Solaris, or Linux operating system. When you have successfully installed the SNMS software, use the Initial Configuration Wizard (ICW) to configure the software. (After initial configuration, you can use the SNMS GUI to change your configuration parameters.) You are then ready to use the SNMS software.

You can also run the SNMS software on a client machine by downloading the client files from the server and then installing them on your client. You can install client files on machines that use an IRIX, Solaris, Linux, IBM AIX, or Windows (2000 and NT) operating system.



CAUTION

If you purchased the StorNext Management Suite (SNMS) product, you must use the installation instructions in this chapter to successfully install SNMS on your machine. You do not need to use the installation instructions in the other chapters of this guide.

Determining Installation Requirements

Before installing SNMS on any machine, refer to the *StorNext Management Suite Release Notes* to verify that you have complied with all the necessary requirements for running the software on your specific operating systems.

To learn more about advanced configuration and features such as failover, refer to the *StorNext Management Suite System Administrator Guide*.

Using the Optional Pre-Installation Configuration

SNMS requires the user accounts `tdlm` and `www` to exist in the `passwd` file, and the group account `adic` to exist in the `group` file. During installation, SNMS uses a system utility to create these accounts if it cannot find them.

- If you want the system utility to create the accounts, skip this section and go to the [Installing SNMS Software](#) section in this document.
- If you prefer to manually add these accounts, use the procedure described here. You must not only perform this procedure for each machine where you install the SNMS software, but also on each machine that you set up as a client (refer to the [Installing Client Software](#) section in this document). After you have completed this optional step, continue to the [Installing SNMS Software](#) section in this document.

Step 1 Add the following user accounts `tdlm` and `www`.

Username	UserID	GroupID	Login Shell	Home Directory
tdlm	100	100	/bin/ksh	/usr/adic
www	101	100	/bin/ksh	/usr/adic/www

Step 2 Add the group account `adic`.

Group Name	GroupID	Members List
adic	100	root, tdlm, www

Installing SNMS Software

If you purchased the SNMS product, use the following procedure to install the SNMS software in your operating environment. Both server and client files are loaded on your machine during the installation process.

- Step 1** Designate one machine as your server.
- Step 2** Load the CD that is appropriate for your operating system.
- Step 3** Double-click the StorNext folder.
- Step 4** Double-click inst.StorNext.

The following menu opens.

```
StorNext INSTALL 2.3.1(xxx) MAIN MENU
```

- 1) Installation Configuration
- 2) Install StorNext
- 3) Show Status
- 4) Quit

```
Enter your choice <#>:
```

Figure 2-1 StorNext Install Main Menu

- Step 5** Type 1 to display a list of parameters that can be modified.

The following menu appears. The software is installed into the directory (in this example, <usr>) containing the greatest amount of space.

```

StorNext Install 2.3.1 (xx) Configuration Menu

      _____VALUE_____      _____DESCRIPTION_____
0)    /<usr>/adic/perl            Perl installation directory
1)    /<usr>/adic/database        Database installation directory
2)    /<disk2>/database_bkp       Database backup directory
3)    /<disk2>/database_jnl       Database journal directory
4)    /<usr>/adic/MSM             Media Manager installation directory
5)    /<usr>/adic/TSM             Tertiary Manager installation directory
6)    LTO                        Default media type
7)    LTO                        Default backup type
8)    /<usr>/adic/TCM             Trashcan Manager installation directory
9)    /<usr>/adic/www            GUI installation directory
10)   /<usr>/adic/apache          Apache installation directory
11)   /<usr>/cvfs                 Disk Manager installation directory
12)   RETURN                     Returns to previous menu

Enter parameter to modify or other selection <12>:

```

Figure 2-2 StorNext Install Configuration Menu

Step 6 To modify the default parameters, type the parameter number.

If you do not need to modify the parameters, skip this step and go to [Step 8](#).



NOTE

If you do not use LTO2 media in your library, you need to change parameter numbers 6 and 7 to match the media type that is located in your library. For mixed media or multiple libraries, you need to change the parameter numbers to match the media type that you use as your primary backup.

For increased reliability, install the database backup directory (`database_bkp`) and the database journal directory (`database_jnl`) on a disk that is different from the one on which the database installation directory is stored.

Step 7 When you are satisfied with the parameter settings of the installation configuration, press **Enter** or type 12 to return to the **Install Main Menu** (see [Figure 2-1](#)).

Step 8 Type 2 to install the SNMS software.

The following menu appears showing eight steps of component-level status. As the software is being installed, it displays a submenu for each step. When the step is complete, its status changes from “To do” to “Complete.”

This menu contains the same content for all operating systems except IRIX. On IRIX, you will see additional text on the screen that instructs you to reboot your machine. (Refer to the note in [Step 10](#)).

```
StorNext INSTALL 2.3.1(xx) Status
```

```
1) Install perl           Complete
2) Install database      Complete
3) Install MSM           Complete
4) Install TSM           Complete
5) Install TCM           Complete
6) Install GUI           Complete
7) Install apache       Complete
8) Install DSM           Complete
```

```
When the installation has completed you will point your browser at
the following address and port# to access the StorNext home page:
```

```
http://<machinename:port#>
```

```
Please make a note of this information.
```

```
-----
Some operations have been performed which require the machine to be
restarted. For these changes to take effect please reboot the machine
at your convenience.
```

```
Hit the enter key to continue.
```

Figure 2-3 StorNext Install Status



NOTE

Please make note of the machine name and port number in the **Install Status** screen (see [Figure 2-3](#)). You will need this information to access the **StorNext Management Suite** GUI.

Step 9 When the installation is complete, return to the **Install Main Menu** (see [Figure 2-1](#)).

To review the screen that displays the component-level status of the SNMS software installation (see [Figure 2-3](#)), type 3 from the **Install Main Menu**.

Step 10 Type 4 to quit the installation process and exit the menu.



NOTE

Before configuring the StorNext FS software, reboot your system if you are using an IRIX operating system.

Configuring SNMS Software

Use the following procedure to configure the SNMS software that you have installed on your machine.

Step 1 Open your Web browser.



NOTE

Refer to the *StorNext Management Suite Release Notes* for information about browsers that are supported by SNMS.

Step 2 Type the full address of your machine and its port number (`http://<machine name>:<port number>`) in the **Address** field and press **Enter**. Use the name of the machine and port number that you copied when you installed the SNMS software.

If you did not remember to copy the name of your machine and its port number, you can still access the SNMS software. By default, the software runs on port number 81. However, if this port number is being used by another application, then use the next higher number. For instance, if port number 81 is not available, then use port number 82; if port number 82 is not available, then use port number 83.

The following screen appears.

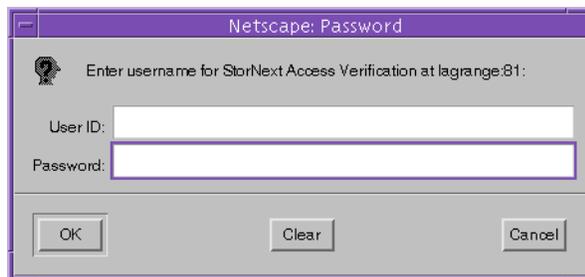


Figure 2-4 StorNext Logon

Step 3 Type `admin` in the **User ID** field and press **Tab**.

Step 4 Type `admin` in the **Password** field and click **OK**.



NOTE To change your password or to set up additional users, refer to the *StorNext Management Suite System Administrator Guide* for more information.

You will be prompted to start non-running components see [Figure 2-5](#)) and the initial **StorNext GUI** (for either **StorNext Management Suite** or the **StorNext File System**) will appear.

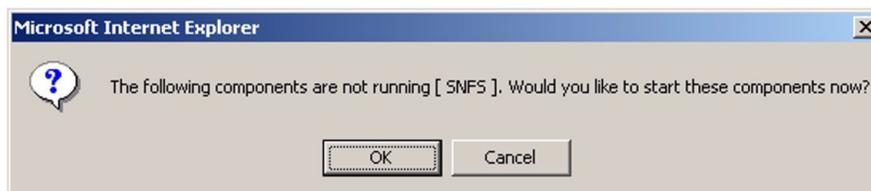


Figure 2-5 StorNext Run Components Prompt

Step 5 Click **OK** to start the (SNMS or SNFS) components.

The **Initial Configuration Wizard** (ICW) screen (see [Figure 2-6](#)) appears and will guide you through the complete configuration of the StorNext software.

**CAUTION**

You should first complete the ICW for licensing and configuring your software before you use the StorNext Management Suite GUI. If you work on the GUI before completing the ICW, file system failures will occur.

Using the Initial Configuration Wizard

The Initial Configuration Wizard (ICW) guides you step-by-step through the process of configuring the SNMS software. The first page of the ICW lists seven configuration steps that must be completed in sequence. Text for the active step appears in a different color. It is followed by the word **Completed** when the step is done. Until all seven configuration steps are completed, the ICW opens every time the **StorNext Management Suite** GUI is refreshed.

