Hewlett Packard Enterprise

HPE StoreOnce 3660, 5260 and 5660 Systems Installation Guide

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HPE StoreOnce 3660, 5260 and 5660 Systems Installation Guide

Abstract

This guide provides instructions for installing the StoreOnce 3660, 5260, and 5660 Systems, including the optional hardware and capacity upgrade kits. Use the instructions in this guide to install a new StoreOnce System or add a capacity upgrade kit to an existing StoreOnce System. This guide is for HPE StoreOnce system administrators.

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Notices

Acknowledgments

Table of contents

Introduction to this guide

Use the procedures in this guide to install, configure, or upgrade an StoreOnce 3660, 5260, and 5660 System.

- Install a new system, including any capacity upgrade kits and optional features.
  - Installing the StoreOnce 3660 System
  - Installing the StoreOnce 5260 and 5660 System
- Configure a new system after it has been installed using the start here guide for the system: HPE StoreOnce 3660 Systems Start Here Guide or HPE StoreOnce 5260 and 5660 Systems Start Here Guide

  Configuring a newly installed system
- Install StoreOnce Gen4 Plus optional hardware in an existing system.

  Installing StoreOnce Gen4 Plus optional hardware

Subtopics

Read this if you are installing your first StoreOnce Gen4 Plus system

StoreOnce Management Console supported browsers

More information

StoreOnce websites

Read this if you are installing your first StoreOnce Gen4 Plus system

This section is for system engineers who are experienced with installing StoreOnce Gen4 Plus systems and are new to 3660, 5260, and 5660 Systems.

The 3660, 5260, and 5660 Systems are the fourth generation of StoreOnce Systems. These systems are designed to be simpler to install and configure than the previous generation appliances.

- Systems are preconfigured in manufacturing. They ship with all capacity upgrades and optional hardware cards already installed, licensed, and available for use.
- Storage is preconfigured in manufacturing for the full system build. Storage provisioning for capacity expansions will occur in the field.
- The systems auto-configure on startup; little manual intervention is required.
- User interface and status reporting are designed for maximum ease of use and clarity.
- Storage enclosures are labeled to show the server that they attach to and their JBOD number.
- Cables are labeled with their installation location.
- Hard disk labeling kits make it easier to return hard disks to their proper slots during installation or maintenance procedures.

  If a disk is not installed in its original slot, the system will fail to start.

> **IMPORTANT:**
> Because they are preconfigured, the fourth-generation StoreOnce Systems must be installed exactly as described in this guide.

- Storage enclosures must be connected to the same server with which they were manufactured.
- Cables must be connected to the same server and/or storage enclosure with which they were manufactured.
- Hard disks are preconfigured and must remain installed or returned to the same disk slots in which they arrived.

  The hard disks can be removed to make the storage enclosures lighter and easier to install. All hard disks must be returned to their original slots before the system is powered on. Failure to return each disk to its proper location will result in the system failing to

start.

Label the disks with the provided label kits before removing them from the storage enclosure for ease of installation and maintenance.

- The server and storage enclosures must be switched off when installing additional enclosures.

TIP:
If a StoreOnce 3660, 5260, and 5660 System does not start up correctly after installation, the problem is probably with the way it was installed. Check the installation first before attempting to debug the system.

StoreOnce Management Console supported browsers

For the most current compatibility information including browser versions, see the HPE StoreOnce Support Matrix. See StoreOnce websites for the link to this resource.

- Internet Explorer
- Mozilla Firefox
- Google Chrome

HPE StoreOnce 3660 System

Base system

The StoreOnce 3660 System consists of a server with preconfigured storage on 10 hard disks of 8TB each and 2 hard disks of 4TB each for the operating system.

Capacity upgrade options

IMPORTANT: The StoreOnce capacity upgrades are supported only in OFFLINE mode. Ensure that the server node and enclosures are powered off before performing capacity upgrades. See Capacity upgrade planning considerations for more information.

R7M22A: HPE StoreOnce 3660 96TB Capacity Upgrade Kit

One Primera 600 LFF 2U storage enclosure containing one dual integrated SAS I/O module and twelve 8TB disks. You can add a maximum of two upgrade enclosures to the system.

Optional hardware

Four PCIe slots are available for optional hardware.

- R7M24A: HPE StoreOnce Gen4 Plus Ethernet10/25Gb 2-port SFP Adapter
- R7M25A: HPE StoreOnce Gen4 Plus 10GBASE-T 2-port Adapter
- BB986A StoreOnce 16Gb Fibre Channel 2-port card
- BB990A StoreOnce 32 Gb Fibre Channel 2-port card

Subtopics

Installing the HPE StoreOnce 3660: Process overview

Procedure

1. Prepare the rack for installation.
2. Read the system handling requirements.
3. Install the controller nodes.
4. Install the capacity upgrade drive enclosures.
5. Configure the system.
6. See Optional hardware.

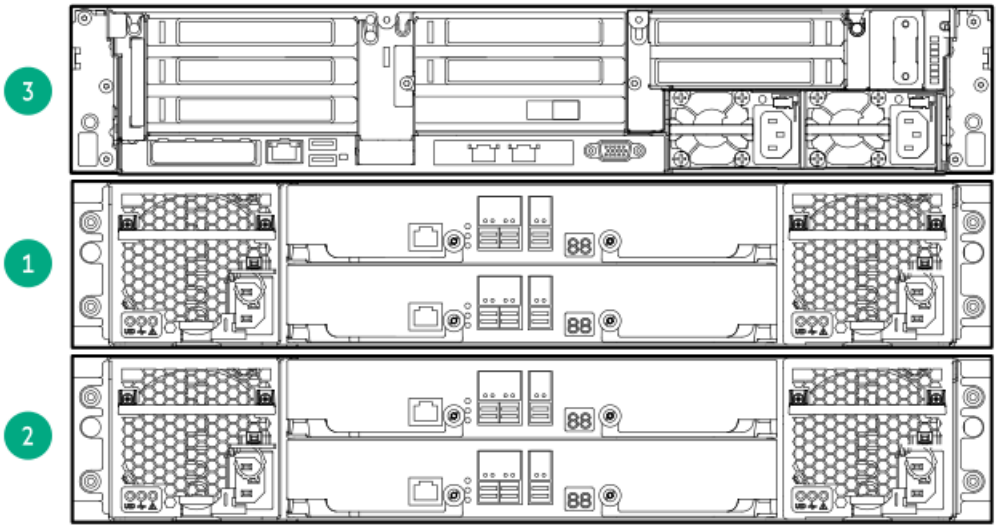
Preparing the rack for the 3660 System

Procedure

Ensure that there is space in the rack for the server and any additional capacity upgrade storage enclosures.

- The base system requires 2U.
- The system supports up to two capacity upgrade storage enclosures. Each storage enclosure requires 2U.
- Storage enclosures must be installed under the system server so the cables reach.

Figure 1. 3660 System rack layout with R7M22A capacity upgrade kit



Item	Description
3	Server node.
1	JBOD 1: First capacity upgrade enclosure.
2	JBOD 2: Second capacity upgrade enclosure.

3660 System handling requirements

Component	Rack space	Weight
System server	2U	24 kg (54 lbs)
3660 capacity upgrade enclosure (R7M22A)	2U	33 kg (74 lbs)

WARNING:

Use extreme care when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury.

- Always use at least two people to lift and locate the server.
- Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

TIP:

Hard disks are preconfigured and must remain installed or returned to the same disk slots they arrived in.

You can remove the hard disks to make the storage enclosures lighter and easier to install. All hard disks must be returned to their original slots before the system is powered on. Failure to return each disk to its proper location will result in the system failing to start.

Label the disks with the provided label kits before removing them from the storage enclosure for ease of installation and maintenance.

Installing the controller node for HPE StoreOnce 3660

Prerequisites

Required tools:

- Torx T10 screwdriver
- A monitor and USB keyboard or a KVM for initial network configuration

WARNING:

Use extreme care when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury.

- Always use at least two people to lift and locate the server.
- Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

Procedure

1. Verify that you received the following components:
   - Controller node
   - Rail kit
   - Security bezel
   - Two power cables
   - One network cable
2. Record the iLO default network information from the label on top of the server.

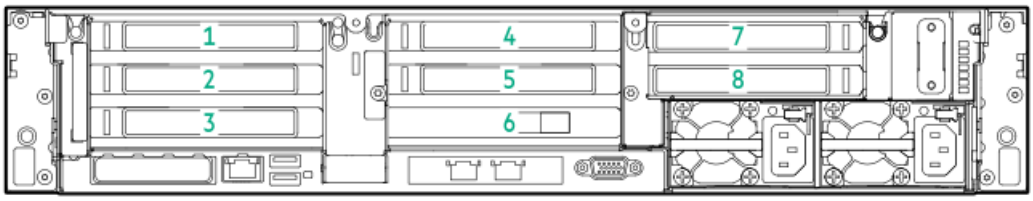
   iLO user name:_____

iLO network name:_____

iLO password:_____

3. Install the optional PCIe cards, if necessary.
   - If the optional PCIe cards were ordered with the system, they have been preinstalled.
   - If the cards were ordered separately, install them now.

Figure 1. PCI slot numbering

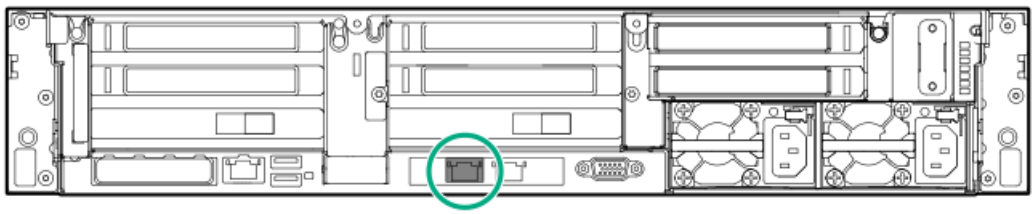


   a. Install the network cards starting in PCI slot 1 and then additional network cards in slots 2, 4, and 5 in that order.
   b. Install the FC cards starting at PCI slot 5 and then additional FC cards in slots 4, 2, and 1 in that order.
   c. Verify that the correct SFP+ transceivers are fitted, if necessary.

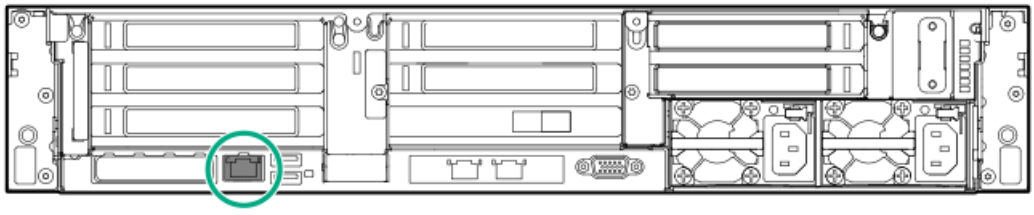
   For detailed installation instructions, see Install PCIe cards .

4. Install the controller node in the rack.
   a. Install the rail kit for the controller node. See the installation instructions supplied with the rail kit.
   b. Insert the two locking nuts for the server into the rack; one on each front column.
   c. Install the controller node into the rack and secure it using the thumbscrews on the front bezel of the server.
5. Connect the controller node.
   a. Connect the power cables.

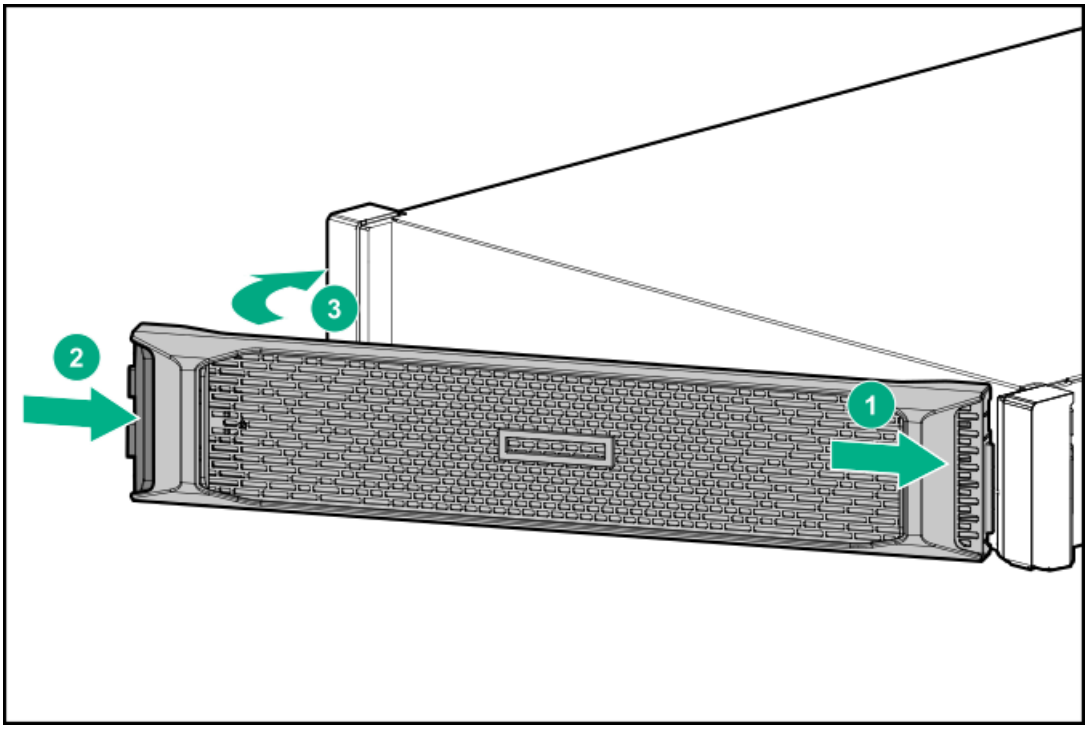
      Connect each power cable to a separate PDU in the rack.
   b. Connect a network cable to OCP NIC port 1.



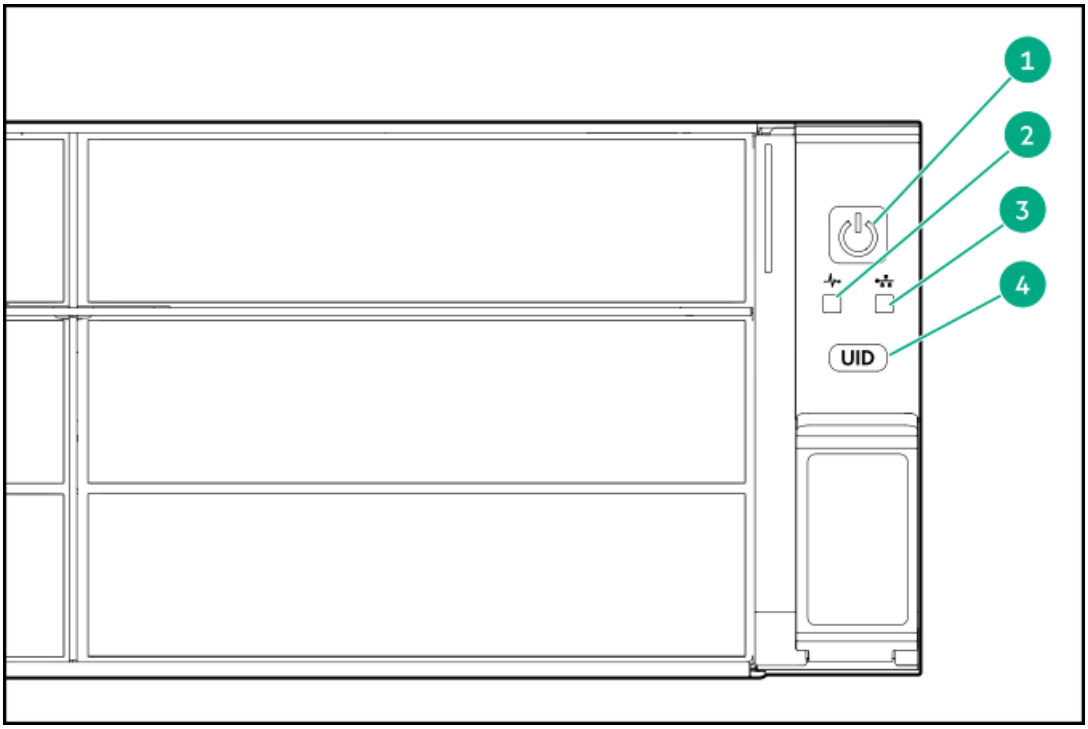
   c. Connect a network cable to the iLO port (recommended).



   d. Connect a VGA monitor and a USB keyboard for initial configuration.
6. Attach the bezel to the front of the controller node.



7. Power on the StoreOnce System (the power button is on the front of the server).



Item	Description
1	Power LED and on/off button. The power button LED flashes green at the start of the power-on sequence and then turns solid green.
2	System health LED. The system health LED flashes green at the start of the power-on sequence and then turns solid green.
3	NIC status LED. If OCP NIC port 1 is connected to an active link, the NIC status LED will also begin to flash green when the StoreOnce System is powering up.
4	UID LED. While configuring the system using iLO virtual console, the UID LED flashes blue.

After successful bootup, the console displays a login prompt.

8. Configure iLO during bootup (recommended).

Most iLO settings must be configured during bootup. The iLO network options can also be configured with the System Manager.

a. Press F9 System Utilities.

b. Select System Configuration > iLO 5 Configuration > Network Options.

c. Configure the iLO network options and note the details.

iLO IP address:_____

iLO subnet mask:_____

iLO gateway:_____

9. Configure the basic network.

By default, the system will have already attempted to obtain a DHCP address on LAN port 1. If you already know the IP address that was assigned over DHCP, this step is optional.

a. Log in using the default user name and password.

Default user name: `console`

Default password: `changeme`

b. Change the console password to proceed.

Choose a secure password with at least eight characters that is memorable to you.

c. If the system obtained an IP address through DHCP, it is displayed. To configure a static address for LAN port 1 (eno1), select the Configure initial network option from the console menu.

Note the DHCP assigned IP address or the static address details.

IP address:_____

Prefix length:_____

Gateway:_____

DNS:_____

You can remove the console display and keyboard.

10. Open a web browser and use the IP address from the previous step to access the StoreOnce System. The First Time Setup wizard is automatically displayed. Use the First Time Setup wizard to configure the system for use.

The setup steps include:

- Setting the Administrator Password.
- Setting the Console Password.
- Setting basic System Information such as the system name (host name), location, and contact information.
- Setting the System Date & Time. You can set the date and time manually, or synchronize the date and time with a network time server.
- Configuring Storage. The wizard detects the factory installed storage. The wizard also enables you to configure additional storage capacity that you might have installed. The wizard also reports issues with additional storage, for example, when additional storage is not installed in the correct location.
- Configuring Remote Support.

