Sun Storage 2500-M2 Arrays

Getting Started Guide

This document provides an overview of the installation procedure for Oracle's Sun Storage 2500-M2 Arrays, including:

- Sun Storage 2540-M2 array (controller tray with Fibre Channel host connectivity)
- Sun Storage 2530-M2 array (controller tray with SAS-2 host connectivity)
- Sun Storage 2501-M2 array (expansion tray)

For detailed information, have the *Sun Storage 2500-M2 Arrays Hardware Installation Guide* available as you go through the steps in this document.

Additional documentation is listed in the section "Documentation for This Product" and available at the Oracle documentation web site:

http://www.oracle.com/technetwork/documentation/oracle-unified-ss-193371.html

Sun Storage Common Array Manager

Oracle's Sun Storage Common Array Manager (CAM) software is a key component for the initial configuration and operation of Sun Storage 2500-M2 Arrays hardware. It is installed on a management host cabled to the array via out-of-band Ethernet (cables for this connection are provided). **Note**: In-band management is also supported.

To download and get started with CAM, review the latest *Sun Storage Common Array Manager Quick Start Guide*. CAM documentation can be found here:

http://www.oracle.com/technetwork/documentation/disk-device-194280.html

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Note – It is recommended to begin the download process now so that the software is ready for installation when hardware installation is complete.

Before You Begin

Review the following documents before starting the installation:

• *Important Safety Information for Sun Hardware Systems*	• *Sun Storage 2500-M2 Arrays Hardware Release Notes*
• *Sun Storage 2500-M2 Arrays Safety and Compliance Manual*	• *Sun Storage 2500-M2 Arrays Site Preparation Guide*

Review Contents of the Ship Kit

FIGURE 1 shows the components of the controller tray ship kit for the Sun Storage 2540-M2 array, Sun Storage 2530-M2 array, and Sun Storage 2501-M2 array expansion tray. Note the following:

- AC or DC power cables are included in the ship kit, depending on the configuration ordered.
- Small form-factor pluggables (SFPs) are included only with the Sun Storage 2540-M2 array.
- Cables for connecting the controller tray to the data host (SAS or Fibre Channel) are not included and may be ordered separately. SAS cables for intertray cabling are included with the Sun Storage 2501-M2 array expansion tray ship kit. **Note**: The maximum cable length for 6 Gb/sec SAS-2 is 10 meters.

FIGURE 1 Controller Tray Ship Kit Contents
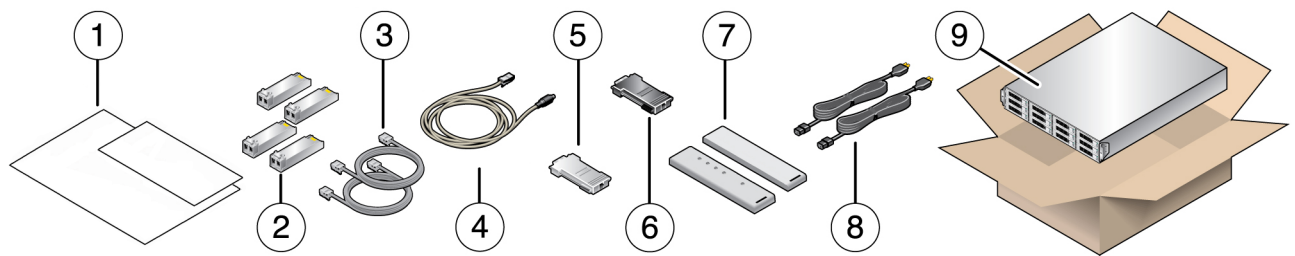
Callout	Description	Callout	Description
1	Documentation	6	RJ-45 - DB9 adapter with null modem
2	Fibre Channel SFPs (2540-M2 only)	7	Bezel end caps
3	RJ-45 - RJ-45 Ethernet cables (one per controller module)	8	Power cables* - AC cables included for AC configurations - DC cables included for DC configurations
4	RJ-45 - mini-DIN cable	9	Controller tray
5	RJ-45 - DB9 adapter		

* AC power cables shown.