Each configuration step also contains its own wizard that leads you through a set of screens for that step. You must continue through all the screens for a configuration step before the step is completed. For example, you must complete all the screens associated with Step 1: Enter License before you can continue to Step 2: Add File System. When you are finished with a step, click **Done** to continue to the next step. After a step is completed, you cannot return to the previous step.

Once all the steps are completed, click **Finish** from the **ICW** screen. The **ICW** screen is no longer available—it is designed for initial configuration only.

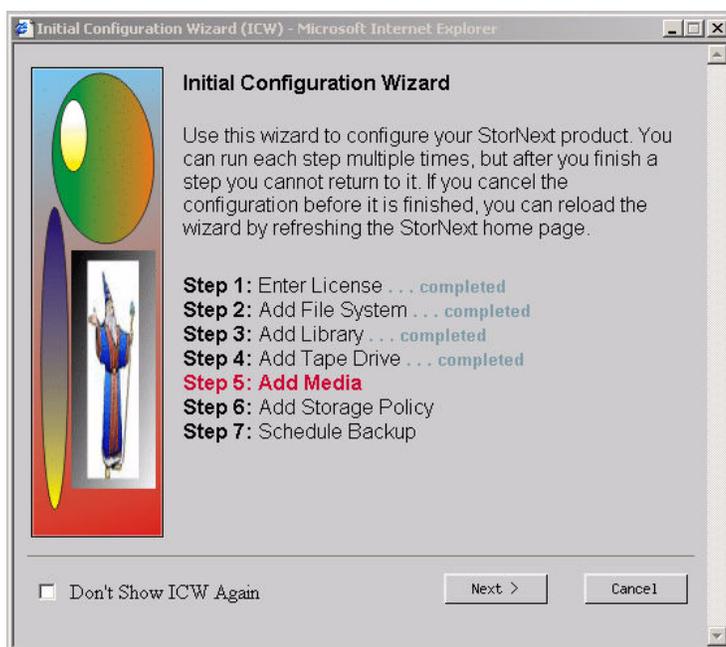


Figure 2-6 Initial Configuration Wizard

Click **Next** to begin Step 1: Enter License. The **Enter License - Introduction** screen appears (see [Figure 2-7](#)).

Entering a License

You must accept the SNMS license agreement and provide a valid license string to go to the next configuration step.

The SNMS software comes with a temporary license that allows you to use the software for 30 days. If you have not received a license string, you will see the **30 day temporary license** check box on the **Enter License String** screen. To use the temporary license, select this check box and proceed through resetting the wizard. Before the temporary license expires, you should contact the ADIC Technical Assistance Center (ATAC) at 1-800-827-3822 or at support@adic.com to obtain a permanent license.

You may receive your license in one of the following ways.

- If you receive your license string electronically, paste the license string into the file /<usr>/adic/DSM/config/license.dat. This allows SNMS to automatically detect your license string when going through the ICW.
- If you receive your license string as a hard copy, type the license string exactly as it appears into the field on the **Enter License String** screen. The following is an example of a license string.

```
server 1 83000C82 AAAAAAAAAAWAJDA2R7UBAM7RA974VNBRRFFANXECXZW2E9DAYBQ5HA
```

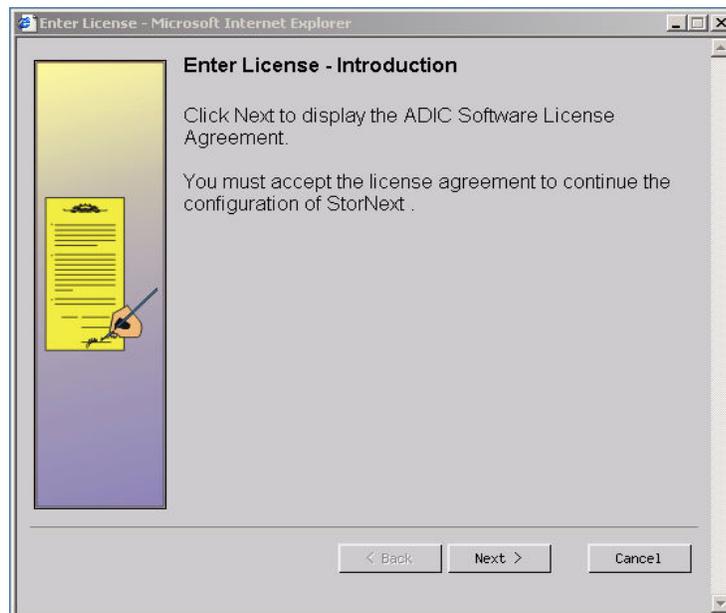


Figure 2-7 Enter License - Introduction

Step 1 Click **Next** to continue through all the screens for the Enter License wizard.

Once the **Status** screen appears displaying successful completion of adding the license information, click **Next** to return to the **Enter License - Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 1: Enter License (see [Figure 2-6](#)).

Step 3 Click **Next** to begin Step 2: Add File System.

The **File System - Introduction** screen appears (see [Figure 2-8](#)).

Adding File Systems

The Add File System wizard configures one or more file systems, along with the following options and additional screen information.

- **Enable Data Migration**—This option appears on the **Add New File System** screen. If checked, SNMS becomes a managed file system and enables automatic data movement between the tape library and disk storage. If unchecked, SNMS remains an unmanaged file system and never moves any data to the tape storage library.
- **Enable Trashcan**—This option appears on the **Add New File System** screen and is only available for managed file systems. If checked, you can delete files from the Trashcan.



CAUTION

If you are using the SNMS client software with Windows, you need to turn off the Recycle Bin within the StorNext File Systems mapped on your Windows machine to ensure the file systems will work properly.

To turn off the Recycle Bin, perform the following steps on your Windows client machine.

- Step 1** Right-click the **Recycle Bin** icon located on your desktop and click **Properties**.
- Step 2** Click the **Global** tab.
- Step 3** Click **Configure drives independently**.
- Step 4** Click the **Local Disk** tab onto which you have mapped SNMS.
- Step 5** Select the **Do not move files to the Recycle Bin. Remove files immediately when deleted** check box.
- Step 6** Click **Apply** and **OK**.

- **Affinities** —You must first install SNMS before you can add affinities to a file system that you have added. (Refer to “Adding an affinity” in the *StorNext Management Suite Administrator Guide* for instructions on performing this task.)
- **Customize Stripe Group** screen—When entering a name for the stripe group, selecting a disk, and entering the stripe breadth for a file system on this screen, all disks in the stripe group must have the same number and size of sectors. By default, if you configure more than one stripe group, the first stripe group will contain the meta-data and journal.

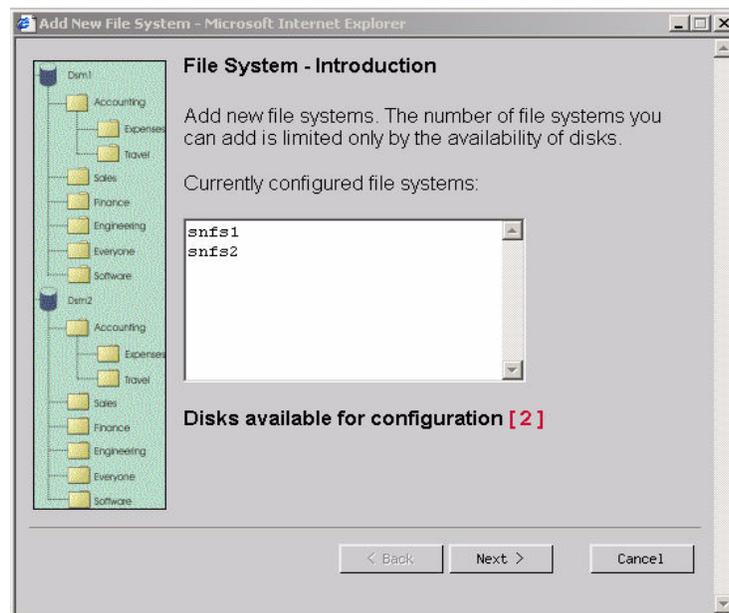


Figure 2-8 File System - Introduction

Step 1 Click **Next** to continue through all the screens for the Add File System wizard.



CAUTION

The default settings for each step of the Add File System wizard screens are optimized for most configurations. If you decide to change the default settings, your changes could negatively impact system performance.

Once the **Status** screen appears displaying successful completion of configuring one or more file systems, click **Next** to return to the **File System - Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **completed** after Step 2: Add File System.

Step 3 Click **Next** to begin Step 3: Add Library.

The **Library Introduction** screen appears (see [Figure 2-9](#)).

Adding Libraries

The Add Library wizard configures one or more tape libraries.

