

NetApp® Software and Firmware Upgrade Guide

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Table of Contents

Chapter 1	Upgrading NetApp Software and Firmware	1
	What this guide contains	1
Chapter 2	Upgrading Data ONTAP Software.	3
	Overview of how to upgrade Data ONTAP software	3
	Downloading the software	4
	Creating system boot diskettes	11
	Booting from the system boot diskettes	15
	Uncompressing and installing the system files	16
	Uncompressing and installing system files from a UNIX host.	17
	Uncompressing and installing system files from a Windows PC	20
	Changing default security style.	23
	Creating a Diagnostics diskette.	24
	Creating a Diagnostics diskette on a Windows host	25
	Creating a Diagnostics diskette on a UNIX host	27
Chapter 3	Upgrading NetApp Firmware	29
	Overview of how to upgrade system firmware.	29
	Creating the firmware upgrade diskette	30
	Upgrading the firmware	34

What this guide contains

Upgrades supported

This guide contains information for upgrade releases of

- ◆ Data ONTAP™ software, including the following diskette creation:
 - ❖ System Boot diskettes
 - ❖ Diagnostics diskette
- ◆ NetApp® system firmware

Note

Additional memory requirements: If you are installing Data ONTAP software on a system that has or will have more than 56 disk drives, you need to have 512 MB of main memory and 32 MB of NVRAM.

Platforms supported

The following Network Appliance™ filer models are supported for software and firmware upgrades:

- ◆ F210, F220, F230
- ◆ F330
- ◆ F520, F540
- ◆ F630
- ◆ F720, F740, F760

Upgrade locations

Upgrades of Data ONTAP and the system firmware are located in two areas:

- ◆ CD-ROM that came with your package
- ◆ NOW (NetApp On the Web) site (<http://now.netapp.com/>)

Upgrade requirements

To perform the upgrade, you must

- ◆ have access to either of the following clients, which must have write permission to the filer's root directory:
 - ❖ a PC running Windows 95, Windows 98, Windows NT 3.51, or Windows NT 4.0, and a CD-ROM drive (if upgrading from the CD-ROM that came with the upgrade package)
 - ❖ a UNIX workstation running SunOS 4.1.x, and a CD-ROM drive (if upgrading from the CD-ROM that came with the upgrade package)
- ◆ be able to log in to the filer as Administrator
- ◆ have access to the filer's system console (from, for example, a `telnet` session)

Where to go from here

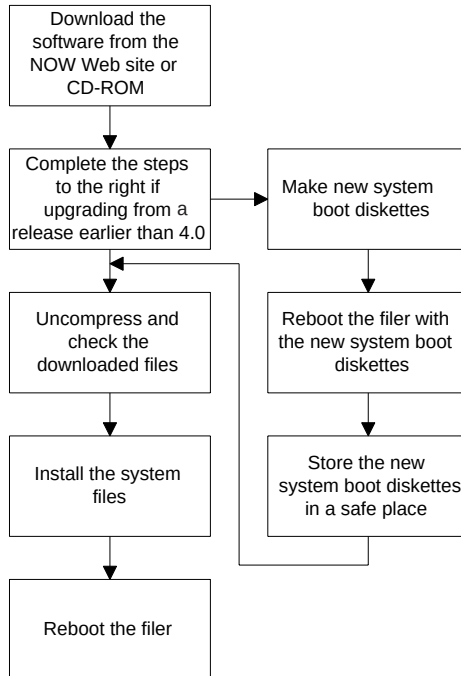
The following table explains where to go in this guide for your particular upgrade needs.

If you want to...	Go to...
Upgrade your Data ONTAP software to a new version.	"Overview of how to upgrade Data ONTAP software" on page 3
Create a Diagnostics diskette.	"Creating a Diagnostics diskette" on page 24
Upgrade your Data ONTAP firmware to a new version.	"Overview of how to upgrade system firmware" on page 29

Overview of how to upgrade Data ONTAP software

Roadmap to upgrades

The following illustration depicts how to upgrade Data ONTAP software.



To perform the upgrade, you need access to both the filer's system console and a client system, either a UNIX workstation (running SunOS 4.1.x or later) or a Windows PC (running Windows 95 or Windows NT), with write permission to the filer's root directory.