Install the Cabinet and Rail Kit

Before installing the rail kit, install and stabilize the cabinet as described in the cabinet installation instructions. Make sure the cabinet's casters (if any) are locked to prevent the cabinet from rolling, and remove or open the front panel and vented back panel. Then, follow the rail kit installation instructions found in the *Installing Adjustable Support Rails* document.

Note – Each tray requires two standard mounting rack units (2U) of vertical space in the cabinet.

Install the Tray in the Cabinet and Connect Power Cables

The following procedure provides an overview of installing a controller tray or expansion tray into the cabinet. Consult the Hardware Installation Guide for further details.

Note – Airflow through the tray is front-to-back. For proper ventilation, allow 30 in (76 cm) clearance in front of the cabinet and 24 in (61 cm) clearance behind the cabinet.

Note – When installing tray hardware, load the cabinet so as not to make it top-heavy. One approach is to place the controller tray in the middle portion of the cabinet while allowing room for expansion trays to be placed above and below the controller tray.
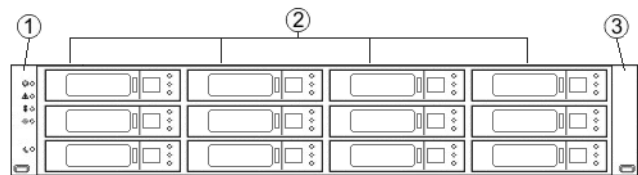
FIGURE 2 Installing the Tray
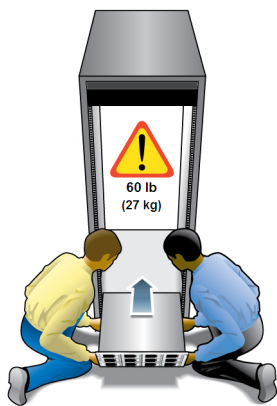
Step	Task
1.	Using two people, carefully lift and rest the tray on the bottom ledge of the left and right rails. **Caution**: Tray equipment can weight up to 60 lb (27 kg).
2.	Carefully slide the tray into the cabinet until the front mounting flanges on the tray touch the vertical face of the cabinet and the rear edges of the tray fit into the clips on the support rails.
3.	Secure the front of the tray by inserting a screw through the center hole in each front mounting flange. (**Note**: Washers may be required.) Tighten the screws.
4.	Secure the rear of the tray by inserting a screw through the hole in each rear mounting flange and into each support rail. (**Note**: Washers may be required.) Tighten the screws.
5.	Replace the end caps (bezels) that cover the mounting flanges on the front of the array tray.
6.	Verify that the tray power switches and cabinet circuit breakers are turned off.
7.	Connect each tray power supply to a separate power source in the cabinet.

Review Front Panel

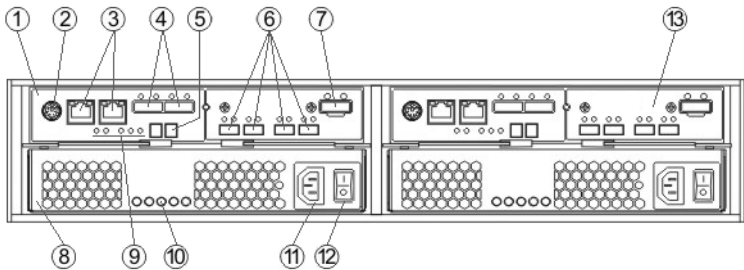**FIGURE 3** Controller Tray and Expansion Tray Front Panel

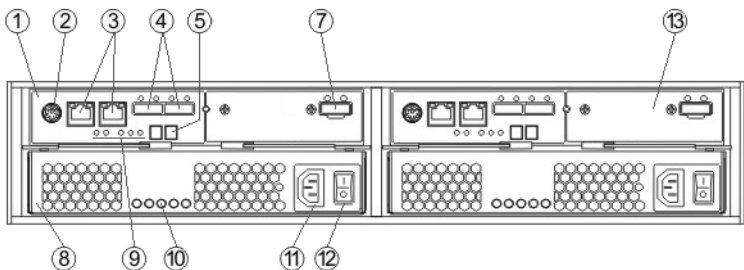| Callout	Description
1	Left end cap with front panel LEDs
2	Disk drives
3	Right end cap

Review Rear Panel

Note: AC power connectors and switches shown. DC configuration is available. See Hardware Installation Guide for more information.