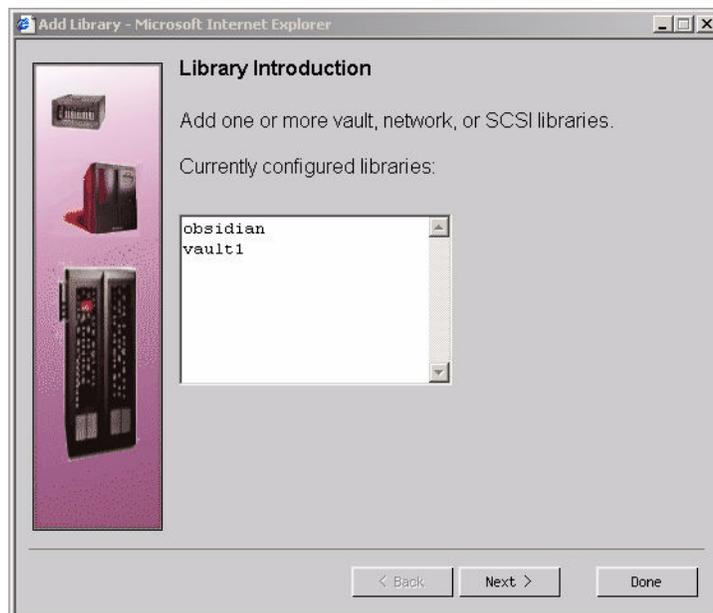


Figure 2-9 Library Introduction

Step 1 Click **Next** to continue through all the screens for the Add Library wizard.



NOTE On the **Library Introduction** screen, fabric-attached libraries should be configured as SCSI libraries.

Once the **Status** screen appears displaying successful completion of configuring one or more tape libraries, click **Next** to return to the **Library Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 3: Add Library.

Step 3 Click **Next** to begin Step 4: Add Tape Drive.

The **Tape Drive Introduction** screen appears (see [Figure 2-10](#)).

Adding Tape Drives

The Add Tape Drive wizard configures drives in the archive.

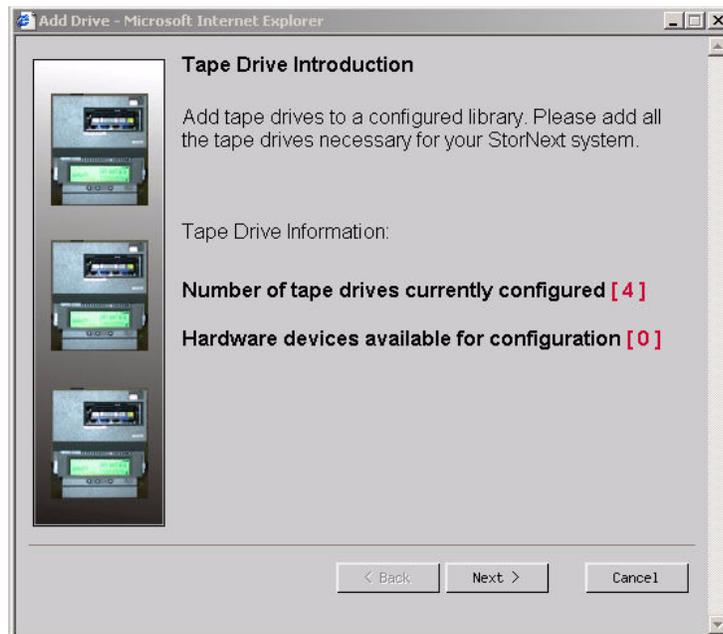


Figure 2-10 Tape Drive Introduction

**CAUTION**

If you plan to set up one or more software applications to share a library, your media may be overwritten. Therefore, before proceeding to Step 1 of Adding Tape Drives, refer to [Sharing a library between applications on page 4-104](#) of the *StorNext Management Suite Installation Guide* for instructions on how to properly set up your software to prevent this situation.

Step 1 Click **Next** to continue through all the screens for the Add Tape Drive wizard.

**NOTE**

For SCSI, network, or fibre-attached libraries, the device must be matched with the correct slot on the **Matched Devices With Slots** screen. For direct SCSI-attached disks that are not fibre channel, you do not need to match the device with the correct slot because the matching is automatically done. If you need help with slot-to-drive associations, contact ATAC at 1-800-827-3822 or at support@adic.com.

Once the **Status** screen appears displaying successful completion of adding tape drives, click **Next** to return to the **Tape Drive Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 4: Add Tape Drive.

Step 3 Click **Next** to begin Step 5: Add Media.

The **Add Media - Introduction** screen appears (see [Figure 2-11](#)).

Adding Media

The Add Media wizard enters media information in the database and groups media into a single pool to be available for use as needed. The time required to complete this process varies depending on the number of media you are adding and the speed of your processor. A rough estimate is one minute per 15 media.

**NOTE**

Before you run this wizard, all of your media should be labeled with barcodes and placed in the library.

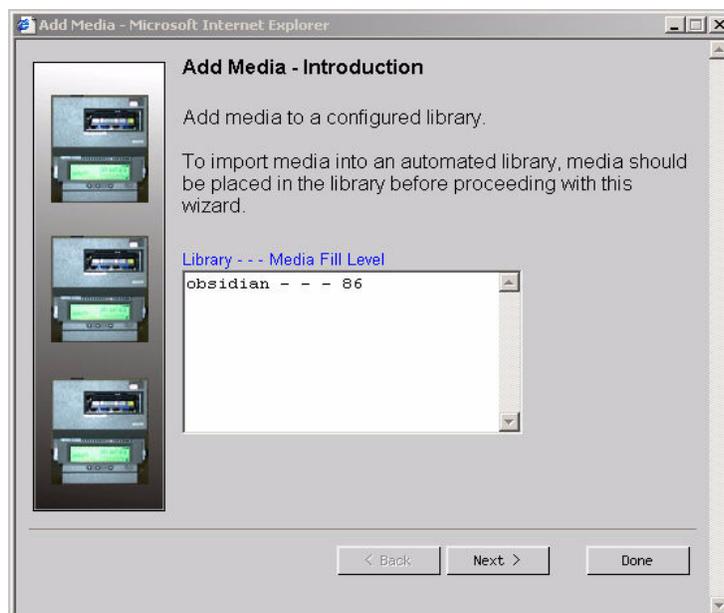


Figure 2-11 Add Media - Introduction

Step 1 Click **Next** to continue through all the screens for the Add Media wizard.

**NOTE**

When you are at the **Select Media Backup** screen, you should keep the default setting of two backup media as a minimum to provide primary and secondary backup copies.

Once the **Status** screen appears displaying successful completion for adding media, click **Next** to return to the **Add Media - Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 5: Add Media.

Step 3 Click **Next** to begin Step 6: Add Storage Policy.

The **Storage Policy - Introduction** screen appears (see [Figure 2-12](#)).

Adding Storage Policies

The Add Storage Policy wizard creates policy classes to logically segregate and control data. The policy class parameters determine storage and truncation rules.

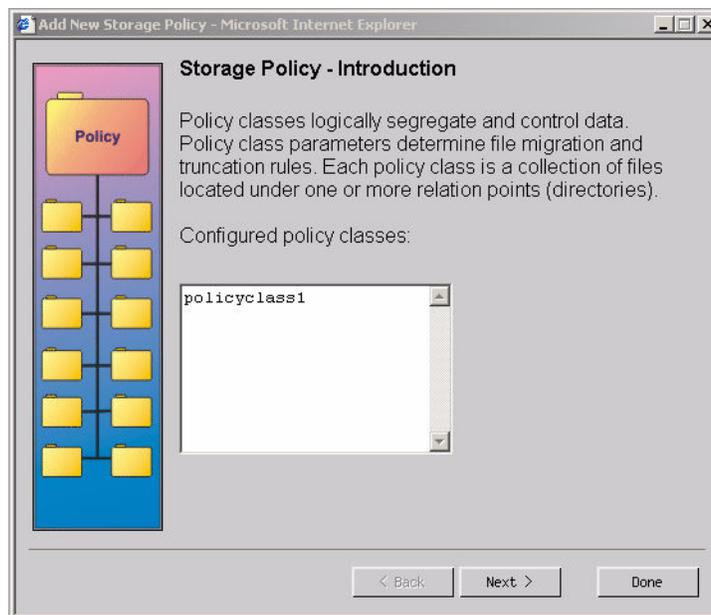


Figure 2-12 Storage Policy - Introduction

Step 1 Click **Next** to continue through all the screens for the Add Storage Policy wizard.

Once the **Status** screen appears displaying successful completion of configuring storage policies, click **Next** to return to the **Storage Policy - Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 6: Add Storage Policy.

Step 3 Click **Next** to begin Step 7: Schedule Backup.

The **Schedule StorNext Backup Introduction** screen appears (see [Figure 2-13](#)).

Scheduling a Backup

The Schedule Backup wizard schedules backups that run automatically at designated times. Backups are intended to protect against catastrophic loss.

The backup contains only the SNMS configuration files and database.