Start the upgrade by following the instructions in "Downloading the software" on page 4.

Downloading the software

What to download

This release of the software consists of new system files and new Boot Diskettes. The following table tells you which files you must download for the upgrade.

If...	You must download...
You are upgrading from a release of Data ONTAP 4.0 or later.	The compressed file that contains the system files, from either the • NOW Web site • CD-ROM that came with your upgrade package
You are upgrading from a release of Data ONTAP earlier than 4.0.	The compressed file that contains the system files and the new Boot Diskettes, from either the • NOW Web site • CD-ROM that came with your upgrade package

Download the system files from the NOW Web site

Use the following procedure to access the system files from the NOW Web site and download them to your system.

Step	Action
1	Using your client's browser, go to the NOW home page: <i>http://now.netapp.com/</i> Enter your password to enter the NOW home page.
2	Click the Software Library link.
3	Click the Data ONTAP link for the software version you want.
4	Click the Data ONTAP specific version link.

Step	Action
5	Read the End User Software License, enter your email address, then click Accept.
6	Select the System Files link specific to your filer model to download the system files in compressed format. Note_____ The System Files are available in two formats: ◆ tar format, which you can use to upgrade your filer from a UNIX administration host ◆ ZIP format, which you can use to upgrade your filer from a Windows PC administration host Click the link for the format you need.

Download the system boot images from the NOW Web site

If you are upgrading from a release of Data ONTAP prior to 4.0, use the following procedure to download the system boot images from the NOW Web site.

If you have the Data ONTAP Upgrade package, the system boot diskettes are included in that package. You do not need to download or create the system boot diskettes.

Step	Action
1	If you are still in the Software Library page of the NOW Web site, after downloading the system files, skip to Step 6. Otherwise, using your client's browser, go to the NOW home page: <i>http://now.netapp.com/</i> Enter your password to enter the NOW home page.
2	Click the Software Library link.
3	Click the Data ONTAP link for the software version you want.
4	Click the Data ONTAP specific version link.

Step	Action
5	Read the End User Software License, enter your email address, then click Accept.
6	Click the Boot Diskette 1 link for your filer model to download the first Boot Diskette image. Note_____ The Boot Diskette software link appears in both the <i>Administration from UNIX host</i> and <i>Administration from Windows PC</i> tables. Both sets of links download the same software.
7	Click the Boot Diskette 2 link for your filer model to download the second Boot Diskette image.

Download the system files from the CD-ROM on a UNIX host

Use the following procedure to access the system files from the CD-ROM and download them to your system.

Step	Action
1	Mount the filer's root file system to the client's <i>/mnt</i> directory: mount toaster:/mnt where <i>/mnt</i> is the directory on the client where you want to mount the filer's root file system.
2	Change the directory to <i>/mnt</i>: cd /mnt where <i>/mnt</i> is the directory on the client that you created in Step 1.

Step	Action
3	If your filer is a model in the F200 or F300 series, copy the files to your host by - inserting the Data ONTAP CD-ROM into your CD-ROM drive - extracting the files, specifying the input file, output file, and block size: <pre>tar xvf /CD-ROM_MNT_PT/ONTAP/release/X86/SYSFILES.TAR</pre> where <i>/CD-ROM_MNT_PT</i> is the name of your CD-ROM mount point and <i>release</i> is the release number on the CD-ROM. If your filer is a model in the F500, F600, or F700 series, copy the files to your host by - inserting the Data ONTAP CD-ROM into your CD-ROM drive - extracting the files, specifying the input file, output file, and block size: <pre>tar xvf /CD-ROM_MNT_PT/ONTAP/release/ALPHA/SYSFILES.TAR</pre> where <i>/CD-ROM_MNT_PT</i> is the name of your CD-ROM mount point and <i>release</i> is the release number on the CD-ROM. Result: The tar command reports the names of the files it has copied; they are <i>tar_image.Z</i> and <i>install_netapp</i>.
4	If you want, remove the tar file by entering the following command: <pre>rm SYSFILES.TAR</pre> where <i>SYSFILES.TAR</i> is the name you gave the system files archive, if you renamed it during the copy process.