Installing the capacity upgrade drive enclosures for the HPE StoreOnce 3660

Prerequisites

The capacity upgrade kit contents and drive enclosure are unpacked and ready to be installed on the rack. See Safety considerations before beginning this procedure.

- Always use at least two people to lift drive enclosure, or three is lifting above chest level.

- If available, use a mechanical or electrical lift that can support the enclosure from underneath. Do not use a vacuum lift or physically lift from the top portion of the enclosure.
- Install a rail kit in the rack for each enclosure in your storage system.

IMPORTANT: The StoreOnce 3660 capacity upgrades are supported only in OFFLINE mode. Please ensure that the server and enclosure power is OFF before performing a capacity upgrade. See Capacity upgrade planning considerations for more information.

Procedure

1. Prepare for drive enclosure installation.
2. Install the 2U rail kit.
3. Install the drive enclosure(s).
4. Label the drive enclosures or Check the drive enclosure pull out tab.
5. Connect data cables.
6. Connect power to the drive enclosures.
7. Configure the system.

Subtopics

Preparing for drive enclosure installation for the HPE StoreOnce 3660 system

Procedure

1. Gather the required tools, see Required tools.
2. Unpack the capacity upgrade kit and verify the contents.

   See Capacity upgrade kit contents.
3. Unpack the rail kit. Install the rail kit following the instructions supplied with the rail kit.

   IMPORTANT:

   Read the installation guidelines carefully before installing the rails and the expansion enclosure. The instructions provide important safety information.

   NOTE:

   Adjust the back bracket on the standard rail kit after installing the rails. For ease of installation with the Capacity Upgrade Kit, Hewlett Packard Enterprise recommends making the adjustment prior to mounting the rail kit.
4. Identify the rack location for the 2U drive enclosure, see Planning the rack layout for the HPE StoreOnce 3660, Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure to plan where to rack the drive enclosures in relation to the controller node in the system.

Installing a 2U rail kit for the HPE StoreOnce 3660 system

Prerequisites

- Determine the correct location for installing a rail kit and drive enclosure, see the Planning the rack layout for the HPE StoreOnce 3660, Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure.
- Gather the required tools.
- Ensure you have the 2U enclosure kit parts.
- Observe safety precautions when installing a rail kit.
- Verify that you are using a 2U rail kit with a 2U enclosure. The 2U rails are labeled "USE FOR 2U CHASSIS".
- Review Guidelines for the rail kit installation in a rack.

About this task

A 2U rail kit is used with the 2U drive enclosure.

Procedure

1. Determine the rack "U" position for installing a 2U enclosure in the rack.

   The 2U enclosure rail kit requires two units of vertical space in the rack. To prevent the rack from tipping, install the initial drive enclosures after installing the controller node enclosure. Align the bottom of the rail with the bottom of the "U" position.

2. From the front of the rack, position the rail inside the rack and engage the rail with the rear rack column.

   a. To ensure a proper fit between the front and rear rack columns, compress or extend the length of the rail.

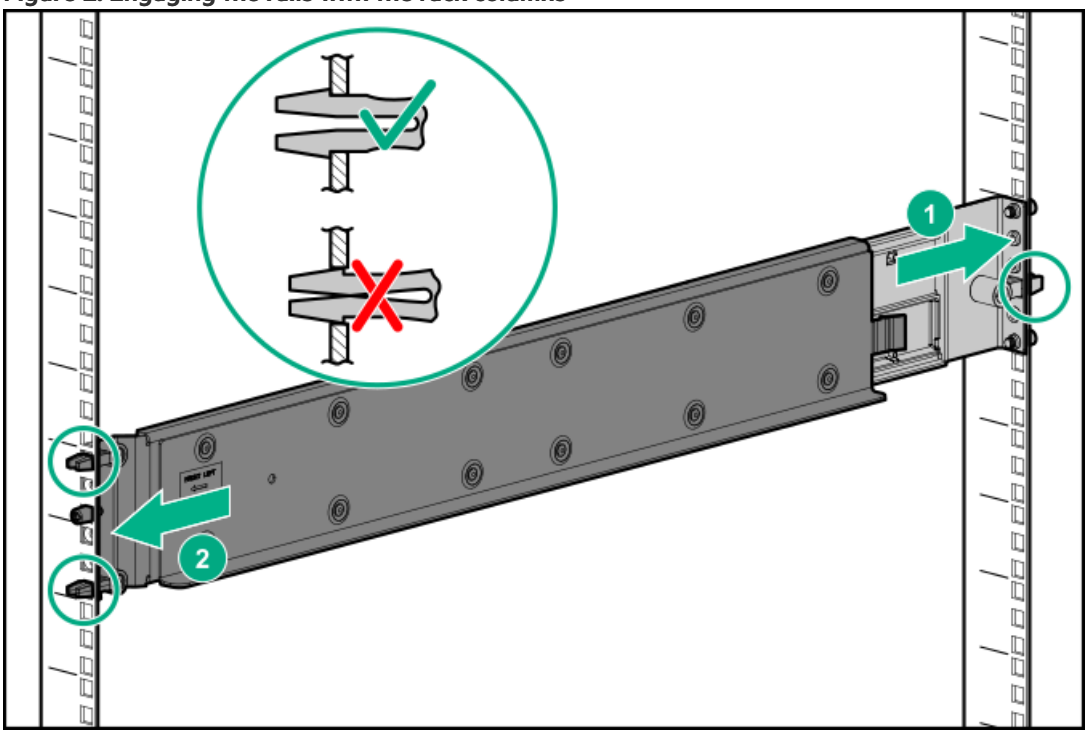
   b. Position the rail inside the rack with the rail label facing the inside of the rack.

      Labels on the rails denote Front Right and Front Left to assist with orientation.

   c. Engage the rail with the rear rack column. Insert the rear end of the rail through the chosen "U" position, until the clip snaps into place and the pins extend through the rack holes (1).

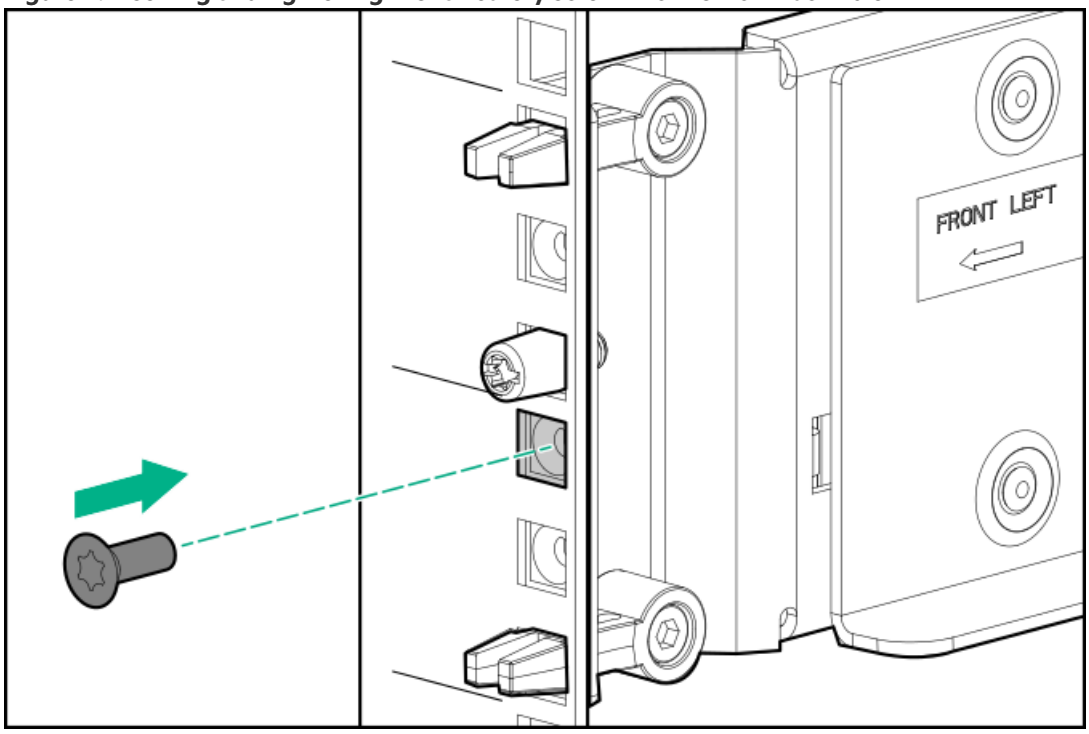
   NOTE: To reposition the rail, pinch the rail locking clips to remove it.

Figure 1. Engaging the rails with the rack columns



3. Engage the rail with the front rack column.
   a. Pull the front of the rail to connect it to the front RETMA rail.
   b. Engage the rail with the front rack column. Insert the front end of the rail through the chosen "U" position, until the clip snaps into place and the pins extend through the rack holes (2).
4. Repeat steps 2 and 3 for the other rail.
5. Insert and tighten the rail safety screw into the front rack holes.
   a. Insert and tighten the safety screw into the front rack hole as indicated in the following image. The safety screw is provided with the rail kit package.

Figure 2. Inserting and tightening the rail safety screw into the front rack hole

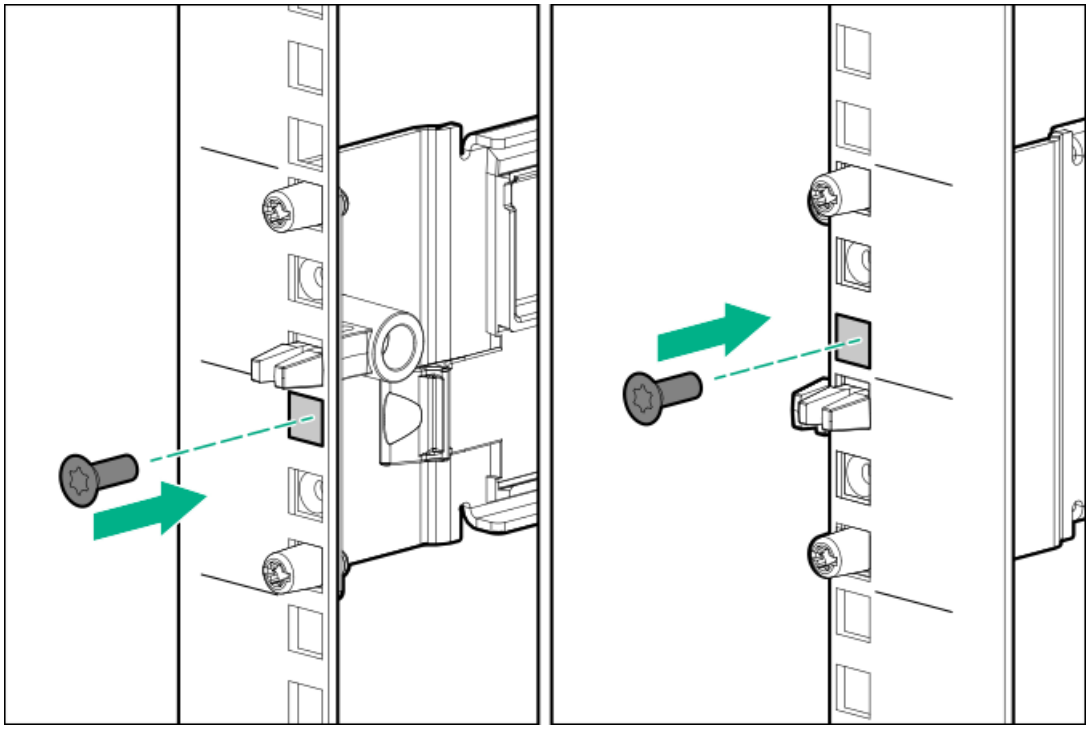


   b. Repeat for the other rail.
6. Insert and tighten the rail safety screw into the rear rack holes.

   The rail kit package contains five safety screws. One screw is an extra.

   a. Insert and tighten the safety screw into the rear rack hole. Refer to the gray square in the following image for the screw location.

Figure 3. Inserting and tightening the rail safety screw into the rear rack hole



b. Repeat for the other rail.

> **WARNING:**
>
> Before installing any hardware on the rails, verify that both ends of each rail are secured with the included safety screws and, if applicable, hold-down brackets.
>
> Securely tighten the safety screws before you insert an enclosure to prevent the rails from disengaging, damaging the equipment or causing personal physical harm.

7. To secure the enclosures for shipping, install rear hold-down brackets to the rail rear columns.

   Perform this step only when the front and rear RETMA rails are exactly 29 inches apart, such as in an HPE factory-integrated rack.

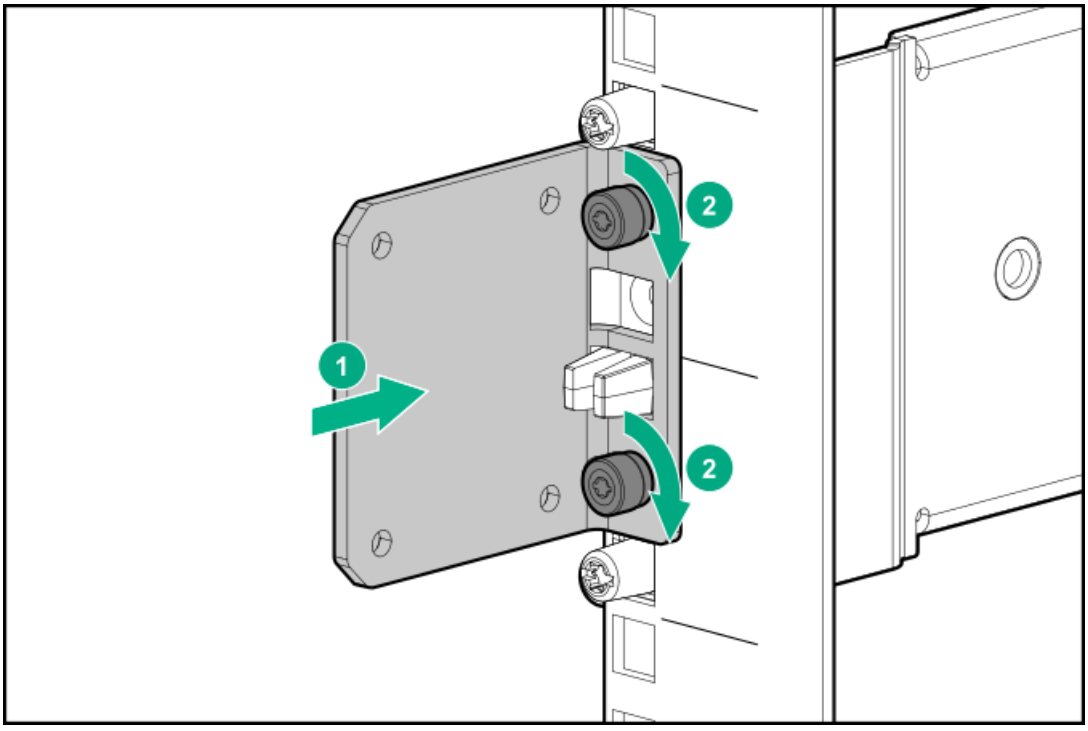
   The brackets secure the enclosure after it is installed.

   > **TIP:** Use a long shank tool or tool extension to reach the bracket screws.

   a. Install two rear hold-down brackets, one per rack column (1).

   b. For each bracket, tighten the captive screws to the rack columns through the rail kit (2). (Torque specification is 20 In-Lb.)

Figure 4. Installing a drive enclosure rear hold-down bracket for a 2U rail



8. Verify that the rails are secured by pushing on the front and back of each rail ledge.

Installing a drive enclosure

Prerequisites

The 2U rail kit has been installed.

About this task

IMPORTANT:

Do not power on drive enclosures during installation. See Capacity upgrade planning considerations for more information.

This procedure applies to 2U drive enclosures that provide expanded capacity for the storage system.

CAUTION:

Use extreme caution when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury. Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

Component	Rack space	Weight
HPE Primera 600 LFF storage enclosure (R7M22A)	2U	33kg (74 lbs)

Always use at least two people to lift and locate a capacity upgrade enclosure into the rack.

TIP:

Hard disks are preconfigured and must remain installed or returned to the same disk slots they arrived in.

You can remove the hard disks to make the storage enclosures lighter and easier to install. All hard disks must be returned to their original slots before the system is powered on. Failure to return each disk to its proper location will result in the system failing to start.

Label the disks with the provided label kits before removing them from the storage enclosure for ease of installation and maintenance.

Procedure

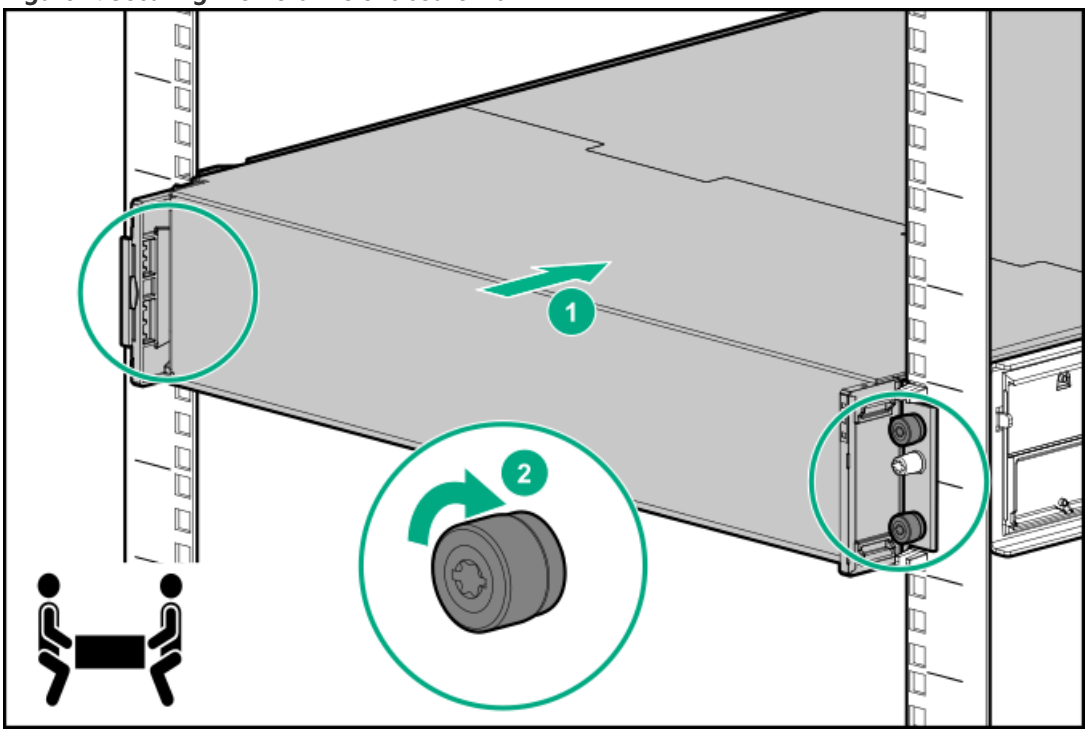
1. Verify that the drive enclosure is right-side up.

