### 1. Before you begin

Refer to the E2700 Controller-Drive Tray and Related Drive Trays guide, and review those instructions before installing. You can download documentation and the appropriate operating system version of the SANtricity® Storage Manager for your management station and attached hosts from the NetApp Support Site at support.netapp.com.

**ATTENTION** Register the E-Series storage system—Before you begin the installation, register your E-Series storage system at support.netapp.com using the serial number for the integrated controller-drive tray, which is printed on a silver label affixed to the top of the controller-drive tray and preceded by the word "Serial." Use of any other component serial numbers (such as these for individual controllers or drive trays) will not enable correct registration for the storage array.

Record the serial number of the integrated controller-drive tray for later use. This serial number is required to initiate any support request for your system.

If your array includes expansion drive trays as well as a controller-drive tray, refer to the enclosure part numbers in your Sales Order. Verify that you install the controllers in the controller-drive tray, and not in a drive tray. (Controller-drive trays do not include a "G3" designation in their part numbers. Drive trays part numbers include a "G3" designation.)

**Tools:**
- An Internet connection (optional)
- A cart to hold the controller-drive tray and its components
- Labels for the cable connections
- A medium flat-blade screwdriver and a No. 2 Phillips screwdriver
- Anti-static wrist straps (included, but bring an anti-static pad)
- A flashlight

**ATTENTION** Possible hardware damage—To prevent electrostatic discharge damage to the tray, use proper antistatic protection when handling tray components.

### 2. Install the mounting rails

You can install the controller-drive tray into an industry-standard cabinet.

There must be a minimum depth of 76 cm (30 in.) between the front EIA support rails and the rear EIA support rails.

**2.1 Position the mounting rails in the cabinet.**

- If you are installing the mounting rails above an existing tray, position the mounting rails directly above the tray.
- If you are installing the mounting rails below an existing tray, allow 8.9-cm (3.5-in.) vertical clearance for the E2724 controller-drive tray.

**2.2 Starting with the left mounting rail, use a flat-blade screwdriver to loosen the two flat-head rail adjustment screws. Hold the front of the left mounting rail against the inside of the front cabinet-mouting flange, and then extend the rear of the mounting rail until it makes contact with the rear cabinet-mounting flange. The alignment pins at the rear of the mounting rail should slide into the holes at the rear of the cabinet.**

**3. Install the controller-drive tray**

**WARNING (W06) Risk of bodily injury**

Two persons are required to safely lift the component.

With the help of one other person, remove the controller-drive tray from the shipping box.

**E2724 Controller-Drive Tray – Front View**

1. Standby Power LED
2. Power LED
3. Over-Temperature LED
4. Service Action Required LED
5. Locate LED
6. Drive Carrier

**3.1 Mounting Holes**

1. Mounting Holes
2. Screw

### 4. Secure the controller-drive tray

**WARNING (W10) Risk of bodily injury**—Do not use equipment in the cabinet as a shelf or workspace.

- Secure the screws in the top mounting holes and the bottom mounting holes on each side of the controller-drive tray (refer to the image at the top of the next column).

**4.1 Two-Unit (2U) Mounting Holes**

1. Mounting Holes on the Industry-Standard Cabinet
2. Adjustment Screws for Locking the Length of the Mounting Rail
3. Washer
4. Clip for Securing the Rear of the Controller-Drive Tray

**4.2 From the front of the cabinet, with the mounting-rail flanges inside of the cabinet's mounting rail assemblies, use the Phillips screwdriver to loosely tighten only the lower screw.**

**4.3 From the rear of the cabinet, use the Phillips screwdriver to loosely tighten the two screws. Do not completely tighten the screws until you have installed the controller-drive tray in the cabinet.**

**4.4 Repeat step 2.2 through step 2.4 for the right mounting rail.**

**4.5 Tighten the flat-head rail adjustment screws on both mounting rails.**

### 5. Connect the cables

**WARNING (W03) Risk of exposure to laser radiation—Do not disassemble or remove any part of a Small Form-factor Pluggable (SFP) transceiver because you might be exposed to laser radiation.**

**ATTENTION** Potential damage to equipment (Network Telecommunications Equipment Ethernet cable installations only)—The intra-building ports (Ethernet maintenance ports) of this equipment is suitable for connection to intra-building or unexposed wiring or cabling only. The intra-building ports of this equipment must not be metalically connected to interfaces that connect to the Outside Plant (OSP) or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1088-CORE) and require isolation from the exposed OSP cabling. The addition of Primary Protection is not sufficient protection in order to connect these interfaces metallycally to OSP wiring.

The cable shall be Shielded Twisted Pair (STP) and must be grounded at both ends to meet the intra-building lightning requirements from section X.6.9 of GR-1088-CORE, issue 95.