Step	Action
5	Run the <code>install_netapp</code> script with an argument that tells the script where to install the files; this is the mount point for the filer's root directory. You can keep or delete the <code>tar</code> files. - If you want to delete the <code>tar</code> files, use the following command: <code>./install_netapp /mnt</code> - If you want to keep the <code>tar</code> files, use the following command: <code>./install_netapp -k /mnt</code> where <code>/mnt</code> is the directory on the client where you mounted the filer's root file system. Result: The install script decompresses and extracts files.
6	From the client system, unmount the filer's root file system (/) by entering the following commands: <pre>cd / umount /mnt</pre> where <code>/mnt</code> is the directory on the client where you mounted the filer's root file system.

Download the system files from the CD-ROM on a Windows PC

Use the following steps to access the system files from the CD-ROM and download them to your system.

Step	Action
1	On the administration host, right-click My Computer and select Map Network Drive. The Map Drive dialog box appears.
2	In the dialog box, select an unused drive letter, for example: N:

Step	Action
3	In the Path field of the dialog box, enter two backslashes followed by the name of the filer, a backslash, and the name assigned to the hidden share of its root directory, C\$. For example: \\toaster\c\$ Leave the Connect As field unchanged.
4	Insert the Data ONTAP CD-ROM into your CD-ROM drive.
5	If you are upgrading an F200 or F300 series filer: ❖ go to the <i>ONTAP\release\X86</i> folder on the Data ONTAP CD-ROM, where <i>release</i> is the particular release number you want, then double-click <i>Setup.exe</i>. If you are upgrading an F500, F600, or F700 series filer: ❖ go to the <i>ONTAP\release\ALPHA</i> folder on the Data ONTAP CD-ROM, where <i>release</i> is the particular release number you want, then double-click <i>Setup.exe</i>. The setup.exe program displays a warning box.
6	Make sure that you have followed the steps described in the warning box, then click OK. The WinZip dialog box appears.
7	In the WinZip dialog box, insert the drive letter you chose for the filer's root directory. For example, if you chose drive N in Step 2, replace <DRIVE>:\ETC with the following path: N:\ETC
8	Leave the other options as they are. Ensure that the following check boxes are checked: • Overwrite Files Without Prompting • When Done Unzipping Run...
9	Click the Unzip button. In the dialog box's lower panel, confirming messages are displayed as files are decompressed.

Where to go from here

Use the following table to decide what you need to do next.

If...	Then...
You are upgrading from Data ONTAP 4.0 or later.	You have completed the download. Continue with the instructions in “Uncompressing and installing the system files” on page 16.
You are upgrading from a release of Data ONTAP earlier than 4.0.	You must create a new system boot diskette. Continue with the instructions in “Creating system boot diskettes” on page 11.

Creating system boot diskettes

Overview of creating system boot diskettes

The procedure you follow to create the system boot diskettes differs depending on whether you are using a UNIX host or a Windows PC to administer your filer.

Use one of the procedures shown in the following table to create the system boot diskettes.

If you are...	Follow the instructions in...
Using a UNIX host to administer your filer	“Creating system boot diskettes on a UNIX host” on page 11
Using a Windows PC to administer your filer	“Creating system boot diskettes on a Windows PC” on page 12

Creating system boot diskettes on a UNIX host

Complete the following steps to create system boot diskettes on a UNIX host.

Note _____

Replace the variable *filename* with the name of the Boot Floppy image you downloaded.

If the diskette drive in your administration host is not named */dev/fd0*, replace */dev/fd0* with the name of your diskette drive.

Step	Action
1	Insert a write-enabled diskette in the diskette drive on the administration host.
2	Copy the Boot Floppy 1 image to the diskette by using the dd command: dd if=<i>filename</i> of=<i>/dev/fd0</i> bs=512
3	Remove the diskette from the drive and write-protect it to prevent it from being erased accidentally.