**CAUTION**

Your data files must be stored on tape because the backup does not store them.

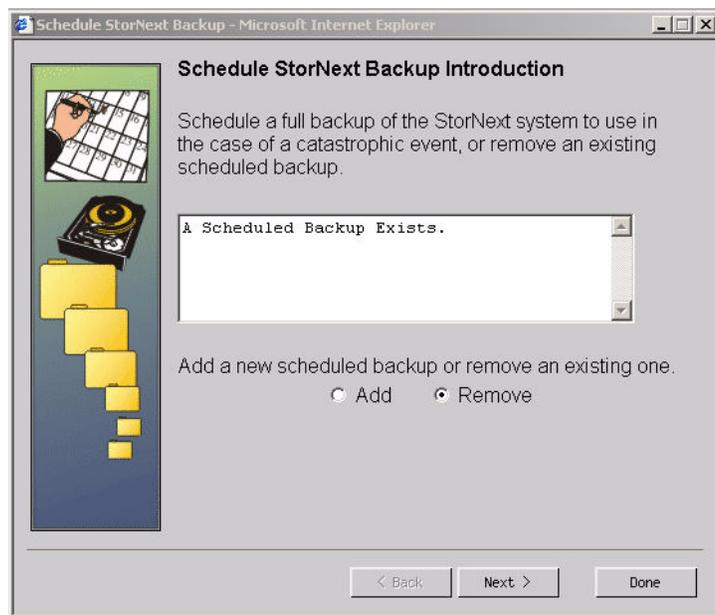


Figure 2-13 Schedule StorNext Backup Introduction

Step 1 Click **Next** to continue through all the screens for the Schedule Backup wizard.

**NOTE**

On the **E-mail Address and Backup Copies** screen, check the **Primary & Secondary** check box to create primary and secondary backup copies of your data. If you do not check this option, SNMS makes only a primary backup copy.

Once the **Status** screen appears displaying successful completion of backing up the SNMS files, click **Next** to return to the **Schedule StorNext Backup Introduction** screen.

Step 2 Click **Done** to complete the last step of the software configuration process.

The **ICW** screen appears and displays the word **Completed** after Step 7: Schedule Backup.

You have now completed the initial configuration for the SNMS software, and you can use the **StorNext Management Suite** GUI to access the functionality of the software. Refer to the *StorNext Management Suite System Administrator Guide* for more information about this functionality.

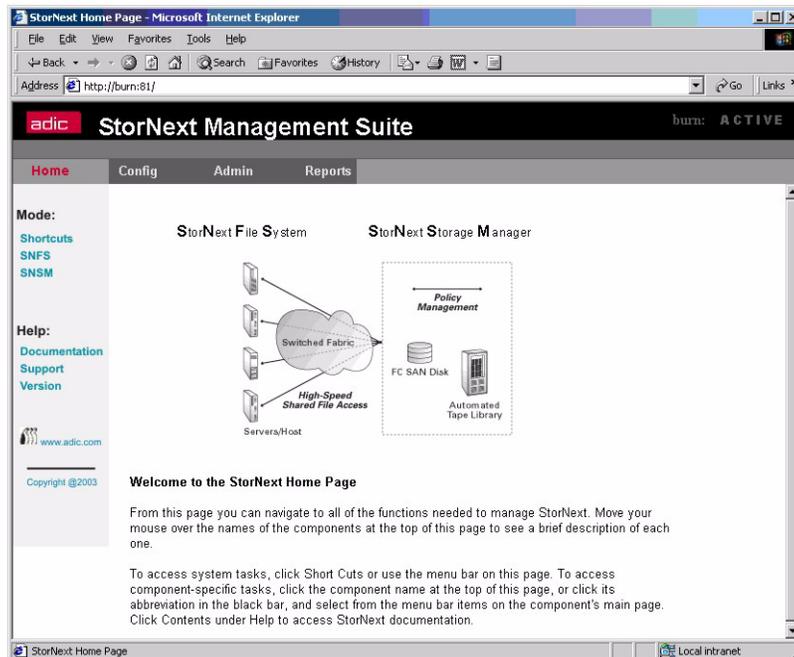


Figure 2-14 StorNext File System GUI

Downloading Client Software

Once you have configured the SNMS software, you can download the client files from the server and then install them on your client machines. To download the client software from your server, use either a Web browser or File Transfer Protocol (FTP).

Using a Web Browser

Use the following procedure to download client software if you have access to a web browser on your client machine.

- Step 1** Launch a browser from your client machine and point to the URL where your **StorNext Management Suite** GUI resides.
- Step 2** Select and click **Shortcuts** from the left navigation bar.
- Step 3** Select and click **Download Client Software** from the **Admin** menu. The following screen appears.

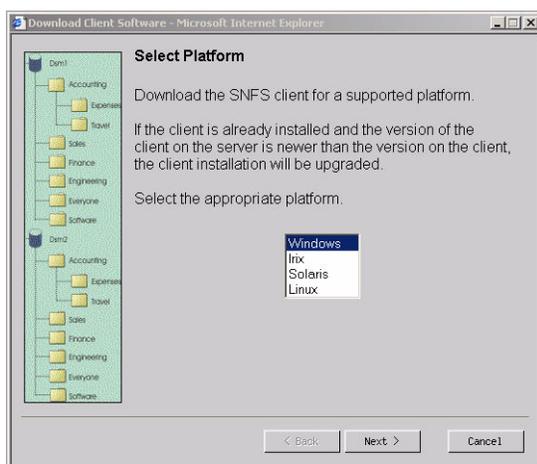


Figure 2-15 Select Platform

- Step 4** Choose the platform that corresponds to the operating system on your client machine and click **Next**.
- Step 5** Continue through the **Download Client Software** wizard until you have completed downloading the software for the platform you selected.
- Step 6** Go to the [Installing Client Software](#) section of this document for instructions on installing the software for your operating system.

Using FTP

Use the following procedure to download client software if you do not have Web browser access.

- Step 1** `ftp <StorNext server>`
- Step 2** `ftp> cd /<usr>/cvfs/CLIENTS`
- Step 3** `ftp> bin`
- Step 4** `ftp> get <platform.tar>`
- Step 5** Go to the [Installing Client Software](#) section of this document for instructions on installing the software for your operating system.

Installing Client Software

The SNMS client software allows the mounting of one or more StorNext File Systems and communicates with your server. Once you have downloaded the SNMS client software from the server, you can install the software on your client machines. You cannot perform these installations through the GUI; you must use command-driven procedures that are specific for your operating system.

The following procedures provide instructions for installing the SNMS client software in a Windows, SGI IRIX, Sun Solaris, Linux, or IBM AIX operating system.



NOTE

If you used the optional pre-installation configuration, you must first perform the steps for adding a user account and a group account on each machine that you set up as a client. (Refer to the [Using the Optional Pre-Installation Configuration](#) section in this document to perform these steps.)

Installing on Windows

Use the following procedure to install the SNMS client software in a Windows operating system.

- Step 1** Double-click the downloaded file system icon (for example, n32d408.exe) from the location where you saved the file on your machine.
- Step 2** Follow the instructions on the screens in the Windows InstallShield Wizard.



WARNING:

On the Choose Options to Complete the Installation screen, do NOT select the option to Label my StorNext File System Disk Devices check box. During the initial installation of the SNMS software, the disks have already been labeled during server setup. If you re-label your operating system disk, you will have to completely rebuild your machine or restore it using an operating system backup.

- Step 3** Once installation is complete, click **Finish** and reboot your system.

Installing on SGI IRIX

Use the following procedure to install the SNMS client software in an SGI IRIX operating system.

- Step 1** Log on as `root`.

This allows you to perform the installation without having permission problems.

- Step 2** Install the client software.

```
tar xvf <filename>
inst -f .
Inst> go
Inst> quit
```

- Step 3** Enable the StorNext File System to start automatically on reboot.

```
chkconfig cvfs on
chkconfig verbose on
```

Step 4 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 5 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 6 Add the following line to the `/etc/fstab` file to enable automount after reboot.

```
<file system name> <mount point> cvfs verbose=yes 0 0
```

The file system name is the name that you created when you configured the SNMS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)

Step 7 Reboot the client to rebuild the UNIX kernel.



NOTE To mount a file system manually, type the following at the command prompt.

```
mount -t cvfs <file system name> <mount point>
```

Installing on Sun Solaris

Use the following procedure to install the SNMS client software in a Sun Solaris operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
tar xvf <filename>
pkgadd -d .
Select to add the package 'ADICsnfs'
type y (yes, add the package)
type q (quit the pkgadd program)
```

Step 3 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 4 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 5 Add the following line to the `/etc/vfstab` file to enable automount after reboot.

```
<file system name> - <mount point> cvfs - auto verbose=yes
```

The file system name is the name that you created when you configured the SNMS software using the ICW **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)



NOTE To mount a file system manually, type the following at the command prompt.

