Quantum DXi6802 and DXi690x: Rack Mount Rails Replacement

Follow the steps in this document to replace the rack mount rails in the DXi6802 or DXi690x:

1. Shutting Down the System on page 2
2. Replacing the rack mount rails:
   - Replacing the DXi6802 or DXi690x Node Rails on page 3:
   - Replacing the DXi6802 Array or Expansion Module Rails on page 8
   - Replacing the DXi690x Array or Expansion Module Rails on page 12
3. Turning On the System on page 17

Necessary Tools

Before you begin, gather the necessary tools:

- Small flat head screwdriver
- Large flat head screwdriver
- #2 PHILLIPS screwdriver

Caution: Use appropriate ESD precautions, including the use of a grounding strap, when performing any of these procedures.

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Shutting Down the System

To shut down the system:

Caution: Before shutting down the DXi6802 or DXi690x, make sure that all backup and replication jobs are finished, and that space reclamation activity is complete.

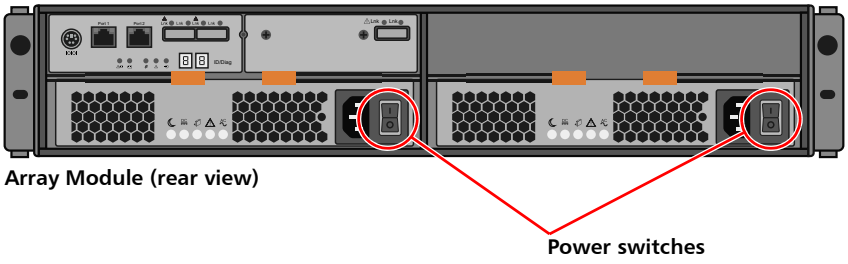
1 Shut down the system from the remote management console using the **Shutdown** option on the **Utilities > Reboot & Shutdown** page.

Note: Shutting down the system can take up to 15 minutes. Only the Node will completely shut down.

Note: If you need help accessing remote management, see the *DXi6000 User's Guide* (6-67199) at www.quantum.com/DXi6800docs or the *DXi690x User's Guide* (6-68159) at www.quantum.com/DXi6900docs.

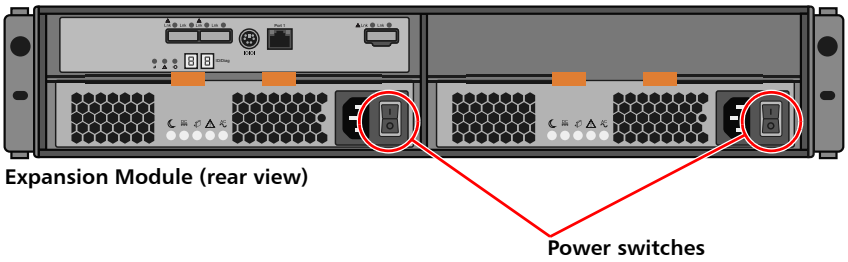
2 After the Node shuts down, turn off both power switches on the back of each Array Module (RBOD) (see Figure 1). Wait until the seven segment display on the rear of the module turns off.

Figure 1 Turning Off the Array Modules (RBODs)



3 Turn off both power switches on the back of each Expansion Module (EBOD) (see Figure 2).

Figure 2 Turning Off the Expansion Modules (EBODs)



Replacing the DXi6802 or DXi690x Node Rails

Follow the steps below to replace the DXi6802 or DXi690x Node rails:

1. Removing the DXi6802 or DXi690x Node from the Rack on page 3
2. Installing the DXi6802 or DXi690x Node Rack Mounting Rails on page 5
3. Installing the DXi6802 or DXi690x Node on page 6

Removing the DXi6802 or DXi690x Node from the Rack

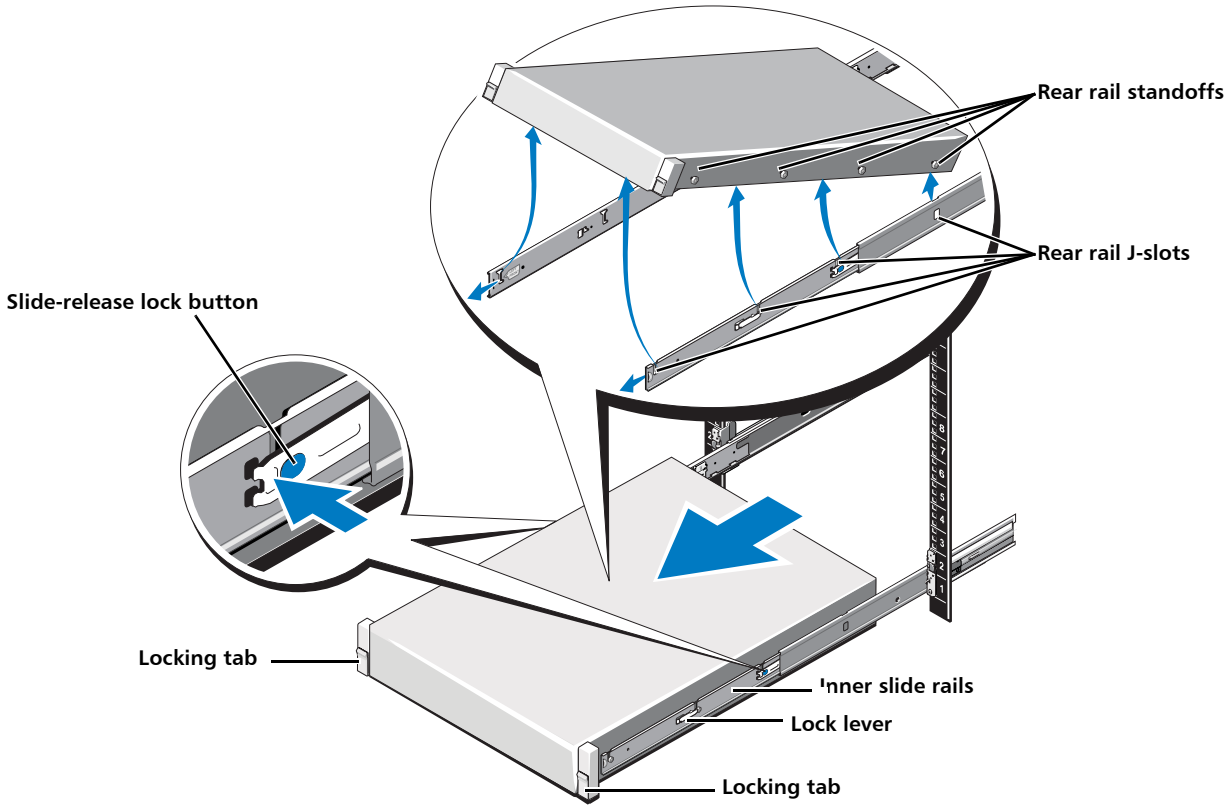
To remove the DXi6802 or DXi690x Node from the rack:

1. Shut down the DXi6802 or DXi690x system (see Shutting Down the System on page 2).
2. If installed, remove the front bezel from the Node by lifting the latch on the left side of the bezel.
3. Remove all power, SAS, Ethernet, and Fibre Channel cables from the rear of the Node. Make sure to label the cables so they can be easily identified when they are re-connected to the Node after the replacement procedure is complete.
4. Press the locking tab on either side of the Node, and slide the Node out from the rack until the inner rails lock.