Step	Action
4	Attach a label to the diskette that contains the following information: ◆ System Boot Diskette 1 ◆ Data ONTAP release number ◆ NetApp filer model Note_____ It is important to record the filer model on the diskette label, especially if you have different models on site. The system boot diskettes between different filer models are not interchangeable. _____
5	Repeat Steps 1 through 4 for the second system boot diskette, labeling it System Boot Diskette 2.

Creating system boot diskettes on a Windows PC

Complete the following procedures to create the system boot diskettes on a Windows PC:

- ◆ Download the RaWrite utility if you don't already have it (this utility is necessary to extract the system boot diskette software and write it to the diskette).
- ◆ Create the system boot diskettes.

Downloading the RaWrite utility: If you do not have the RaWrite utility, complete the following steps to download it from the NOW Web site; otherwise, continue with the next section, "Creating system boot diskettes" on page 13."

Step	Action
1	Go to the NOW home page: <i>http://now.netapp.com/</i> Enter your password to enter the NOW home page.
2	Click Tools & Utilities.
3	Select RaWrite from the Useful Tools and Other Links list, then click Go!

Step	Action
4	Click the Download RAWRITE link to download the RaWrite utility. You might see a dialog box that states something like the following: You have started to download a file of the type application Click "More Info" to learn how to extend Navigator's capabilities. Click the Save button to save the file to your hard disk.
5	Click the Save button.

Creating system boot diskettes: Complete the following steps to create the system boot diskettes.

Step	Action
1	Insert a blank, write-enabled diskette into the diskette drive.
2	Open the Rawrite folder you downloaded and double-click Rawrite.exe. Results: RaWrite starts and prompts for an image source file.
3	Enter the name you used for the Boot Floppy 1 image file that you downloaded. Results: RaWrite prompts for a target diskette drive.
4	Enter the drive letter for the formatted diskette that will be the system boot diskette. Results: RaWrite displays messages like the following: <pre> RaWrite 2.0 - Write disk file to raw floppy diskette Number of sectors per track for this disk is 18 Writing image to drive A:.. Press ^C to abort. Track: 79 Head: 1 Done. </pre>
5	Remove the diskette from the drive.
6	Write-protect the diskette.

Step	Action
7	Attach a label to the diskette that contains the following information: ◆ System Boot Diskette 1 ◆ Data ONTAP release number ◆ NetApp filer model Note_____ It is important to record the filer model on the diskette label, especially if you have different models on site. The system boot diskettes between different filer models are not interchangeable. _____
8	Repeat Steps 1 through 7 for the second system boot diskette, labeling it System Boot Diskette 2.

What to do next

Continue the upgrade process using the instructions in “Booting from the system boot diskettes” on page 15.

Booting from the system boot diskettes

When to boot from diskette

If your filer is running a release of Data ONTAP earlier than 4.0, complete the following steps to boot the filer.

Step	Action	
1	Insert the diskette labeled <i>System Boot Diskette 1</i> into the filer's diskette drive.	
2	If...	Then...
	The filer is running	At the system console, enter reboot
	The filer is powered off	Turn on the filer's power.
3	When the filer displays a list of options, select option 1, Normal Boot. Result: The filer boots from the system boot diskettes with the new release of the software.	
4	Remove the system boot diskette and store it in a safe place.	

What to do next

Continue the upgrade process using the instructions in “Uncompressing and installing the system files” on page 16.

Uncompressing and installing the system files

**Overview of
uncompressing and
installing system
files**

The steps you follow to uncompress and install the system files differ depending on whether you are using a UNIX host or a Windows PC to administer your filer. Use one of the procedures shown in the following table to uncompress and install the system files.

If you are...	Follow the instructions in...
Using a UNIX host to administer your filer	“Uncompressing and installing system files from a UNIX host” on page 17
Using a Windows PC to administer your filer	“Uncompressing and installing system files from a Windows PC” on page 20

Uncompressing and installing system files from a UNIX host

Uncompressing the files

The system files you downloaded are in compressed format. You must uncompress the files before you can use them.

Complete the following steps to uncompress and check the system files, replacing *filename.z* in the procedure with the name of the file you downloaded.

