

Data ONTAP™ Software 5.3

Start Here

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Part number 210-02340
March 1999

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About this document

Welcome

Welcome to release 5.3 of the Data ONTAP™ software.

This document provides you with the information that you need to get started using Data ONTAP 5.3 and your NetApp® filer.

Contents of this document

This document discusses the following topics.

Chapter	Contents
Chapter 1, “ Introduction ,” on page 1	Provides orientation to this document.
Chapter 2, “ Information for All Users ,” on page 3	Provides information that all users need to know.
Chapter 3, “ Information for New Filer Installations ,” on page 11	Provides information that users who are installing new filers need to know.
Chapter 4, “ Information for Filer Upgrades ,” on page 13	Provides information that users who are upgrading to Data ONTAP 5.3 need to know.

What to do next

The following table describes how you should proceed.

If you are...	Then...
Installing a new filer	Read the following information in this document: ◆ Chapter 2, “Information for All Users,” on page 3 ◆ Chapter 3, “Information for New Filer Installations,” on page 11 Then read the following documents in the order that they are listed: 1. <i>Read Me First</i>, if it is included in the documentation 2. <i>Hardware Installation Guide</i> for your new filer 3. One of the <i>First-Time Configuration</i> guides, based on the type of setup you plan on doing, as discussed in Step 3 of the section “For a new filer” on page 12. 4. If you are converting a new filer plus an old filer into a cluster, the <i>Cluster Conversion Guide</i>
Upgrading an existing filer	Read the following information in this document: ◆ Chapter 2, “Information for All Users,” on page 3 ◆ Chapter 4, “Information for Filer Upgrades,” on page 13 Then read the following documents in the order that they are listed: 1. <i>Read Me First</i>, if it is included in the documentation 2. <i>Software and Firmware Upgrade Guide</i> 3. If you are converting two filers to a cluster, the <i>Cluster Conversion Guide</i>

Overview

Contents of this chapter

This chapter contains the following information that all Data ONTAP software users should read:

- ◆ “[Documentation included in this release](#)” on page 4
- ◆ “[Late-breaking documentation changes](#)” on page 9
- ◆ “[What to do next](#)” on page 10
- ◆ For information about Data ONTAP 5.3 bugs, log in to NetApp On the Web (NOW) at <http://now.netapp.com>, select Bugs On Line from the Information Locator pull-down menu, and click Go.

Documentation included in this release

Documentation provided in several formats

This release includes documentation in the following formats:

- ◆ Print
- ◆ Adobe Acrobat PDF
- ◆ HTML
- ◆ ASCII text

Not all documents are provided in all formats.

Documents provided

The following table lists the documents in this release and describes their contents.

Document	Description
<i>Cluster Conversion Guide</i>	Describes how to convert a pair of filers to a cluster.
<i>Command Reference</i>	Describes the commands that you use to control a filer.
<i>End User Software License</i>	Describes the terms and conditions under which the Data ONTAP software is licensed to you.
<i>Field Service Guide</i> for your filer	Describes how to install components in a filer.
<i>First-Time Configuration Using the Setup Command</i>	Describes how to configure a new filer using command-line interface.
<i>First-Time Configuration using the Setup Wizard</i>	Describes how to configure a new filer using a Web browser.
<i>Hardware Guide for the NetApp StorageShelf 2</i>	Describes how to install a Dual StorageShelf 2 disk shelf.
<i>Hardware Installation Guide</i> for your filer	Describes how to install a new filer.

Document	Description
<i>index.htm</i>	Describes the contents of the Data ONTAP CD-ROM. This is an ASCII file on the CD-ROM.
<i>Fibre Channel StorageShelf Hardware Guide</i>	Describes how to install the Fibre Channel StorageShelf FC7 (9 GB) and FC8 (18 GB) disk shelves.
<i>Quick Reference Guide</i>	Summarizes the commands that you use to control a filer.
<i>Read Me First</i>	Describes any critical information that was too late to be described in other documents.
<i>Software and Firmware Upgrade Guide</i>	Describes how to upgrade the Data ONTAP software on an existing filer.
<i>Start Here</i>	This document. Describes information for new and experienced users, and provides an overview of how to proceed with a new filer installation or an existing filer upgrade.
<i>System Administrator's Guide</i>	Describes how to manage a filer after it is installed and configured.