   Note: If necessary, remove the optional screws securing the Node to the front of the rack (behind the locking tab).

5. Locate the lock levers on the sides of the inner rails (see Figure 3). Unlock each lever by rotating it up to its release position.

Figure 3 Removing the Node from the Rack



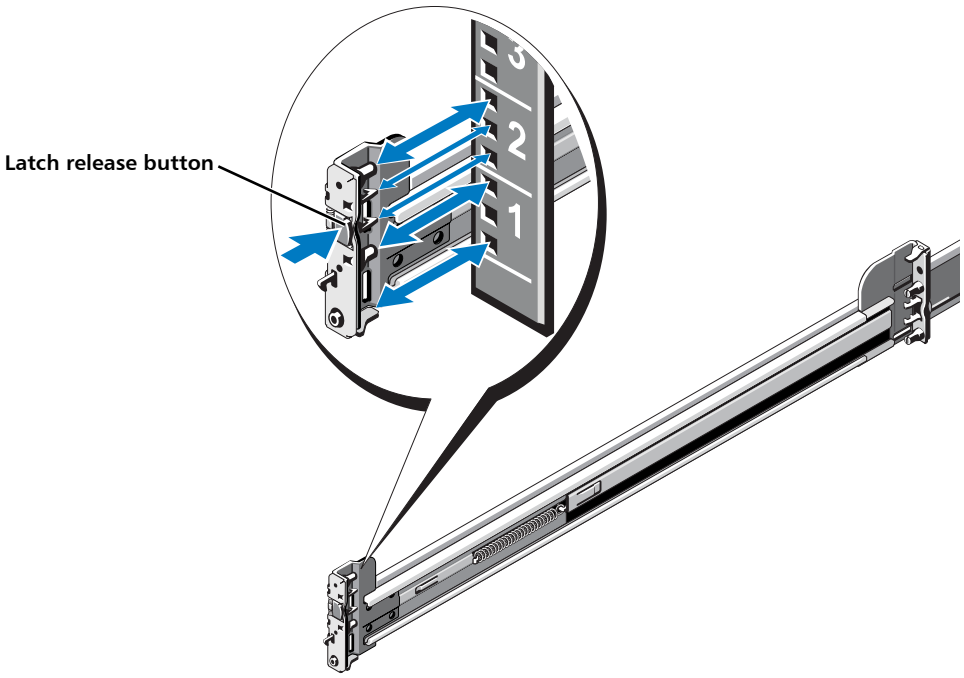
6 Slide the Node forward until the rail standoffs are at the front of the J-slots.

7 Remove the Node from the rack and place it on a level surface.

WARNING: The DXi6802 Node (including hard drives) weighs 53.3 pounds (24.2 kg). The DXi6900 G1/G2 Node (including hard drives) weighs 53.0 pounds (24.0 kg). A minimum of two people are required to lift the chassis.

8 Use a flat head screwdriver to lift the latch release button on the end piece midpoint and unseat each rail (see Figure 4), and then remove the rails from the rack.

Figure 4 Removing the Node Rails

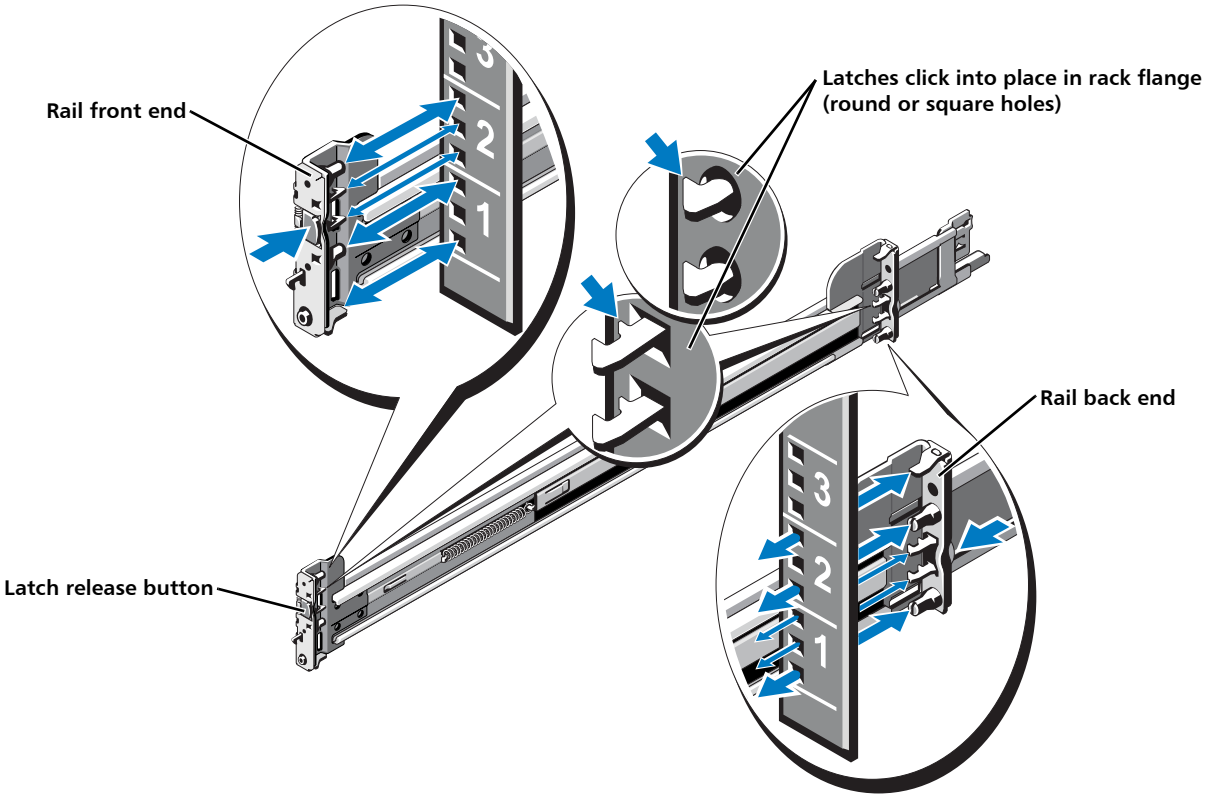


Installing the DXi6802 or DXi690x Node Rack Mounting Rails

To install the replacement DXi6802 or DXi690x Node rack mounting rails:

1. If present, remove the orange plastic clip from each mounting rail so that the rail can be extended. (The rails are marked right and left.)
2. Position the left and right rail end pieces labeled **FRONT** facing inward, and orient each end piece to seat in the holes on the front side of the vertical rack flanges (see Figure 5).

Figure 5 Installing the Node Rails



3 Align each back end piece in the bottom and top holes of the desired U spaces.

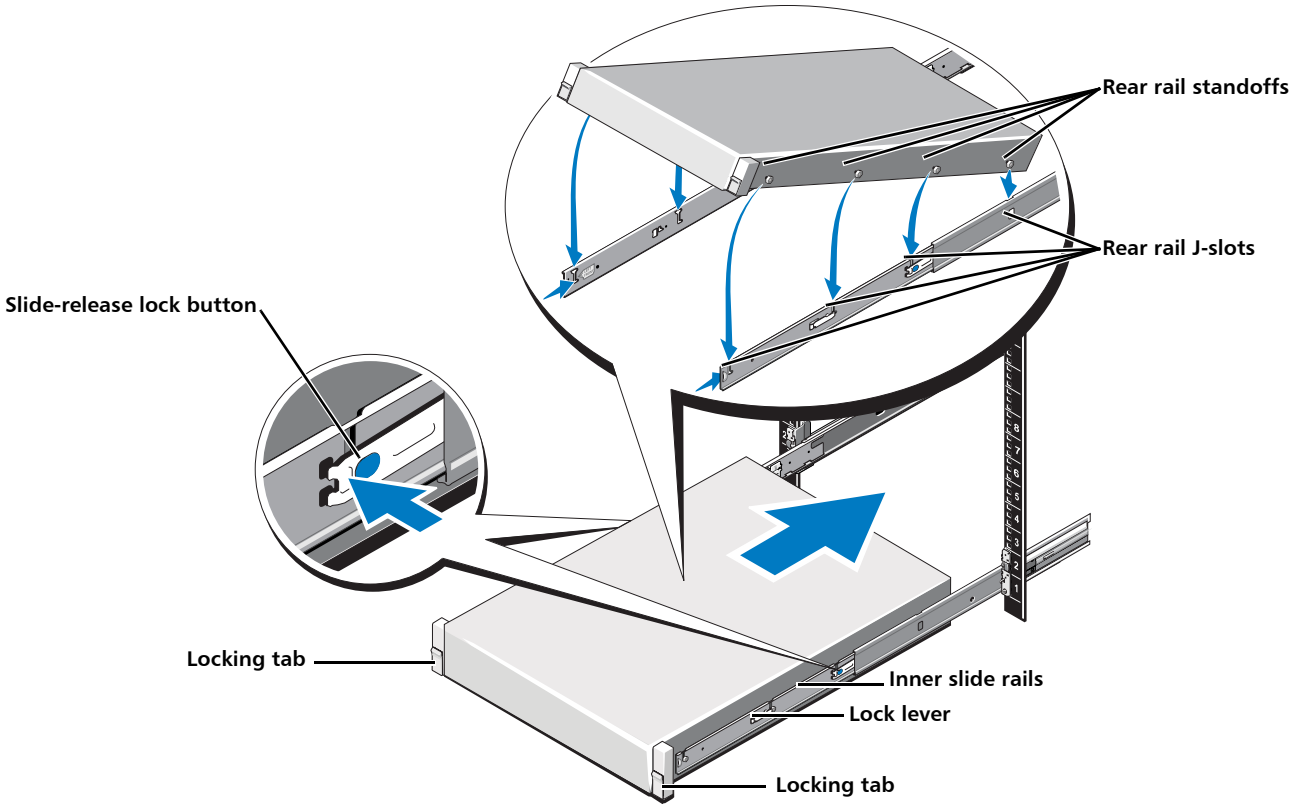
4 Engage the back end of the rail until it fully seats on the vertical rack flange and the latch clicks into place. Repeat these actions to position and seat the front end piece on the vertical rack flange.

Installing the DXi6802 or DXi690x Node

To install the DXi6802 or DXi690x Node:

1 Pull the inner slide rails out of the rack until they lock into place (see Figure 6).

Figure 6 Installing the Node



2 Locate the rear rail standoff on each side of the system and lower them into the rear J-slots on the slide assemblies.

3 Rotate the system downward until all the rail standoffs are seated in all four of the J-slots.

4 Slide the system inward until the lock levers click into place.

5 Press the slide-release lock buttons on both rails and slide the system into the rack.

6 Reconnect all power, SAS, Ethernet, and Fibre Channel cables on the rear of the Node.

Note: For cabling diagrams, see the *DXi6800 Installation and Configuration Guide* (6-67757) at www.quantum.com/DXi6800docs or the *DXi690x Installation and Configuration Guide* (6-68160) at www.quantum.com/DXi6900docs.

7 Turn on the system (Turning On the System on page 17).

8 If applicable, replace the front bezel. Insert the right side of the bezel into the slots on the right side of the Node, then snap the left side of the bezel into place.

