

NetApp® SCSI DiskShelf12 Hardware Guide

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Preface

About this guide	This guide describes how to set up, install, connect, and monitor the NetApp® SCSI DiskShelf12 (SDS12).
Audience	This guide is for qualified system administrators and service personnel who are familiar with Network Appliance™ filers and how the Network File System (NFS), Common Internet File System (CIFS), and Hypertext Transfer Protocol (HTTP) protocols are used to share and transfer files.
Terminology	This guide uses the following terms: ◆ <i>Disk shelf</i> refers to any SCSI disk shelf model. ◆ <i>Filer</i> refers to those NetApp filers that support the disk shelves. ◆ <i>Device carrier</i> refers to any container that encases a power supply or disk. ◆ <i>Disk</i> applies to any 18-GB or 36-GB SCSI disk encased in its device carrier. ◆ <i>SSM</i> refers to the SCSI Services Module card that provides monitoring, reporting, and control of the SDS12.
Command conventions	You can enter filer commands on the system console or from any client that can obtain access to the filer using a Telnet session. This guide uses the command syntax and output of SunOS 4.1x in examples of commands run on a UNIX workstation. If you use a different version of UNIX, the command syntax and output might be different.
Formatting conventions	The following table lists different character formats used in this guide to set off special information.

Formatting convention	Type of information
<i>Italic type</i>	◆ Words or characters that require special attention. ◆ File names and path names. ◆ Placeholders for information you must supply. For example, if the guide requires you to enter the fctest <i>adapternam</i>e command, you enter the characters “fctest” followed by the actual name of the adapter. ◆ Man page names. ◆ Book titles in cross-references.
Monospaced font	◆ Command and daemon names. ◆ Information displayed on the system console or other computer monitors. ◆ The contents of files.
Bold monospaced font	Words or characters you type. What you type is always shown in lowercase letters, unless your program is case-sensitive and uppercase letters are necessary for it to work properly.

Keyboard conventions

This guide uses capitalization and some abbreviations to refer to the keys on the keyboard. The keys on your keyboard might not be labeled exactly as they are in this guide.

What is in this guide...	What it means...
hyphen (-)	Used to separate individual keys. For example, Ctrl-D means holding down the Ctrl key while pressing the D key.
<i>Enter</i>	Used to refer to the key that generates a carriage return, although the key is named Return on some keyboards.
<i>type</i>	Used to mean pressing one or more keys on the keyboard.

What is in this guide...	What it means...
<i>enter</i>	Used to mean pressing one or more keys and then pressing the <i>Enter</i> key.

Special messages

This guide contains special messages that are described as follows:

Note

A note contains important information that helps you install or operate the system efficiently.

Caution

A caution contains instructions that you must follow to avoid damage to the equipment, a system crash, or loss of data.

WARNING

A warning contains instructions that you must follow to avoid personal injury.

Safety Information

Safety rules

You must follow these safety rules when working with this equipment:

WARNING

Failure to follow the directions contained in the following statements could result in bodily harm or loss of life.

- ◆ When installing disk shelves and a filer/NetCache™ Appliance into a movable cabinet or rack, install the equipment from the bottom up for best stability.
- ◆ To reduce the risk of personal injury from hot surfaces, allow the internal components time to cool before touching them or installing options.
- ◆ To reduce the risk of personal injury or damage to the equipment, ensure that the equipment is properly supported or braced when installing options.
- ◆ This equipment is designed for connection to a grounded outlet. The grounding type plug is an important safety feature. To avoid the risk of electrical shock or damage to the equipment, do not disable this feature.
- ◆ This equipment is furnished with one or more replaceable batteries. There is danger of explosion if the battery is incorrectly replaced. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Warning for units with two power supplies

If your filer, NetCache Appliance, or disk shelf has two power supplies and you need to turn the unit off, heed the following warning:

WARNING

This unit has more than one power supply cord. To reduce the risk of electrical shock, disconnect all power supply cords before servicing.

AVERTISSEMENT

Cet appareil comporte plus d'un cordon d'alimentation. Afin de prévenir les chocs électriques, débrancher tous les cordons d'alimentation avant d'effectuer le dépannage.

ACHTUNG

Dieses Gerät besitzt zwei Netzanschlussleitungen. Vor Wartung alle Anschlüsse vom Netz trennen.

About this chapter

This chapter discusses the environmental and electrical requirements that your site must meet before you can install an SDS12 and connect it to an F85 filer. It also lists the disk shelf's dimensions and weight that your site must be capable of handling.

Topics in this chapter

This chapter discusses the following topics:

- ◆ “[Environmental requirements](#)” on page 2
- ◆ “[Electrical requirements](#)” on page 3
- ◆ “[Dimensions and weight](#)” on page 5

Environmental requirements

Operating conditions

The following table lists the maximum environmental conditions that your site must meet for your SDS12 and F85 filer to run properly.

Environmental condition	Operating condition
Temperature range	50° F to 95° F (10° C to 35° C)
Relative humidity	8% to 80% noncondensing

Note

For the disk shelf to have the proper operating conditions, the front of the disk shelf must be at least 1 inch from the nearest obstruction. The back of the disk shelf must be at least 6 inches from the nearest obstruction.

