EMC® VNXe3100/VNXe3150

Installing an Optional 12-Slot Disk-Array Enclosure

P/N 300-012-215
REV 03

This document describes how to install an optional 12-slot disk-array enclosure (DAE) in a VNXe3100 or VNXe3150 system.

Before you start

Before you begin the this procedure, refer to your EMC VNXe™ online help (**Servicing your system › Adding or replacing faulted hardware components › Add a new hardware component**) for instructions on how to handle hardware components. Review the **Disk handling cautions**.

⚠WARNING

The enclosure is heavy and should be installed into a rack by two people. To avoid personal injury and/or damage to the equipment, do not attempt to lift and install the enclosure into a rack without a mechanical lift and/or help from another person.

Tasks to install a 12-slot DAE

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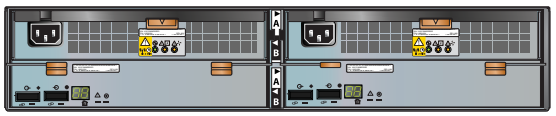
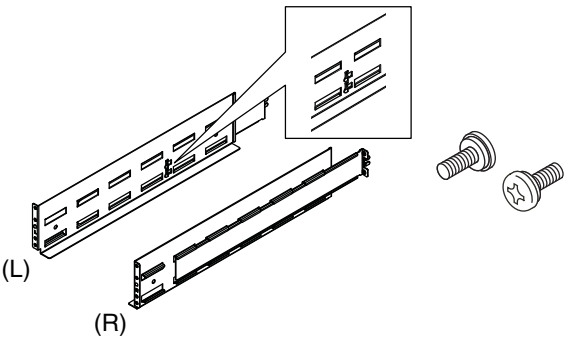
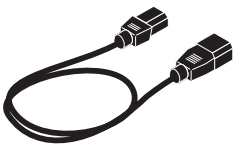
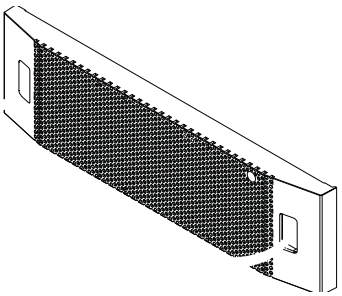
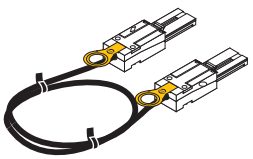
Task 1: Verify shipping package contents

Verify that you received the following:

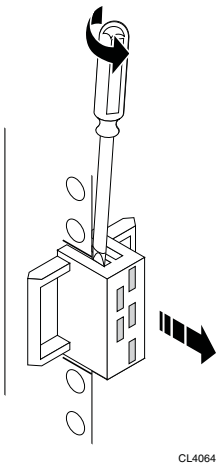
Component		Quantity
Disk-array enclosure (DAE)	Rear view  Front view	1
DAE rail kit		1 (includes 2 rails and 16 screws)
Power cords		2
Bezel for disk-array enclosure (with key)		1
DAE SAS cables (copper) that connect disk-array enclosures to each other or to DPE		2

Task 2: Remove the filler panels

In most cases, the front space into which you will install the enclosure is covered by a filler panel, which is attached to latch brackets.

If one or more filler panels cover the space where you want to install the DAE:

1. Remove the filler panels.
2. Use a flatblade screwdriver or similar tool to pry off the latch brackets.



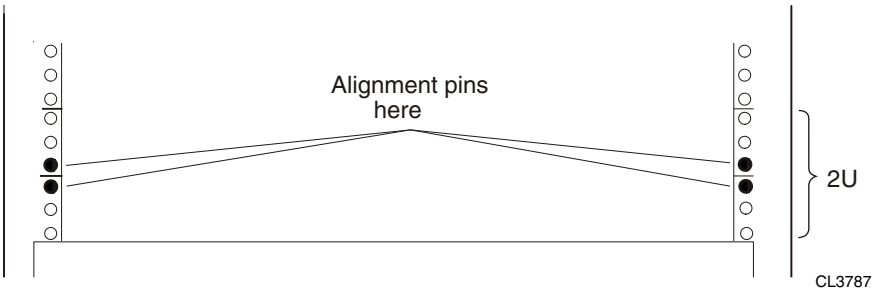
Task 3: Install the rails for the disk-array enclosure

Install the DAE rails in the next available 2U space directly above the base system DPE or the last DAE in the system. Most cabinets mark 1U increments with horizontal lines or small holes in the channels.