Step	Action
1	Uncompress the files with names that end with .z: uncompress filename.Z ...
2	Verify the lengths and checksums of the downloaded files. ls -l filename ... In the actual command, substitute the name of the file for <i>filename</i> . (After a file has been uncompressed, its name does not have the .z extension.)
3	Compare the length reported by the ls command with the value shown in the NOW page. sum filename ... In the actual command, substitute the name of the file for <i>filename</i> . Compare the checksum you compute with the value shown in the NOW page. If the values do not match, the compressed file might have become corrupted when you downloaded it. Start the upgrade process again using the instructions in “Downloading the software” on page 4.

Installing the files

Complete the following steps to install the system files on your filer.

Note

Replace the variable *filer* with the host name of your filer; replace the variable *full_path_to_file* with the full path of the system file that you downloaded and uncompressed.

Step	Action
1	Enter the following commands at the filer's administration host: <pre>mount <i>filer</i>:/ /mnt cd /mnt tar xvf <i>full_path_to_file</i></pre> Example: If your filer is named <i>toaster</i> and you saved the uncompressed system file named <i>1.2.3_tar_floppy_pc</i> in the <i>/tmp</i> directory, enter the following commands at the administration host: <pre>mount <i>toaster</i>:/ /mnt cd /mnt tar xvf /tmp/<i>1.2.3_tar_floppy_pc</i></pre> Results: The files <i>install_netapp</i> and <i>tar_image.z</i> are extracted.
2	On the filer's administration host, run the <code>install_netapp</code> script with an argument that tells the script where to install the files; that is, to the mount point for the filer's root directory: <pre>./install_netapp /mnt</pre> Results: The <code>install_netapp</code> script uncompresses the image file, installs it, and then deletes the temporary files it has used, while displaying a transcript of its actions.
3	Enter the following commands at the filer's administration host to unmount the filer's root file system: <pre>cd / umount /mnt</pre> Results: The filer's root file system is unmounted from the administration host.
4	Remove the compressed and uncompressed system files from the administration host.

Step	Action
5	Enter the following command at the filer's command prompt to copy the executable file to the hard disk boot area of each of the filer's disks: download Note_____ You can enter the command either at the filer console or from a <code>telnet</code> connection to the filer. Results: When the executable file has been copied to the filer's disks, the command prompt reappears—the download command displays a series of dots showing the progress and a message that the download has completed.
6	Enter the following command at the filer's command prompt to reboot the filer: reboot Results: The filer console displays the copyright notice followed by the Data ONTAP release number. The software upgrade is complete.

Uncompressing and installing system files from a Windows PC

Uncompressing and installing the files

Complete the following steps to uncompress and install the system files.

Step	Action
Map a drive to the filer's root volume	
1	From the administration host, right-click the My Computer icon and select Map Network Drive. Results: The Map Drive dialog box appears.
2	In the dialog box, select a drive letter; for example: N:
3	In the Path field of the dialog box, enter the Universal Naming Convention (UNC) path; the UNC consists of two backslashes, the name of the filer, a backslash, and the name assigned to the hidden share of the filer's root directory (C\$). Example: \\toaster\c\$ Note_____ If the dialog box contains a Connect As field, leave the field unchanged. If the dialog box contains a Reconnect at Login check box, leave the box unchecked. _____
4	Click OK. Results: The drive letter is mapped to the filer's root volume.
Uncompress and install the system files	
5	Click the Start button on the task bar, then select Run. Results: The Run dialog box appears.

Step	Action
6	Click the Browse button. Results: The Browse window appears.
7	Use the Browse window to locate the setup file you downloaded, then double-click the file name. Results: The WinZip dialog box appears.
8	In the WinZip dialog box, insert the drive letter you chose for the filer's root directory. Leave the other options unchanged. Make sure that both the Overwrite Files Without Prompting and When Done Unzipping Run check boxes are checked. For example, if you chose drive N in Step 2, replace <DRIVE>:\ETC with the following path: N:\ETC
9	Click the Unzip button. Results: In the dialog box's lower panel, confirming messages are displayed as files are uncompressed and installed on the filer.
10	Enter the following command at the filer's command prompt to copy the executable file to the hard disk boot area of each of the filer's disks: down load Note You can enter the command either at the filer console or from a telnet connection to the filer. Results: When the executable file has been copied to the filer's disks, the command prompt reappears—the down load command displays a series of dots showing the progress and a message that the download has been completed.