Storage conditions

The following table lists the conditions at which a disk shelf and F85 filer can be stored.

Environmental condition	Storage condition
Temperature range	-40° F to 149° F (-40° C to 65° C)
Relative humidity	8% to 80% noncondensing

Electrical requirements

Input voltage and inrush current requirements

The following table lists the input voltage and inrush current requirements with power applied to the SDS12 and F85 filer.

Current type	Input voltage	Inrush current
AC	230V AC	40A
	115V AC	20A

Power supply efficiency rating: The following table lists the efficiency rating of the power supply.

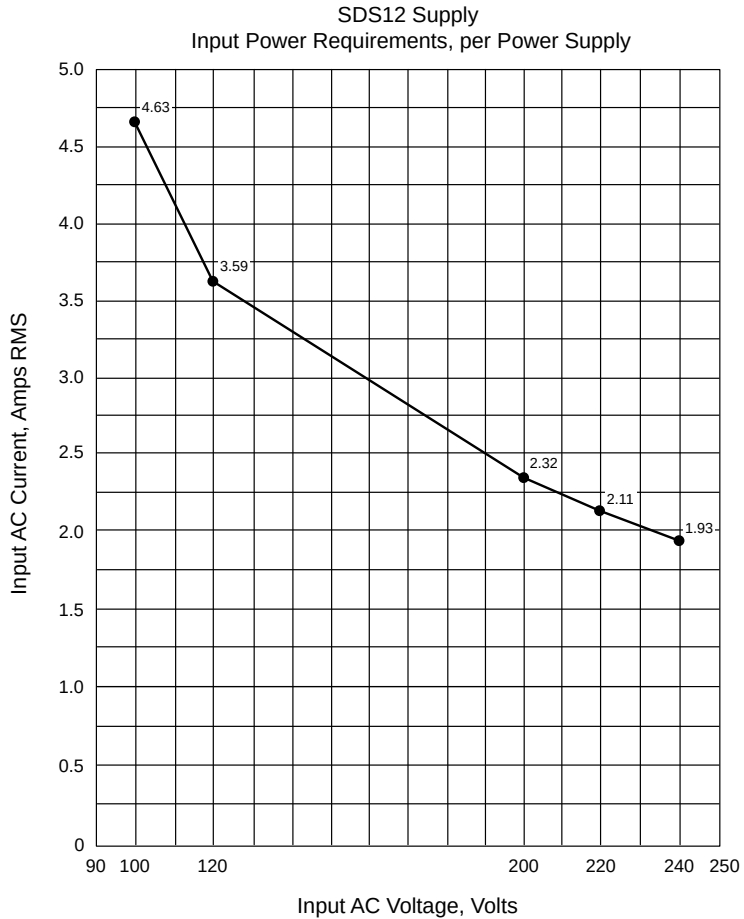
Number of power supplies	Efficiency rating
1	70% @ 100V AC

Power requirements

The following table describes the power requirements for the SDS12 disk shelf connected to two 20A circuits based on a maximum PSU load.

Volts	Amps per SDS12
100–240V	4.6–1.9A

Use the following graph to determine current allocation for each SDS12 power supply based on the worst-case minimum input voltage.



Power consumption and thermal rating

The power consumption (in watts) and the number of BTUs per hour produced by the disk shelf depend on the number and type of devices (for example, power supplies, disks, and so on) installed in the disk shelf.

Average power consumption for one disk shelf: The following table gives an example of average power consumption for one disk shelf with 12 disks, 2 power supplies, and 3 fans.

Power consumption	Thermal rating
340W	1, 160 BTU/hr.

Dimensions and weight

Dimensions of a disk shelf

The following table lists the dimensions of a single disk shelf in U.S. linear measure, metric, and U-metric, where applicable. Your site must be capable of housing disk shelves with these requirements.

Dimensions and weight	Measurements
Height	5.25 in. (13.3 cm) ¹
Width	17.55 in. (44.6 cm)
Depth	17 in. (43.2 cm)

1. The height of the shelf is 3U, where 1U = 1.75 inches.

Weight of the disk shelf

The following table lists the weight of a single SDS12 based on its configuration.

Disk shelf configuration	Weight
When empty	35.4 lbs (16 kg)
With 12 disk drives	75 lbs (34 kg)

About this chapter

This chapter provides all the information you need to install an SDS12 into an equipment rack.

Note

The configuration information in this guide reflects the configurations supported as of December 2000. NetApp periodically adds to and enhances the configuration options. To obtain information about the current configurations, go to the *System Configuration Guide* on the NOW Web page at <http://now.netapp.com>.