Document formats

The following table lists the documents in this release and shows the formats in which they are provided.

Document	Print	PDF	HTML	Man Pages
<i>Cluster Conversion Guide</i>	X	X	X	
<i>Command Reference</i>	X		X	X
<i>End User Software License</i>	X			

Document	Print	PDF	HTML	Man Pages
<i>Field Service Guide for your filer</i>	X	X		
<i>First-Time Configuration Using the Setup Command</i>	X	X	X	
<i>First-Time Configuration Using the Setup Wizard</i>	X	X	X	
<i>Hardware Guide for the NetApp StorageShelf 2</i>	X	X		
<i>Hardware Installation Guide for your filer</i>	X	X		
<i>Fibre Channel StorageShelves Hardware Guide</i>	X	X		
<i>Quick Reference Guide</i>	X	X		
<i>Read Me First</i> (provided only if there was last-minute information)	X			
<i>Software and Firmware Upgrade Guide</i>	X	X	X	
<i>Start Here</i>	X	X	X	
<i>System Administrator's Guide</i>	X	X	X	

Accessing the PDF files

You can access the PDF files from the CD-ROM or from NOW.

Accessing the PDF files from the CD-ROM: To access the PDF files from the CD-ROM, follow these steps.

Step	Action
1	Read the <i>index.htm</i> file on the CD-ROM to find the PDF files.
2	Use Adobe Acrobat Reader 3.0 or later to open the desired file.

Accessing the PDF files from NOW: To access the PDF files from NOW, follow these steps.

Step	Action
1	Use your browser to go to <i>http://now.netapp.com</i> .
2	Click the Software Library link.
3	Locate the Data ONTAP 5.3 section of the Software library.
4	Under the heading “Documentation,” locate the PDF section and click the document you want to view.

Accessing the HTML files

You can access the HTML files from the CD-ROM or from NOW.

Note

You need to use Netscape 4.0 or later or Internet Explorer 4.0 or later to view the documentation in HTML.

Accessing the HTML files from the CD-ROM: To access the HTML files from the CD-ROM, follow these steps.

Step	Action
1	Read the <i>index.htm</i> file on the CD-ROM to find the directory that contains the Documentation Web.
2	Use your browser to open the <i>index.htm</i> file.
3	Under HTML, click the star next to the desired document.

Accessing the HTML files from NOW: To access the HTML files from NOW, follow these steps.

Step	Action
1	Use your browser to go to <i>http://now.netapp.com</i> .
2	Click the Software Library link.
3	Locate the Data ONTAP 5.3 section of the Software Library.

Step	Action
4	Under the heading “Documentation,” locate the HTML section and click the document you want to view.

Accessing the man pages

You can access the man pages as follows:

- ◆ From a UNIX system: Mount the */etc/man* directory from your filer’s default volume, modify the man page path to add the */etc/man* directory to the path, then use the `man` command to view the individual pages.
- ◆ With an HTML browser: Go to `http://filename/na_admin`, where *filename* is the name of the filer you want, then click the Manual Pages link.

Late-breaking documentation changes

About this section

This section contains changes that could not be included in NetApp documentation. The information in this section supersedes the information in any other NetApp documentation.

Support for clusters with FORE/IP SPANS with PVCs

This release does not support ATM clusters with ATM FORE/IP Permanent Virtual Circuits (PVCs). PVCs are statically assigned. For each destination, you must establish (attach the IP layer to) a PVC explicitly and delete (detach the IP layer from) the PVC explicitly.