The enclosure top has caution and regulatory labels, and the bottom has no labels.

2. If plastic ear caps are installed on the drive enclosure front, temporarily remove them to expose the thumbscrews. To remove, pull the ear caps away from the drive enclosure.
3. If available, place the drive enclosure onto a mechanical or electrical lift and move it in front of the rack. If a lift is not available, use at least 2 people to lift a 2U drive enclosure.
4. At the rack front, align the drive enclosure just above the rail ledges and slide it all the way into the rack.
5. Secure the drive enclosure to the front of the rack:

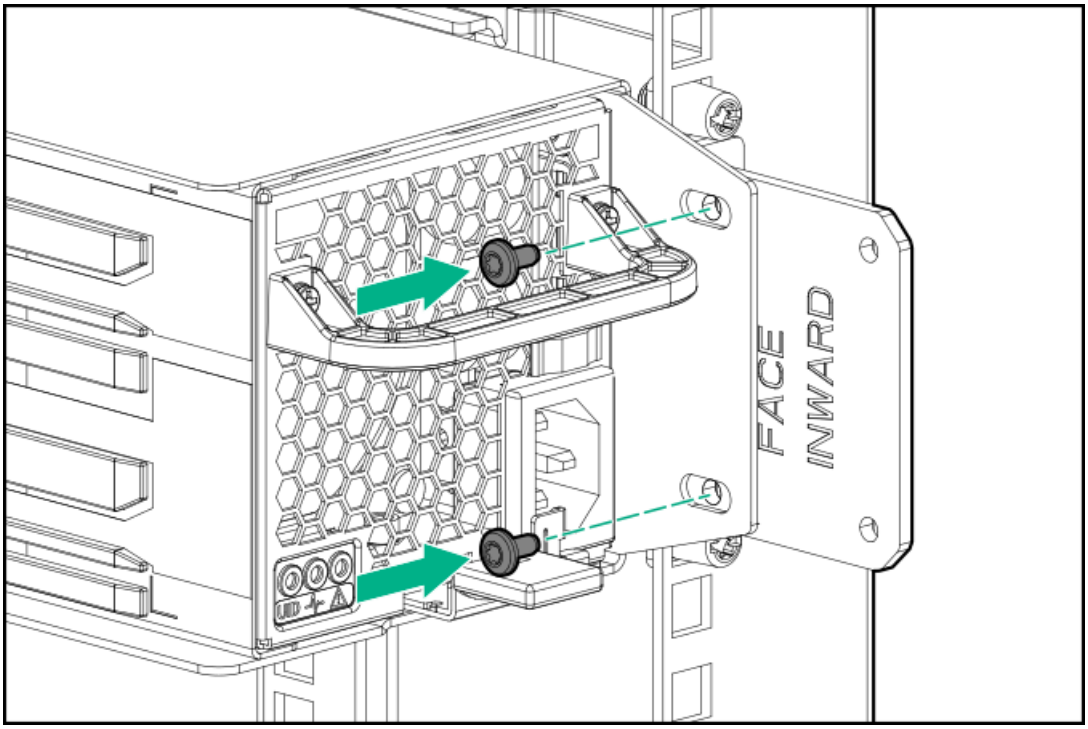
   Secure with the four captive T25 Torx thumbscrews, two on each side of the drive enclosure. Torque to 20-in-Lbs.

Figure 1. Securing the 2U drive enclosure front



6. At the drive enclosure front, install the plastic ear caps on each side. Ensure that the ear cap is in the correct orientation and snap it into place.
7. At the rack rear, if rear hold-down brackets are installed and the front and rear RETMA rails are exactly 29 inches apart, secure the drive enclosure with two pan head T15 Torx screws (on each side of the enclosure). Torque to 20-in-Lbs.

Figure 2. Installing rear hold-down screws, drive enclosure rear view



Labeling drive enclosures

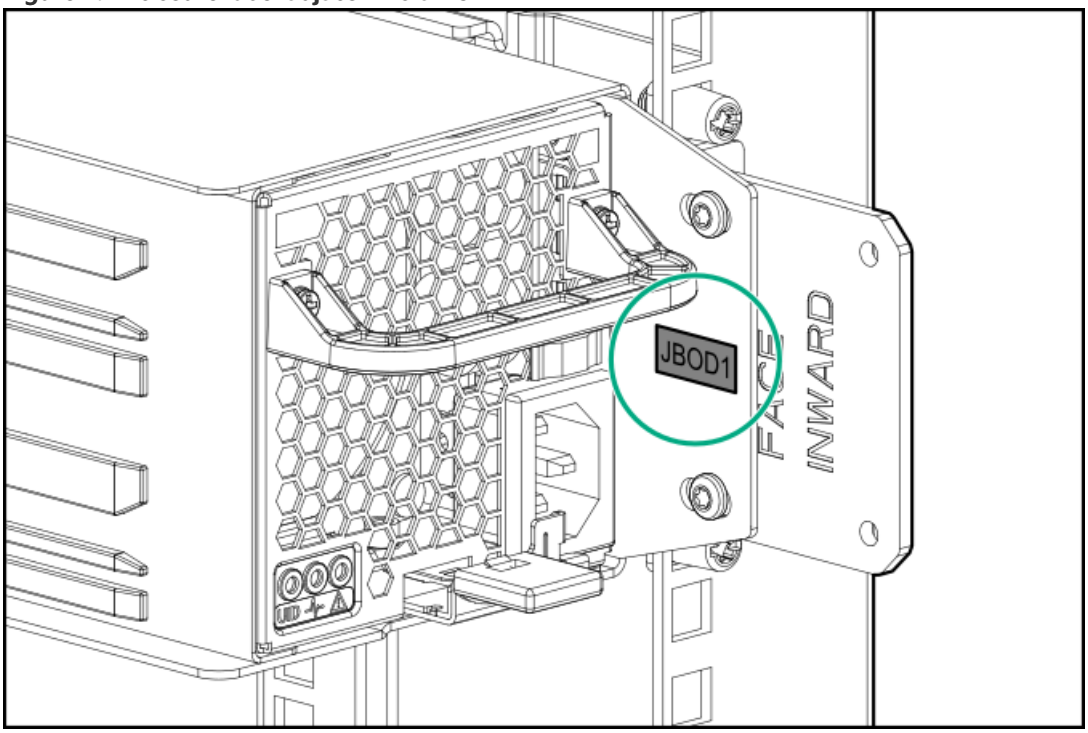
Prerequisites

Review Drive enclosure labels.

Procedure

1. Locate the first drive enclosure beneath the controller node enclosure and label it **JBOD1**.
2. Apply the label on the left or right side of the enclosure, adjacent to the PCBMs.
3. Apply the matching label to the front side of the enclosure.

Figure 1. Enclosure label adjacent to a PCM



4. Repeat steps 2 and 3 for labeling the other drive enclosures in your rack. See Planning the rack layout for the HPE StoreOnce 3660,

Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure.

Subtopics

Drive enclosure labels

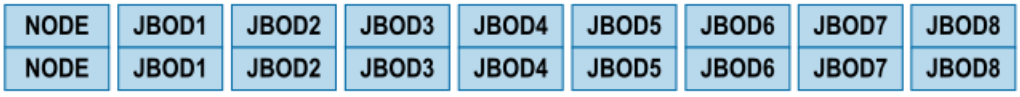
Drive enclosure labels

The storage system is shipped with labels for each drive enclosure in a rack.

IMPORTANT:
Only label the drive enclosures that are installed. Do not label any rack units reserved for future use.

The drive enclosure labels come as stickers ranging from **JBOD1 - JBOD8**. The following figure illustrates a drive enclosure label packet.

Figure 1. Drive enclosure labels



Use the labels to identify a drive enclosure when cabling it.

Checking the drive enclosure number on the pull out tab

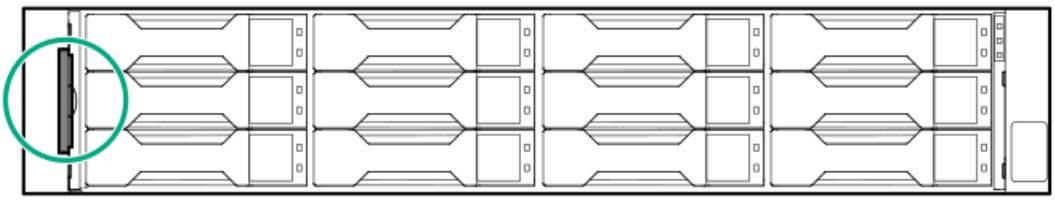
Prerequisites

Checking the drive enclosure number on the pull out tab is only required if your system has arrived pre-configured on the rack. Follow the steps at Labeling drive enclosures if your system has arrived in separate components and not pre-configured in the rack. The pullout tab also contains the component's serial number.

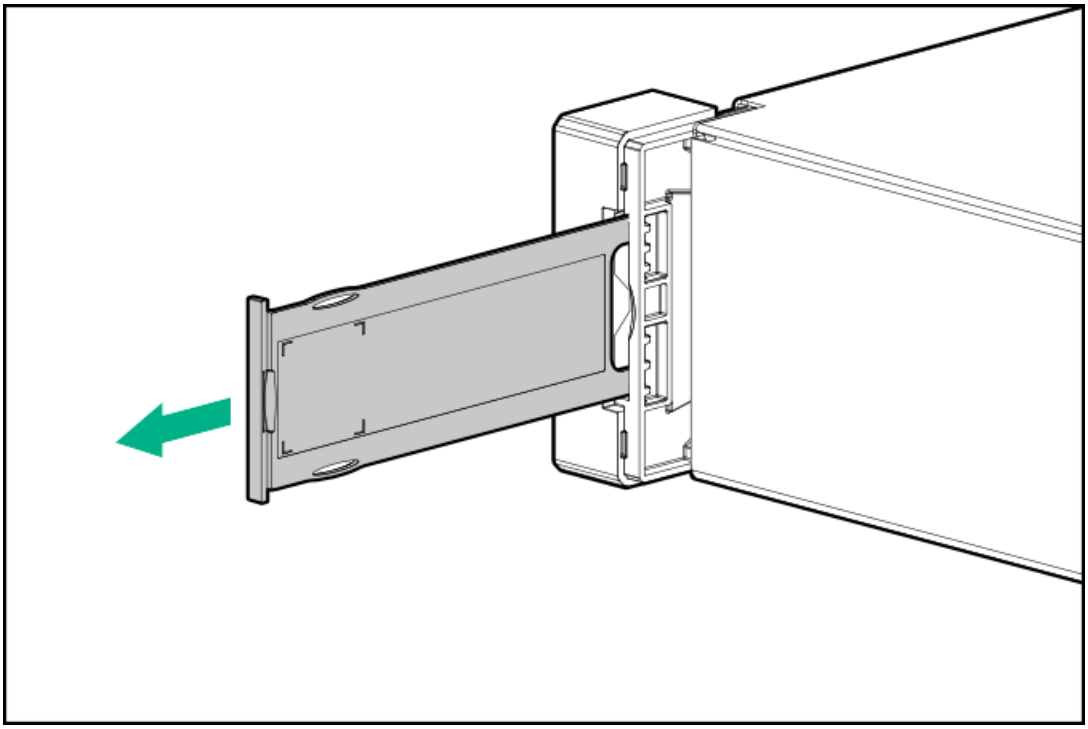
Procedure

1. Locate the pull out tab.

   Figure 1. HPE Primera 600 LFF storage enclosure (capacity upgrade R7M22A/R7M23A)
   The pull out tab is located on the front left corner of the drive enclosure.

2. Pull out the system information tab.



3. Verify the drive enclosure number on the pull out tab.

Connecting cables to the drive enclosure for the HPE StoreOnce 3660

Prerequisites

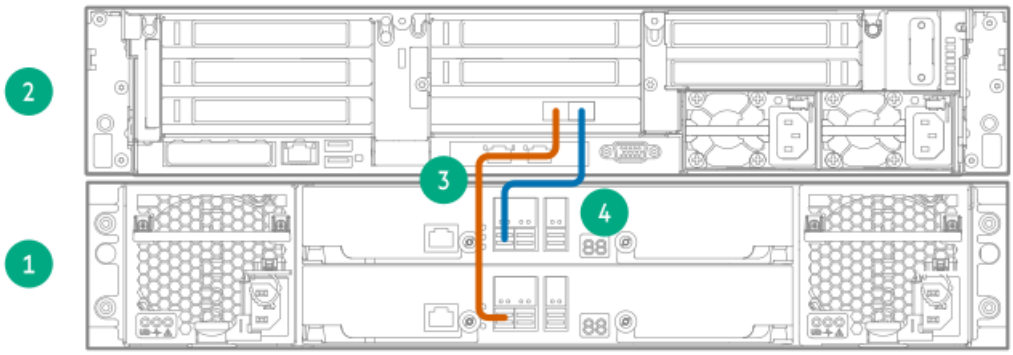
The expansion drive enclosures have been installed in the rack and have been powered on. For instructions on how to add more drive enclosures to the rack, see the HPE StoreOnce 3660, 5260 and 5660 System Capacity Upgrade Guide.

Procedure

1. Apply the correct labels to the cables. Label the SAS cables on each end with the following convention see Cable labels for more information on how to label the cables:
   - N = Node (server node)
   - S = Slot
   - P = Port
   - J = JBOD
   - I = I/O module
   - F = Floating number (for moving cables)

   If a cable will be moved when adding a drive enclosure, use the "F" label by wrapping the label around the cable before moving it.
2. Connect a 2m SAS cable from port 1 of the RAID controller on the server node to IOM 0 port 1 on the capacity upgrade enclosure (JBOD 1), and connect a 1m SAS cable from port 2 of the RAID controller to IOM 1 port 1 of the capacity upgrade enclosure (JBOD 1).

SAS cable	Label color	Label
New 2m cable	Red	N:S6:P1 - JF:I0:P1
	White	F = 1
New 1m cable	Green	N:S6:P2 – J1:I1:P1



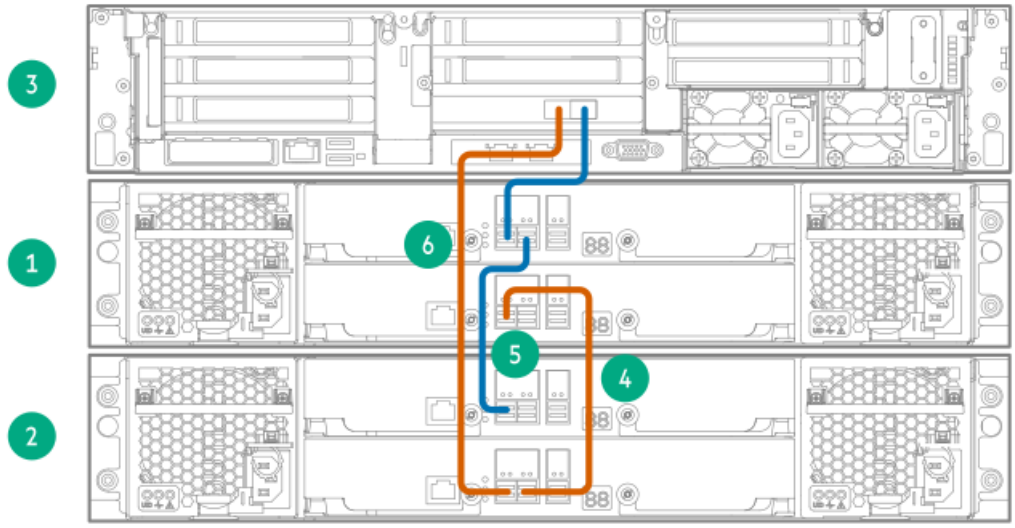
Item	Description
2	Server node.
1	JBOD 1: First capacity upgrade enclosure

Item	SAS cable	Label Color	Cable from	To
3	New 2m cable	Red and White	Node Slot 6 Port 1	JBOD 1 IOM 0 Port 1
4	New 1m cable	Green	Node Slot 6 Port 2	JBOD 1 IOM 1 Port 1

3. To cable a second drive enclosure, complete the following steps:
   a. Connect a new 1m SAS cable from IOM 1 port 2 of the first capacity upgrade enclosure (JBOD 1) to IOM 1 port 1 of the second capacity upgrade enclosure (JBOD 2).
   b. Connect a new 2m SAS cable from IOM 0 port 2 on the second capacity upgrade enclosure (JBOD 2) to port 1 on the first capacity upgrade enclosure (JBOD 1).
   c. On the moving SAS cable, replace the “F=1” label with the “F=2” label.

SAS cable	Label color	Label
New 2 m SAS cable	Red	J1:I0:P1 - J2:I0:P2
New 1m cable	Green	J1:I1:P2 - J2:I1:P1
Moving 2m cable	Red and White	(F=2)

Figure 1. Cabling the second capacity upgrade enclosure



Item	Description
3	Server node.
1	JBOD 1: Base enclosure.
2	JBOD 2: Second capacity upgrade enclosure.

Item	SAS cable	Label color	Cable from	To
4	New 2m cable	Red	JBOD 1 IOM 0 Port 1	JBOD 2 IOM 0 Port 2
5	New 1m cable	Green	JBOD 1 IOM 1 Port 2	JBOD 2 IOM 1 Port 1
6	Moving 2m cable	White	Node Slot 6 Port 1	JBOD 2 IOM 1 Port 1

d. Connect two power cables to each storage enclosure. Connect each power cable to a different PDU.

Connecting power to the drive enclosures for HPE StoreOnce 3660

Prerequisites

1. Review Guidelines for power cabling.
2. Review Redundant power cabling.

About this task

NOTE:

A drive enclosure is powered on after a power cable drawing current from a PDU is inserted into the PCM of the drive enclosure.

Procedure

1. Locate the locking power cable for each PCM.

   The black cable is for the left PCM (0) and the gray cable is for the right PCM (1).