**FIGURE 4** Controller Tray Rear View

2540-M2

2530-M2

Callout	Description: 2540-M2 and 2530-M2
1	Controller module A
2	Serial port
3	Ethernet ports
4	SAS host ports (Not used on 2540-M2)
5	Seven-segment display
6	Fibre Channel host ports (2540-M2 only)
7	Expansion port
8	Power-fan module
9	Controller module LEDs
10	Power-fan module LEDs
11	Power connector
12	Power switch
13	Controller module B

FIGURE 5 Expansion Tray Rear View

2501-M2
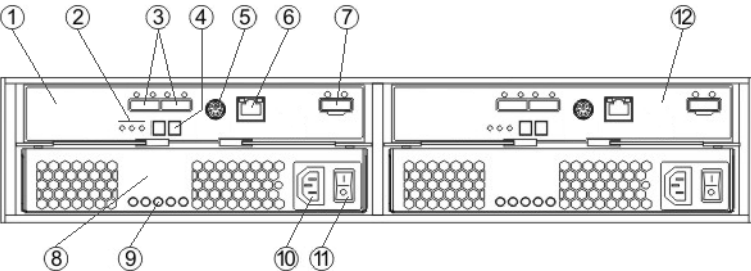
Callout	Description: 2501-M2
1	Input/output module (IOM) A
2	IOM LEDs
3	SAS host ports
4	Seven-segment display
5	Serial port
6	Ethernet port
7	Expansion port
8	Power-fan module
9	Power-fan module LEDs
10	Power connector
11	Power switch
12	IOM B

Connect Controller and Expansion Trays

FIGURE 6 shows recommended expansion cabling for one, two, and three expansion trays. See the Hardware Installation Guide for more information.