Topics in this chapter

This chapter discusses the following topics:

- ◆ “[Installing the SDS12 mounting rails into a rack](#)” on page 8
- ◆ “[Installing a disk shelf into a rack](#)” on page 10

Installing the SDS12 mounting rails into a rack

About the disk shelf mounting rails

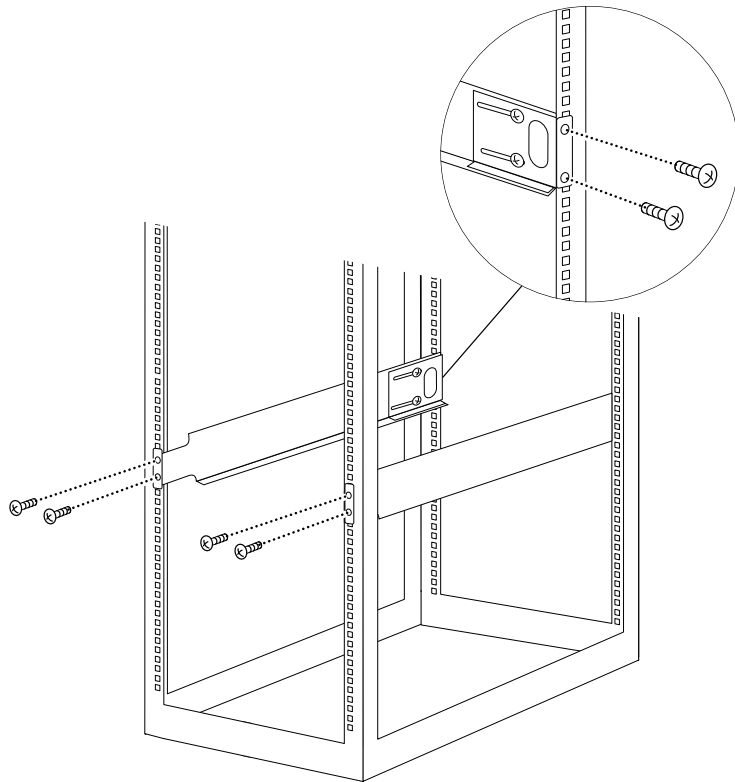
To install an SDS12, you must first install disk shelf mounting slide rails (which support any 19 inch four-post square hole rack) into the rack to add support for the weight of the disk shelf.

Required equipment

To install the mounting rails, you need the following equipment:

- ◆ Two adjustable mounting slide rails
- ◆ #2 Phillips screwdriver
- ◆ Twelve 10-32 x 1/2-inch Phillips pan-head screws
- ◆ Eight beveled metal washers

The following illustration shows the slide rails installed in a rack.



Installing the SDS 12 mounting rails in the rack

To install the shelf mounting rails into a rack, complete the following steps.

Step	Action	
1	Ensure that there is enough room in the rack to install the SDS12. The disk shelf takes 3U of rack space. ¹	
2	If . . .	Then . . .
	The two adjustable slide rail flanges are not already attached to the support rails	Attach one flange to each of the support rails using two 10-32 x 1/2-inch pan-head screws. Do not tighten the screws at this time
	The two slide rail flanges are already attached to the support rails	Ensure that the two 10-32 pan-head screws are slightly loose, allowing the flanges to slide freely.
	Note _____ Make sure that the adjustable portion of the mounting rails face the rear of the rack. Otherwise, the disk shelf does not fit into the rack. _____	
3	Place the flange of the slide rail assembly behind the right-front vertical rail of the rack. Thread two 10-32 x 1/2-inch screws with a beveled washer and push them through the front vertical rail of the rack and into the two center-most screw holes of the slide rail flange. Ensure that the rail is centered vertically within the 3U mounting area.	
4	Tighten the screws.	
5	Slide out the adjustable slide rail flange until it meets the back vertical rail of the rack. Ensure that the rail is level from front to back.	
6	Thread two 10-32 x 1/2-inch screws with a beveled metal washer and push them through the back vertical rail of the rack and into the two holes of the adjustable slide rail mounting flange. Tighten the screws.	
7	Tighten the two 10-32 screws that attach the adjustable slide rail flange to the support rail.	
8	Repeat steps 2 through 7 to install the second support rail.	

1. 1U = 1.75 in.

Installing a disk shelf into a rack

Required equipment

To install a disk shelf into a rack, use the following tools and equipment:

- ◆ A disk shelf containing the power supplies and SCSI disks you ordered
- ◆ SCSI cables, as ordered
- ◆ Four 6-32 x 3/8-inch Phillips flat-head screws
- ◆ Two mounting ears (a pair)
These are usually preinstalled if you ordered a rack-mounted system.
- ◆ #2 Phillips screwdriver
- ◆ A disposable ESD (electrostatic discharge) wrist strap and grounding leash
- ◆ Appropriate screws, if the provided screws do not fit your rack
- ◆ Lock bar and key

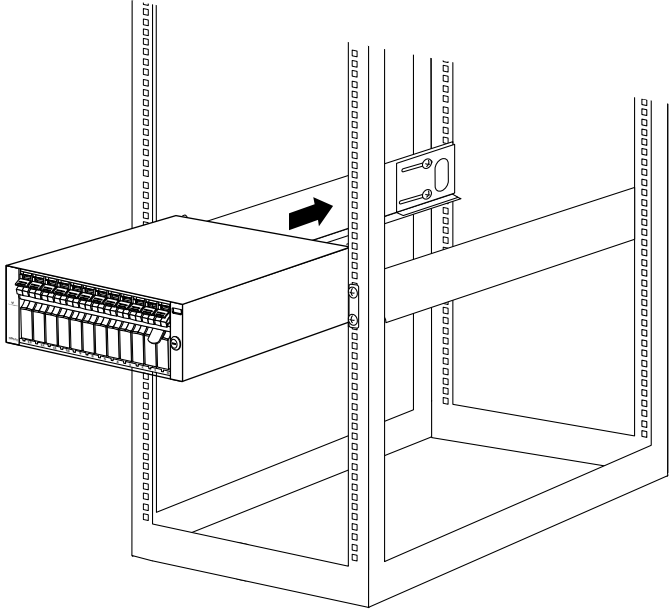
Installing the SDS 12 into a rack

To install the SDS12 into a rack, complete the following steps.