2. Insert one end of the locking power cable into the PCM outlet. Repeat for the other power cable.

   a. If the cable is not inserted properly, find the two red tabs on the top and bottom of the electrical connector and slide them toward you using your thumb and index finger. At the same time, pull the locking power cable out of the PCM outlet. Then, insert the cable again.

3. Pull on the locking power cable to ensure it is properly secured.

4. Connect the other end of each locking power cable from the PCM to a power source, ensuring that the routed cables maintain proper service clearance.

   Each power cable must be connected to an independent power source with each controlled and protected by its own circuit breaker.

5. Pull on the locking power cable to ensure it is properly secured.

   If the cable is not inserted properly, push the release tab on the top of the electrical connector while pulling the locking power cable out of the power strip or independent PDU outlet.

   NOTE: Some PDUs do not have a latch to lock the locking power cable. To secure the cable, use the cord retention mechanism that came with the PDU.

6. Repeat for all drive enclosure PCMs.

Configuring a newly installed 3660 System

About this task

For additional information and instructions on each step, see the online help or user guide.

Procedure

1. Log on to the StoreOnce Management Console. Review and update the settings that were configured with the First Time Setup Wizard.
   - Administrator password
   - System information, such as system, location, and contact information
   - System date and time, or NTP configuration
   - Storage configuration
   - Remote Support configuration
   - Console password
2. Complete the network configuration.

   On the main menu, select Settings. In the Hardware section, click the Networking panel.

   For additional information, see Initial StoreOnce network configuration.

3. If necessary, redeem licenses. Capacity or feature licenses ordered with the system will be preinstalled. If ordered separately redeem them now.

   For instructions, see Redeeming a capacity upgrade license.

4. Configure licenses, if necessary. Capacity or feature licenses ordered with the system will be preinstalled. If ordered separately, configure them now.

a. On the main menu, select Settings.

b. In the Systems section, click the License Management panel.

- To view a license summary, click the Overview tab.
- To view a list of the installed licenses, click the Licenses tab.

For additional information, see Licensing.

5. Configure user accounts.

a. On the main menu, select Settings.

b. In the User Management section, click the Users and Groups panel panel.

- To add a user or group, select Add user or group on the Actions menu.
- To edit a user, click the user name.
- To remove a user, click the user name and then click Remove.

For additional information, see User roles and types.

6. Configure StoreOnce email alerts.

To display the configured email alerts, select Notifications from the Settings menu item.

7. Configure SNMP.

a. On the main menu, select Settings.

b. In the Notifications section, click the SNMP panel.

- To view summaries of the SNMP configuration, click the Overview tab. To view lists of the items in the summaries, click the graphic segments and legends.
- To configure SNMP, select the tabs for Agent Setup, Trapsinks, and Users.

8. Apply an SSL certificate.

a. On the main menu, select Settings.

b. In the Security section, click the Certificates panel.

c. On the Certificates screen, select Generate CSR on the Actions menu.

9. Expand storage, if necessary. Capacity upgrades ordered with the system will have already been configured. If capacity upgrades were ordered separately, configure them now.

a. On the main menu, select Settings.

b. In the Hardware section, click the Storage panel.

c. On the Storage screen, click the Local Storage tab, and then expand the Actions (▪▪▪) menu and select Rescan.

Newly detected storage is added to the storage list with a status of `Unconfigured`.

d. To configure the new storage for use, expand the Actions (▪▪▪) menu and select Configure.

10. Configure Remote Support using STaTS.

For additional information, see StoreOnce Remote Support.

11. Configure Fibre Channel.

For additional information, see Fibre Channel with StoreOnce Systems.

12. Configure iLO, if necessary.

If you plan to use iLO with the system and did not configure it during the system installation, configure iLO now.

- View or update the iLO configuration from the StoreOnce Management Console.

a. On the main menu, select Settings.

b. In the Hardware section, click the Integrated Lights Out (iLO) Configuration panel.

   The Integrated Lights Out (iLO) Configuration screen shows the HPE Integrated Lights Out network configuration.

- In environments that do not use DHCP, DNS, or WINS, configure a static IP address during bootup.

  a. Restart or power on the StoreOnce server.

  b. Press F9 in the server POST screen.

     The UEFI System Utilities start.

  c. Select System Configuration > iLO 5 Configuration > Network Options.

  d. Configure the iLO network options and note the iLO IP address, iLO subnet mask, and iLO gateway.

Results

The 3660 System is now installed and ready for production use.

HPE StoreOnce 5260 and 5660 System

Base system components

- The HPE StoreOnce 5260 server contains two 1.92TB SSDs for the operating system and eight 3.2TB SSDs for the data cache. The HPE StoreOnce 5660 System contains two 1.92TB for the operating system and eight 6.4TB SSDs for the data cache.
- One 2U storage enclosure containing one dual integrated SAS I/O module and twelve 16TB disks.

Capacity upgrade options

IMPORTANT: The StoreOnce capacity upgrades are supported only in OFFLINE mode. Ensure that the server node and enclosures are powered off before performing capacity upgrades. See Capacity upgrade planning considerations for more information.

R7M23A: HPE StoreOnce 5260/5660 192TB Capacity Upgrade Kit

One Primera 600 LFF 2U storage enclosure containing one dual integrated SAS I/O module and twelve 16TB preconfigured disks. For the StoreOnce 5260 System you can add up to three enclosures to the base system for a maximum of four enclosures on the system. For the StoreOnce 5660 System you can add up to seven enclosures to the base system for a maximum configuration of eight enclosures on the system.

Optional hardware

Four PCIe slots are available optional hardware.

- R7M24A: HPE StoreOnce Gen4 Plus Ethernet10/25Gb 2-port SFP Adapter
- R7M25A: HPE StoreOnce Gen4 Plus 10GBASE-T 2-port Adapter
- BB986A: StoreOnce 16Gb Fibre Channel 2-port card
- BB990A: StoreOnce 32 Gb Fibre Channel 2-port card

Subtopics

Installing the HPE StoreOnce 5260 and 5660: Process overview

Preparing the rack for the 5260 and 5660 System

HPE StoreOnce 5260 and 5660 handling requirements

Installing the controller node for the HPE StoreOnce 5260 and 5660

Installing the capacity upgrade drive enclosures for the HPE StoreOnce 5260 and 5660

Configuring a newly installed StoreOnce 5260 and 5660 system

Installing the HPE StoreOnce 5260 and 5660: Process overview

Procedure

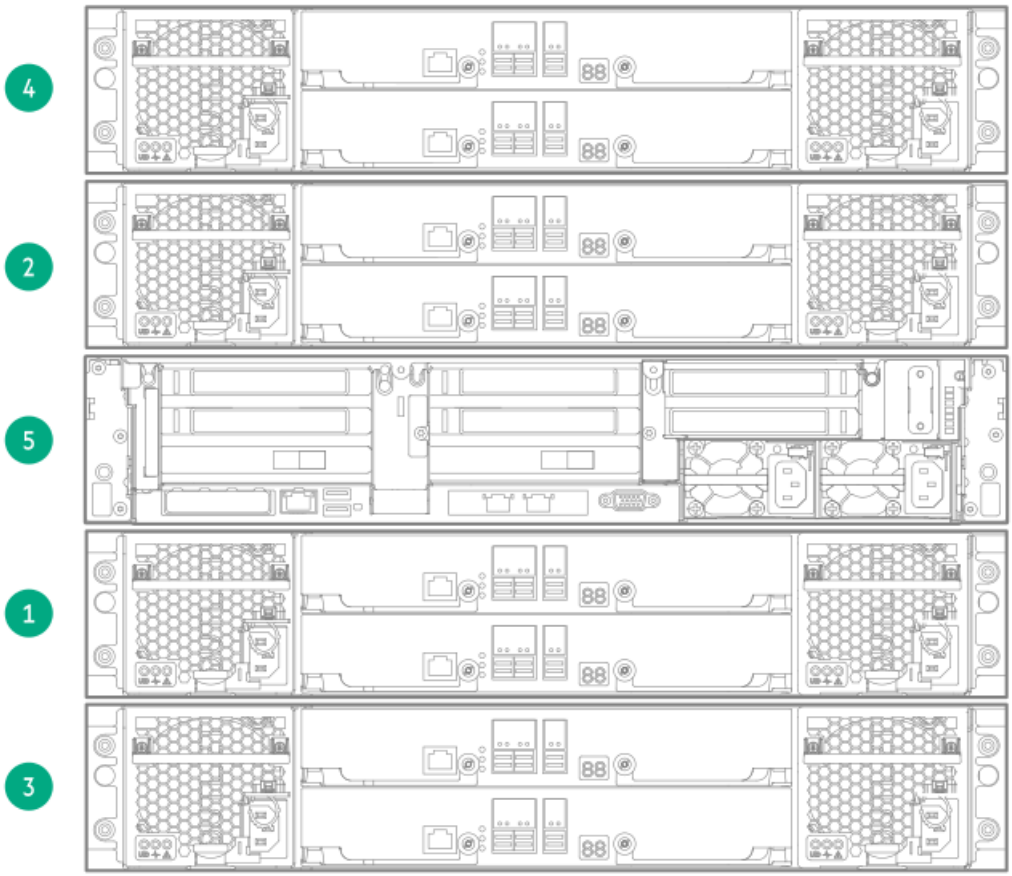
1. Prepare the rack for installation.
2. Read the system handling requirements.
3. Install the controller nodes.
4. Install the capacity upgrade drive enclosures.
5. Configure the system.
6. See Optional hardware.

Preparing the rack for the 5260 and 5660 System

Procedure

1. Ensure that there is space in the rack for the server, base storage enclosure, and any additional capacity upgrade storage enclosures.
   - The base system requires 4U. The server and base storage enclosure each require 2U.
   - The StoreOnce 5260 system supports up to four capacity upgrade storage enclosures. Each capacity upgrade enclosure requires 2U.
   - The StoreOnce 5660 system supports up to eight capacity upgrade enclosures. Each capacity enclosure requires 2U.

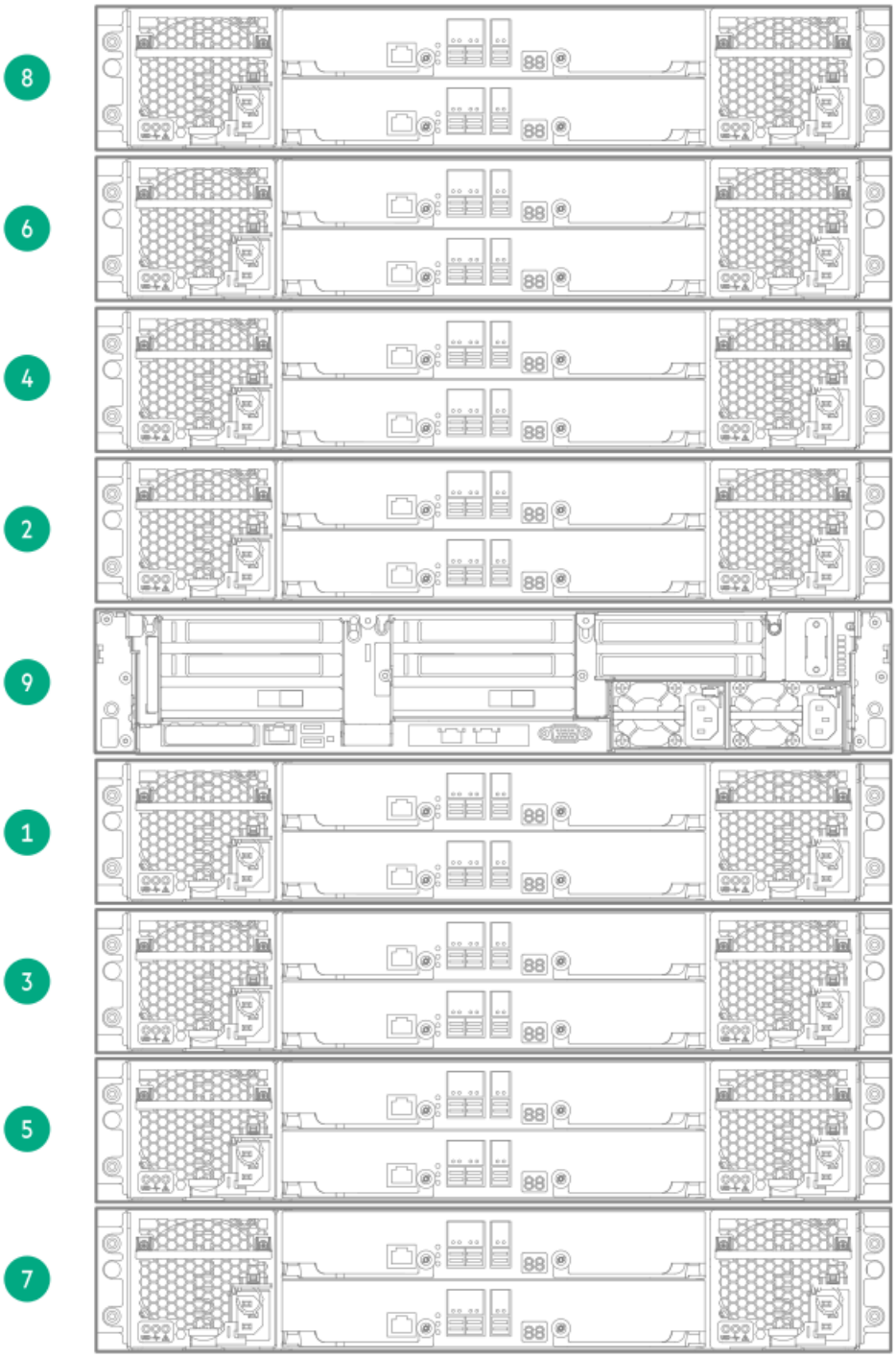
Figure 1. HPE StoreOnce 5260 System rack layout with R7M23A capacity upgrade kit



Item	Description

Item	Description
4	JBOD 4: Fourth capacity upgrade kit. Install this component above JBOD 2.
2	Server node JBOD 2: Second capacity upgrade kit. Install this component above the server node.
5	Server node
1	JBOD 1: Base Enclosure. Install this below the server node.
3	JBOD 3: Third capacity upgrade kit. Install the following JBOD.

Figure 2. HPE StoreOnce 5660 System rack layout with R7M23A capacity upgrade kit



Item	Description
8	JBOD 8: Eight capacity upgrade kit. Install above JBOD 6.
6	JBOD 6: Sixth capacity upgrade kit. Install above JBOD 4.
4	JBOD 4: Fourth capacity upgrade kit. Install above JBOD 2.
2	JBOD 2: Second capacity upgrade kit. Install directly above server node.

Item	Description
9	Server node
1	JBOD 1: Base Enclosure. Install below server node.
3	JBOD 3: Third capacity upgrade kit. Install below JBOD 1.
5	JBOD 5: Fifth capacity upgrade kit. Install below JBOD 3.
7	JBOD 7: Seventh capacity upgrade kit. Install below JBOD 5.

2. Install two power cords for the server and each storage enclosure.

HPE StoreOnce 5260 and 5660 handling requirements

Component	Rack space	Weight
System server	2U	19 kg (43 lbs)
5260/5660 capacity upgrade enclosure (R7M23A)	2U	33 kg (74 lbs)

WARNING:

Use extreme care when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury.

- Always use at least two people to lift and locate the server.
- Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

TIP:

Hard disks are preconfigured and must remain installed or returned to the same disk slots they arrived in.

You can remove the hard disks to make the storage enclosures lighter and easier to install. All hard disks must be returned to their original slots before the system is powered on. Failure to return each disk to its proper location will result in the system failing to start.

Label the disks with the provided label kits before removing them from the storage enclosure for ease of installation and maintenance.

Installing the controller node for the HPE StoreOnce 5260 and 5660

Prerequisites

Required tools:

- Torx T10 screwdriver
- A monitor and USB keyboard or a KVM for initial network configuration

WARNING:

Use extreme care when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury.

- Always use at least two people to lift and locate the server.
- Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

Procedure

1. Verify that you received the controller node components.
   - Controller node
   - Rail kit
   - bezel
   - Two power cables
   - One network cable
2. Record the iLO default network information from the label on top of the server.

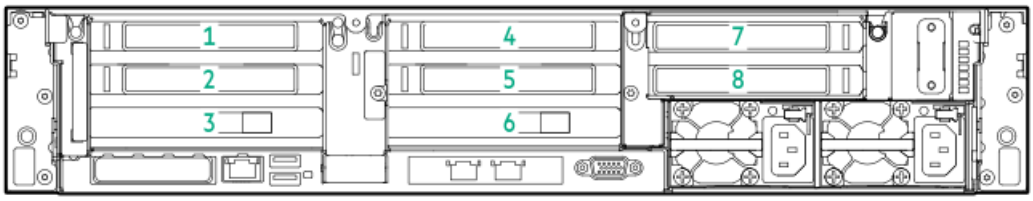
   iLO user name:_____

   iLO network name:_____

   iLO password:_____
3. Install the optional PCIe cards, if necessary.

   If the optional PCIe cards were ordered with the system, they have been preinstalled. If the cards were ordered separately, install them now.

   Figure 1. PCI slot numbers

   NOTE: StoreOnce Optional PCIe cards can only be installed in PCI slots 1, 2, 4, and 5. Slots 3, 6, 7, and 8 are not used for optional hardware.

   a. Install the network cards starting in PCI slot 1 and then additional network cards in slots 2, 4, and 5 in that order.

   b. Install the FC cards starting at PCI slot 5 and then additional FC cards in slots 4, 2, and 1 in that order.

   c. Verify that the correct SFP+ transceivers are fitted, if necessary.

   For detailed installation instructions, see Install PCIe cards .
4. Install the StoreOnce controller node in the rack.

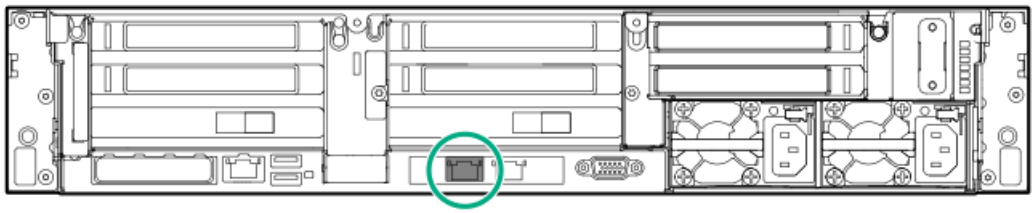
   a. Install the rail kit for the controller node. See the installation instructions supplied with the rail kit.

   b. Insert the two locking nuts for the server into the rack; one on each front column.