Replacing the DXi6802 Array or Expansion Module Rails

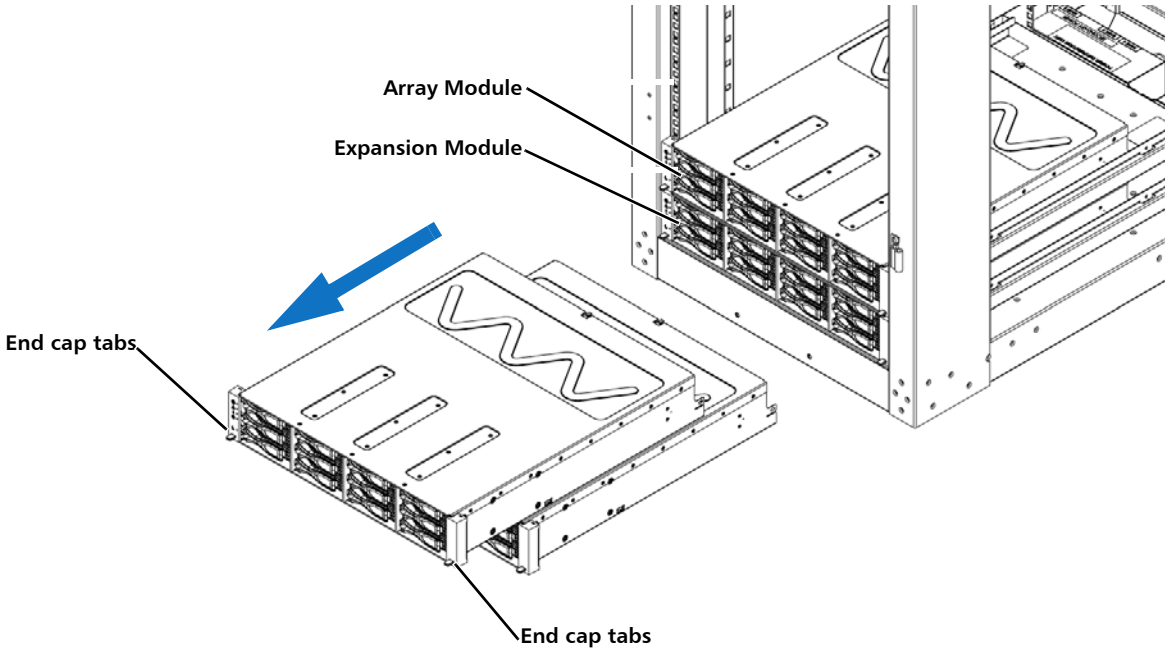
Follow the steps below to replace the DXi6802 Array or Expansion Module rails:

1. Removing the DXi6802 Array or Expansion Module from the Rack on page 8
2. Installing the DXi6802 Array or Expansion Module Rack Mounting Rails on page 9
3. Installing the DXi6802 Array or Expansion Module on page 11

Removing the DXi6802 Array or Expansion Module from the Rack

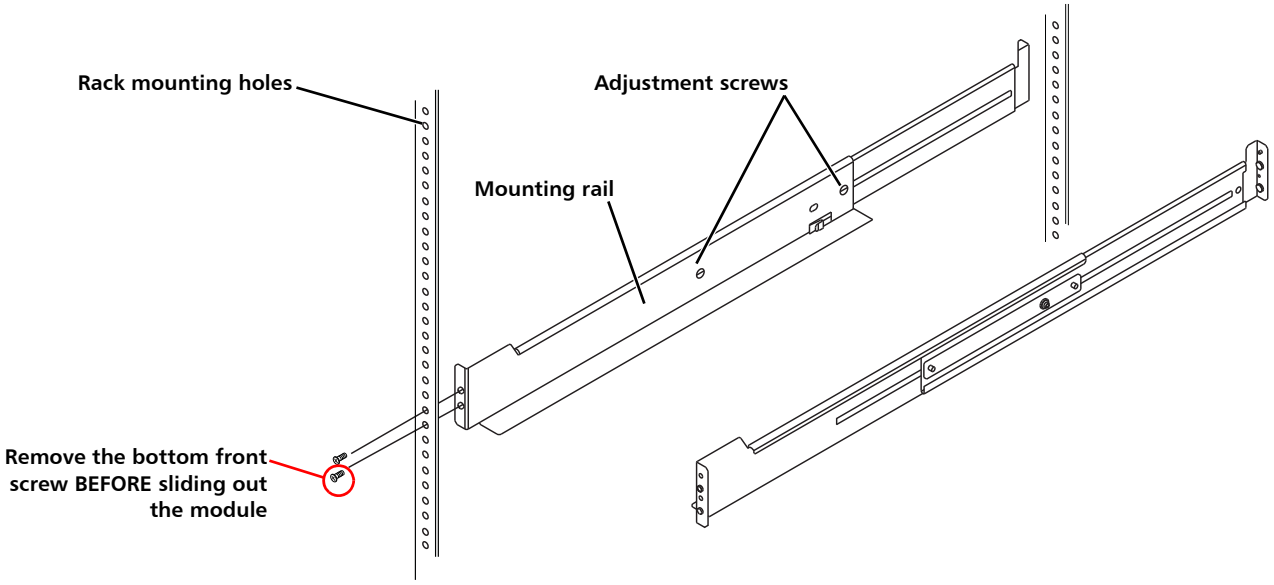
1. Shut down the DXi6802 system (see Shutting Down the System on page 2).
2. Remove all power and SAS cables from the rear of the Array or Expansion Module. Make sure to label the cables so they can be easily identified when they are re-connected to the module after the replacement procedure is complete.
3. Remove the end caps from each side of the Array or Expansion Module (see Figure 7).

Figure 7 Removing the Array or Expansion Module



4. Remove the bottom front screw on each rail (see Figure 8).

Figure 8 Removing the Array or Expansion Module Rails



5 Slide the Array or Expansion Module out of the rack and place it on a level surface.

WARNING: The DXi6802 Array Module (RBOD) and Expansion Module (EBOD) weigh 55.6 pounds (25.2 kg) and 54.7 pounds (24.8 kg) respectively. A minimum of two people are required to lift either chassis.

6 For each rail, perform the following steps (see Figure 12):

- **a** Loosen the adjustment screws on the mounting rail.
- **b** Remove the screws securing the rear flange of the mounting rail to the cabinet.
- **c** Remove the top front screw on each rail.
- **d** Contract the support rail and remove rail from the cabinet.

Installing the DXi6802 Array or Expansion Module Rack Mounting Rails

To install the replacement DXi6802 Array Module or Expansion Module rack mounting rails:

Note: The rails are designed to accommodate racks with both round and square holes. Nut clips are *not* needed for racks with square holes.

1 For racks with square holes, replace the set of small spacers on the front and rear of the support rail with the large spacers included in the rail kit (see Figure 9).

Note: You do *not* need to replace the spacers if you are using a rack with round holes.

2 Make sure that the adjustment screws on the support rail are loose.

3 Place the support rail inside the cabinet and extend the support rail until the flanges on the support rail touch the inside of the cabinet.

4 Insert one M5 screw through the front of the cabinet and screw into the top captured nut in the support rail. Add a large washer between each M5 screw and the mounting rail bracket.