Step	Action
11	Enter the following command at the filer's command prompt to reboot the filer: reboot Results: The filer console displays the copyright notice followed by the Data ONTAP release number. The software upgrade is complete.

Changing default security style

Changing to CIFS-compatible security styles

If you upgraded from Data ONTAP 5.0 or earlier, every volume and qtree (formerly quota tree) has a default security style of UNIX, which permits only UNIX-style permissions.

Security styles: To enable NTFS-style file security on one or more volumes, you can change the security style of the volumes you want to one of the following styles:

- ◆ mixed, which allows both UNIX-style and Windows NT-style permissions.
- ◆ ntfs, which allows only Windows NT-style permissions.

Note

If you have only one volume, that volume is also the root volume.

Changing the root volume security style: To change the security style of the root volume to mixed, use the following command:

qtree security /vol/vol0/ mixed

The default name of the root volume is /vol/vol0, and you must put a slash after the name of the root volume.

For additional information about security styles, volumes, and qtrees, refer to the *Data ONTAP System Administrator's Guide*.

Creating a Diagnostics diskette

About making a Diagnostics diskette

This section describes how to make a Diagnostics boot diskette from a diskette image file supplied on the CD-ROM. (The procedure is the same for any such diskette image file).

Creating diskettes from diskette image files

Depending on the type of client you are using, follow one of the following sets of instructions:

- ◆ Creating an update diskette on a Windows host
- ◆ Creating an update diskette on a UNIX host

Creating a Diagnostics diskette on a Windows host

Description

This procedure creates a bootable Diagnostics diskette.

Prerequisites

The Data ONTAP CD-ROM provides the RaWrite DOS utility for copying a boot image from the CD-ROM onto a 1.44 MB 3.5-inch diskette. This utility is necessary to extract the Diagnostics boot software and write it to the diskette.

RaWrite is located on the CD-ROM in the *utils/rawrite/rawrite.exe* file. You can run RaWrite either in a DOS shell window or from the Windows desktop.

Steps

To create a Diagnostics boot diskette from the CD-ROM using a Windows host:

Step	Action
Preparing to create a boot diskette	
1	Insert the CD-ROM into the Windows host's CD-ROM drive. It is automatically mounted by the Windows host.
2	Insert a blank, write-enabled 1.44 MB diskette into the Windows host's diskette drive.

Step	Action	
3	To run RaWrite from a DOS shell	To run RaWrite from the Windows desktop
	Enter the <code>rawrite</code> command at the DOS prompt, using the command syntax shown below. In this example, the CD-ROM is drive E: and the blank diskette has been inserted in the PC's A: drive: <pre>E:\utils\rawrite\rawrite -f E:\<file> -d A -n</pre> Where <i><file></i> is the file name of the diskette image file on the CD-ROM.	Double-click the My Computer icon on your Windows desktop.
4	Remove the diskette from the diskette drive, write-protect it, and label the diskette appropriately, including the filer model.	In the My Computer window, double-click the icon for the CD-ROM drive.
5		Open the Utils folder.
6		Open the RaWrite folder.
7		Double-click the RaWrite icon. When you start RaWrite this way, a window opens on your screen and RaWrite leads you through the steps for creating the diskette.
8		Remove the diskette from the diskette drive, write-protect it, and label the diskette appropriately, including the filer model.

Creating a Diagnostics diskette on a UNIX host

Description

This procedure creates a Diagnostics diskette from the CD-ROM using a UNIX host.

Steps

Use the following table to create the Diagnostics diskette from a UNIX host.

Step	Action
1	Insert the CD-ROM in the UNIX host's CD-ROM drive.
2	Mount the CD-ROM (some UNIX hosts do this automatically when the CD-ROM is inserted into the drive; others require the use of the mount command. Consult the documentation for your system, if necessary).
3	Insert a blank, write-enabled 1.44 MB diskette into the UNIX hosts's diskette drive. (In this example, assume the CD is mounted at <code>/cdrom</code>).
4	Copy the update image to the diskette: Using the dd command, specify the input file, output file, and block size using the following command syntax: <pre>dd if=/cdrom/<file> of=/dev/fd0 bs=512</pre> Where <i><file></i> is the file name of the diskette image file on the CD-ROM. Replace <code>/dev/fd0</code> with the device name of your diskette drive if it is not <code>/dev/fd0</code>.
5	Remove the diskette from the diskette drive, write-protect it, and label the diskette appropriately, including the filer model.