```
mount -F cvfs <file system name> <mount point>
```

Installing on Linux

Use the following procedure to install the SNMS client software in a Linux operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
tar xvf <filename>
rpm -ivh <client package name>
```

Step 3 Enable the `chkconfig` levels to start automatically on reboot.

```
chkconfig --level 3456 cvfs on
```

Step 4 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 5 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 6 Add the following line to the `/etc/fstab` file to enable automount after reboot.

```
<file system name> <mount point> cvfs verbose=yes 0 0
```

The file system name is the name that you created when you configured the SNMS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)



NOTE To mount a file system manually, type the following at the command prompt.

```
mount -t cvfs <file system name> <mount point>
```

Installing on IBM AIX

Use the following procedure to install the SNMS client software in an IBM AIX operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
tar xvf <filename>  
installp -ac -d ./*.bff all
```

Step 3 Make sure the `<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 4 Create the mount points for the file systems.

```
mkdir -p <mount point>  
chmod 777 <mount point>
```

Step 5 Add a stanza to `/etc/filesystems` to enable automount after reboot.

```
crfs -v cvfs -d <file system name> -a verbose=yes -a  
type=cvfs -A yes -m <mount point>
```

The file system name is the name that you created when you configured the SNMS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)

Installing StorNext FS on UNIX

You can install the StorNext File System (StorNext FS) software on a UNIX machine that uses an SGI IRIX, Sun Solaris, Linux, (Red Hat, SuSE) or IBM AIX operating system. Once you have successfully installed the StorNext FS software on your server, use the Initial Configuration Wizard (ICW) to configure the software. You are then ready to use the StorNext FS software.

You can also run the StorNext FS software on a client machine by downloading the client files from the server and then installing them on your client.



CAUTION

If you purchased the StorNext File System (StorNext FS) product for UNIX, you must use the installation instructions in this chapter to successfully install StorNext FS on your UNIX machine. You do not need to use the installation instructions in the other chapters of this guide unless you purchase the StorNext FS for Windows product (refer to [Installing StorNext FS on Windows on page 4-1](#)) or the StorNext Management Suite product (refer to [Installing SNMS on page 2-1](#)).

Determining Installation Requirements

Before installing StorNext FS on any machine, refer to the *StorNext Management Suite Release Notes* to verify that you have complied with all the necessary requirements for running the software on your specific operating system.

To learn more about advanced configurations and features like failover, refer to the *StorNext Management Suite System Administrator Guide*.

Using the Optional Pre-Installation Configuration

StorNext FS requires the user account `www` to exist in the `passwd` file, and the group account `adic` to exist in the `group` file. During installation, StorNext FS uses a system utility to create these accounts if it cannot find them.

- If you want the system utility to create the accounts, skip this section and go to the [Installing StorNext FS Software](#) section in this document.
- If you prefer to manually add these accounts, use the procedure described below. You must not only perform this procedure for each machine on which you install the StorNext FS software, but also on each machine that you set up as a client (refer to the [Installing Client Software](#) section in this document). After you have completed this optional step, continue to the [Installing StorNext FS Software](#) section in this document.

Step 1 Add the user account `www`.

Username	UserID	GroupID	Login Shell	Home Directory
www	101	100	/bin/ksh	/usr/adic/www

Step 2 Add the group account `adic`.

Group Name	GroupID	Members List
adic	100	root, tdlm, www

Installing StorNext FS Software

Use the following procedure to install the StorNext FS software in your UNIX operating environment. Both server and client files are loaded on your machine during the installation process.

Step 1 Designate one machine as your server.

Step 2 Load the CD that is appropriate for your operating system.

Step 3 Double-click the StorNext folder.

Step 4 Double-click inst.SNFS.

The following menu appears.

```
SNFS INSTALL 2.3.1(xxx) MAIN MENU

1) Installation Configuration
2) Install SNFS
3) Show Status
4) Quit

Enter your choice <#>:
```

Figure 3-1 SNFS Install Main Menu**Step 5** Type 1 to display a list of parameters that can be modified.

The following menu appears. The software is installed into the directory (in this example, <usr>) containing the most amount of space.

```
SNFS Install 2.3.1 (xxx) Configuration Menu

      VALUE                DESCRIPTION
0)    /<usr>/adic/perl     Perl installation directory
1)    /<usr>/adic/www      GUI installation directory
2)    /<usr>/adic/apache   Apache installation directory
3)    /<usr>/cvfs          Disk Manager installation directory
4)    RETURN              Returns to previous menu

Enter parameter to modify or other selection <4>:
```

Figure 3-2 SNFS Install Configuration Menu**Step 6** To modify the default parameters, type the parameter number.

If you do not want to modify the default parameters, skip this step and go to [Step 8](#).

Step 7 When you are satisfied with the parameter settings of the installation configuration, press **Enter** or type 4 to return to the **Install Main Menu** (see [Figure 3-1](#)).

Step 8 Type 2 to install the StorNext FS software.

The following menu appears showing four steps of component-level status. As the software is being installed, it displays a submenu for each step. When the step is complete, its status changes from “To do” to “Complete.”

This menu contains the same content for all operating systems except IRIX. On IRIX, you will see additional text on the screen that instructs you to reboot your machine. (Refer to the note in [Step 10](#).)

SNFS INSTALL 2.3.1(xx) Status

1) Install perl	Complete
2) Install GUI	Complete
3) Install apache	Complete
4) Install DSM	Complete

When the installation has completed you will point your browser at the following address and port # to access the StorNext home page:

`http://<machinename:port#>`

Please make a note of this information.

Hit the enter key to continue.

Figure 3-3 SNFS Install Status



NOTE

Please make note of the machine name and port number in the **Install Status** screen (see). You will need this information to access the **StorNext File System GUI**.

Step 9 When the installation is complete, return to the **Install Main Menu** (see [Figure 3-1](#)).

To review the screen that displays the component-level status of the StorNext FS software installation (see), type 3 from the **Install Main Menu**.

Step 10 Type 4 to quit the installation process and exit the menu.



NOTE

Before configuring the StorNext FS software, reboot your system if you are using an IRIX operating system.

Configuring StorNext FS Software

Use the following procedure to configure the StorNext FS software that you have installed on your machine.

Step 1 Open your Web browser.



NOTE

Refer to the *StorNext Management Suite Release Notes* for information about browsers that are supported by StorNext FS.

Step 2 Type the full address of your machine and its port number (http://<machine name>:<port number>) in the **Address** field and press **Enter**. Use the name of the machine and port number that you copied when you installed the StorNext FS software.

If you did not remember to copy the name of your machine and its port number, you can still access the StorNext FS software. By default, the software runs on port number 81. However, if this port number is being used by another application, then use the next higher number. For instance, if port number 81 isn't available, then use port number 82; if port number 82 isn't available, then use port number 83.

The following screen appears.

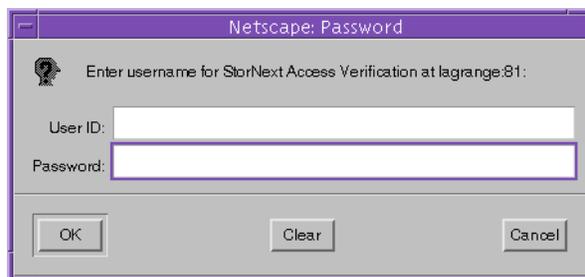


Figure 3-4 StorNext Logon

Step 3 Type `admin` in the **User ID** field and press **Tab**.

Step 4 Type `admin` in the **Password** field and click **OK**.

 **NOTE** To change your password or to set up additional users, refer to the *StorNext Management Suite System Administrator Guide* for more information.

The **Initial Configuration Wizard (ICW)** screen (see [Figure 3-5](#)) and the **StorNext File System GUI** appear. The ICW guides you through the complete configuration of the StorNext FS software.

 **CAUTION** You should first complete the ICW for licensing and configuring your software before you use the StorNext File System GUI. If you work on the GUI before completing the ICW, you will encounter file system failures.

Using the Initial Configuration Wizard

The Initial Configuration Wizard (ICW) guides you step-by-step through the process of configuring the StorNext FS software. The first page of the ICW lists two configuration steps that must be completed in sequence. Text for the active step appears in a different color, and is followed by the word **Completed** when the step is done. Until the two configuration steps are completed, the ICW opens every time the **StorNext File System GUI** is refreshed.

Each configuration step also contains its own wizard that leads you through a set of screens for that step. You must continue through all the screens for a configuration step before the step is completed. For example, you must complete all the screens associated with Step 1: Enter License before you can continue to Step 2: Add File System. When you are finished with a step, click **Done** to continue to the next step. After a step is completed, you cannot return to the previous step; however, when you are still working on a step, you may continue multiple times through each step's screens by clicking **Next**.

Once all the steps are completed, click **Finish** from the **ICW** screen. The **ICW** screen is no longer available—it is designed for initial configuration only.



Figure 3-5 Initial Configuration Wizard

Click **Next** to begin Step 1: Enter License. The **Enter License - Introduction** screen appears (see [Figure 3-6](#)).

Entering a License

The Enter License wizard enables the configuration of the StorNext FS software. You must accept the StorNext FS license agreement and provide a valid license string to go to the next configuration step.

The StorNext FS software comes with a temporary license that allows you to use the software for 30 days. If you have not received a license string, you will see the **30 day temporary license** check box on the **Enter License String** screen. To use the temporary license, select this check box and proceed through the resetting of the wizard. Before the temporary license expires, you should contact the ADIC Technical Assistance Center (ATAC) at 1-800-827-3822 or at support@adic.com to obtain a permanent license.

You may receive your license in one of the following ways.

- If you receive your license string electronically, paste the license string into the file `/<usr>/adic/DSM/config/license.dat`. This allows StorNext FS to automatically detect your license string when going through the ICW.
- If you receive your license string as a hard copy, type the license string exactly as it appears into the field on the **Enter License String** screen. The following is an example of a license string.