Note: The front edge of each rail is stamped L or R for left and right sides, when they face the cabinet front.

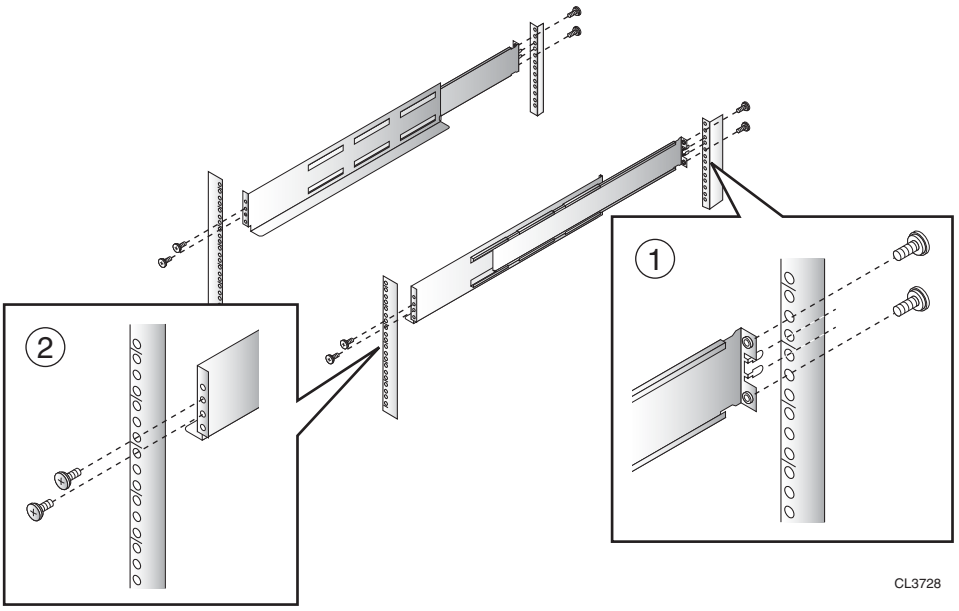
Install *each* rail:

1. From the front of the cabinet, insert the right rail alignment pins above and below the bottom U mark on the *rear* cabinet channel.



2. Pull the sliding rail to the front of the cabinet, and secure it to the front channel by using two of the provided screws at the *middle* two holes of the rail.

3. Secure the rail to the rear channel with two screws, leaving the screws slightly loose to allow for adjustment when you install the DAE chassis.

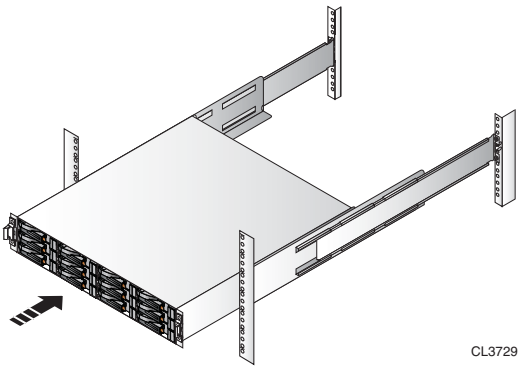


Task 4: Install the disk-array enclosure in the cabinet/rack

⚠WARNING

The enclosure is heavy and should be installed into a rack by two people. To avoid personal injury and/or damage to the equipment, do not attempt to lift and install the enclosure into a rack without a mechanical lift and/or help from another person.

1. ***With help from another person***, lift the enclosure and, from the front of the cabinet/rack, slide the enclosure onto the rails.