Overview of how to upgrade system firmware

What is needed

To upgrade your system's firmware, you need a firmware upgrade diskette, which might be included in the NetApp CD-ROM package. If you do not have a firmware upgrade diskette, you must make an upgrade diskette from either the NetApp CD-ROM or from the NetApp NOW site.

Where to go from here

Use the following table to decide what you need to do next.

If you...	Then follow...
Do not have a firmware upgrade diskette	The instructions in "Creating the firmware upgrade diskette" on page 30 for your specific system.
Do have a firmware upgrade diskette	The upgrade instructions in "Upgrading the firmware" on page 34 for your specific system.

Creating the firmware upgrade diskette

Where to obtain the upgrade image

The firmware upgrade image is available in several areas.

Location...	Obtaining the diskette...
Data ONTAP Upgrade package (if available)	Diskette is included in the Upgrade package.
Software release CD-ROM	Read the <i>index.htm</i> file on the CD-ROM for the location of the firmware files and how to create the firmware diskette.
NOW Web site (http://now.netapp.com/home)	Go to the Supported Tools & Utilities menu in the NOW Web site. Select the firmware version that you need for the upgrade.

Creating the firmware diskette

Depending on whether you are creating the diskette on a UNIX system or a Windows PC system, use one of the following instructions to create a firmware diskette from the NOW Web site or the CD-ROM.

Considerations

For F200, F300, F500, and F600 series filers: If you are creating a firmware upgrade diskette on a UNIX system, you need SunOS 4.1.x or later running on your UNIX system.

If you are creating a firmware upgrade diskette on a PC running Windows NT or Windows 95 or later, you need to have RaWrite and WinZip (or equivalent products) installed on your PC. For information about obtaining RaWrite, refer to the instructions in “Downloading the RaWrite utility” on page 12.

For F700 series filers: Creating a firmware diskette for the F700 series filers is different from creating it for any other filer series:

- ◆ You do not need RaWrite or WinZip.
- ◆ You do need a PC-formatted diskette, write-enabled, for the procedure.

**For F200, F300,
F500, and F600
series filers**

Creating the firmware upgrade diskette on a UNIX system: Follow these steps to create a diskette to be used in the upgrade procedure. This procedure assumes that you are using a UNIX system running SunOS 4.1.x or later.

Step	Action	
1	Insert a write-enabled diskette into the UNIX system on which you will download the firmware.	
2	Download the compressed firmware file. If the .Z or .gz extension is not included with the file name during download, add the appropriate extension before clicking the Save button. Alternatively, you can rename the file to include the appropriate extension after you save the file.	
3	Uncompress or gunzip the file.	
	To uncompress the .Z file, use the following command: uncompress firmware.v.v.Z	To gunzip the .gz file, use the following command: gunzip firmware.v.v.gz
	where v.v is the specific version of firmware you need.	
	Most UNIX systems have uncompress installed as part of the OS installation. However, you must obtain gunzip separately. For further instructions regarding GNU software, visit the Free Software Foundation home page at <i>http://www.fsf.org</i> .	
4	Copy the firmware file to the diskette by entering the dd command, as follows: dd if=firmware.x.x of=/dev/fd0 bs=512 where firmware.x.x is the specific firmware release, of=/dev/fd0 is your system's diskette drive, and bs=512 is the blocking factor.	
5	Remove the diskette from the UNIX system and label the diskette with its appropriate firmware version.	