**FIGURE 6** Expansion Tray Cabling Configurations
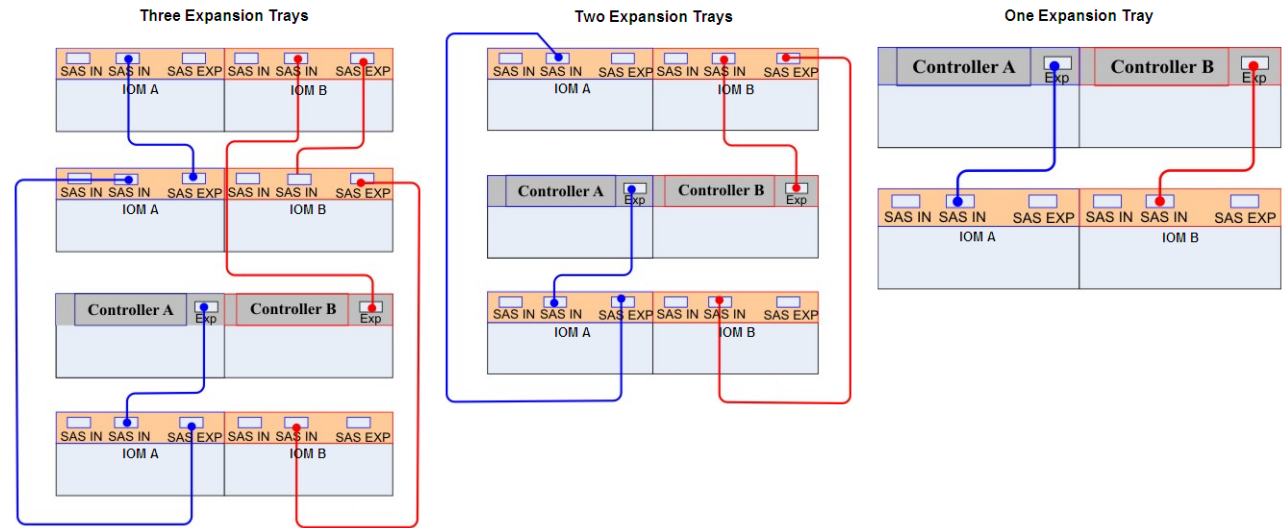
Connect Data Hosts

FIGURE 7 shows sample host connection configurations for one host in a direct topology, two hosts in a direct topology, and two hosts in a Fibre Channel switch topology. For Fibre Channel connections (Sun Storage 2540-M2 only), plug an SFP into a controller host port before cabling. For more information, see the Hardware Installation Guide.

Note – The SAS host interface does not support a switch topology.

FIGURE 7 Sample Controller-to-Data Host Connections
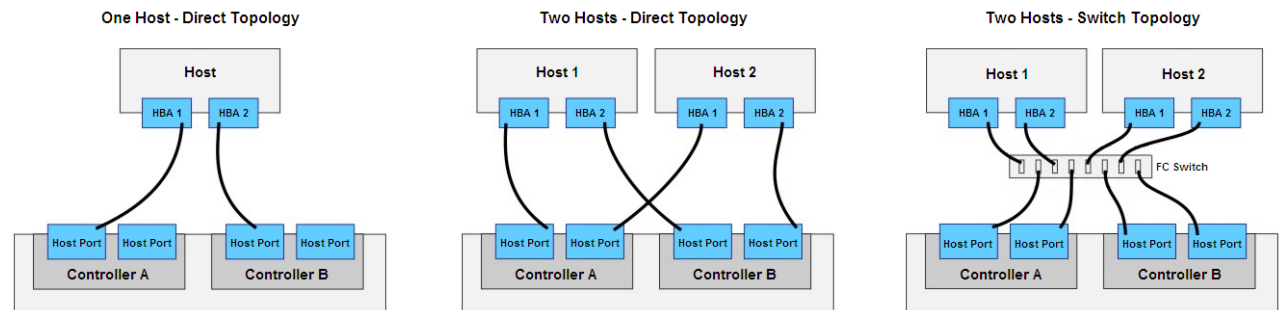
Connect Management Host

Connect an Ethernet cable from the management host port (Ethernet Port 1) of each controller to the LAN of the management host. **Note**: Ethernet Port 2 is reserved for access by Support personnel.

Turn on Power and Install Management Host Software

To power on the array, follow the procedure in the Installation Guide. Then, install Sun Storage Common Array Manager on the management host. If you did not previously begin the download process, see the "Sun Storage Common Array Manager" section.

During initial array registration, you are prompted to register with the Auto Service Request (ASR) service. It is highly recommended that you register with ASR so that Support can respond appropriately to your needs.

Documentation for This Product

Additional documentation for Sun Storage 2500-M2 Arrays is available at:

http://www.oracle.com/technetwork/documentation/oracle-unified-ss-193371.html

Review safety information	*Sun Storage 2500-M2 Arrays Safety and Compliance Manual*
	Important Safety Information for Sun Hardware Systems
Review known issues and workarounds	*Sun Storage 2500-M2 Arrays Hardware Release Notes*
	Sun Storage Common Array Manager Release Notes
Prepare the site	*Sun Storage 2500-M2 Arrays Site Preparation Guide*
Install the array	*Sun Storage 2500-M2 Arrays Hardware Installation Guide*
Get started with the management software	*Sun Storage Common Array Manager Quick Start Guide*
Install the management software	*Sun Storage Common Array Manager Installation and Setup Guide*
Manage the array	*Sun Storage Common Array Manager Array Administration Guide*
	Sun Storage Common Array Manager CLI Guide

Oracle Contact Information

Documentation	http://www.oracle.com/technetwork/indexes/documentation/index.html
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Training	https://education.oracle.com