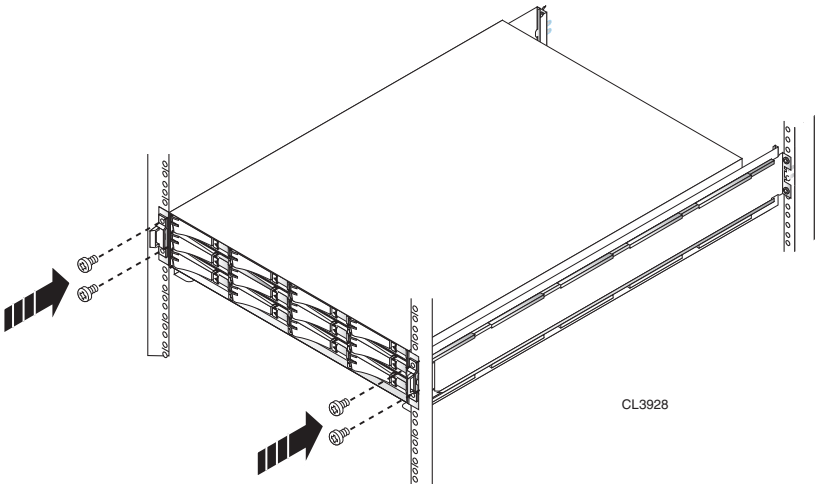


When the enclosure slides to the back of the cabinet, the rear tabs on the rails insert into the notches in the rear of the enclosure. The tabs secure and support the rear of the enclosure.

If the chassis does not slide all the way into the cabinet, you may need to further loosen the screws that hold the rear of the rails in place, then adjust the rails to allow the tabs to fit into the notches.

2. Once the enclosure is completely seated into the rear tabs, tighten the screws (two on each rail) that secure the rails to the channels.
3. Secure the front of the enclosure to the front vertical channels of the cabinet by using four screws (two per side).

   Install all four screws but do not tighten them until all screws are in place.



Task 5: Install disk modules

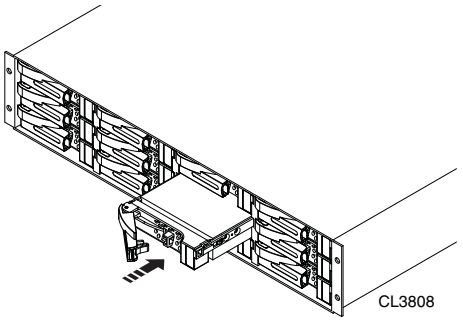
If the disk modules shipped separately from the DAE, install them in the enclosure now. If the disk modules are already installed in the DAE, go to "Install the DAE bezel" on page 7.

Disk handling

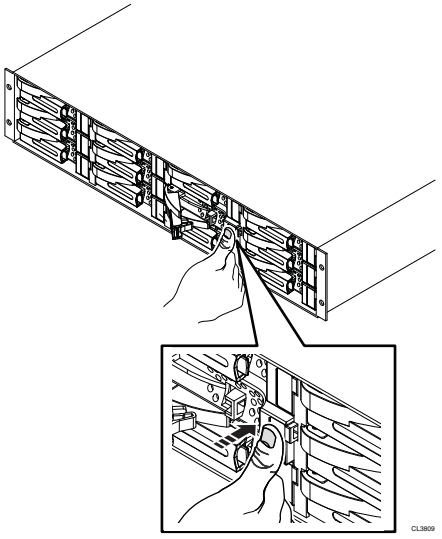
- Do not remove a disk filler until you have a replacement disk available to replace it.
- Disks are sensitive to the extreme temperatures that are sometimes encountered during shipping. We recommend that you leave the new disk in its shipping material and expose the package to ambient temperature for at least four hours before attempting to use the new disks in your system.
- Avoid touching any exposed electronic components and circuits on the disk.
- Do not stack disks upon one another, or place them on hard surfaces.
- When installing multiple disks in a powered up system, wait at least 6 seconds before sliding the next disk into position.

To install a disk

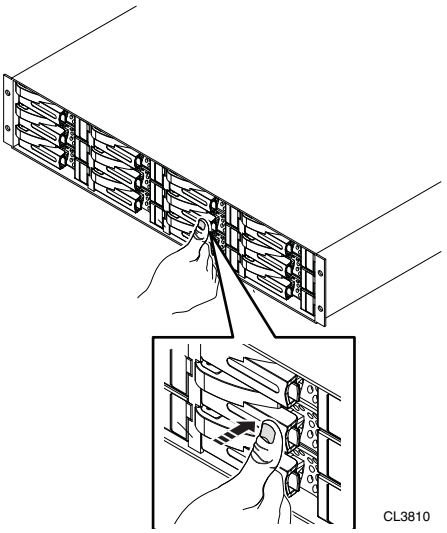
1. Attach an ESD wristband to your wrist and the enclosure in which you are installing the disk.
2. Unpack the new disk.
3. To insert the new disk:
   a. Align the disk with the guides in the slot.
   b. Ensure the ejector handle is open at a 45 degree angle from the drive.



c. Gently push the module in by pressing on the right-most thumb space.