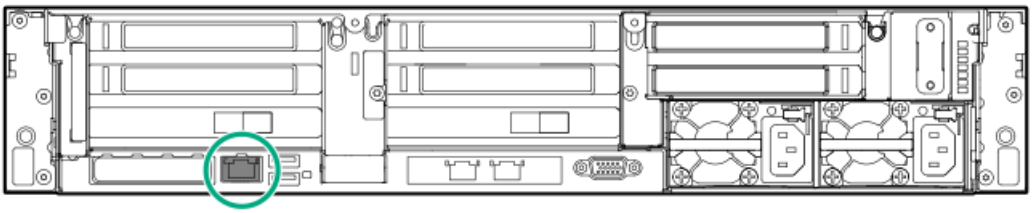
   c. Install the controller node into the rack and secure it using the thumbscrews on the front bezel of the server.
5. Connect the controller node.

   a. Connect the power cables. Connect each power cable to a separate PDU in the rack.

   b. Connect a network cable to OCP NIC port 1.

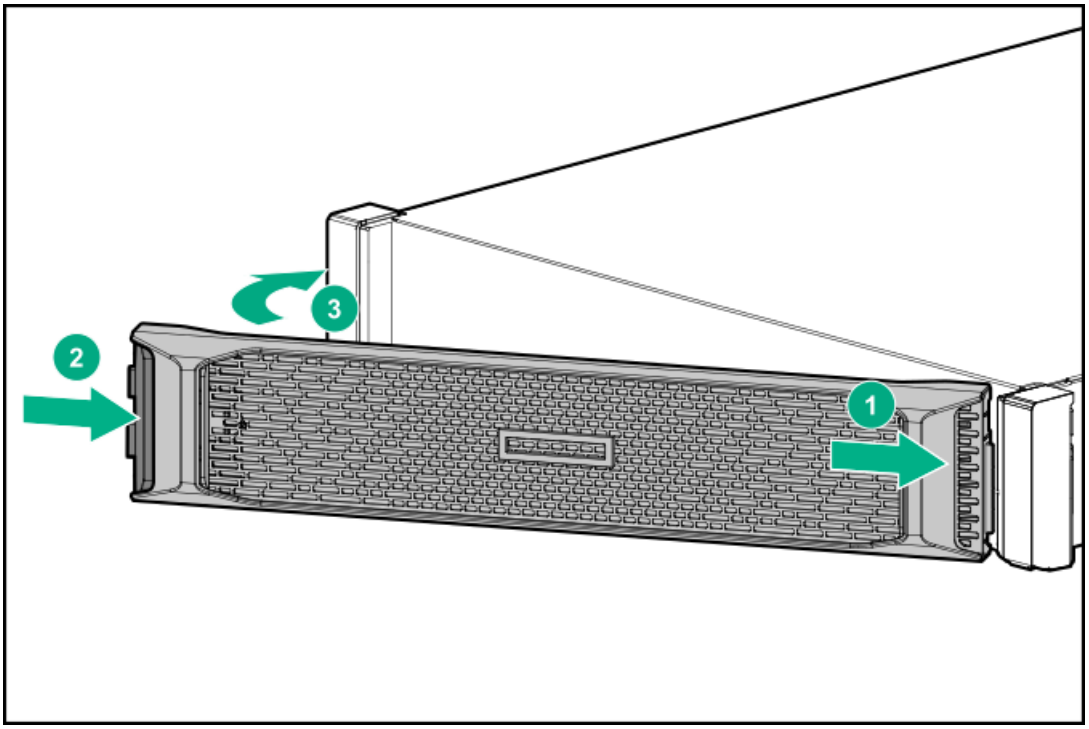
   

   c. Connect a network cable to the iLO port (recommended).



d. Connect a VGA monitor and a USB keyboard for initial configuration.

6. Attach the bezel to the front of the controller node.



7. Configure iLO during bootup (recommended).

   Most iLO settings must be configured during bootup. The iLO network options can also be configured with the System Manager.

   a. Press F9 System Utilities.

   b. Select System Configuration > iLO 5 Configuration > Network Options.

   c. Configure the iLO network options and note the details.

      iLO IP address:_____

      iLO subnet mask:_____

      iLO gateway:_____

8. Configure the basic network.

   By default, the system will have already attempted to obtain a DHCP address on LAN port 1. If you already know the IP address that was assigned over DHCP, this step is optional.

   a. Log in using the default user name and password.

      Default user name: `console`

      Default password: `changeme`

   b. Change the console password to proceed.

      Choose a secure password with at least eight characters that is memorable to you.

   c. To configure a static address for LAN port 1 (eno1), select the Configure initial network option from the console menu.

      Note the DHCP assigned IP address or the static address details.

IP address:_____

Prefix length:_____

Gateway:_____

DNS:_____

You can remove the console display and keyboard.

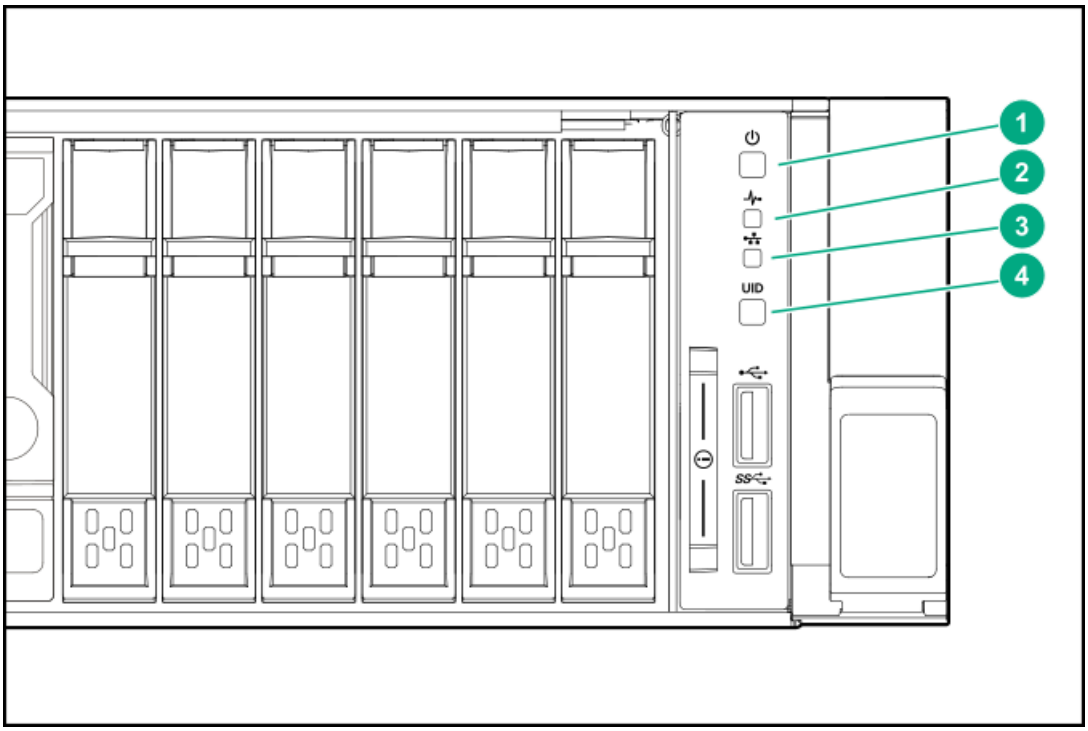
9. Open a web browser and use the IP address from the previous step to access the StoreOnce System.

   The First Time Setup wizard is automatically displayed. Use the First Time Setup wizard to configure the system for use.

   The First Time Setup wizard sets or configures:

   - Administrator password.
   - Console password.
   - Basic system information, such as the system name (host name), location, and contact information.
   - System date and time. You can set the date and time manually, or synchronize the date and time with a network time server.
   - Storage. The wizard detects the factory installed storage. The wizard also enables you to configure additional storage capacity that you might have installed. The wizard also reports issues with additional storage, for example, when additional storage is not installed in the correct location.
   - Remote Support.

10. Power on the controller node by pressing the power button on the front of the server.



Item	Description
1	Power LED and on/off button. The power button LED flashes green at the start of the power-on sequence and then turns solid green.
2	System health LED. The system health LED flashes green at the start of the power-on sequence and then turns solid green.
3	NIC status LED. If LAN port 1 is connected to an active link, the NIC status LED will also begin to flash green when the StoreOnce System is powering up.
4	UID LED. While configuring the system using iLO virtual console, the UID LED flashes blue.

After successful bootup, the console displays a login prompt.

Installing the capacity upgrade drive enclosures for the HPE StoreOnce 5260 and 5660

Prerequisites

The capacity upgrade kit contents and drive enclosure are unpacked and ready to be installed on the rack. See Safety considerations before beginning this procedure.

- Always use at least two people to lift drive enclosure, or three is lifting above chest level.
- If available, use a mechanical or electrical lift that can support the enclosure from underneath. Do not use a vacuum lift or physically lift from the top portion of the enclosure.
- Install a rail kit in the rack for each enclosure in your storage system.

IMPORTANT: The StoreOnce 5260/5660 capacity upgrades are supported only in OFFLINE mode. Please ensure that the server and enclosure power is OFF before performing a capacity upgrade. See Capacity upgrade planning considerations for more information.

Procedure

1. Prepare for drive enclosure installation.
2. Install the rail kit(s).
3. Install the drive enclosure(s).
4. Label drive enclosures or Check the drive enclosure pull out tab .
5. Connecting the data cables.
6. Connect power to the drive enclosures .
7. Configure the system.

Subtopics

Preparing for drive enclosure installation for the HPE StoreOnce 5260 and 5660 systems

Installing a 2U rail kit for the HPE StoreOnce 5260 and 5660 systems

Installing a drive enclosure

Labeling drive enclosures

Checking the drive enclosure number on the pull out tab

Connecting data cables for the HPE StoreOnce 5260 and 5660

Connecting power to the drive enclosures for HPE StoreOnce 5260 and 5660

Preparing for drive enclosure installation for the HPE StoreOnce 5260 and 5660 systems

Procedure

1. Gather the required tools, see Required tools.
2. Unpack the capacity upgrade kit and verify the contents.

   See Capacity upgrade kit contents.
3. Unpack the rail kit. Install the rail kit following the instructions supplied with the rail kit.

IMPORTANT:

Read the installation guidelines carefully before installing the rails and the expansion enclosure. The instructions provide important safety information.

NOTE:

Adjust the back bracket on the standard rail kit after installing the rails. For ease of installation with the Capacity Upgrade Kit, Hewlett Packard Enterprise recommends making the adjustment prior to mounting the rail kit.

4. Identify the rack location for the 2U drive enclosure, see Planning the rack layout for the HPE StoreOnce 3660, Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure to plan where to rack the drive enclosures in relation to the controller node in the system.

Installing a 2U rail kit for the HPE StoreOnce 5260 and 5660 systems

Prerequisites

- Determine the correct location for installing a rail kit and drive enclosure, see the Planning the rack layout for the HPE StoreOnce 3660, Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure.
- Gather the required tools.
- Ensure you have the 2U enclosure kit parts.
- Observe safety precautions when installing a rail kit.
- Verify that you are using a 2U rail kit with a 2U enclosure. The 2U rails are labeled "USE FOR 2U CHASSIS".
- Review Guidelines for the rail kit installation in a rack.

About this task

A 2U rail kit is used with the 2U drive enclosure.

Procedure

1. Determine the rack "U" position for installing a 2U enclosure in the rack.

   The 2U enclosure rail kit requires two units of vertical space in the rack. To prevent the rack from tipping, install the initial drive enclosures after installing the controller node enclosure. Align the bottom of the rail with the bottom of the "U" position.

2. From the front of the rack, position the rail inside the rack and engage the rail with the rear rack column.

   a. To ensure a proper fit between the front and rear rack columns, compress or extend the length of the rail.

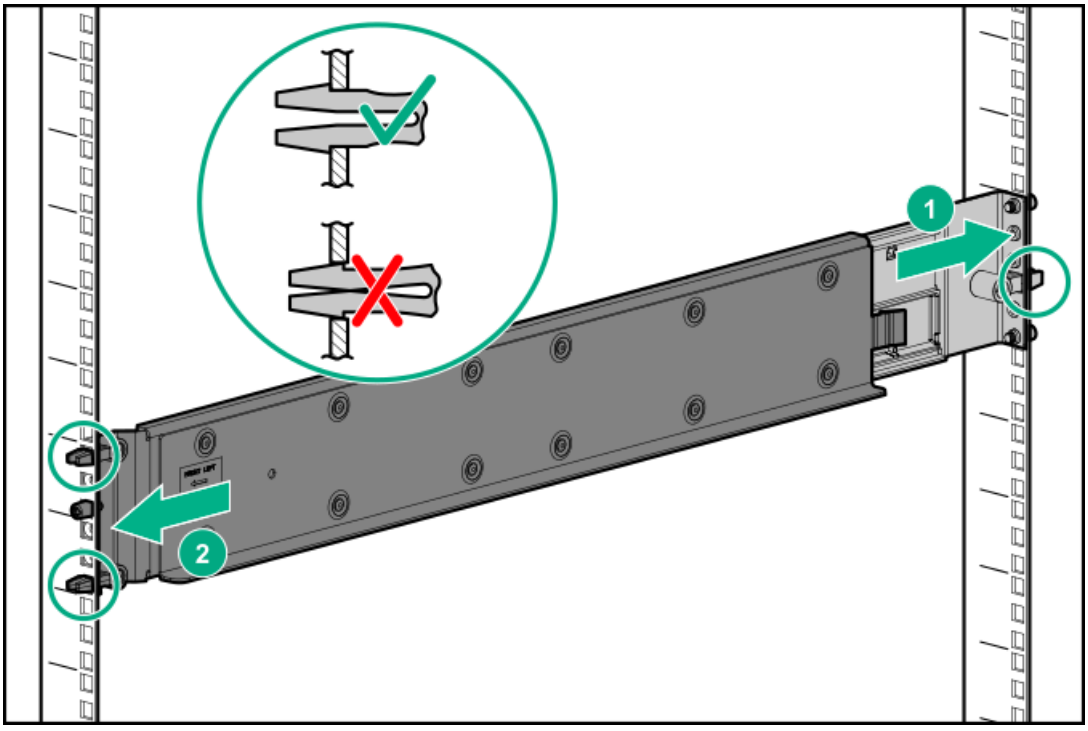
   b. Position the rail inside the rack with the rail label facing the inside of the rack.

      Labels on the rails denote Front Right and Front Left to assist with orientation.

   c. Engage the rail with the rear rack column. Insert the rear end of the rail through the chosen "U" position, until the clip snaps into place and the pins extend through the rack holes (1).

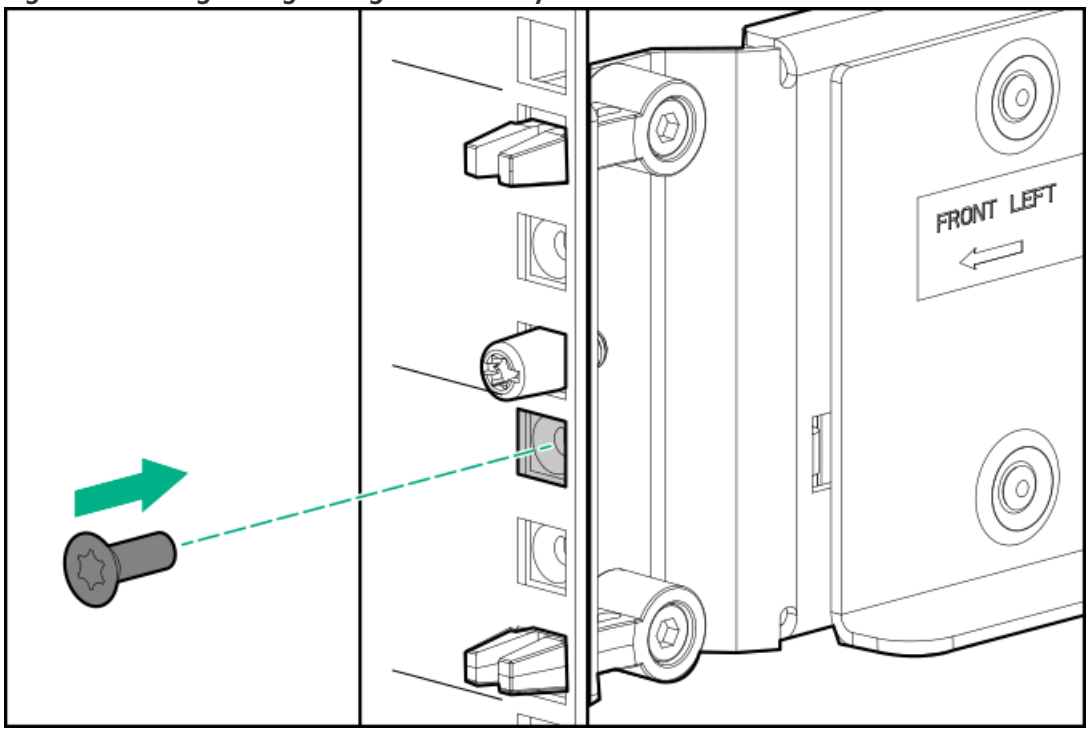
      NOTE: To reposition the rail, pinch the rail locking clips to remove it.

Figure 1. Engaging the rails with the rack columns



3. Engage the rail with the front rack column.
   a. Pull the front of the rail to connect it to the front RETMA rail.
   b. Engage the rail with the front rack column. Insert the front end of the rail through the chosen "U" position, until the clip snaps into place and the pins extend through the rack holes (2).
4. Repeat steps 2 and 3 for the other rail.
5. Insert and tighten the rail safety screw into the front rack holes.
   a. Insert and tighten the safety screw into the front rack hole as indicated in the following image. The safety screw is provided with the rail kit package.