```
server 1 83000C82 AAAAAAAAAAWAJDA2R7UBAM7RA974VNBRFFANXECXZW2E9DAYBQ5HA
```

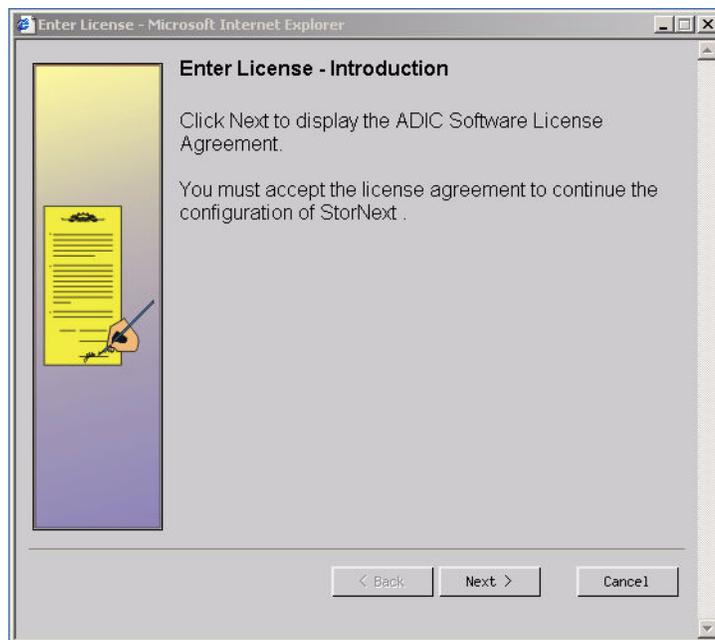


Figure 3-6 Enter License - Introduction

Step 1 Click **Next** to continue through all the screens for the Enter License wizard.

Once the **Status** screen appears displaying successful completion for adding the license information, click **Next** to return to the **Enter License - Introduction** screen.

Step 2 Click **Done** when you are ready to start the next step of the software configuration process.

The **ICW** screen appears and displays the word **completed** after Step 1: Enter License (see [Figure 3-5](#)).

Step 3 Click **Next** to begin Step 2: Add File System.

The **File System - Introduction** screen appears (see [Figure 3-7](#)).

Adding File Systems

The Add File System wizard configures one or more file systems.

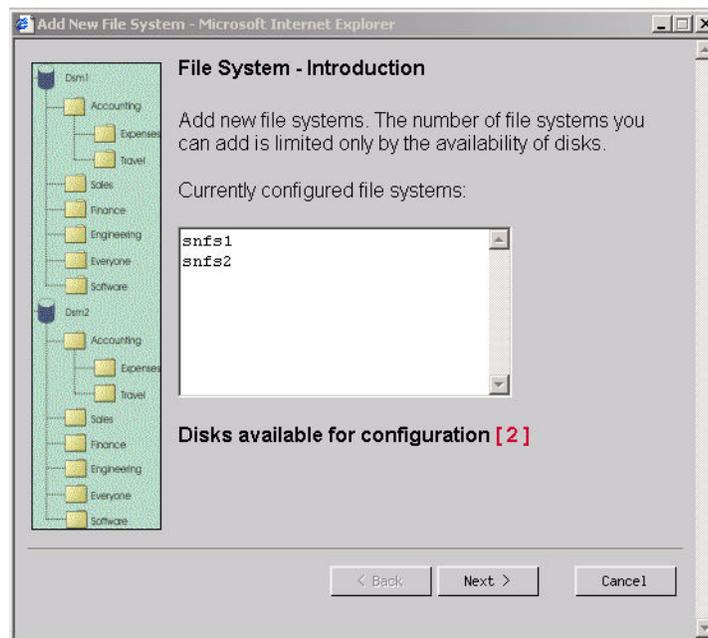


Figure 3-7 File System - Introduction

Step 1 Click **Next** to continue through all the screens for the Add File System wizard.



CAUTION

The default settings for each step of the Add File System wizard screens are optimized for most configurations. If you decide to change the default settings, your changes could negatively impact system performance.

Step 2 Click **Done** to complete the last step of the software configuration process.

The **ICW** screen appears and displays the word **completed** after Step 2: Add File System.



NOTE

You must first install StorNext FS before you can add affinities to a file system that you have added. (Refer to “Adding an affinity” in the *StorNext Management Suite Administrator Guide* for instructions on performing this task.)

You have now completed the initial configuration for the StorNext FS software, and you can use the **StorNext File System** GUI to access the functionality of the software. Refer to the *StorNext Management Suite System Administrator Guide* for more information about this functionality.

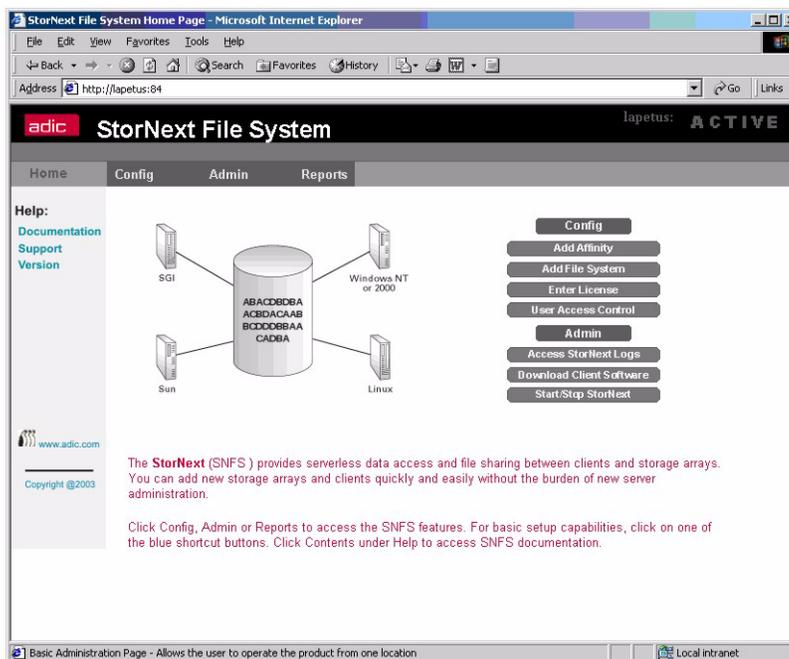


Figure 3-8 StorNext File System GUI.

Downloading Client Software

Once you have configured the StorNext FS software, you can download the client files from the server and then install them on your client machines. To download the client software from your server, use either a Web browser or File Transfer Protocol (FTP).

Using a Web Browser

Use the following procedure to download client software if you have access to a Web browser on your client machine.

- Step 1** Launch a browser from your client machine and point to the URL on which your **StorNext File System** GUI resides.
- Step 2** Select and click **Download Client Software** from the **Admin** menu.

The following screen appears.

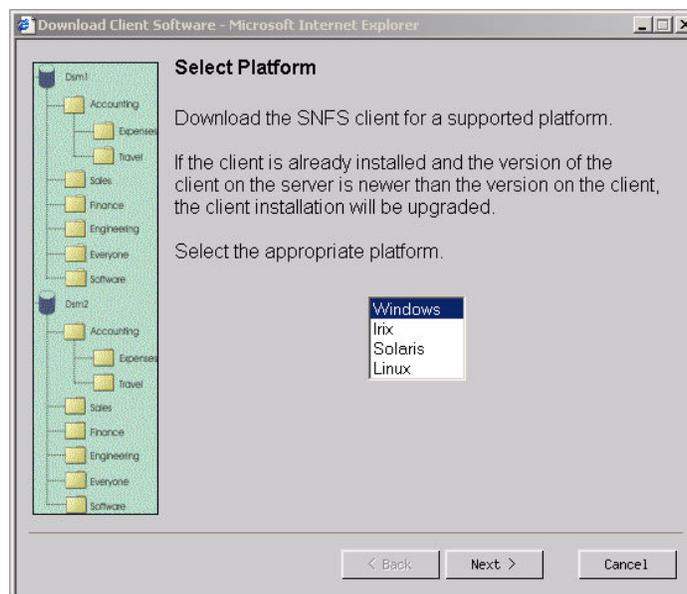


Figure 3-9 Select Platform

- Step 3** Choose the platform that corresponds to the client machine operating system and click **Next**.
- Step 4** Continue through the **Download Client Software** wizard until you have completed downloading the software for the platform you selected.
- Step 5** Go to the [Installing Client Software](#) section of this document for instructions on installing the software for your operating system.

Using FTP

Use the following procedure to download client software if you do not have Web browser access.

- Step 1** `ftp <StorNext FS server>`
- Step 2** `ftp> cd /<usr>/cvfs/CLIENTS`
- Step 3** `ftp> bin`
- Step 4** `ftp> get <platform.tar>`
- Step 5** Go to the section that follows for instructions on installing the software for your operating system.

Installing Client Software

The SNFS client software communicates with your server and allows the mounting of one or more StorNext File Systems. Once you have downloaded the SNMS client software from the server, you can install the software on your client machines. You cannot perform these installations through the GUI; you must use command-driven procedures that are specific for your operating system.

The following procedures provide instructions for installing the StorNext FS client software in a Windows, SGI IRIX, Sun Solaris, Linux, or IBM AIX operating system.



NOTE

If you used the optional pre-installation configuration, you must first perform the steps for adding a user account and a group account on each machine that you set up as a client. (Refer to the [Using the Optional Pre-Installation Configuration](#) section in this document to perform these steps.)

Installing on Windows

Use the following procedure to install the StorNext FS client software in a Windows operating system.

- Step 1** Double-click the downloaded file system icon (for example, n32d408.exe) from the location that you saved the file on your machine.
- Step 2** Follow the instructions on the screens in the Windows InstallShield Wizard.



WARNING:

On the Choose Options to Complete the Installation screen, do NOT select the Label my StorNext File System Disk Devices check box. During the initial installation of the StorNext FS software, the disks have already been labeled during server setup. If you re-label your operating system disk, you will have to completely rebuild your machine or restore it using an operating system backup.

- Step 3** Once installation is complete, click **Finish** and reboot your system.

Installing on SGI IRIX

Use the following procedure to install the StorNext FS client software in an SGI IRIX operating system.

- Step 1** Log on as `root`.

This allows you to perform the installation without having permission problems.

- Step 2** Install the client software.