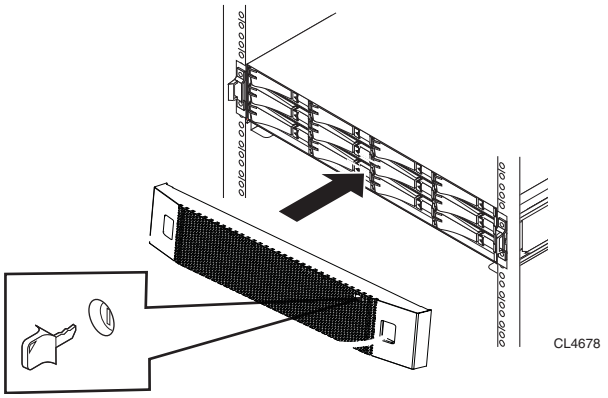
d. Engage the ejector handle to fully seat the disk module.



4. Remove and store the ESD wristband.

Task 6: Install the DAE bezel

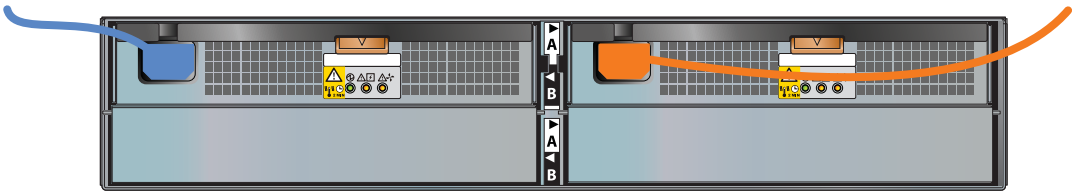
1. Align the bezel with the enclosure.
2. Gently push the bezel into place on the cabinet until it latches
3. Secure the bezel by turn the key in the lock.



Task 7: Attach AC power cords

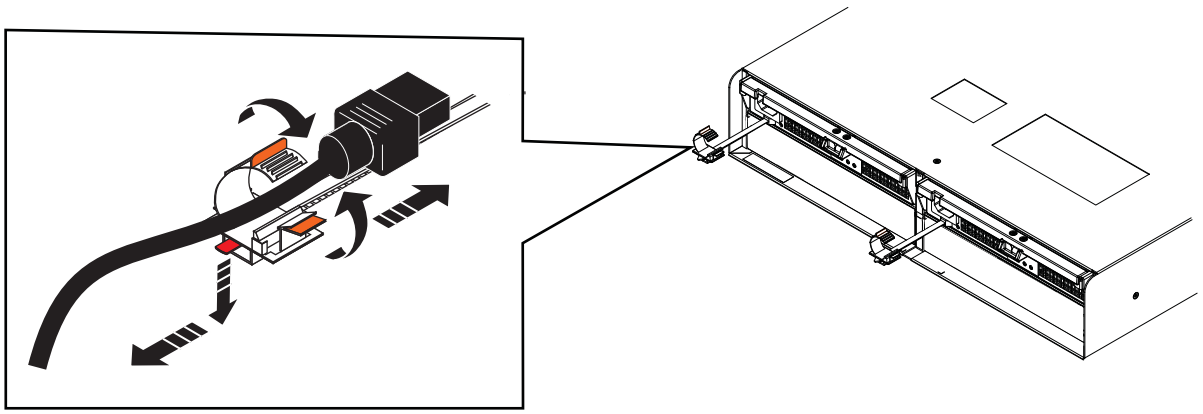
Note: The enclosures will start immediately when connected to active AC power.

1. Connect each power/cooling module in the DAE to a separate AC power circuit:
   a. Attach the B (left) module to the circuit shared with DPE power supply B.
   b. Attach the A (right) module to the circuit shared with DPE power supply A.



2. Secure the power cords with the retention bails (strain reliefs) at each connector.

   The strain reliefs prevent the power cords from pulling out of the connections.