Note: Only insert the top screw on the front of the rail at this time. Do *not* insert the bottom screw yet.

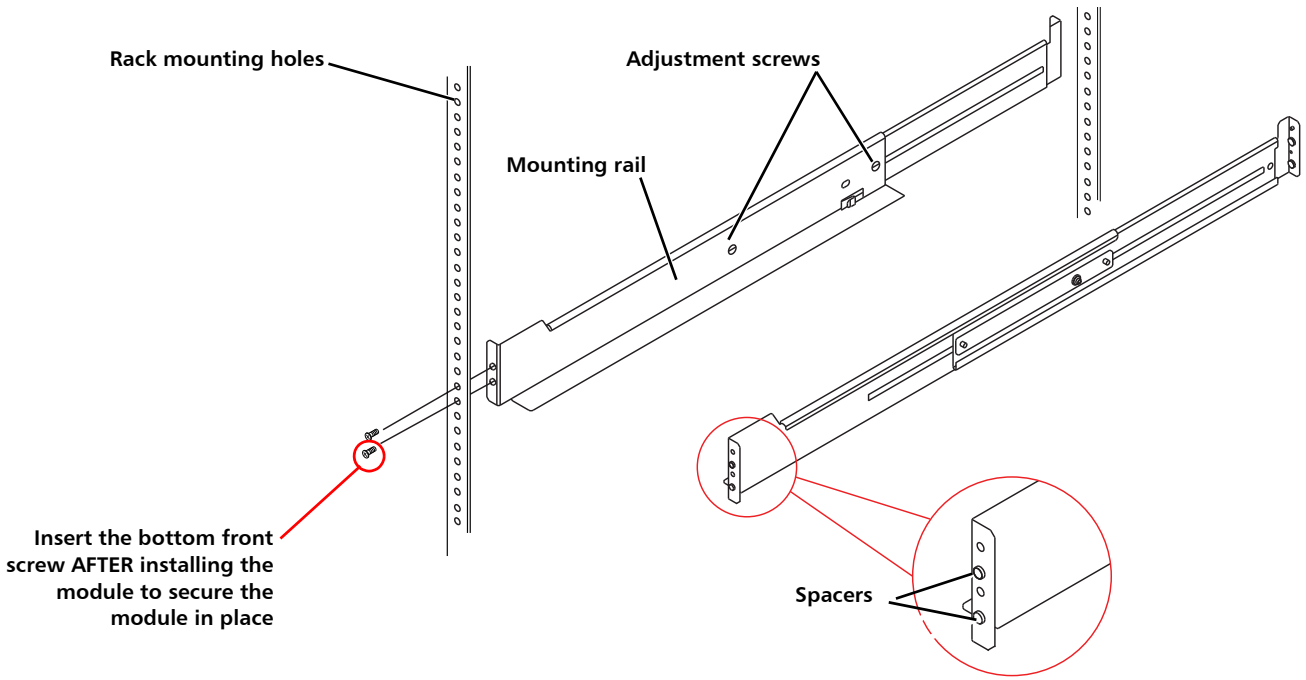
5 Insert two M5 screws through the rear of the cabinet and screw into the captured nuts in the rear flange in the mounting rail. Add a large washer between each M5 screw and the mounting rail bracket.

6 Tighten the adjustment screws on the mounting rail.

Caution: Do not over tighten the screws. You can strip the threads on the mounting rails if the hex screws are over-tightened.

7 Repeat this procedure for the second mounting rail.

Figure 9 Installing the Array or Expansion Module Rails

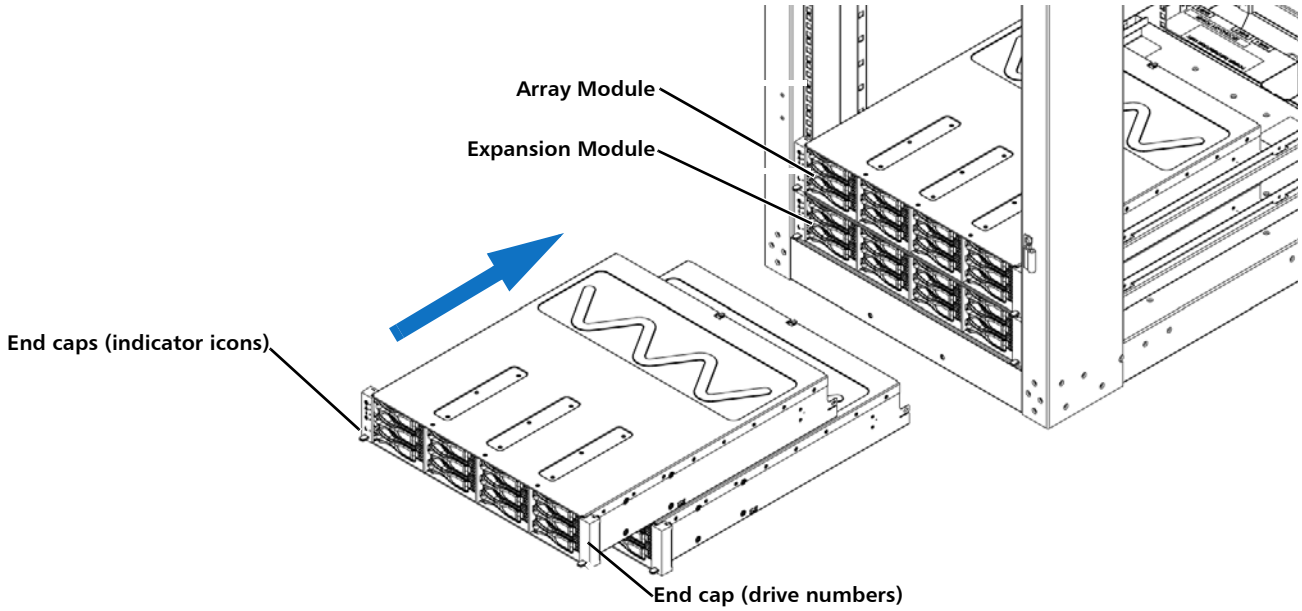


Installing the DXi6802 Array or Expansion Module

To install the DXi6802 Array Module or Expansion Module:

1 Align the Array or Expansion Module with the rails and slide the module into the rack (see Figure 10).

Figure 10 Installing the Array or Expansion Module



2 Insert one M5 screw through the bottom hole in the front of each rail to secure the module in place (see Figure 9).

3 Install the end caps on either side of the module by inserting the top of the end cap first and then snapping the bottom into place.