In this step, you will connect the E2724 controller-drive tray to the host or hosts, and then you will connect the EDE500 drive tray or the DE1600 drive tray to either a E2724 controller-drive tray (which contains the controllers), or to another DE5600 drive tray or DE1600 drive tray in the storage array. For more information, refer to these documents:
- Quick Install Guide for the DE5600 Drive Tray
- Quick Install Guide for the DE1600 Drive Tray
- Quick Install Guide for the DE6500 Drive Tray
- E2700 Controller-Drive Tray and Related Drive Trays hardware installation guide

**You will install the DE5600 drive trays and the DE1600 drive trays below and above the controller-drive tray, keeping the weight in the lower portion of the cabinet. For the maximum number of drives supported in a particular configuration, see the E2700 Controller-Drive Tray and Related Drive Trays hardware installation guide.**

**E2724 Controller-Drive Tray**

1. Mounting Holes
2. Screw

**E2724 Controller-Drive Tray – Rear View with Four-Port SAS HIC**

1. Controller Carrier
2. Power-Fan Carrier

**E2724 Controller-Drive Tray – Rear View with Four-Port FC HIC**

1. Controller Carrier
2. Power-Fan Carrier

With the help of one other person, slide the rear of the controller-drive tray onto the mounting rails so that the mounting holes on the front flanges of the controller-drive tray align with the mounting holes on the front of the mounting rails.
Fabric Topology – Two Hosts and a Dual Controller-Drive Tray for Maximum Redundancy Connected by a Switch

1. Host
2. HBA 1 or NIC 1
3. HBA 2 or NIC 2
4. Host Port 1
5. Controller A
6. Controller B

Fabric Topology – Three Hosts and a Dual Controller-Drive Tray for Maximum Redundancy Connected by Two Switches

1. Host
2. HBA 1 or NIC 1
3. HBA 2 or NIC 2
4. Host Port 1
5. Host Port 2
6. Controller A
7. Controller B

Double Stack Drive Tray Cabling with an E2724 Controller-Drive Tray

When there is more than one drive tray, connect one port on controller A to the left ESM of the first drive tray in the stack and one port on controller B to the right ESM of the last drive tray in a dual stack to maximize performance.

For specific guidelines about cabling an E2724 controller-drive tray to DE1600 drive trays, DE5600 drive trays, and DE6900 drive trays, refer to the E2700 Controller-Drive Tray and Related Drive Trays hardware installation guide.

Establish network connectivity

This section describes configuration of the entire storage array using the out-of-band management method after you have installed SANtricity Storage Manager using the instructions in the Initial Configuration and Software Installation Guide for SANtricity Storage Manager.

For more information about out-of-band management, or if you have chosen to use in-band management, refer to the “Deciding on the Management Method” topic in the same document.

Out-of-band management - Managing a storage array by using a storage management station to send commands through the Ethernet connections on each controller.

Use one of the following methods to configure the controllers for network connectivity, referring to the Initial Configuration and Software Installation Guide for SANtricity Storage Manager for detailed instructions.

Without a DHCP server

7.a. Verify that you have connected separate Ethernet cables to each controller, as described in Step 5.4 through Step 5.6.

7.b. Manually configure the network settings on the controllers, using the guidelines and procedures from the “Manually Configuring the Controllers” steps in the Initial Configuration and Software Installation Guide for SANtricity Storage Manager.

With a DHCP server

7.c. Verify that you have connected separate Ethernet cables to each controller, as described in Step 5.4 through Step 5.6.

8. Assign static IP addresses to the controllers, using either your DHCP server (preferred) or the SANtricity Storage Manager AMW, which requires that you have previously discovered the storage system.

NOTE: This method applies only to IPv4 networks.

Stateless Address Auto-Configuration

Use the Stateless Address Auto-Configuration feature that provides separate Ethernet cables to each controller, as described in Step 5.4 through Step 5.6.

NOTE: This method applies only to IPv6 networks and does not require either a DHCP server or a router.

Make the storage array operational

Use the SANtricity Storage Manager or your software management system to perform the final tasks on your storage array to make it operational. For more information, refer to the Initial Configuration and Software Installation Guide for SANtricity Storage Manager for additional information.

You can start the SANtricity Storage Manager software from your management station either by typing [email protected]: and pressing Enter (UNIX OSs), or by navigating to the directory that contains the [email protected] file, typing [email protected]: and pressing Enter (Windows OSs).

• The client software starts and shows the Enterprise Management Window.

• When you double-click the storage array that you want to manage, the associated Array Management Window (AMW) is launched.

Discover the storage array by selecting Tools >> Automatic Discovery from the ESM. (If automatic discovery is unsuccessful, use the controller IP address to start manual discovery.)

Double-click the storage array you want to manage so that the associated AMW launches.

Configure the Storage Array from the Setup tab in the AMW.