Note

Bringing a SPANS interface down does not flush incoming or outgoing PVCs. You must enter an explicit `atmarp -d` and `atmarp -x` command or wait until the filer reboots to flush PVCs.

FORE/IP SPANS interface

A FORE/IP SPANS interface is supported for each ATM adapter and has the prefix *fa*. An interface with the prefix *a* now refers to the physical ATM adapter. Use the adapter interface to configure *a* LANE partner for clusters. You do not assign it an IP address.

Mapping Windows NT administrator to root

If you plan to use CIFS, set the `waf1.net_admin_priv_map_to_root` option to On. This option maps the Windows NT administrator to root. If you do not set this option to On, you cannot perform administrative tasks from a Windows client.

Using date and rdate commands when running SnapMirror

Using the `date` or `rdate` command to make the date on a filer go backward when the SnapMirror™ feature is running can cause snapshots to appear out of sequence. When this occurs, SnapMirror assumes that the older snapshot was created before the newer one, causing SnapMirror to ask for a new, complete transfer before proceeding with any incremental transfers.

To avoid this problem, turn SnapMirror off until the filer completes the date change, or change the date while SnapMirror is inactive.

What to do next

Next steps

What you do next depends on whether you are installing a new filer or upgrading a filer, as shown in the following table.

If you are...	Read...
Installing a new filer	Chapter 3, “ Information for New Filer Installations ,” on page 11
Upgrading a filer	Chapter 4, “ Information for Filer Upgrades ,” on page 13

Overview

Who should read this chapter

You should read this chapter if you are installing a new filer. If you are upgrading from a previous version of Data ONTAP, read Chapter 4, “[Information for Filer Upgrades](#),” on page 13, instead.

What is in a new filer

A new filer has the following items installed on it:

- ◆ Latest version of Data ONTAP
- ◆ Latest firmware
- ◆ Additional items that you ordered

What to do next

For a new filer

If you are installing a new filer, follow these steps.

Step	Action
1	Read the <i>Read Me First</i> document, if it is included in the documentation.
2	Follow the instructions in the <i>Hardware Installation Guide</i> for your new filer.
3	Follow the instructions in the <i>First-Time Configuration Using the Setup Wizrd</i> if you want to use the new Web-based Wizrd instead of the command-line interface. <i>First-Time Configuration Using the Setup Command</i> if you want to use the <code>setup</code> command. You must use this guide if you are setting up filers in a clustered environment.

For cluster conversions

If you are using the new filer with another filer to form a cluster, follow these steps.

Step	Action
1	Read the <i>Read Me First</i> document, if it is included in the documentation.
2	Follow the instructions in the <i>Hardware Installation Guide</i> for your new filer.
3	Follow the instructions in the <i>Cluster Conversion Guide</i> .

Overview

Who should read this chapter

You should read this chapter if you are upgrading to this release of the Data ONTAP software or are converting filers to a cluster. If you are installing a new filer or a factory-configured cluster, read Chapter 3, “[Information for New Filer Installations](#),” on page 11, instead.

Deciding whether to upgrade

Before you upgrade to Data ONTAP 5.3 software, consider the following: if you upgrade and find that you need to revert to a pre-5.1 release, you might lose qtree information. It is a good idea for you to make a backup of your data before you upgrade.

Contents of this chapter

This chapter contains the following information for users who are upgrading to Data ONTAP 5.3 from a previous release of Data ONTAP:

- ◆ “[System requirements for this release](#)” on page 14
- ◆ “[New features in this release](#)” on page 16
- ◆ “[Bugs fixed since Data ONTAP 5.2.1](#)” on page 20
- ◆ “[What to do next](#)” on page 21

System requirements for this release

Filers supported

This release runs on the following Network Appliance™ filer models: all F200, F300, F500, F630, and F700 series filers. When the term “filer” is used in this document, the information applies to any of these models.