Install the end cap with the indicator icons to the left of the module, and install the end cap with the drive numbers to the right of the module.

4 Reconnect all power and SAS cables on the rear of the module.

Note: For cabling diagrams, see the *DXi6800 Installation and Configuration Guide* (6-67757) at www.quantum.com/DXi6800docs.

5 Turn on the system (Turning On the System on page 17).

Replacing the DXi690x Array or Expansion Module Rails

Note: NetApp Co-Branded EMEA installations do not follow the rack installation procedures below. NetApp Co-Branded EMEA Array and Expansion Module rails follow the same procedures as the DXi6802 disk backup system (see Replacing the DXi6802 Array or Expansion Module Rails on page 8).

Follow the steps below to replace the DXi690x Array or Expansion Module rails:

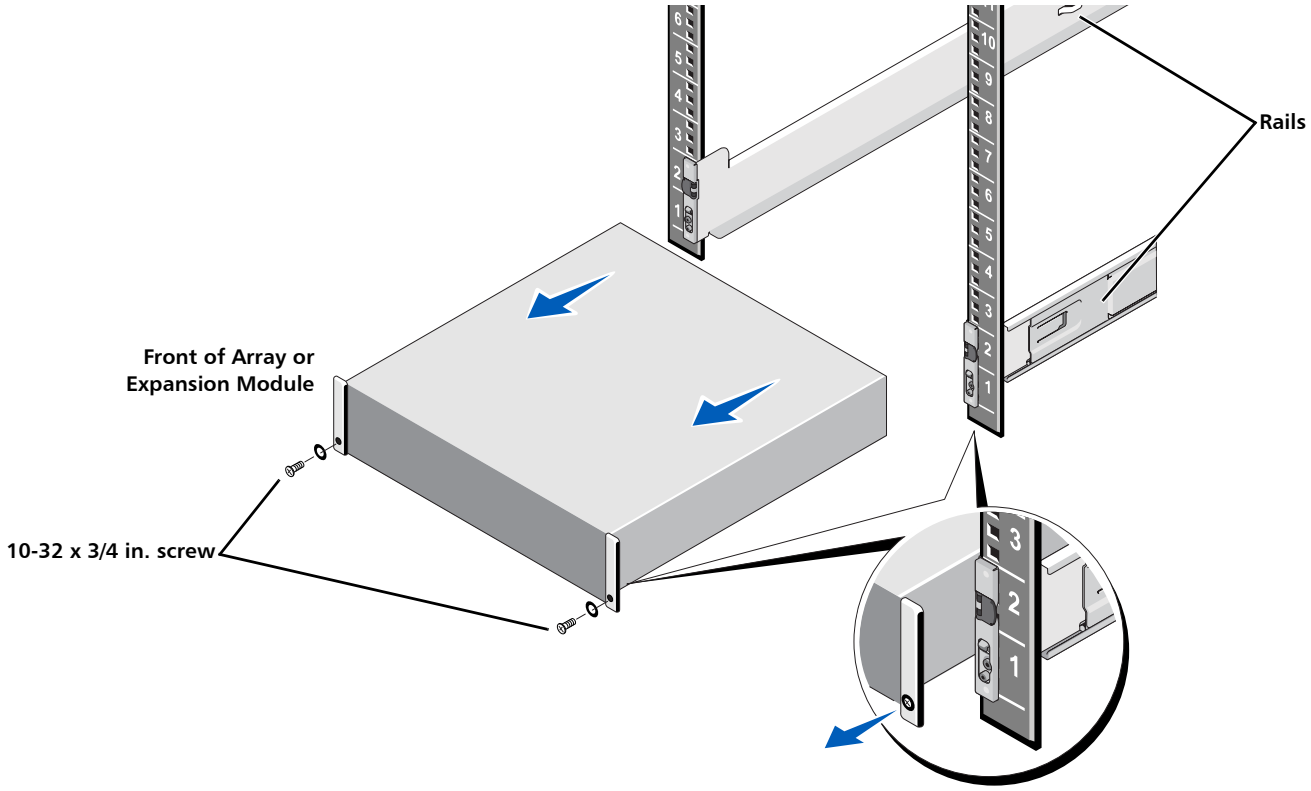
1. Removing the DXi690x Array or Expansion Module from the Rack on page 12
2. Installing the DXi690x Array or Expansion Module Rack Mounting Rails on page 15
3. Installing the DXi690x Array or Expansion Module on page 16

Removing the DXi690x Array or Expansion Module from the Rack

To remove the DXi690x Array or Expansion Module from the rack:

1. Shut down the DXi690x system (see Shutting Down the System on page 2).
2. Remove all power and SAS cables from the rear of the Array or Expansion Module. Make sure to label the cables so they can be easily identified when they are re-connected to the module after the replacement procedure is complete.
3. Remove the end caps from each side of the Array or Expansion Module.
4. Remove the 10-32 x 3/4 in. SEM screw with washer on each side of the Array or Expansion Module's front panel (see Figure 11).