Figure 2. Inserting and tightening the rail safety screw into the front rack hole

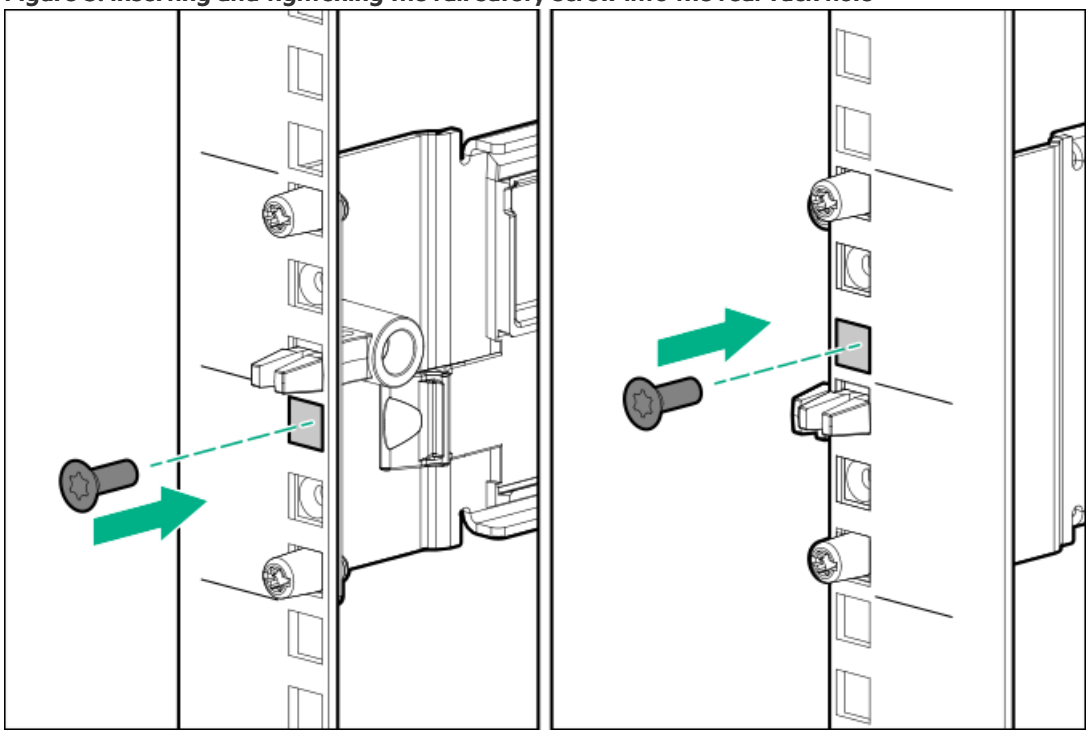


   b. Repeat for the other rail.
6. Insert and tighten the rail safety screw into the rear rack holes.

   The rail kit package contains five safety screws. One screw is an extra.

a. Insert and tighten the safety screw into the rear rack hole. Refer to the gray square in the following image for the screw location.

Figure 3. Inserting and tightening the rail safety screw into the rear rack hole



b. Repeat for the other rail.

> **WARNING:**
>
> Before installing any hardware on the rails, verify that both ends of each rail are secured with the included safety screws and, if applicable, hold-down brackets.
>
> Securely tighten the safety screws before you insert an enclosure to prevent the rails from disengaging, damaging the equipment or causing personal physical harm.

7. To secure the enclosures for shipping, install rear hold-down brackets to the rail rear columns.

   Perform this step only when the front and rear RETMA rails are exactly 29 inches apart, such as in an HPE factory-integrated rack.

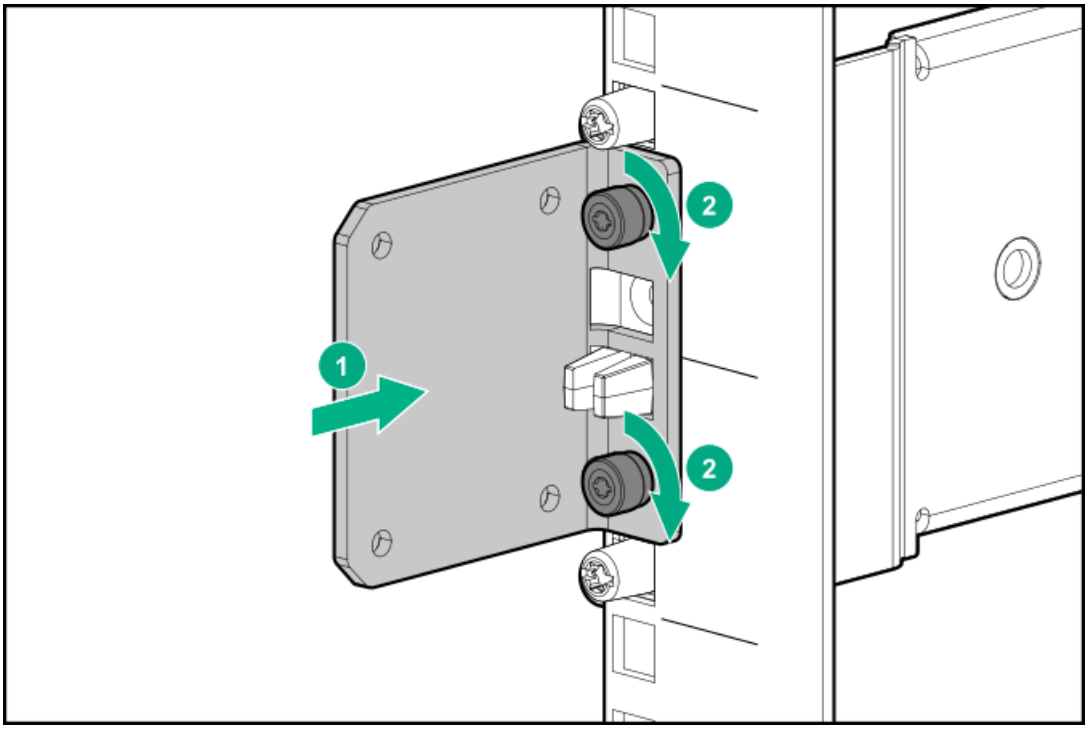
   The brackets secure the enclosure after it is installed.

> **TIP:** Use a long shank tool or tool extension to reach the bracket screws.

a. Install two rear hold-down brackets, one per rack column (1).

b. For each bracket, tighten the captive screws to the rack columns through the rail kit (2). (Torque specification is 20 In-Lb.)

Figure 4. Installing a drive enclosure rear hold-down bracket for a 2U rail



8. Verify that the rails are secured by pushing on the front and back of each rail ledge.

Installing a drive enclosure

Prerequisites

The 2U rail kit has been installed.

About this task

IMPORTANT:

Do not power on drive enclosures during installation. See Capacity upgrade planning considerations for more information.

This procedure applies to 2U drive enclosures that provide expanded capacity for the storage system.

CAUTION:

Use extreme caution when installing and pulling units from the rack. Unattached units can slip and fall, damaging the StoreOnce System or causing personal injury. Hewlett Packard Enterprise is not responsible for any damage or injury caused by mishandling the StoreOnce System.

Component	Rack space	Weight
5260/5660 Capacity upgrade enclosure (R7M23A)	2U	33kg (74 lbs)

Always use at least two people to lift and locate a capacity upgrade enclosure into the rack.

TIP:

Hard disks are preconfigured and must remain installed or returned to the same disk slots they arrived in.

You can remove the hard disks to make the storage enclosures lighter and easier to install. All hard disks must be returned to their original slots before the system is powered on. Failure to return each disk to its proper location will result in the system failing to start.

Label the disks with the provided label kits before removing them from the storage enclosure for ease of installation and maintenance.

Procedure

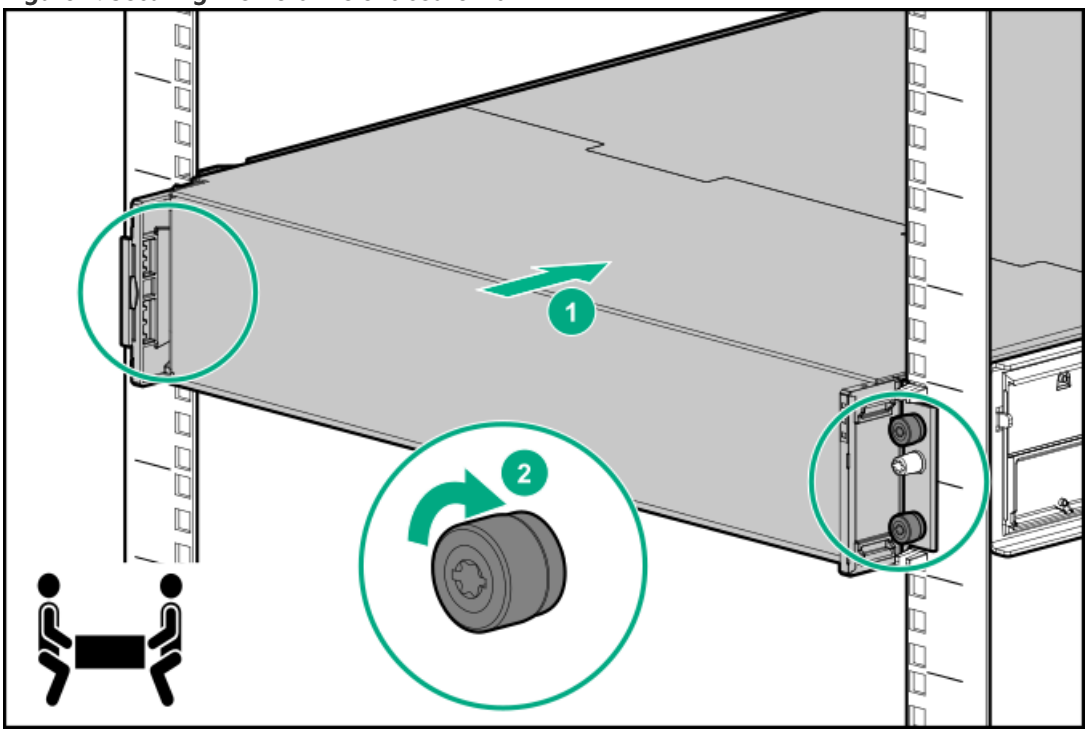
1. Verify that the drive enclosure is right-side up.

The enclosure top has caution and regulatory labels, and the bottom has no labels.

2. If plastic ear caps are installed on the drive enclosure front, temporarily remove them to expose the thumbscrews. To remove, pull the ear caps away from the drive enclosure.
3. If available, place the drive enclosure onto a mechanical or electrical lift and move it in front of the rack. If a lift is not available, use at least 2 people to lift a 2U drive enclosure.
4. At the rack front, align the drive enclosure just above the rail ledges and slide it all the way into the rack.
5. Secure the drive enclosure to the front of the rack:

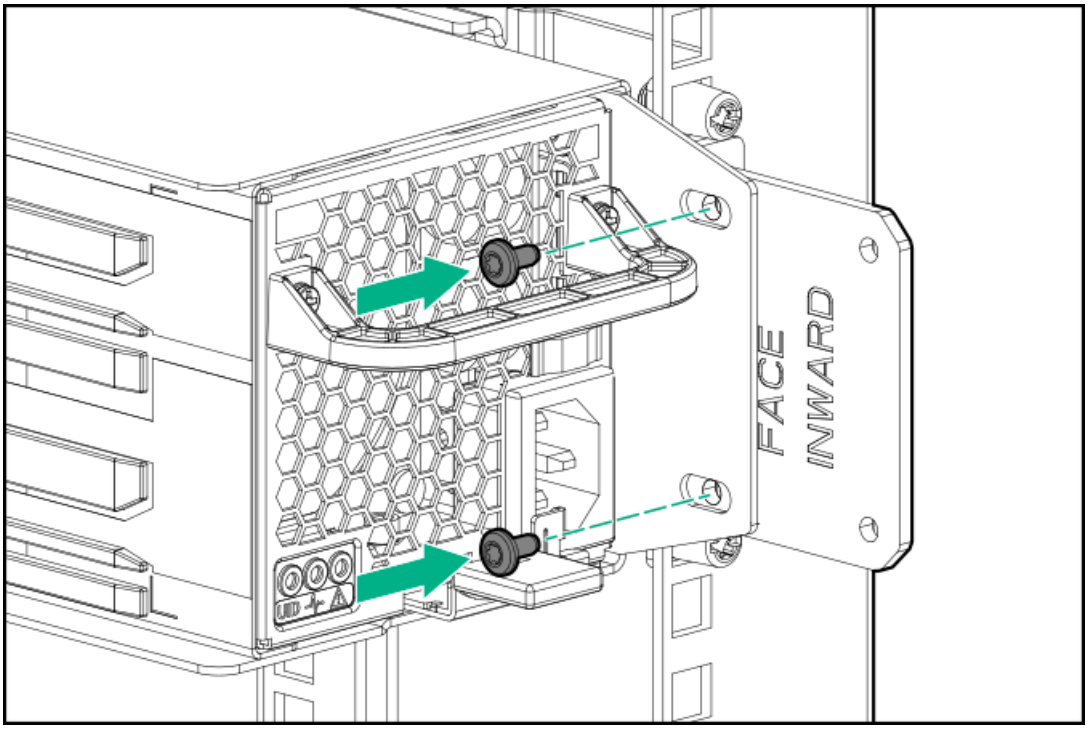
   Secure with the four captive T25 Torx thumbscrews, two on each side of the drive enclosure. Torque to 20-in-Lbs.

Figure 1. Securing the 2U drive enclosure front



6. At the drive enclosure front, install the plastic ear caps on each side. Ensure that the ear cap is in the correct orientation and snap it into place.
7. At the rack rear, if rear hold-down brackets are installed and the front and rear RETMA rails are exactly 29 inches apart, secure the drive enclosure with two pan head T15 Torx screws (on each side of the enclosure). Torque to 20-in-Lbs.

Figure 2. Installing rear hold-down screws, drive enclosure rear view



Labeling drive enclosures

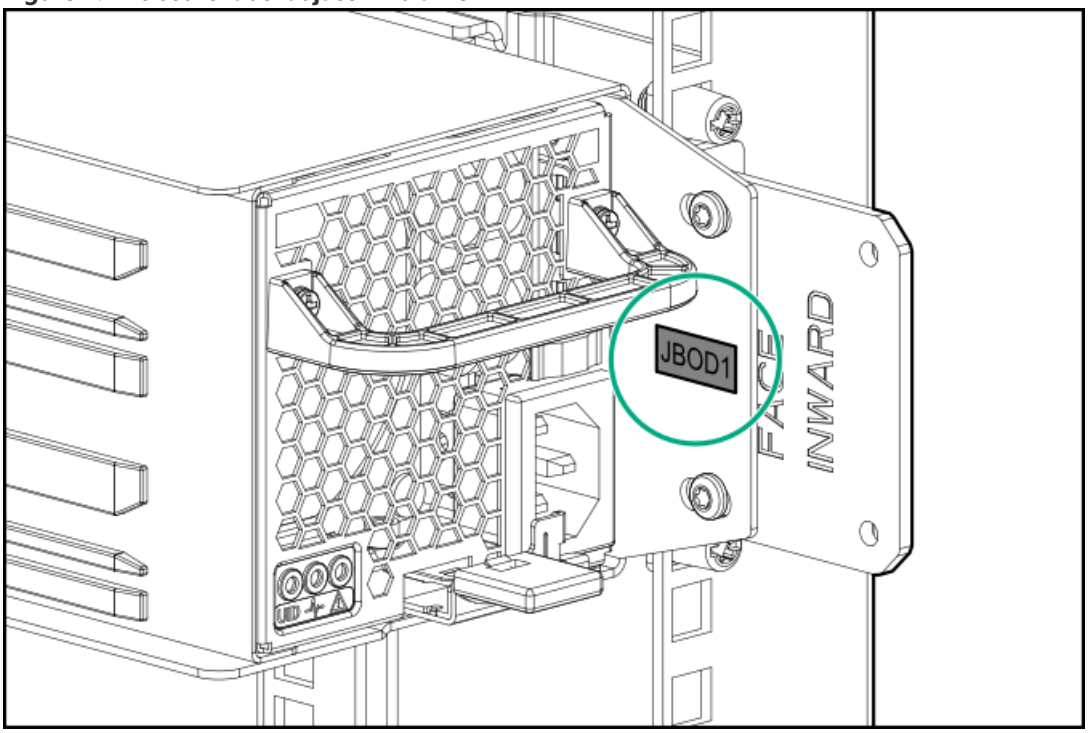
Prerequisites

Review Drive enclosure labels.

Procedure

1. Locate the first drive enclosure beneath the controller node enclosure and label it **JBOD1**.
2. Apply the label on the left or right side of the enclosure, adjacent to the PCBMs.
3. Apply the matching label to the front side of the enclosure.

Figure 1. Enclosure label adjacent to a PCM



4. Repeat steps 2 and 3 for labeling the other drive enclosures in your rack. See Planning the rack layout for the HPE StoreOnce 3660,

Planning the rack layout for the HPE StoreOnce 5260 enclosure or Planning the rack layout for the HPE StoreOnce 5660 enclosure.

Subtopics

Drive enclosure labels

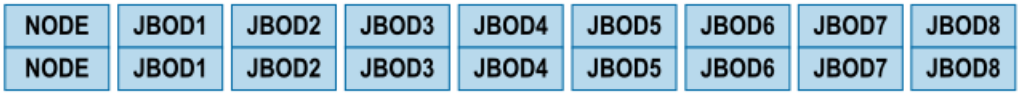
Drive enclosure labels

The storage system is shipped with labels for each drive enclosure in a rack.

IMPORTANT:
Only label the drive enclosures that are installed. Do not label any rack units reserved for future use.

The drive enclosure labels come as stickers ranging from **JBOD1 - JBOD8**. The following figure illustrates a drive enclosure label packet.

Figure 1. Drive enclosure labels



Use the labels to identify a drive enclosure when cabling it.

Checking the drive enclosure number on the pull out tab

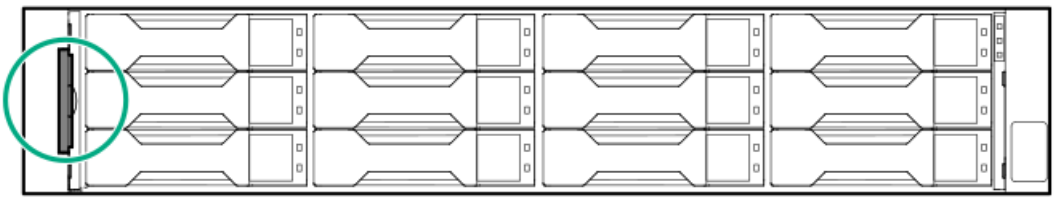
Prerequisites

Checking the drive enclosure number on the pull out tab is only required if your system has arrived pre-configured on the rack. Follow the steps at Labeling drive enclosures if your system has arrived in separate components and not pre-configured in the rack. The pullout tab also contains the component's serial number.