WARNING

Because the disk shelf is very heavy when loaded with disks, it is advised that another person assists you in the installation.

Step	Action	
1	If . . .	Then. . .
	The mounting ears are already attached to the shelf The mounting ears need to be attached	Go to Step 6 . Go to Step 2 .
2	Locate the slot at the front-right side of the SDS12.	
3	Insert a mounting ear into the slot.	
4	Thread two 6-32 x 3/8-inch screws through the storage system and into the mounting ear. You might need to shift the mounting ear to thread the screws correctly into the holes of the mounting ear.	

Step	Action
5	Repeat Step 2 through Step 4 to install the left mounting ear.
6	Make sure that the disk shelf is fully loaded with disks that are firmly locked into the disk shelf before installing it into a rack. Caution— Do not remove disks from the disk shelf before you install the disk shelf into the rack.
7	Put on an ESD wrist strap and grounding leash to protect against electrostatic discharge.
8	Insert the disk shelf into the interior slides of the mounting rails, as shown in the following figure. 
9	Use a Phillips-head screwdriver to tighten the four screws on the mounting ears of the storage system. Ensure that the screws pass through the holes of the front vertical rail of the rack and into holes of the mounting-bracket flange.

About this chapter This chapter provides all the information you need to connect an SDS12 to an F85 filer and to a power source.

Topics in this chapter This chapter discusses the following topics:

- ◆ [“Connecting an SDS12 to an F85 filer”](#) on page 14
- ◆ [“Powering on the SDS12”](#) on page 16

Connecting an SDS12 to an F85 filer

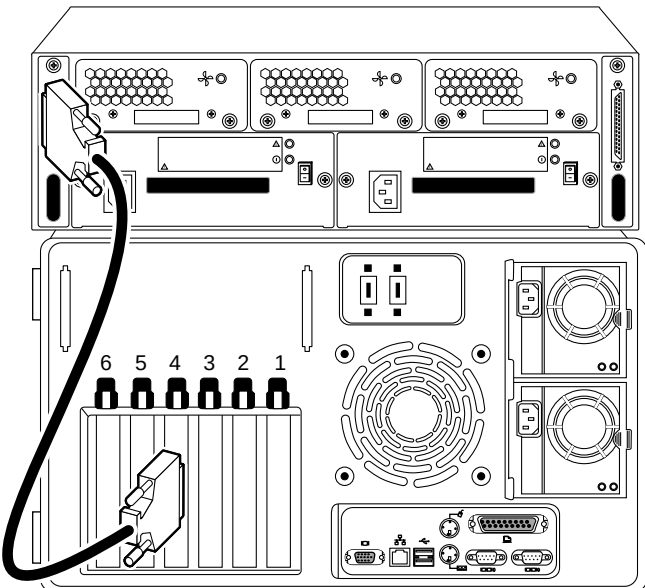
Required equipment

To connect a single SDS12 to an F85, use a 1-meter SCSI cable with a 68-pin connector on one end and a very high density cable interface (VHDCI) connector on the other end.

Connecting an SDS12 to an F85

To connect an SDS12 to an F85, complete the following steps.

Step	Action
1	Put on an ESD antistatic wrist strap and grounding leash.
2	Make sure that the F85 is turned off.
3	Make sure that the disk shelf is turned off.
4	Connect the VHDCI end of the SCSI cable to slot 4 of the F85.

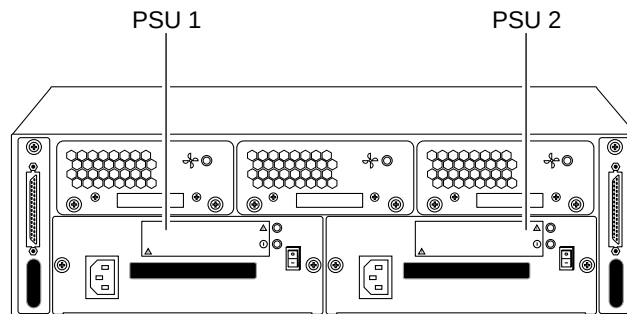
Step	Action
5	Connect the 68-pin end of the SCSI cable to the onboard SCSI enclosure services module of the SDS12. The following illustration shows the connection of an SDS12 to an F85.  The diagram illustrates the connection between an F85 (top) and an SDS12 (bottom). The F85 has a 68-pin SCSI connector on its top. The SDS12 has a 68-pin SCSI connector on its front, labeled 1 through 6. A SCSI cable is shown connecting the two.
6	Connect the disk shelf to a power source. See “Powering on the SDS12” on page 16.