Figure 11 Removing the Array or Expansion Module

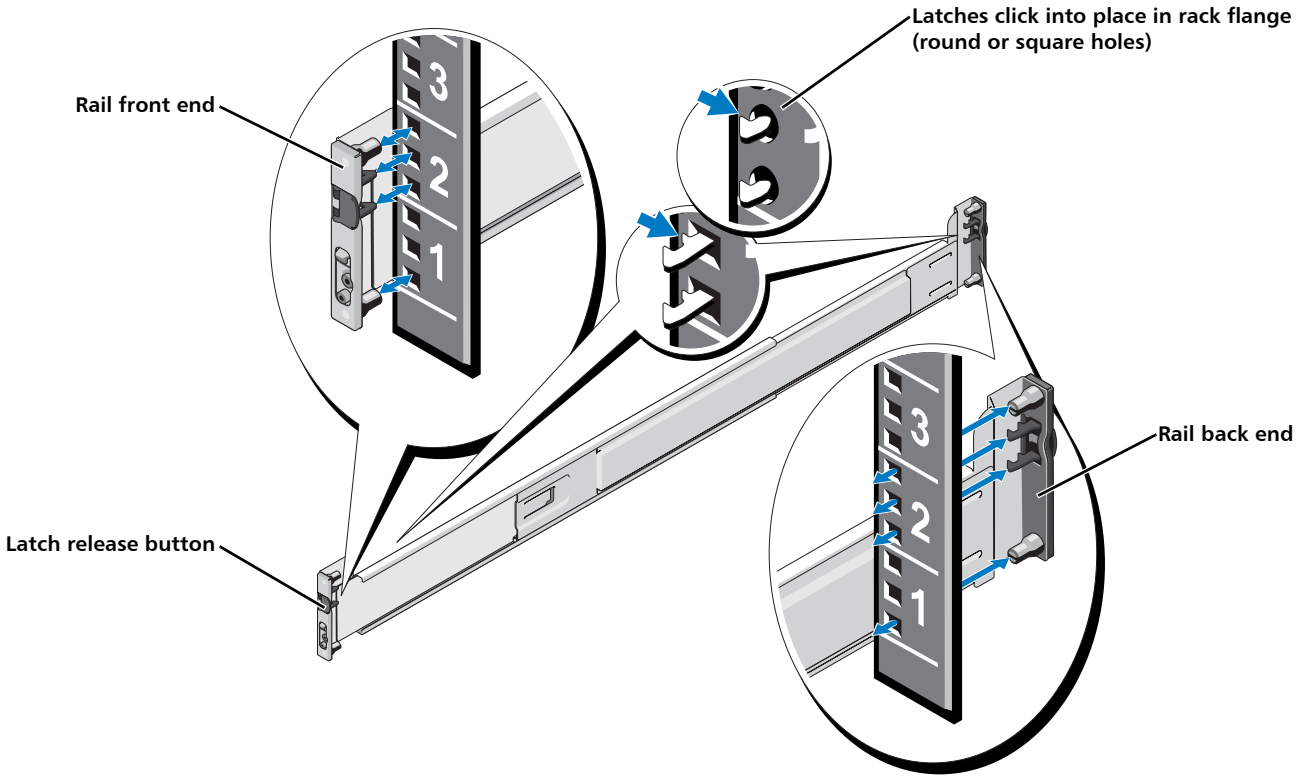


5 Slide the Array or Expansion Module out of the rack and place it on a level surface.

WARNING: The DXi690x Array Module and Expansion Module (including hard drives) weigh 59.0 pounds (26.8 kg) and 57.0 pounds (25.9 kg) respectively. A minimum of two people are required to lift the chassis.

6 For each rail, pull on the blue release latch on each end piece and unseat the rail from the rack (see Figure 12).

Figure 12 Removing the Array or Expansion Module Rails

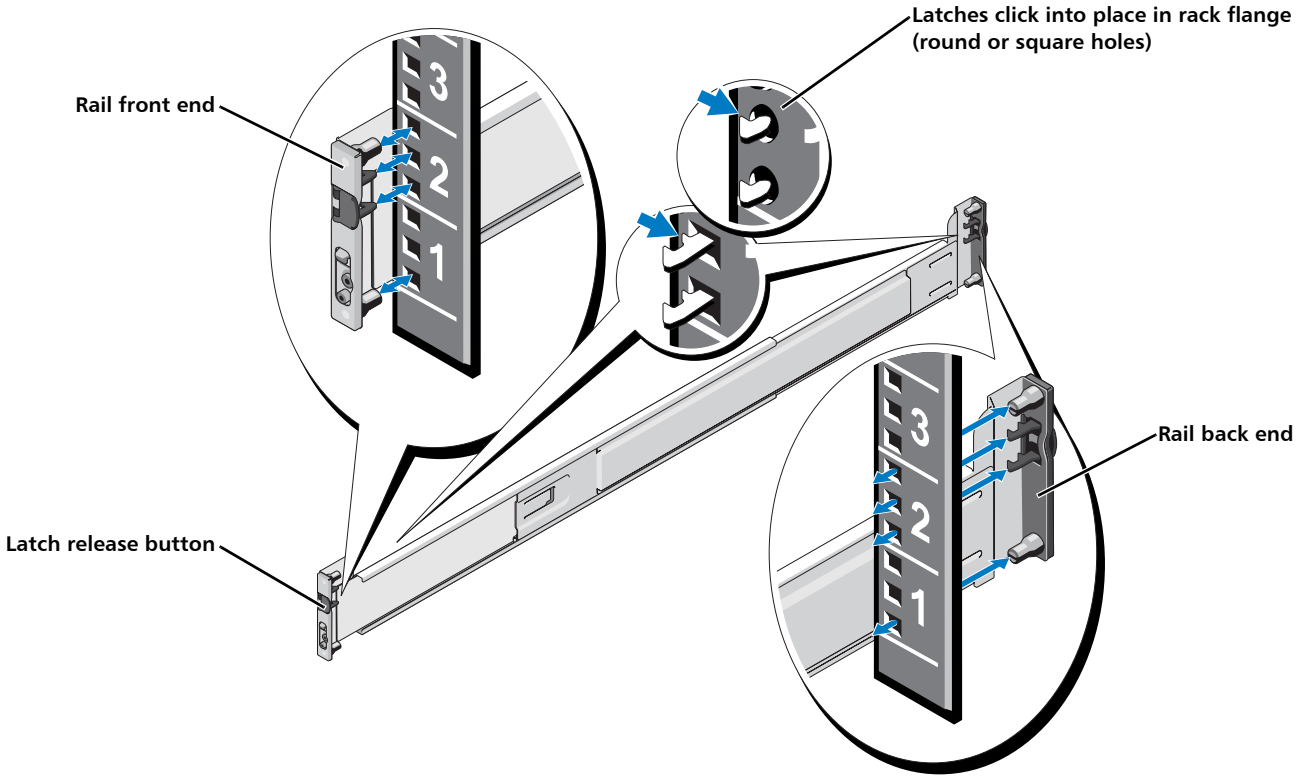


Installing the DXi690x Array or Expansion Module Rack Mounting Rails

To install the replacement DXi690x Array Module or Expansion Module rack mounting rails:

1. Position the left and right rail end pieces labeled **FRONT** facing inward, and orient each end piece to seat in the holes on the front side of the vertical rack flanges (see Figure 13).
2. Align each back end piece in the bottom and top holes of the desired U spaces.
3. Engage the back end of the rail until it fully seats on the vertical rack flange and the latch clicks into place. Repeat these actions to position and seat the front end piece on the vertical rack flange.