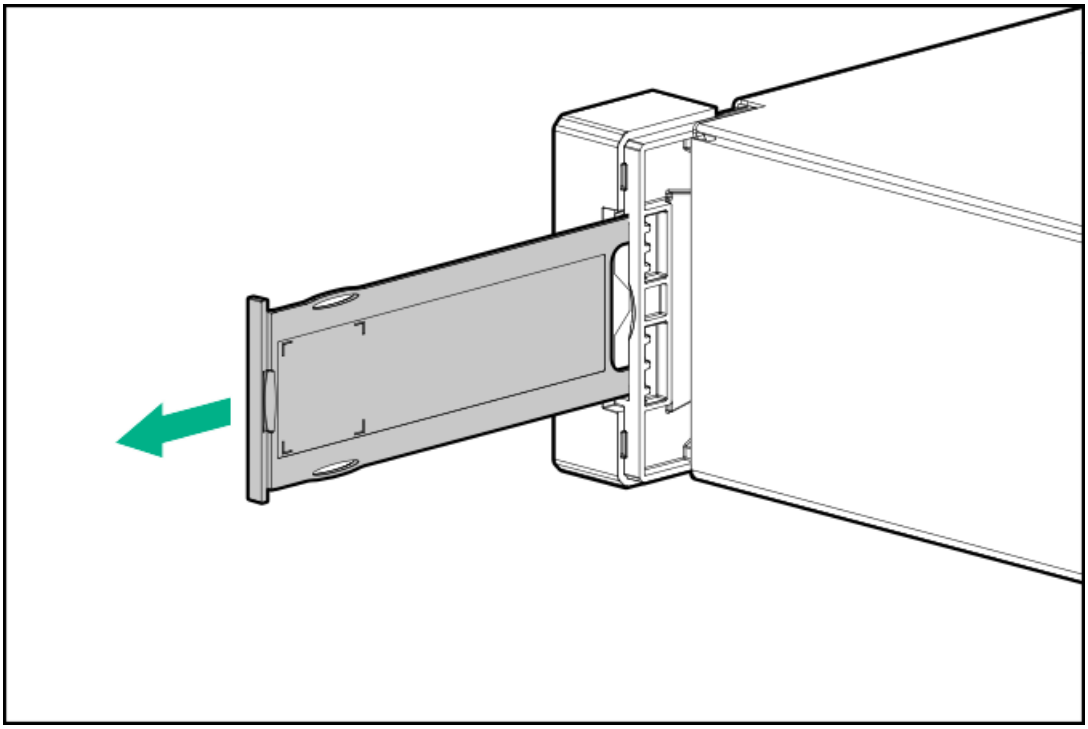
Procedure

1. Locate the pull out tab.

   Figure 1. HPE Primera 600 LFF storage enclosure (capacity upgrade R7M22A/R7M23A)
   The pull out tab is located on the front left corner of the drive enclosure.



2. Pull out the system information tab.



3. Verify the drive enclosure number on the pull out tab.

Connecting data cables for the HPE StoreOnce 5260 and 5660

Prerequisites

The expansion drive enclosures have been installed in the rack and have been powered on. For instructions on how to add more drive enclosures to the rack, see the HPE StoreOnce 3660, 5260 and 5660 System Capacity Upgrade Guide.

Procedure

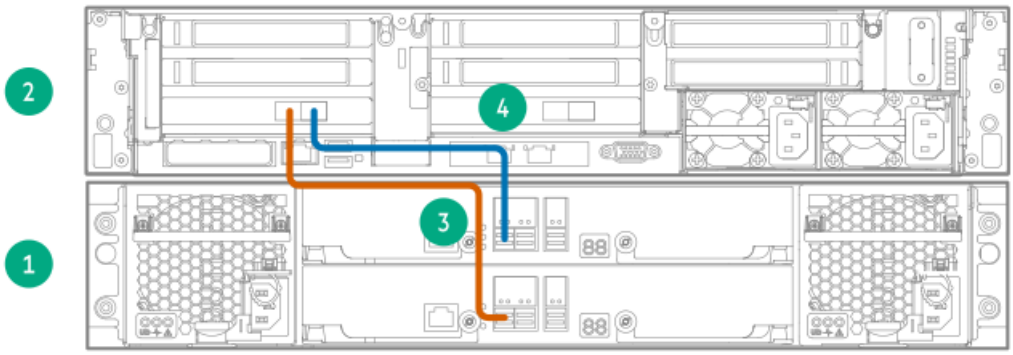
1. Apply the correct labels to the cables. Label the SAS cables on each end with the following convention:
   - N = Node (server node)
   - S = Slot
   - P = Port
   - J = JBOD
   - I = I/O module
   - F = Floating number (for moving cables)

   If a cable will be moved when adding a drive enclosure, use the "F" label by wrapping the label around the cable before moving it.
2. Apply the JBOD1 label to the top-left pull-out tab at the front of the enclosure.
3. Apply the cable label to the new SAS cable.

Table 1.

SAS cable	Label color	Cable label
New 2m cable	Red	N:S3:P1–JF:I0:P1
	White	F = 1
New 1m cable	Green	N:S3:P2–J1:I1:P1

4. Cable the enclosure.



Item	Description
2	Server node.
1	JBOD 1: First Capacity upgrade kit.

Item	SAS cable	Label color	Cable from	To
3	New 2m cable	Red and White	Node Slot 3 Port 1	JBOD 1 IOM 0 Port 1
4	New 1m cable	Green	Node Slot 3 Port 2	JBOD 1 IOM 1 Port 1

Connecting power to the drive enclosures for HPE StoreOnce 5260 and 5660

Prerequisites

1. Review Guidelines for power cabling.
2. Review Redundant power cabling.

About this task

NOTE:
A drive enclosure is powered on after a power cable drawing current from a PDU is inserted into the PCM of the drive enclosure.

Procedure

1. Locate the locking power cable for each PCM.

   The black cable is for the left PCM (0) and the gray cable is for the right PCM (1).

2. Insert one end of the locking power cable into the PCM outlet. Repeat for the other power cable.

   a. If the cable is not inserted properly, find the two red tabs on the top and bottom of the electrical connector and slide them toward you using your thumb and index finger. At the same time, pull the locking power cable out of the PCM outlet. Then, insert the cable again.

3. Pull on the locking power cable to ensure it is properly secured.
4. Connect the other end of each locking power cable from the PCM to a power source, ensuring that the routed cables maintain proper service clearance.

   Each power cable must be connected to an independent power source with each controlled and protected by its own circuit breaker.

5. Pull on the locking power cable to ensure it is properly secured.

   If the cable is not inserted properly, push the release tab on the top of the electrical connector while pulling the locking power cable

out of the power strip or independent PDU outlet.

NOTE: Some PDUs do not have a latch to lock the locking power cable. To secure the cable, use the cord retention mechanism that came with the PDU.

6. Repeat for all drive enclosure PCMs.

Configuring a newly installed StoreOnce 5260 and 5660 system

About this task

If the system has capacity upgrade enclosures, you can install and configure them before or after configuring the newly installed system.

For additional information and instructions on each step, see the online help or user guide.

Procedure

1. Log on to the StoreOnce Management Console. Review and update the settings that were configured with the First Time Setup Wizard.
   - Administrator password
   - System information, such as system, location, and contact information
   - System date and time, or NTP configuration
   - Storage configuration
   - Remote Support configuration
   - Console password
2. Complete the network configuration.

   On the main menu, select Settings. In the Hardware section, click the Networking panel.

   For additional information, see Initial StoreOnce network configuration.
3. If necessary, redeem licenses.

   Capacity or feature licenses ordered with the system will be preinstalled. If ordered separately redeem them now. For instructions, see Redeeming a capacity upgrade license.
4. Configure licenses, if necessary.

   Capacity or feature licenses ordered with the system will be preinstalled. If ordered separately, configure them now.

   a. On the main menu, select Settings.

   b. In the Systems section, click the License Management panel.
      - To view a license summary, click the Overview tab.
      - To view a list of the installed licenses, click the Licenses tab.

   For additional information, see Licensing.
5. Configure user accounts.

   a. On the main menu, select Settings.

   b. In the User Management section, click the Users and Groups panel panel.
      - To add a user or group, select Actions > Add user or group.
      - To edit a user, click the user name.
      - To remove a user, click the user name and then click Remove.

   For additional information, see User roles and types.

6. Configure StoreOnce email alerts.

   To display the configured email alerts, select Notifications from the Settings menu item.

7. Configure SNMP.

   a. On the main menu, select Settings.

   b. In the Notifications section, click the SNMP panel.

   - To view summaries of the SNMP configuration, click the Overview tab. To view lists of the items in the summaries, click the graphic segments and legends.
   - To configure SNMP, select the tabs for Agent Setup, Trapsinks, and Users.

8. Apply an SSL certificate.

   a. On the main menu, select Settings.

   b. In the Security section, click the Certificates panel.

   c. Select Certificates > Actions > Generate CSR.

9. Expand storage, if necessary.

   Capacity upgrades ordered with the system will have already been configured. If capacity upgrades were ordered separately, configure them now.

   a. On the main menu, select Settings.

   b. In the Hardware section, click the Storage panel.

   c. On the Storage screen, click the Local Storage tab, and then expand the Actions (▪▪▪) menu and select Rescan.

      Newly detected storage is added to the storage list with a status of `Unconfigured`.

   d. To configure the new storage for use, expand the Actions (▪▪▪) menu and select Configure.

10. Configure Remote Support using STaTS.

    For additional information, see StoreOnce Remote Support.

11. Configure Fibre Channel.

    For additional information, see Fibre Channel with StoreOnce Systems.

12. Configure iLO, if necessary.

    If you plan to use iLO with the system and did not configure it during the system installation, configure iLO now.

    - View or update the iLO configuration from the StoreOnce Management Console.

      a. On the main menu, select Settings.

      b. In the Hardware section, click the Integrated Lights Out (iLO) Configuration panel.

         The Integrated Lights Out (iLO) Configuration screen shows the HPE Integrated Lights Out network configuration.

    - In environments that do not use DHCP, DNS, or WINS, configure a static IP address during bootup.

      a. Restart or power on the StoreOnce server.

      b. Press F9 in the server POST screen.

         The UEFI System Utilities start.

      c. Select System Configuration > iLO 5 Configuration > Network Options.

      d. Configure the iLO network options and note the iLO IP address, iLO subnet mask, and iLO gateway.

Results

The 5260 and 5660 System is now installed and ready for production use.

Configuring a newly installed system

Prerequisites

- The hardware is installed correctly. If someone else installed the system, see Verifying the StoreOnce Gen4 hardware installation.
- The system is powered on.
- The First Time Setup Wizard has been run.

About this task

For additional information and instructions on each step, see the online help or user guide.

Procedure

1. Log on to the StoreOnce Management Console. Review and update the settings that were configured with the First Time Setup Wizard.
   - Administrator password
   - System information, such as system, location, and contact information
   - System date and time, or NTP configuration
   - Storage configuration
   - Remote Support configuration
   - Console password
2. Complete the network configuration.

   On the main menu, select Settings. In the Hardware section, click the Networking panel.

   For additional information, see Initial StoreOnce network configuration.
3. Configure licenses.
   a. On the main menu, select Settings.
   b. In the Systems section, click the License Management panel.
      - To view a license summary, click the Overview tab.
      - To view a list of the installed licenses, click the Licenses tab.

   For additional information, see Licensing.
4. Configure user accounts.
   a. On the main menu, select Settings.
   b. In the User Management section, click the Users and Groups panel panel.
      - To add a user or group, select Add user or group on the Actions menu.
      - To edit a user, click the user name.
      - To remove a user, click the user name and then click Remove.

   For additional information, see User roles and types.
5. Configure StoreOnce email alerts.
   - To display the configured email alerts, select Notifications from the Settings menu item.
6. Configure SNMP.
   a. On the main menu, select Settings.
   b. In the Notifications section, click the SNMP panel.
      - To view summaries of the SNMP configuration, click the Overview tab. To view lists of the items in the summaries, click the graphic segments and legends.

- To configure SNMP, select the tabs for Agent Setup, Trapsinks, and Users.

7. Apply an SSL certificate.
   a. On the main menu, select Settings.
   b. In the Security section, click the Certificates panel.
   c. On the Certificates screen, select Generate CSR on the Actions menu.
8. Expand storage if necessary.

   Expand storage in the following cases:

   - More capacity upgrade kits were attached after running the First Run Setup Wizard.
   - All licenses were not applied when capacity upgrade kits were installed. In this case, add the correct licenses and expand storage.
9. Configure Remote Support using STaTS.

   For additional information, see StoreOnce Remote Support.
10. Configure Fibre Channel.

    For additional information, see Fibre Channel with StoreOnce Systems.
11. Configure iLO, if necessary.

    If you plan to use iLO with the system and did not configure it during the system installation, configure iLO now.

    - View or update the iLO configuration from the StoreOnce Management Console.
      a. On the main menu, select Settings.
      b. In the Hardware section, click the Integrated Lights Out (iLO) Configuration panel.

         The Integrated Lights Out (iLO) Configuration screen shows the HPE Integrated Lights Out network configuration.
    - In environments that do not use DHCP, DNS, or WINS, configure a static IP address during bootup.
      a. Restart or power on the StoreOnce server.
      b. Press F9 in the server POST screen.

         The UEFI System Utilities start.
      c. Navigate to System Configuration > iLO 5 Configuration > Network Options.
      d. Configure the iLO network options and note the iLO IP address, iLO subnet mask, and iLO gateway.

Subtopics

Verifying the hardware installation

Initial StoreOnce network configuration

Full license entitlement

User roles and types

StoreOnce Remote Support

iLO network name and iLO password

Configuring media servers to use StoreOnce Catalyst

Drivers for StoreOnce VTL devices on client servers

Warranty details

Fibre Channel with StoreOnce Systems

Verifying the hardware installation

Prerequisites

- The system hardware was installed using the instructions in the start here guide or this document.
- The First Time Setup Wizard was run.

  Open a web browser and access the StoreOnce System. The First Time Setup wizard is automatically displayed. Use the First Time Setup wizard to configure the system for use.

About this task

The StoreOnce System is supplied preconfigured according to the options specified at the time of order. Any additional storage and/or Optional Hardware PCIe cards are already installed, licensed, and available for use.

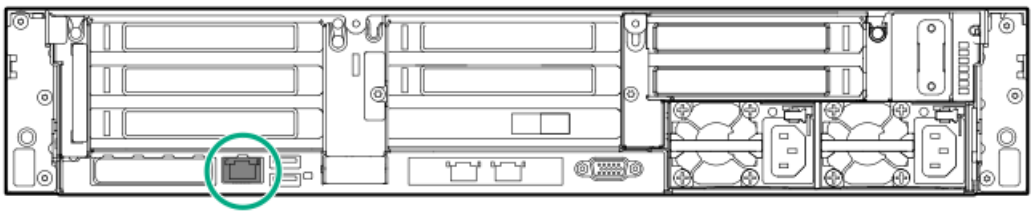
When configuring a system that someone else installed, verify the hardware installation before continuing the system configuration.

Procedure

1. Verify that any optional Ethernet or Fibre Channel cards that were not included in the original order are installed.

   For instructions, see Installing optional hardware. You can install the license during the configuration process.
2. Verify that all network cables are connected.
3. If the system has optional FC cards, verify that all FC cables are connected.
4. If the system has one or more storage enclosures, verify that all power cables to the storage enclosures are installed.
5. If the system has storage enclosures, verify that all enclosures are properly labeled, and all SAS cables are properly labeled and installed.
6. If the system is using a network management application, verify that an Ethernet cable is installed in the iLO port.

Figure 1. StoreOnce 3660 iLO port location



The StoreOnce 5260 and 5660 Systems iLO port is in the same location.

Initial StoreOnce network configuration

The initial network configuration contains a single Port Set on a 1 GbE network containing one subnet. This Port Set is configured to use IPv4 DHCP for management, NAS (NFS/CIFS), Catalyst and Replication, and RMC iSCSI traffic. This configuration is the typical network connection for the StoreOnce Management Console. You can edit the configuration to cater for the requirements of your networking environment.

For example:

- You may want to use a bonded Port Set for the StoreOnce Management Console.
- You may want to configure the remaining network ports for dedicated backup and/or replication and StoreOnce Management Console Catalyst Copy.
- You may want to configure VLAN subnets.
- You may want to configure dual stack subnets (IPV4 with IPv6).

Ensure that you understand your hardware and networking environment before creating the configuration. For additional information, see the user guide.

Full license entitlement

- **Cloud Bank Storage Read/Write license**: Enables connection to Cloud storage through a Cloud Service Provider. The cloud storage license provides cloud capacity in 1 TB increments. The maximum is 1,000 TB total in the cloud.
- **Cloud Bank Storage Detach license**: Allows the system to archive and disconnect from a cloud store and place it in archive mode.
- **Security license**: Enables the security features of Data at Rest Encryption and Data in Flight Encryption.
- **Fibre Channel Optional Hardware license**: Allows the use of an optionally added Fibre Channel card. The license comes with the card.
- **Network Interface Optional Hardware license**: Allows the use of an optionally added 10GbE-T and 10/25Gb SFP network card. The license comes with the card.

Subtopics

Redeeming a capacity upgrade license

Redeeming a capacity upgrade license

About this task

The capacity upgrade kit includes a license entitlement certificate. The certificate is a paper document containing the information necessary to obtain your unique LTU (License to Use) key file from My License Portal HPE.

NOTE:
Redeem licenses individually to obtain a license key file for each upgrade kit. Do not merge multiple entitlements to redeem a single license key file.

IMPORTANT:
Add the licenses before expanding the capacity of the StoreOnce System. Storage configuration fails if the enclosures are not licensed.

Procedure

1. On the main menu, select Settings.
2. From the System panel, select the License Management.
3. On the Overview tab, make a note of the Locking ID (Serial Number).

   If you are managing the system through the federation lead, ensure that you are viewing the correct system.
4. Go to My License Portal at **https://myenterpriselicense.hpe.com/cwp-ui/auth/login**, as directed in the License Entitlement Certificate.
5. Log in using your HPE Passport user ID and password.
6. To search for your license, enter your Entitlement Order Number.
7. To activate and obtain your license, follow the steps on your license.

   You can obtain the license file by downloading it directly from the website or from an email with a .zip attachment.
8. Return to the License Management screen in the StoreOnce Management Console.
9. Expand the Actions menu (▪▪▪), click the Add License icon (+), and then follow the onscreen instructions.

User roles and types

TIP: To identify the current user, click the user icon ( ).

User roles

When the system is installed, the Admin user is created and assigned the Administrator role.