```
tar xvf <filename>
inst -f .
Inst> go
Inst> quit
```

Step 3 Enable the StorNext File System to start automatically on reboot.

```
chkconfig cvfs on
chkconfig verbose on
```

Step 4 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 5 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 6 Add the following line to the `/etc/fstab` file to enable automount after reboot.

```
<file system name> <mount point> cvfs verbose=yes 0 0
```

The file system name is the name that you created when you configured the StorNext FS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)

Step 7 Reboot the client to rebuild the UNIX kernel.



NOTE To mount a file system manually, type the following at the command prompt.

```
mount -t cvfs <file system name> <mount point>
```

Installing on Sun Solaris

Use the following procedure to install the StorNext FS client software in a Sun Solaris operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
tar xvf <filename>
pkgadd -d .
Select to add the package 'ADICsnfs'
type y (yes, add the package)
type q (quit the pkgadd program)
```

Step 3 Make sure the `/usr/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 4 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 5 Add the following line to the `/etc/vfstab` file to enable automount after reboot.

```
<file system name> - <mount point> cvfs - auto verbose=yes
```

The file system name is the name that you created when you configured the StorNext FS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)

**NOTE**

To mount a file system manually, type the following at the command prompt.

```
mount -F cvfs <file system name> <mount point>
```

Installing on Linux

Use the following procedure to install the StorNext FS client software in a Linux operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
tar xvf <filename>
rpm -ivh <client package name>
```

Step 3 Enable the `chkconfig` levels to start automatically on reboot.

```
chkconfig --level 3456 cvfs on
```

Step 4 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 5 Create the mount points for the file systems.

```
mkdir -p <mount point>
chmod 777 <mount point>
```

Step 6 Add the following line to the `/etc/fstab` file to enable automount after reboot.

```
<file system name> <mount point> cvfs verbose=yes 0 0
```

The file system name is the name that you created when you configured the StorNext FS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)



NOTE To mount a file system manually, type the following at the command prompt.

```
mount -t cvfs <file system name> <mount point>
```

Installing on IBM AIX

Use the following procedure to install the StorNext FS client software in an IBM AIX operating system.

Step 1 Log on as `root`.

This allows you to perform the installation without having permission problems.

Step 2 Install the client software.

```
installp -ac -d *.bff all
```

Step 3 Make sure the `/<usr>/cvfs/config/fsnameservers` file contains the name of your server machine.

Step 4 Create the mount points for the file systems.

```
mkdir -p <mount point>  
chmod 777 <mount point>
```

Step 5 Add a stanza to `/etc/filesystems` to enable automount after reboot.