Figure 13 Installing the Array or Expansion Module Rails

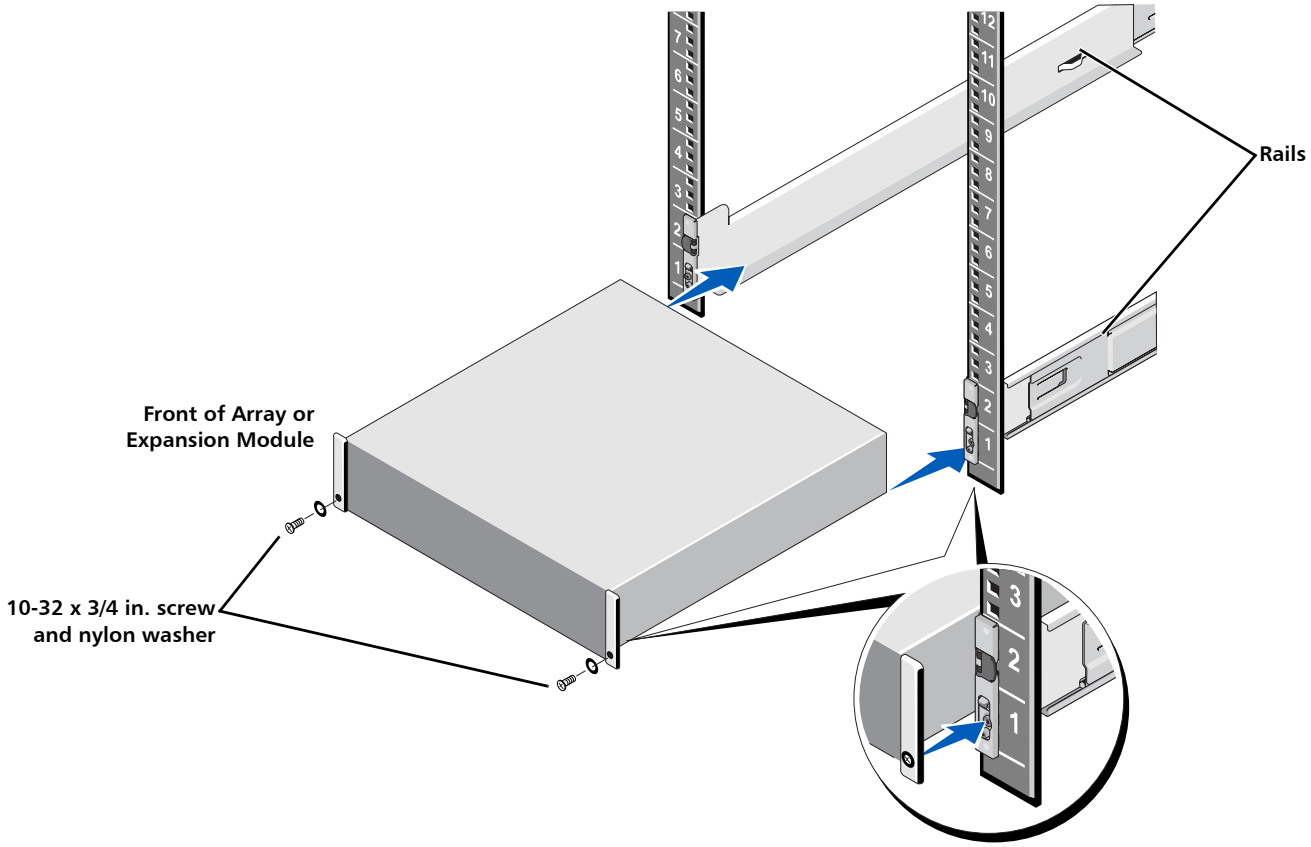


Installing the DXi690x Array or Expansion Module

To install the Array Module or Expansion Module:

1 Align the Array or Expansion Module with the rails and slide the module into the rack (see Figure 14).

Figure 14 Array or Expansion Module Installation



2 Use a 10-32 x 3/4 in. SEM screw with washer at the bottom hole on each side of the Array or Expansion Module's front panel to secure the module to the rack.

3 Install the end caps on either side of the module by inserting the top of the end cap first and then snapping the bottom into place.

Install the end cap with the indicator icons to the left of the module, and install the end cap with the drive numbers to the right of the module.

4 Reconnect all power and SAS cables on the rear of the module.

Note: For cabling diagrams, see the *DXi690x Installation and Configuration Guide* (6-68160) at www.quantum.com/DXi6900docs.

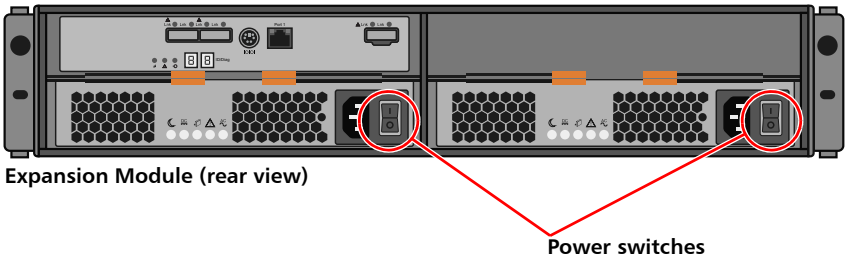
5 Turn on the system (Turning On the System on page 17).

Turning On the System

To turn on the DXi6802 or DXi690x system:

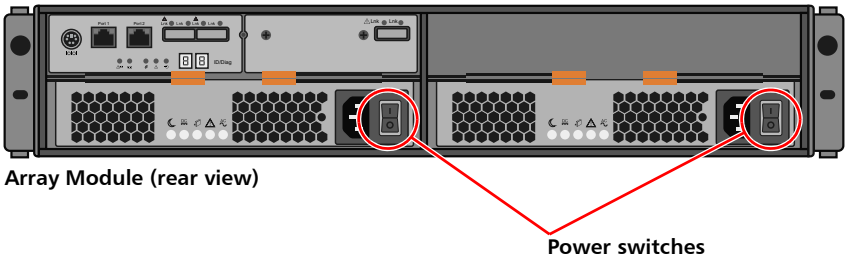
1 Turn on both power switches on the back of each Expansion Module (EBOD) (see Figure 15). Wait until the seven segment display on the rear of the module displays **00** (approximately 1 minute).

Figure 15 Turning On the Expansion Modules (EBODs)



2 Turn on both power switches on the back of each Array Module (RBOD) (see Figure 16). Wait until the seven segment display on the rear of the module displays **99** (approximately 3 minutes).

Figure 16 Turning On the Array Modules (RBODs)



3 Press the power button on the front of the Node (see Figure 17). Wait for the system to boot before attempting to log on.

Note: The system can take approximately 30 minutes to start up, depending on the amount of installed storage capacity.

Figure 17 Turning on the Node