Powering on the SDS12

About powering on the SDS12

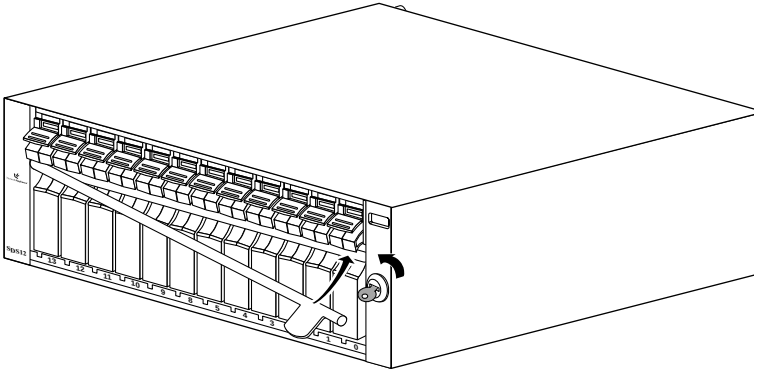
The SDS12 is shipped with two power supplies and an AC power cord for each power supply. You must have separate circuit breakers for each power supply.

The following illustration shows power supply receptacles one and two.



Powering on the SDS12

To power on the SDS12, complete the following steps.

Step	Action
1	Verify that the SDS12 is properly connected to the F85.
2	Lock the disk drives into the SDS12: - Using the key, turn the lock on the right side of SDS12 to unlock. - Insert the thin portion of the lock bar into the hole on the left side of the SDS12 just beneath the release mechanism of left-most disk. - Close the lock bar over all the disks and lock the disk shelf. The following illustration shows the lock bar being moved into lock position. 
3	Connect the power supplies on the SDS12 to separate AC circuit breakers.
4	Turn on the power to the F85.
5	Turn on the power to the SDS12.

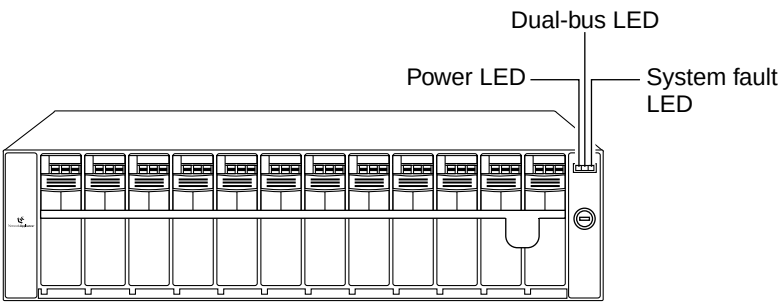
About this chapter This chapter discusses the types and functions of each LED on the disk shelf and how to interpret them.

Topics in this chapter This chapter discusses the following topics:

- ◆ “[Storage enclosure LEDs](#)” on page 20
- ◆ “[SCSI disk LEDs](#)” on page 21
- ◆ “[Power supply LEDs](#)” on page 23
- ◆ “[Fan LED](#)” on page 24

Storage enclosure LEDs

Location of LEDs The following illustration shows the location of the storage enclosure LEDs on the SDS12.



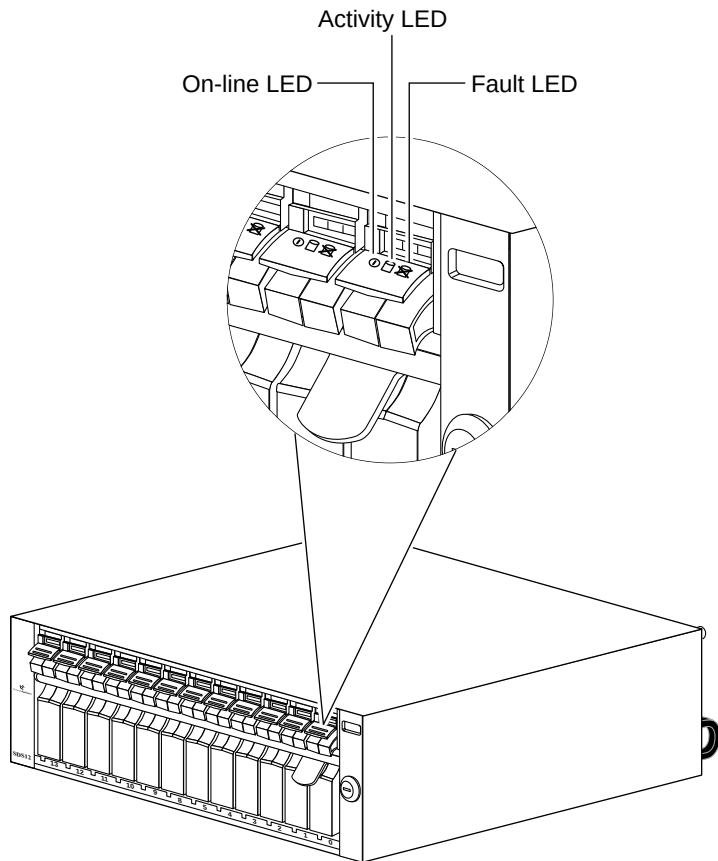
Interpreting storage enclosure LEDs Use the following table to interpret the storage enclosure LEDs.

LED	Status	Description
Power indicator	On (Green)	The storage system is on.
Dual-bus indicator	On (Green)	The storage system is operating in dual-bus split backplane mode.
System fault indicator	On (Amber)	One of the storage system's internal self-tests fails during system startup or whenever a fault is detected.