Clusters are supported only on the following NetApp filers with fibre channel connections to disk shelves:

- ◆ F630
- ◆ F740
- ◆ F760

Number of disk shelves supported

This release supports disk shelves as shown in the following table, up to a capacity of 1.5 terabytes (TB).

Filer	Maximum Number of FC7 (9 GB) Disk Shelves	Maximum Number of FC8 (18 GB) Disk Shelves
Cluster (combined)	24	12
F630	24	12
F720	8	4
F740	16	8
F760	24	12

For other filers, see the *System Configuration Guide*.

Cluster NVRAM requirements

Each filer in a cluster must have 32 MB of NVRAM.

Firmware requirement

The minimum firmware revision for each filer is shown in the following table.

Filer	Firmware revision
F200 and F300 series	1.9_i
F500 series	2.1_a
F630	2.1_a1
F700 series	2.1_a2

For instructions about upgrading your filer firmware, see the *Software and Firmware Upgrade Guide*.

Compression for core dump files on F500, F600, and F700 filers

Data ONTAP 5.3 supports compression for core dump files on filers in the F500, F600, and F700 series. This means that less disk space is required to perform core dump operations than in previous releases. Also, the time to perform these operations is the same as or less than the time required in previous releases.

Disks required to store a core dump

When a core dump occurs in a filer, the memory and NVRAM are dumped to a set of areas at the beginning of all the disks that has a fixed size. Therefore, a filer with a large amount of memory but not enough disks does not have enough room to perform a full core dump. If there are not enough disks on a filer, a partial core dump is performed.

The minimum number of disks that must be installed for a filer to successfully perform a core dump is shown in the following table.

Memory	NVRAM	4-GB disks	9-GB disks	18-GB disks
256 MB	8 MB	3	4	1
256 MB	32 MB	4	4	1
512 MB	32 MB	6	7	2
1 GB	32 MB	12	14	3

New features in this release

Setup Wizard

This release supports the Setup Wizard. The Setup Wizard provides an easy to use web-based method of configuring the basic settings for a new filer.

The Setup Wizard uses the network and a network browser to perform the initial basic setup for filers, eliminating the need for the command-line setup. The Setup Wizard contains context-sensitive help for each field on each page.

If a DHCP server is available on the network, Data ONTAP uses DHCP to assign the filer a static IP address and to get other information for setting up the onboard Ethernet interface on an F700 series filer.

Management commands

The `useradmin` command: This release supports creation of multiple administrative users with the `useradmin` command. An administrative user is a named account that exists on a filer. Administrative users have the same privileges as root, but can have a different password than root.

The `filestats` command: This release contains a new command called `filestats`. The `filestats` command provides you with a quick way to display a summary of file statistics within a volume on a filer, by reading file information from a snapshot.

Network Time Protocol

This release supports Network Time Protocol (NTP). Use this option to synchronize the time and date on a filer with an NTP server, if you have one on your network.

Multilanguage support

Unicode: This release supports unicode, or multiprotocol support for international characters in file names.

Cross-protocol character set: A file name entered in Windows NT appears as the same file name in UNIX, and vice versa.

Note

If you set up CIFS share names or comments that contain Japanese characters, the Japanese characters are not displayed correctly in FilerView. Refer to Bugs On-line for more information about support for Japanese characters in FilerView.

Windows security

Event Auditing: This release supports file event logging and auditing. This feature enables you to track file and directory access successes and failures. Events are logged for both Windows NT and UNIX users in either a text file or a file read by the Windows NT Event Viewer.

Integrated permissions between Windows NT and UNIX: This release supports UID to SID mapping. UNIX users map to NT permissions.

SecureAdmin

This release supports the SecureAdmin™ product. SecureAdmin is a product you purchase separately to use for establishing a secure administrative session with the filer. SecureAdmin enables you to use encrypted passwords and login names to administer filers. When encrypted, passwords and logins become impervious to being discovered over a network, thus improving filer security. Anything sent to or from any console session or remote shell session is encrypted.