Creating the firmware upgrade diskette on a Windows PC: Follow these steps to create a diskette to be used in the upgrade procedure. This procedure assumes that you are using a PC running Windows NT or Windows 95 or later. You need to have RaWrite and WinZip (or equivalent products) installed on your PC. For information about obtaining RaWrite, refer to the instructions in “Downloading the RaWrite utility” on page 12

Step	Action
1	Insert a write-enabled diskette into the PC on which you will download the firmware.
2	Download the firmware.
3	Unzip the file. Follow the instructions for the tool you choose to use. If your system does not handle file names longer than 8 characters, rename the firmware image to an 8-character or fewer file name. If the .gz extension is deleted from the file name during download, you can add the appropriate extension before clicking the Save button. Alternatively, you can rename the file to include the appropriate extension after you save the file.
4	Double-click the RAWRITE icon and follow the instructions on the screen.
5	Remove the diskette from the system and label the firmware diskette appropriately.

For F700 series filers

Follow these steps to create a diskette to be used in the installation. This procedure assumes that you are using a PC running Windows NT or Windows 95 or later.

Note

Many UNIX workstations also have commands in PC format for copying files to diskettes. Refer to your workstation documentation.

Step	Action
1	Insert a write-enabled diskette into the PC on which you will download the firmware image file (<i>fw.rom</i>).
2	Copy the firmware image file from either the CD-ROM or the NOW site to your diskette.
3	Remove the diskette from the system and label the firmware diskette appropriately.

Upgrading the firmware

Completing the upgrade

To complete the upgrade, you need to access the system's console. The upgrade is slightly different on each filer type (F700, F600, F500, F300, or F200 series).

Follow the upgrade instructions for the type of filer you are upgrading.

On an F600 or F700 series filer

Follow these steps to upgrade the firmware on an F600 series or F700 series filer.

Step	Action	
1	If the system is running...	If the system is not running...
	Enter the halt command to shut it down. Result: The ok prompt appears.	Power on the system. As it reboots, press Ctrl-C while the memory test is in progress to interrupt the boot process. Result: The ok prompt appears.
2	Insert the firmware upgrade diskette into the system's diskette drive.	
3	Enter the following command: update-flash The Updater program ◆ prompts you for whether you want to update the system flash; enter y to continue ◆ reads the diskette ◆ checks for a proper firmware image ◆ if the firmware image is valid, writes the flash When the firmware finishes writing, it ends with the ok prompt.	
4	Remove the diskette from the diskette drive and store it in a safe place.	
5	Enter the bye command to reboot the system using the new firmware.	

On an F500 series filer

Follow these steps to upgrade the firmware on an F500 series filer.

Step	Action	
1	If the filer is running...	If the filer is not running...
	Enter the halt command to shut down the filer. Result: The ok prompt appears.	Power on the filer. As the filer reboots, press Ctrl-C while the memory test is in progress to interrupt the boot process. Result: The ok prompt appears.
2	Enter the following command at the ok prompt: updater Caution _____This step starts the Updater program. If you start the Updater program but decide not to continue the firmware upgrade, you must enter the system-rom command before entering the bye command to boot your firmware, as indicated in Step 6. If you do not enter system-rom before entering bye , you remain in the Updater program (contact Network Appliance Technical Support immediately for help). _____ Result: The system boots up with updater and ok prompts.	
3	Insert the firmware upgrade diskette into the filer's diskette drive.	
4	Enter the following command: update-flash The Updater program ◆ reads the diskette ◆ checks for a proper firmware image ◆ if the firmware image is valid, writes the flash When the firmware finishes writing, it ends with the ok prompt.	
5	Remove the firmware diskette from the diskette drive and store it in a safe place.	
6	Enter bye to reboot the filer using the new firmware.	

On an F200 or F300 series filer

Follow these steps to upgrade the firmware on an F200 series or F300 series filer.

Step	Action
1	If the system is running, enter the halt command to shut it down. Result: The OK prompt appears.
2	Power off the system.
3	Insert the firmware upgrade diskette into the system's diskette drive.
4	Power on the system to boot from the firmware upgrade diskette.
5	The upgrade displays Firmware version xx.x_i and prompts you to update the PROM, where xx.x is the version of firmware to which you are upgrading. Enter yes to continue the upgrade.
6	After the upgrade is finished, remove the firmware diskette from the diskette drive and store it in a safe place.
7	Power off the system.
8	Power on the system to use the new firmware.