SCSI disk LEDs

Location of LEDs

The following illustration shows the SCSI disk encased in a device carrier, which has three LED indicators on the front.



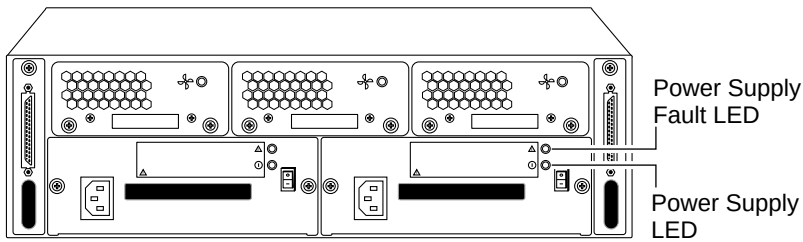
Interpreting SCSI disk LEDs

Use the following table to interpret the disk LEDs.

LED	Status	Description
On-line	On (Green)	The disk drive is receiving power.
Activity	On (Green)	Normal status. Data transfer is occurring properly.
	Off	No data transfers are taking place.
Fault	On (Amber)	A disk failure has been detected.
	Off	Normal status.

Power supply LEDs

Location of LEDs Each power supply contains two LEDs and is encased in a device carrier and housed at the back of the disk shelf. The following illustration shows the location of the power supply LEDs.



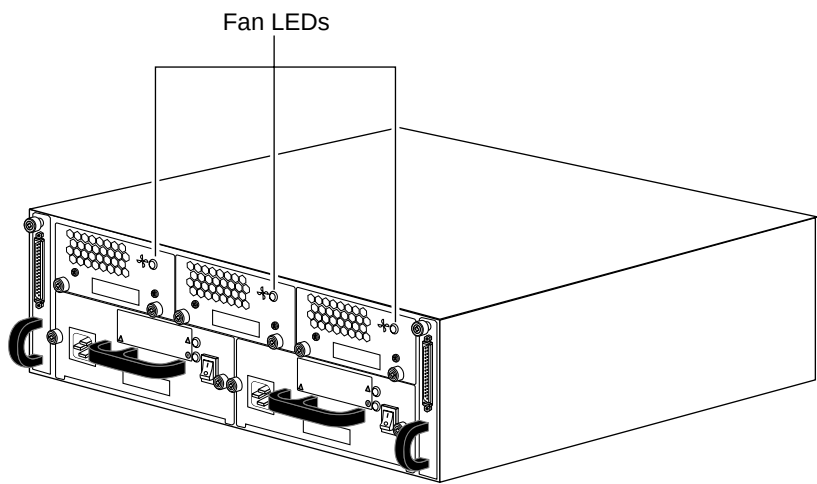
Interpreting power supply LEDs The following table describes how to interpret the power supply LEDs.

Power supply	Fault indicator	Description
Power OK (Green)	On	The storage system is operating normally.
Fault (Amber)	On	The SMM has detected a power supply fault.

Fan LED

About the fan LED

There are three fans on an SDS12. The fan LED is on the device carrier for the fan. The fans are installed on the back of the disk shelf. The following illustration shows the location of the fan LED.



Interpreting the fan LED

The following table describes how to interpret the fan LED.

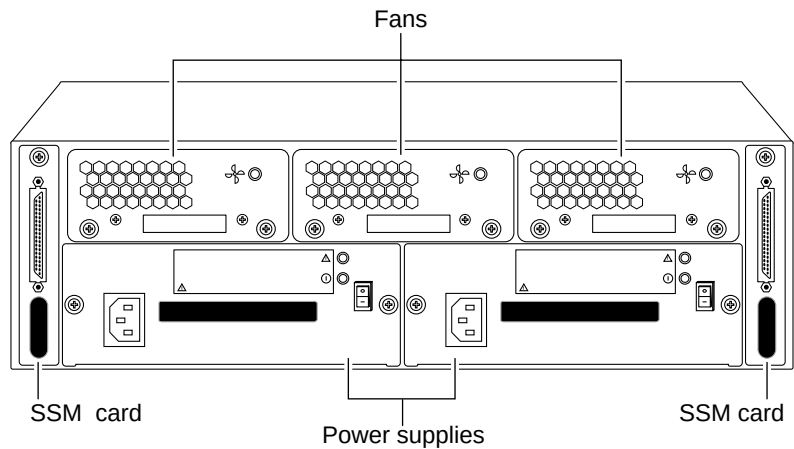
LED	Description
Off	Normal status.
On (Amber)	Fan failure. Fan requires replacement.

About this chapter

This chapter describes how to replace disk shelves in a rack, disks in a disk shelf, and other devices.

Location of SDS12 devices

The following illustration shows the power supplies, fans, and SSM cards located at the rear of the disk shelf.



Topics in this chapter

This chapter discusses the following topics:

- ◆ [“Replacing a disk shelf in a rack”](#) on page 26
- ◆ [“Replacing a disk in a disk shelf”](#) on page 28
- ◆ [“Replacing a power supply in a disk shelf”](#) on page 31
- ◆ [“Replacing a disk shelf fan”](#) on page 34
- ◆ [“Replacing an SSM card”](#) on page 37

Replacing a disk shelf in a rack

About this section

This section discusses how to remove a disk shelf from a rack. It also discusses how to remove a disk shelf from a daisy-chain configuration. It does not discuss how to install a disk shelf.