3. If the power distribution units in your cabinet/rack are not active, turn on AC power now.

   The enclosure powers up immediately once connected to AC power.

Task 8: Attach the expansion (back-end) cables

Each connector on an expansion cable is marked with a ◆ or ● symbol and is keyed to prevent improper connection provided that you do **not force** the cable into a connector. An audible/tangible click indicates that the cable is completely seated in the connector.

Orient the cable connectors as described in the procedure that follows, making sure that you do **not** connect:

- An expansion port ◆◆ to another expansion port ◆◆.
- Any A-side ports to B-side ports.

Procedure

1. If the DAE you just installed is the **first** DAE in the storage system, connect the DAE to the DPE:

   IMPORTANT

   Connecting a DAE to expansion port 1 on the DPE is **not** supported.

   a. If you are connecting to a VNXe3100 DPE that has a cover on expansion port 0 ◆◆ on SP A and/or SP B, refer to Knowledgebase article emc294981 for information on how to do the following:
      - Remove the cover.
      - Clear the port should the cover break when you remove it.

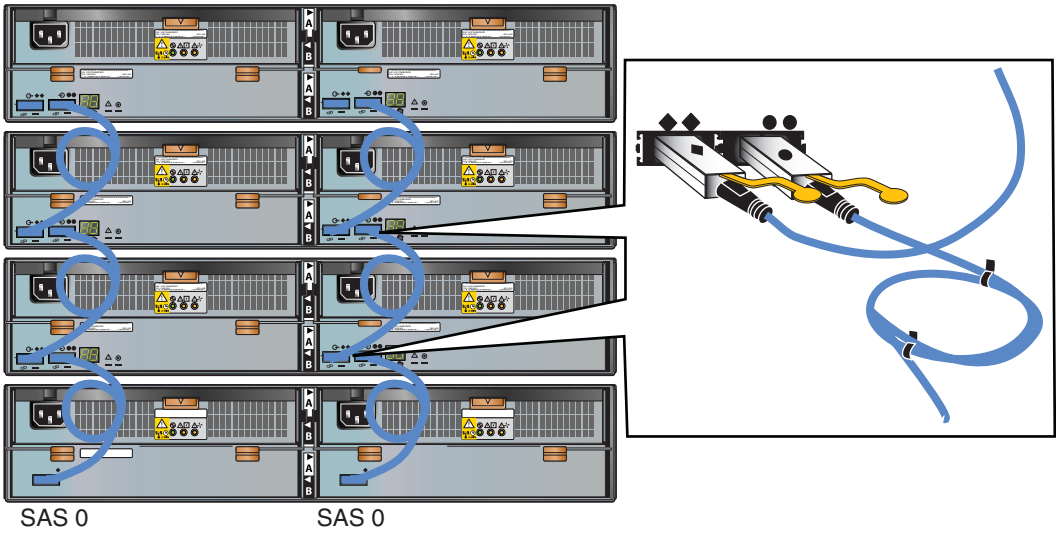
   b. Connect the expansion port 0 ◆◆ on SP A (on the right) in the DPE to the primary port ●● on the link control card directly above it (LCC A).

   c. Connect the expansion port 0 ◆◆ on SP B (on the left) to the primary port ●● on the link control card directly above it (LCC B).

2. If the DAE you just installed is **not the first** DAE in the storage system, connect the new DAE to the previous DAE on the bus:

   a. Connect the primary port ●● on LCC A (on the right) of the new DAE to the expansion port ◆◆ on LCC A of the DAE below.

   b. Connect the primary port ●● on LCC B (on the left) of the new DAE to the expansion port ◆◆ on LCC B of the DAE below.



Task 9: Verify the operation of the new DAE

Verify that the new DAE is recognized by your system, and operating correctly:

1. In Unisphere™, select **System**, then **System Health**.
2. Select the new DAE in the Component list or the graphical view:
   - In the Component list, the new DAE should be marked with a status OK icon:
   - In the graphical view, the DAE should be highlighted green.

   If the system health monitor shows the new DAE as faulted, contact your service provider.

IMPORTANT

Whenever you introduce new disks to your system, you should verify that all disks of that type/model are running the same level of disk firmware. Refer to your online Help for details on how to verify and upgrade disk firmware revisions.

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