SnapMirror

This release supports the SnapMirror™ feature. SnapMirror replicates data from one volume (the source) to another volume (the mirror) and periodically updates the mirror to reflect incremental changes on the source. The result of this process is an on-line, read-only volume that contains the same data as the source volume at the time of the most recent update.

SnapMirror is a licensed feature. You must purchase and install the license code before you can use it

SnapRestore

This release supports the SnapRestore™ feature. SnapRestore enables you to revert a volume to the state it was in when a particular snapshot was taken. Without this feature, you would need to use one of the following methods to restore data to a volume:

- ◆ Restoring files from tape
- ◆ Copying files from a snapshot to the active file system

Using either of these methods takes longer than reverting the volume. This is because with SnapRestore, no data needs to be copied; the file system is just put back in its earlier state.

SnapRestore is a licensed feature. You must purchase and install the license code before you can use it.

Backup and recovery

This release provides the following enhancements:

- ◆ Improved restore speeds
- ◆ Exclude lists added to dump
- ◆ Support for two adapters for 4 simultaneous tape drives on F630 and F760 series filers
- ◆ NDMP v3 support

Networking enhancements

Virtual Network Interface Failover: This release improves the virtual network interface (VIF) failover feature by enabling you to set a policy so that trunked Ethernet interfaces can be load balanced or used as takeover partners. This release also supports super-VIFs.

ATM LANE: This release supports ATM LANE across platforms, including clusters.

Note

If you previously used LANE with Data ONTAP 5.1.3, add the `elconfig wait` command after the last `ifconfig` command in the `/etc/rc` file.

MIB Variables

This release includes Management Information Base (MIB) enhancements for the following:

- ◆ Environmental variables
- ◆ CIFS variables
- ◆ SNMP traps interface

SPANS

This release includes an updated version of SPANS. SPANS now uses the default device name `fa0`. The SPANS interface is created automatically at the filer's initial boot up.

Note

You should edit the filer's `/etc/rc` file to reflect the ATM interface name change; otherwise, the ATM interface does not come up after the software upgrade.

The following table describes the modified SPANS feature, the name of the previous feature, and the new name.

SPANS feature affected	Old name	New name
Default ATM interface name	<i>a0</i>	<i>fa0</i>
Internet to ATM address mapping command	arp	atmarp

The options -d, -s, -l, -x for the **atmarp** command function as they did with the **arp** command.

The -a option of the **atmarp** command displays the table that the ATM address resolution protocol uses to translate between internet addresses and ATM virtual circuits. It does not also display the table that the address resolution protocol uses to translate between IP addresses and the Ethernet address, as the **arp -a** command option does in Data ONTAP 5.2 or earlier.

Persistent options command

This release supports the persistent **options** command. With this feature you no longer have to edit the filer's */etc/rc* file, because the **options** command is automatically persistent and changes to **options** command values are preserved even after a filer reboots.

FilerView enhancements

This release contains the following FilerView enhancements:

- ◆ Administering clusters
- ◆ Changing root password

Bugs fixed since Data ONTAP 5.2.1

Bugs fixed in this release

There are several bug fixes in this release. Refer to Bugs Online at <http://now.netapp.com> for detailed information.

What to do next

Converting filers to a cluster

If you plan to convert your filers to a cluster, obtain the required licenses and cluster hardware, then follow the instructions in the *Cluster Conversion Guide*.

To use clusters, you must have a cluster license for each filer. You must also have a license on each filer for each protocol that you use.

After the conversion

If you have not already done so, consult the *System Administrator's Guide* and the on-line man pages or the *Command Reference Guide* for information about clusters. In particular, read the following documents for information about clusters:

- ◆ The *System Administrator's Guide*
- ◆ The *Quick Reference Guide*, which lists the commands that behave differently in a cluster environment
- ◆ The man pages for commands that behave differently in a cluster environment and the man pages for the `cf` and `partner` commands