For detailed information

To remove a disk shelf from a rack, see “[Removing a disk shelf from a rack](#)” on page 27.

To install a disk shelf in a rack, see “[Installing a disk shelf into a rack](#)” on page 10.

Removing a disk shelf from a rack

About this section This section describes how to remove an SDS12 from a rack. For information about how to install an SDS12 into a rack, see “[Installing a disk shelf into a rack](#)” on page 10.

Removing a disk shelf from a rack To remove a disk shelf from a rack, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Enter the following command: halt
3	Turn off the power at the source.
4	Turn off the power on the disk shelf using the power switch on the back of the disk shelf.
5	Disconnect the two disk shelf power cords from the disk shelf.
6	Disconnect the SCSI cable connecting the disk shelf and F85.
7	Use a Phillips screwdriver to remove the screws from the flanges of the disk shelf mounting bracket.
8	With the help of another person, slide the disk shelf out of the rack. WARNING ————— Because the disk shelf is very heavy when fully loaded, it is advised that at least two people remove the disk shelf.

Replacing a disk in a disk shelf

Replacing a disk

You can replace a disk in a disk shelf for any reason, the most common being disk failure. If a disk in your SDS12 fails, the F85 logs a warning message to the system console indicating which disk failed.

For detailed information

For more information about replacing a disk in a disk shelf, see the following topics:

- ◆ [“Removing a disk from a disk shelf”](#) on page 29
- ◆ [“Installing a disk in a disk shelf”](#) on page 30

Removing a disk from a disk shelf

Removing a disk

To remove a disk from a disk shelf, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Enter the following commands, as appropriate: ◆ disk fail <i>disk_name</i> ◆ disk remove <i>disk_name</i> Result: After you bring the disk to a stop using the disk remove or disk fail commands, the amber fault LED on the disk illuminates, then turns to flashing green. For more information about LEDs, see “Monitoring the SDS12” on page 19. For more information about disk commands, see the <i>System Administrator’s Guide</i> for your specific software version.
3	Unlock and open the disk shelf lock bar.
4	Wait 30 seconds for the disk to stop spinning.
5	To remove the disk, press its release mechanism with one hand while grasping the top flange of the disk shelf with the other hand. Gently slide the disk out of the disk shelf. Caution_____ When removing a disk, always use two hands to support its weight. _____

Installing a disk in a disk shelf

Rules for installing a disk

When you install a disk in a disk shelf, you must adhere to the following rules:

- ◆ Do not remove disks from the disk shelf before you install the disk shelf.
- ◆ Always install the disk shelf fully loaded.
- ◆ Wait until after you attach and secure the SDS12 to the rack before you install disk drives.
- ◆ If you have any empty drive bays, fill them with the provided empty drive shuttles to ensure proper cooling.

Installing a disk

To install a disk in the disk shelf, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Orient the device carrier so you can properly install it.
3	Enter the following command: disk swap
4	Insert the device carrier into the guide slot in the disk shelf and firmly push it in until it engages the backplane and you see the release mechanism click into place. Note_____ If the release mechanism does not click into place, apply additional pressure to the front of the device carrier. _____ Caution_____ Do not slam the device carrier into place. _____
5	Close and lock the disk shelf lock bar. See “Powering on the SDS12” on page 16 for more information.

Replacing a power supply in a disk shelf

About this section This section describes how to remove and install a power supply.

For detailed information For more information about replacing a power supply in a disk shelf, see the following topics:

- ◆ [“Removing a power supply from a disk shelf”](#) on page 32
- ◆ [“Installing a power supply in a disk shelf”](#) on page 33

Removing a power supply from a disk shelf

Removing a power supply

To remove a power supply, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Make sure that the power to the disk shelf is off.
3	Make sure that the disk shelf is disconnected from its power sources.
4	Loosen the captive thumbscrews on both sides of the power supply by turning them counterclockwise. Caution _____ When removing a power supply, always use two hands to support its weight. _____
5	Remove the power supply.

Installing a power supply in a disk shelf

Installing a power supply

To install a power supply in a disk shelf, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Insert the power supply into its slot at the rear of the disk shelf and tighten the captive thumbscrews by turning them clockwise.
3	Reconnect the disk shelf to its power sources.
4	Turn the power switch to the On position.

Replacing a disk shelf fan

About this section

This section describes how to remove and install the hot swappable disk shelf fans in the rear lower portion of the disk shelf.

For detailed information

For more information about replacing a fan in a disk shelf, see the following topics:

- ◆ [“Removing a disk shelf fan”](#) on page 35
- ◆ [“Installing a disk shelf fan”](#) on page 36

Replacing a disk shelf fan

Removing a disk shelf fan

About removing a disk shelf fan

When you remove a disk shelf fan, the power on the disk shelf can remain on. When a fan fails for any reason, the other two fans increase in speed to compensate for the lack of the third fan.