```
crfs -v cvfs -d <file system name> -a verbose=yes -a  
type=cvfs -A yes -m <mount point>
```

The file system name is the name that you created when you configured the StorNext FS software using the ICW's **Add File System** wizard. (Refer to the [Adding File Systems](#) section of this document for more information.)

Installing StorNext FS on Windows

You can install the StorNext File System (StorNext FS) software on a Windows machine that uses either a Windows 2000 or Windows NT operating system. Once you have successfully installed the StorNext FS software on your server, you should obtain a license for your server, label your drives, and configure the software. (After initial configuration, you can use the StorNext FS GUI to change your configuration parameters.) You are then ready to use the StorNext FS software.

You can also run the StorNext FS software on a client machine by downloading the client files from the server and then installing them on your client.



CAUTION

If you purchased the StorNext File System (StorNext FS) product for Windows, you must use the installation instructions in this chapter to successfully install StorNext FS on your Windows machine. You do not need to use the installation instructions in the other chapters of this guide unless you purchase the StorNext FS for UNIX product (refer to [Installing StorNext FS on UNIX on page 3-1](#)) or the StorNext Management Suite product (refer to [Installing SNMS on page 2-1](#)).

Determining Installation Requirements

Before installing StorNext FS on any machine, refer to the *StorNext Management Suite Release Notes* to verify that you have complied with all the necessary requirements for running the software on your specific operating system.

To learn more about advanced configurations and features like failover, refer to the *StorNext Management Suite System Administrator Guide*.

Installing StorNext FS Software

If you purchased the StorNext FS product, use the following procedure to install the StorNext FS software in your Windows operating environment. Both server and client files are loaded on your machine during the installation process.

- Step 1** Designate one Windows machine as your server.
- Step 2** Insert the CD that is appropriate for your operating system into the drive.
- Step 3** Click the **My Computer** icon on your desktop.

Step 4 Select and click the name of the drive that contains the CD.

Step 5 Open the StorNext folder and select the **win2k** or WinNT folder as appropriate.

**CAUTION**

To install StorNext File System with Terminal Server, use the **Add/Remove Programs** function provided by Windows to ensure that the file system drivers are installed in the correct system path (usually `c:\wtsrv\system32\drivers`) on your machine. After the entire installation process has completed, then reboot your machine.

Step 6 Click the installation procedure you want and follow the online instructions.

- Install the base and service files onto the machine you have designated as your server.
- Install the base and client files onto all machines set up as StorNext FS clients.

**NOTE**

This procedure assumes the default directory for installing StorNext FS files is `C:\SNFS`. If you want to use another directory location, replace all references to `C:\SNFS` in this procedure with the specific location used.

Step 7 After the installation is complete, remove the CD from the drive.

Step 8 Restart the machine.

Obtaining a License

Use the following procedure to obtain a valid license file.

Step 1 Run the StorNext FS license host identifier by clicking **Start** and using **Programs > StorNext File System > License Identifier**.

Step 2 Send an e-mail with the ID string and number of client machines to the ADIC Technical Assistance Center (ATAC) at support@adic.com. If you do not have access to e-mail, call ATAC for assistance (see [Customer Assistance on page 5-1](#)).

A technical support representative will respond with a `license.dat` file.

Step 3 Place `license.dat` in the `C:\snfs\config` directory on the server.

**NOTE**

If you have a temporary license, remove the temporary license file first before replacing it with the permanent license file.

Labeling Drives

You must label each drive to be used by StorNext FS. A new drive needs to be labeled only once. This can be done from any StorNext FS client with a Fibre Channel connection to the drive.

Use the following procedure to label each drive to be used by StorNext FS.

**CAUTION**

The process of disk drive labeling re-partitions the drives. Therefore, if you select an incorrect drive, you may invalidate your operating system or lose non-StorNext data.

Step 1 On any StorNext FS client, click **Start** and select **Programs > StorNext File System > Disk Device Labeler**.

Step 2 Inside the **Disk Device Labeler** window, use the mouse to highlight unused drives or drives that do not have a recognized **Volume Type**.

**CAUTION**

Make sure you identify any drives that already contain a recognized **Volume Type**. If you select an incorrect drive, you may invalidate your operating system or lose non-StorNext data.

Step 3 With the drives highlighted, click **Label**, and then click **OK** to confirm the operation.

Step 4 For each drive, use the **New SNFS Label** text box to enter a **Label Name**.

You can create any convention for the label names. For example, you could type CvfsDisk[n] for each label name, replacing [n] with a decimal number starting at 0 and incrementing for each drive, and the label names would be as follows: CvfsDisk0, CvfsDisk1, CvfsDisk2, etc.

Step 5 In the **New Sectors** text box, use either the default value of the **Total Number of Physical Sectors**, or enter a new size tailored for your application.

Step 6 For the remaining StorNext FS drives, repeat [Step 4](#) and [Step 5](#).

Step 7 When done, click **Label**.

Step 8 Click **Exit**.

Configuring StorNext FS Software

Use one of the following procedures to configure the StorNext FS software on your client machine.

Simple Configuration

A simple StorNext FS configuration assumes the following:

- A single regular stripe group.
- The StorNext FS server is directly connected to the Fibre Channel storage area network, although it can support other types of connections. For more information, see “Shared Setup” in the *StorNext Management Suite System Administrator Guide*.

Use the following procedure to configure a simple file system to be managed by StorNext FS.

**NOTE**

You can create a simple StorNext FS configuration during the initial software installation that allows you to test the product. You can change to a custom configuration at any time, however, by following the instructions for [Custom Configuration on page 4-5](#).

Step 1 Create a list of managed file systems (`fsmlist` file) by clicking **Start** and selecting **Programs > StorNext File System > Simple Configuration > StorNext File System > Help**.

For detailed information, click **Start** and select **Programs > StorNext File System > Help**. Then select **Simple Configuration Tool** from the browser window.

Step 2 Close the **Simple Configuration Tool** by clicking **File** and **Exit**.

Step 3 Continue to [Step 9 on page 4-6](#).

Custom Configuration

A custom StorNext FS configuration assumes the following:

- More than one stripe group.
- More than ten users accessing a machine that is used as a dedicated server. For more information, see “Dedicated Setup” in the *StorNext Management Suite System Administrator Guide*.

Use the following procedure to configure a custom file system to be managed by StorNext FS.

Step 1 If you have been running a simple configuration, disable the simple file system by selecting **Start > Programs > StorNext File System > File System Administrator**, stop `file_system_name`, and select **Quit**.

Step 2 Create the `fsnameservers` file by selecting **Start > Control Panel > StorNext File System** icon.

Step 3 Click the `fsnameservers` tab.

Step 4 Add the IP address of the StorNext FS server to the right-hand box and click **Add**.

The `fsnameservers` file must be present on the StorNext FS server and on all StorNext FS clients.



NOTE For information about failover environments, refer to the *StorNext Management Suite System Administrator Guide*.

Step 5 Create a custom StorNext FS-managed file system by clicking **Start** and selecting **Programs > StorNext File System > Configuration Administrator**.

Step 6 Click **New Configuration** and fill out the appropriate information for each window tab.

For more information, refer to the **Help** menu.

Step 7 Save and name the file with an identifiable name using the following format.
`file_system_name.cfg`.



NOTE Make sure you have a `file_system_name.cfg` file for each uniquely named StorNext File System on the StorNext FS server.

Step 8 Close the **Configuration Administrator** by clicking **Exit**.

- Step 9** Click **Start** to launch the StorNext FS server startup utility to automatically start a file system during system startup or reboot.
- Step 10** Select **Program Files > StorNext File System > FSS Start UP List**.
- Step 11** Click on **New**.
- Step 12** Enter the name of the file system to automatically start and click **OK**.
- Step 13** Click **OK** again when finished.
- Step 14** Enable the file system by clicking **Start** and selecting **Programs > StorNext File System > File System Administrator**.
- Step 15** From the **File System Administrator** window, select **File > Start File System**.
- Step 16** Enter the name of the file system you want started and click **Start**.

Mapping StorNext FS Drives

Use the following procedure to map StorNext FS drives on a client machine.

- Step 1** Select a drive letter to map the StorNext FS-managed file system. Or, you can this do at any time through the **File System Client Properties** menu.
- Step 2** Select **My Computer > Control Panel** and click the **StorNext File System** icon.
- Step 3** Click the **Map Drives** tab.
- Step 4** Select an unassigned drive and the file system you want to map to that drive and click **Map**.
- Step 5** Answer **Yes** to the Windows prompt to reboot the system.

The **StorNext File System** GUI appears and provides you access to the functionality of StorNext FS (see the [StorNext File System GUI. on page 3-11](#)). Refer to the *StorNext Management Suite System Administrator Guide* for more information about this functionality.

- Step 6** Return to [Step 1](#) to repeat this procedure for each StorNext FS client using a StorNext FS-managed file system.

After StorNext FS is mapped to a drive letter on each client, you can use the mapped drive for storing and sharing data.

Customer Assistance

Advanced Digital Information Corporation (ADIC) provides the following types of customer assistance for StorNext Management Suite (SNMS).

Technical Assistance

Telephone and e-mail support, as well as training for SNMS, is available through ADIC.

Contacting Support

Depending on how you purchased technical support, telephone support is provided either through your reseller or directly through ADIC.

The ADIC Technical Assistance Center (ATAC) in Denver, Colorado, provides world-wide service and support.

- In North America and Mexico, call toll-free at 1-800-827-3822.
- In Europe, call toll-free at 00800-9999-3822.
- Outside North America and Europe, refer to the ADIC Web site at www.adic.com for a listing of toll-free phone numbers from other countries.
- Send e-mail to: support@adic.com.

Training

The ADIC training organization in Denver provides hands-on instruction for all ADIC products. For a list of classes, call 720-249-5810 between 8 a.m. and 5 p.m. Mountain time.

Publications

The software distribution CDs contain all SNMS documentation in Adobe® Acrobat® Reader format. The Reader is available for download, free of charge, from Adobe, Inc. at www.adobe.com.

Website

Additional information about SNMS and other ADIC products is available on our website at www.adic.com.

Glossary

A

ATAC (ADIC Technical Assistance Center)

The ADIC customer help desk.

D

DSM (Data Storage Manager)

One of two components that make up the StorNext Management Suite. Corresponds to the product formerly known as CentraVision, but presently known as the StorNext File System.

F

FC (Fibre Channel)

A high speed data transfer architecture.

FTP (File Transfer Protocol)

The protocol used on the Internet for sending files.

I

InfiniteFileLife

A feature that offers data protection through file testing and automatic rewriting of data to new media when indicated.

ICW (Initial Configuration Wizard)

A tool for setting up a basic environment for the management of data, both on disk and on removable media (StorNext presently uses tape). It appears the first time the administrator connects to the browser after installing the StorNext Management Suite.

M**Managed file system**

A file system that enables automatic data movement between the tape library and disk storage.

MediaClass

A media management tool that segregates media into class groupings.

MSM (Media Storage Manager)

One of two components that make up the StorNext Storage Manager and corresponds to the product formerly known as VolServ.

P**PolicyClass**

Improves the efficiency of the data movement of different types.

S**SAN (Storage Area Network)**

A SAN is a dedicated, high-performance network whose primary purpose is the transfer of data along FC or high-speed Ethernet connections between servers, interconnect devices, and storage peripherals.

SNMS (StorNext Management Suite)

A scalable, high performance, data management solution that ensures the long-term safety and recoverability of data in SAN environments, while optimizing the use of storage resources. It consists of two components, the StorNext Storage Manager (StorNext SM) and the StorNext File System (StorNext FS).

StorNext FS (StorNext File System)

One of the two components that make up the StorNext Management Suite. StorNext FS uses the functionality of a product, formerly known as CentraVision (DSM), to primarily provide Fibre Channel (FC) connections (but can also support other types of connections) in a serverless environment that enable clients to access data and share files.

StorNext SM (StorNext Storage Manager)

One of two main components comprising the StorNext Management Suite. StorNext SM combines the functionality of two products known as FileServ (TSM) and VolServ (MSM) to provide high-performance file migration and management services, and to manage automated and manual media libraries, including library volumes.

Stripe group configuration

A set of similar storage devices that can be maintained either as a group or as a characteristic of performance. All disks in a stripe group must have the same number and size of sectors.

T**Terminal Server**

A computer or controller used to connect multiple terminals to a network or host computer.

Trashcan

An option available for managed file systems that deletes files.

TSM (Tertiary Storage Manager)

One of two components that make up the StorNext Storage Manager and corresponds to the product formerly known as FileServ,

U**Unmanaged file system**

A file system that never moves any data to the tape storage library.

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