Removing a disk shelf fan

To remove a disk shelf fan, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Loosen the captive thumbscrews on both sides of the fan by turning them counterclockwise.
3	Pull the fan away from the disk shelf with both hands. WARNING _____ The fan blades might still be spinning, be sure to keep your fingers away from the rotating blades.

Installing a disk shelf fan

Installing a disk shelf fan

To install a disk shelf fan, complete the following steps.

Step	Action
1	Put on an ESD wrist strap and grounding leash.
2	Slide the fan gently into the socket, making sure that the fan fits snugly into the disk shelf.
3	Tighten the captive thumbscrews on both sides of the fan by turning them clockwise.

Note

After you replace a fan, all three fans default to maximum speed and then cycle down at 10-second intervals until they reach optimum operating speed.

Replacing an SSM card

About this section

This section describes how to remove and install the SCSI Services Module (SSM) cards, which reside in the rear left and right sides of the disk shelf.

For detailed information

For more information about replacing an SSM card, see the following topics:

- ◆ [“Removing an SSM card”](#) on page 38
- ◆ [“Installing an SSM card”](#) on page 39

Replacing an SSM card

Removing an SSM card

About removing an SSM card

In an SDS12, the primary SSM card copies system-specific information to the secondary SSM card. You must replace the primary SSM card with the secondary SSM card and then add a new SSM card to the secondary SSM card bay.

Removing an SSM card

To remove an SSM card, complete the following steps.

Step	Action	
1	Put on an ESD wrist strap and grounding leash.	
2	Turn off the SDS12.	
3	Turn off the F85.	
4	Remove the power cables from the power outlets and power supplies.	
5	Disconnect the SCSI cables from the F85 to the SDS12.	
6	If . . .	Then. . .
	The primary SSM card fails	You must replace it with the existing secondary SSM card. See “ Installing an SSM card ” on page 39.
	The secondary SSM card fails	You must replace it with a new SSM card. See “ Installing an SSM card ” on page 39.
7	Loosen the captive thumbscrews on the top of the SSM card by turning them counterclockwise.	
8	Pull the SSM card away from the SDS12.	

Installing an SSM card

Installing an SSM card

To install an SSM card, complete the following steps.

Step	Action
1	Insert the replacement SSM card into the SDS12 and make sure that it is properly seated in the connector.
2	Tighten the captive thumbscrew at the top of the SSM card to secure the SSM card to the SDS12.
3	Connect the SCSI cable to the SSM card.
4	Reconnect the power cables to the power outlets and power supplies.
5	Turn on the F85.
6	Turn on the SDS12.
7	Interrupt the boot process by pressing the Delete key during the memory test.
8	Run diagnostics by entering the following command at the ok> prompt: sys-diag See the <i>Diagnostics Guide</i> for more information.
9	Run the specific diagnostics that apply to the unit you installed or replaced.

About this appendix This appendix lists the regulatory notices you need to be aware of when installing and operating your Network Appliance equipment.

Regulatory notices

FCC notices (U.S. only)

Network Appliance devices are designed for a CFR 47 (Code Federal Regulations) Part 15 Class A environment.

The FCC and Network Appliance guarantee the user's rights to operate this equipment only if the user complies with the following rules and regulations:

- ◆ Install and operate this equipment in accordance with the specifications and instructions in this guide.
- ◆ Modify this equipment only in the ways specified by Network Appliance.
- ◆ Use shielded cables with metallic RFI/EMI connector hoods to maintain compliance with applicable emissions standards.
- ◆ If the system has nine or more fibre channel disk shelves, install the system in two or three NetApp System Cabinets to maintain performance within Part 15 of CFR 47 regulations.

Compliance with Part 15 of CFR 47

This equipment has been tested and found compliant with Part 15 of the CFR 47 rules for Class A digital devices. These rules are designed to provide reasonable protection from interference to electronics equipment operated in a commercial environment.

Operation of this device is subject to the following two conditions:

- ◆ This device cannot cause harmful interference.
- ◆ This device must accept any interference received, including interference that may cause undesired operation.

Compliance with ICES-003

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A conforme à la norme NMB-003 du Canada.

Compliance with EN regulations

Marking by the symbol  indicates compliance of this Network Appliance device to the EMC Directive and the Low Voltage Directive of the European Union. Such marking is indicative that this Network Appliance device meets the technical standards listed in “Declaration of Conformity,” later in this appendix.

Caution

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Bureau of Standards, Metrology, and Inspections notice (BSMI, Taiwan only)

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

Translation of the BSMI notice:

Warning: This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

Declaration of Conformity			
Network Appliance, Inc. 495 East Java Drive Sunnyvale, CA 94089, U.S.A, declare under our sole responsibility that the products			
Type of equipment	Description	Model number	Year of manufacture
Network file server	NetApp® F85 filer and SDS12 disk shelf	SMM, AMP	2000
to which this declaration relates conform to the following standards: EN 60950:1992, Information Technology Equipment (Safety) EN 55022:1987, Emissions Requirements for Information Technology Equipment EN 55024:1998, Immunity Requirements for Information Technology Equipment EN 60825-1, Safety of Laser/LED Equipment following the provisions of the directives listed below: 73/23/EEC, ‘Low Voltage Directive’ (Product Safety) 89/336/EEC, Electromagnetic Compatibility Directive Part number: 210-02638			

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