The following roles define the permissions associated with a user:

- **Administrator**: This role allows a user to create and edit management and StoreOnce functions in the StoreOnce Management Console. Any user with the Administrator role has the same permissions as the default Admin account.
- **Observer**: This role limits access to monitoring and viewing.
- **Security Officer**: This role limits the user to creating, editing, and managing security features. For example, key managers, SSL certificates, and directory management.
- **Backup Admin**: This role limits the user to creating, editing, and managing data services features.
- **Backup Operator**: This role limits the user to monitoring and viewing the data services features.

User types

After installation, an administrator can configure additional user accounts and assign them permissions roles and passwords.

The following types of user accounts are available:

- **Local User** (with an Administrator or Observer role): Logs in locally and is authenticated using credentials on the StoreOnce System.
- **Directory User** (with any user role): Logs in as a domain user. External users are authenticated using their domain credentials by either an external Microsoft Active Directory Server.
- **Directory Group** (with any user role): A Microsoft Active Directory group. Members of the group login as domain users.

TIP:

To add directory users or groups, first add the HPE StoreOnce device to an Active Directory domain. Then configure the connection to the Active Directory Domain. For instructions, see the HPE StoreOnce 3660, 5260, and 5660 Systems User Guide .

Default account

- When a StoreOnce System is installed, one default user account (Admin) is created with the Administrator role. You cannot delete the account.

  When you first access a StoreOnce System, use the StoreOnce First Time Setup wizard to set the password for the Admin account.

  IMPORTANT:

  Hewlett Packard Enterprise strongly recommends that you change the default password. After the Admin account password has been change, it cannot be changed back to the default password.

- If Admin credentials are lost, the Admin password can be reset through a locally attached Initialization Console. Hewlett Packard Enterprise recommends changing the Initialization Console password after installation and storing it in an offline password security tool. For instructions on using the Initialization Console, see The Initialization Console.

Best practices

- After using the StoreOnce First Time Setup wizard, a user with the Administrator role can configure additional user accounts. Hewlett Packard Enterprise recommends assigning roles to user accounts that allow the minimum necessary privileges to prevent accidental or malicious data loss.
- If you create a group with the Observer role, Hewlett Packard Enterprise recommends setting up a user in the group with the Administrator role. (Roles set with the Add User action take precedence over roles set with the Add Group action.).
- Hewlett Packard Enterprise recommends using Active Directory or LDAP user types, if possible.
- If you use the StoreOnce federations features, Hewlett Packard Enterprise recommends that you add users to all the StoreOnce Systems in the federation to enable remote management.

StoreOnce Remote Support

StoreOnce Remote Support

Remote support is available with supported devices as part of your warranty or contractual support agreement. Remote support provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise. These features will initiate a faster and more accurate resolution of any issues based on your product service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

The preferred Hewlett Packard Enterprise Remote Support solution for StoreOnce products is Service Tools and Technical Support (STaTS).

Remote Support through STaTS is a standard StoreOnce feature that is enabled and available to all users. It monitors your system and allows the system to proactively contact Hewlett Packard Enterprise for any issues that arise.

NOTE:
For information about configuring Remote Support, see the appropriate sections in the HPE StoreOnce 3660, 5260, and 5660 Systems User Guide.

Subtopics

Configuring remote support

Configuring remote support

About this task

The Remote Support screen allows you to view the level of remote support with HPE.

Remote support can be enabled and disabled. Remote support is disabled by default. You can configure the remote support level, proxy server, site information, and customer information.

Procedure

1. On the main menu, select Settings.
2. In the Support section, click the Remote Support panel.

   The Remote Support screen opens. A status bar near the top of the screen indicates whether remote support is enabled or disabled. Remote support is disabled by default.
3. To enable or disable remote support, click Configure remote support on the Actions menu. The Configure Remote Support dialog opens.
   a. To enable or disable remote support, click the edit icon ( ) on the General panel. The Remote Support Options dialog opens.
   b. To enable remote support, click Send support data to HPE. To disable remote support, click No support.
   c. If you chose to enable remote support, HPE recommends that you also select Allow HPE and partners to contact me.
   d. You can also click Advanced options to see the URL of the Enterprise server that receives event messages. You do not need to change the URL.
   e. When you have completed your choices, click OK. The dialog closes and the Configure Remote Support dialog is redisplayed. Your choice for remote support level is shown. If you have chosen to enable remote support, the Proxy panel is displayed.
4. On the Proxy panel, click Configure Remote Support Proxy. The Proxy dialog opens.
   a. To specify a proxy server, click the Proxy Required toggle and enter:
      - IP address. The IP address of the proxy server that connects to the Internet.
      - Port. The port used by the proxy server.
   b. To specify authentication (if required), click the Proxy server authentication toggle, and then enter Username and Password to log in to the proxy server.
   c. Click OK. The dialog closes and the Configure Remote Support dialog is redisplayed. Your entries for the proxy are shown.

NOTE: StoreOnce software versions 4.3.0 and above provide proxy support over HTTPS.

5. Click Enter Site Information. The Site Information dialog opens. Enter your site information. Click OK. The dialog closes and the Configure Remote Support dialog is redisplayed. Your entries for site information are shown.
6. Click Enter Customer Information. The Customer Information dialog opens. Enter your customer information. Click OK. The dialog closes and the Configure Remote Support dialog is redisplayed. Your entries for site information are shown.
7. Click Update. The Remote Support screen is redisplayed with the new Remote Support Configuration.

iLO network name and iLO password

StoreOnce Systems are built on ProLiant server hardware and use the embedded Integrated Lights-Out 5 (iLO 5) management technology. iLO enables secure remote monitoring and console access through a web browser.

iLO is not required for daily management of the StoreOnce System but is useful in a lights-out data center situation. iLO is also useful for diagnosing hardware failures that prevent access to the appliance through the StoreOnce Management Console.

All StoreOnce Systems described in this guide are supplied with a label that includes the iLO network name and iLO password. Ideally, the installer made a note of this information. If not, it will be necessary to locate the label on the top of the appliance in the data center.

As a best practice, either change the password after installation or define an additional iLO user with privileges that can be used when accessing iLO from a web browser.

For instructions on configuring iLO from the StoreOnce Management Console, see the HPE StoreOnce 3660, 5260, and 5660 Systems User Guide.

Configuring media servers to use StoreOnce Catalyst

About this task

When using StoreOnce Systems Catalyst, the backup application media server must have a component of the StoreOnce Systems deduplication engine installed. In most cases, this component is built into the main application. If the component is not built into your backup application, download and install the applicable plug-in.

Procedure

1. For available and required plug-ins, see the HPE StoreOnce Support Matrix at **https://www.hpe.com/storage/StoreOnceSupportMatrix**.
2. To download the free software, see **http://www.hpe.com/support/softwaredepot**.
3. Search for StoreOnce in the Search Software Depot search box.

   The search result includes the StoreOnce System Software for all products, VSA evaluation files, and QR images for all hardware platforms. The link also includes a link to StoreOnce Free Software.
4. To access plug-ins, click StoreOnce Free Software.
5. To install the plug-ins, follow the instructions included in the download. The download includes release notes and documentation.

Drivers for StoreOnce VTL devices on client servers

To create virtual tape devices on the StoreOnce System, the client server requires a tape driver and a medium changer driver.

- **HPE LTO Tape driver**: The tape driver allows the server to recognize the Ultrium tape devices created by the StoreOnce System.

  Tape drivers can be downloaded from the Hewlett Packard Enterprise Support Center website at **http://www.hpe.com/support/hpesc**. Search on the product name and select Download Drivers and Software.
- **Medium changer driver**: An additional medium changer driver is not required. Microsoft Windows provides a generic changer driver and backup applications provide their own changer drivers.

NOTE:

Certain backup applications require their own drivers for both the tape device and medium changer. For many applications, these drivers are installed automatically during the software installation process. If the backup software is already installed, you might need to update the drivers after installing the StoreOnce System.

After installation, the StoreOnce System does not appear as a device under **My Computer** and it is not mapped to a drive letter. The host machine requires a backup application to back up and restore data. However, if drivers are installed, the backup system can be viewed as a tape drive and medium changer from the Device Manager.

NOTE:

For a Fibre Channel StoreOnce System, the Device Manager will discover a new “unknown” device. This device is only required to ensure that a Fibre Channel target exists as LUN 0 in the SAN. No functionality is provided by this device and no driver is required. If CoFC is configured, this device is replaced by the Catalyst Over Fibre Channel initiator device.

Warranty details

- StoreOnce 3660 Systems have at least one entry for the base server, where the warranty serial number covers theserver and embedded base ten 8 TB disks.

  A separate unique entry is added for each additional R7M22A storage enclosure upgrade kit added to the system. The warranty serial number covers the capacity upgrade enclosure hardware and accompanying disks. (The warranty part number is identical for each enclosure).

- StoreOnce 5260 and 5660 Systems have at least one entry for the base server, where the warranty serial number covers the server.

  A separate unique entry is added for each additional R7M23A storage enclosure kit added to the system. The warranty serial number covers the capacity upgrade enclosure hardware and accompanying disks. (The warranty part number is identical for each enclosure).

Fibre Channel with StoreOnce Systems

Subtopics

Fibre Channel hardware requirements

Supported Fibre Channel connections

Fibre Channel hardware requirements

All StoreOnce Gen4 Plus Systems support data backup to StoreOnce Catalyst and VTL devices through Fibre Channel.

If you intend to connect the StoreOnce System to a SAN, you must purchase and install one or more FC Optional Expansion cards in the PCIe slots. SFP transceivers are supplied with the FC card.

If you ordered FC cards as part of your original purchase, the cards will already be installed and licensed. Install the SFP transceivers before connecting the StoreOnce System to the SAN. Cables are not supplied.

Supported Fibre Channel connections

- The StoreOnce System supports both switched fabric and direct attach private loop topologies.

  A switched fabric topology uses one or more fabric switches to provide a flexible configuration between several Fibre Channel hosts

and Fibre Channel targets, such as StoreOnce Systems.

- Switched fabric configurations are implemented with Fibre Channel switches. Switches may be cascaded or meshed together to form larger fabrics.
- The preferred topology for the StoreOnce System is switched fabric using NPIV (N_Port ID Virtualization).

NOTE:
For the latest compatibility information, see HPE StoreOnce Support Matrix at:
https://www.hpe.com/storage/StoreOnceSupportMatrix

Subtopics

Zoning

Zoning is only required if a switched fabric topology is used.

Multihosting tape devices on SANs is complex. Use zoning tools to help keep the backup/restore environment simple and less susceptible to the effects of changing or problematic SANs.

With zoning, servers, disk arrays, and tape libraries only see the hosts and targets that they must see and use. The benefits of zoning include but are not limited to:

- Limiting unnecessary discoveries on the StoreOnce System
- Reducing stress on the StoreOnce System and its library devices by polling agents.
- Reducing the time it takes to debug and resolve anomalies in the backup/restore environment.
- Reducing the potential for conflict with untested third-party products.

Zoning may not be necessary for small or simple configurations. Typically the bigger the SAN is, the more zoning is needed. Hewlett Packard Enterprise recommends the following for determining how and when to use zoning.

- Small fabric (16 ports or less)—may not need zoning.
- Small to medium fabric (16 - 128 ports)—use host-centric zoning. Host-centric zoning is implemented by creating a specific zone for each server or host, and adding only those storage elements to be used by that host. Host-centric zoning prevents a server from detecting any other devices on the SAN or including other servers. Host-centric zoning also simplifies the device discovery process.
- Disk and tape on the same pair of HBAs is supported, along with the coexistence of array multipath software. Multipath to tape or library devices is not supported on the StoreOnce System, only coexistence of the multipath software and tape devices.
- Large fabric (128 ports or more)—use host-centric zoning and split disk and tape targets. Splitting disk and tape targets into separate zones prevents the StoreOnce System from discovering unnecessary disk controllers. For optimal performance, where practical, dedicate HBAs for disk and tape.

NOTE:
Overlapping zones are supported.

NOTE:
The HPE Brocade SAN Switches support NPIV natively. Cisco SAN Switches require that NPIV is turned on for each port used.

Optional hardware

- HPE StoreOnce Gen4 Plus Ethernet10/25Gb 2-port SFP Adapter (R7M24A)
- HPE StoreOnce Gen4 Plus 10GBASE-T 2-port Adapter (R7M25A)

- HPE StoreOnce Gen4 16Gb FC Card Optional Kit (BB986A)
- HPE StoreOnce Gen4 32Gb FC Card Optional Kit (BB990A)

Subtopics

Optional hardware kit contents

- **Fibre Channel kit**
  - A 16Gb or 32Gb Fibre Channel 2-port adapter
  - Two Short Wave FC SFP+ transceivers appropriate for the supplied card:
    - 16Gb transceiver —Part Number: E7Y09-63001
    - 32Gb transceiver —Part Number: P9H30-63001
  - A License Entitlement certificate
- **10 GbE network kit**
  - A 10 GbE-T or 10/25Gb SFP 2-Port Adaptor card
  - The SFP model has two 10 Gb SR SFP+ transceivers, appropriate for the supplied card (Part Number: 455884-B21)

    You must order the 25 Gb SFP+ transceivers (Part Number: 845398-B21) separately if you want to connect to 25Gb switches.
  - A License Entitlement certificate

Optional hardware kit installation scenarios

There are two installation scenarios for the optional hardware kits.

Optional hardware kits that are ordered with the initial installation:

- The PCIe card will already be installed.
- SFP+ transceivers will not be installed; they will be in the StoreOnce System accessory box. To plug in the SFP+ transceivers, follow the instructions in this guide.
- The license will already be installed and the optional hardware is activated.

Optional hardware kits that are ordered after the initial installation require the following actions:

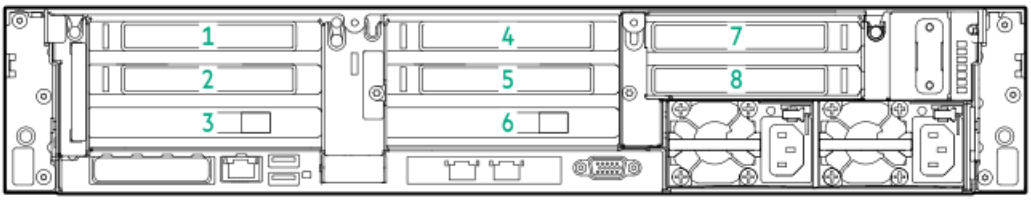
- Unpack the optional hardware kit and check the contents.
- To install the PCIe card in the correct slot and plug in the SFP+ transceivers, follow the instructions in this guide.
- To redeem, apply, and activate the license, follow the instructions on the License Entitlement certificate.

PCIe slot allocation for optional hardware cards

StoreOnce software version 4.3.x and later supports the addition optional hardware to the basic configuration for the HPE StoreOnce 3660, 5260, and 5660 Systems. Optional hardware includes the following:

- 10GbE-T
- 10/25Gb SFP
- 16Gb Fibre Channel
- 32Gb Fibre Channel

Optional hardware cards that are ordered with the base product are installed in the correct PCIe slots, as shown.



Optional hardware cards that are ordered after the initial installation must be installed in the correct sequence, according to the type of card. The sequence is the same for all the systems.

Optional hardware	PCIe slot positions
10 GbE-T	slots 1, 2, 4, and 5
10/25Gb SFP	slots 1, 2, 4, and 5
16Gb Fibre Channel	slots 5, 4, 2, and 1
32Gb Fibre Channel	slots 5, 4, 2, and 1

You can add any combination of cards to any system. The only requirement is that the cards must be installed in the correct sequence by type.

Install PCIe cards

Subtopics

Safety considerations

Subtopics

Preventing electrostatic discharge

To prevent damaging the system, be aware of the recommended precautions when setting up the system or handling parts. A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

To prevent electrostatic damage:

- Avoid hand contact by storing and transporting devices in anti-static containers.
- Keep electrostatic-sensitive parts in their containers until they arrive at the static-safe workstation
- Place parts on a grounded surface before removing them from their containers.
- Avoid touching points, leads, or circuitry
- Always be properly grounded when touching a static-sensitive component or assembly.

Server warnings and cautions

Before installing a server, be sure that you understand the following warnings and cautions.

WARNING:

To reduce the risk of electric shock or damage to the equipment:

- When installing optional expansion cards, leave servers plugged in but switched off, where possible, to retain earthing.
- Ensure that the power cord will not snag when the server is extended from the rack.

WARNING:

To reduce the risk of personal injury from hot surfaces, allow the drives and the internal system components to cool before touching them.

CAUTION:

Do not operate the server for long periods with the access panel open or removed. Operating the server in this manner results in improper airflow and improper cooling that can lead to thermal damage.

Required tools

You need a T-10 or T-15 Torx screwdriver for some procedures.

Prerequisites for installing PCIe cards

About this task

Prepare for maintenance/installation activity.

Procedure

1. Schedule installing optional expansion cards as a maintenance activity in a quiet period.
   a. Make sure that host users are aware of the expansion installation process.
   b. Determine the effect of the installation on scheduled jobs, such as replication or StoreOnce Catalyst Copy.
2. Verify that the latest keystore has been saved, if you have the Security Pack license installed and have applied encryption to any VTL libraries, NAS shares, or Catalyst stores.
   a. Log in to the StoreOnce Management Console.
   b. On the main menu, select Settings.
   c. In the Security section, click the Key Manager panel.
   d. On the Key Manager screen, select Backup on the Actions menu (▪▪▪).

   Find Key Manager information in the StoreOnce Management Console Online Help, and in the HPE StoreOnce 3660, 5260, and 5660 System User Guide.
3. If using HPE StoreOnce Remote Support, disable remote event reporting to Hewlett Packard Enterprise. See Enabling maintenance mode when using StoreOnce Remote Support.

Enabling maintenance mode when using StoreOnce Remote Support

About this task

If StoreOnce Remote Support is configured, put the StoreOnce System into maintenance mode before installing the upgrade. Enabling maintenance mode prevents the system from generating unwanted support calls during the installation process.

Procedure

1. Navigate to the StoreOnce System and log in to the StoreOnce Management Console.
2. On the main menu, select Settings.
3. In the System section, select the Maintenance mode panel.
4. On the Maintenance mode screen, set the Maintenance mode switch to the on position (), and then click OK.

Powering down the StoreOnce System

Prerequisites

Log in with administrator privileges to perform this task.

About this task

Powering down the StoreOnce System using the StoreOnce Management Console, iLO or the front panel Power On/Standby button does not completely shut off system power. Portions of the power supply and some internal circuitry remain active.

Procedure

1. Log in to the StoreOnce Management Console.
2. On the main menu, select Settings.
3. On the **Settings** screen, select Shutdown on the Actions menu (▪▪▪).

Removing cables, extending the server from the rack, and removing the access panel

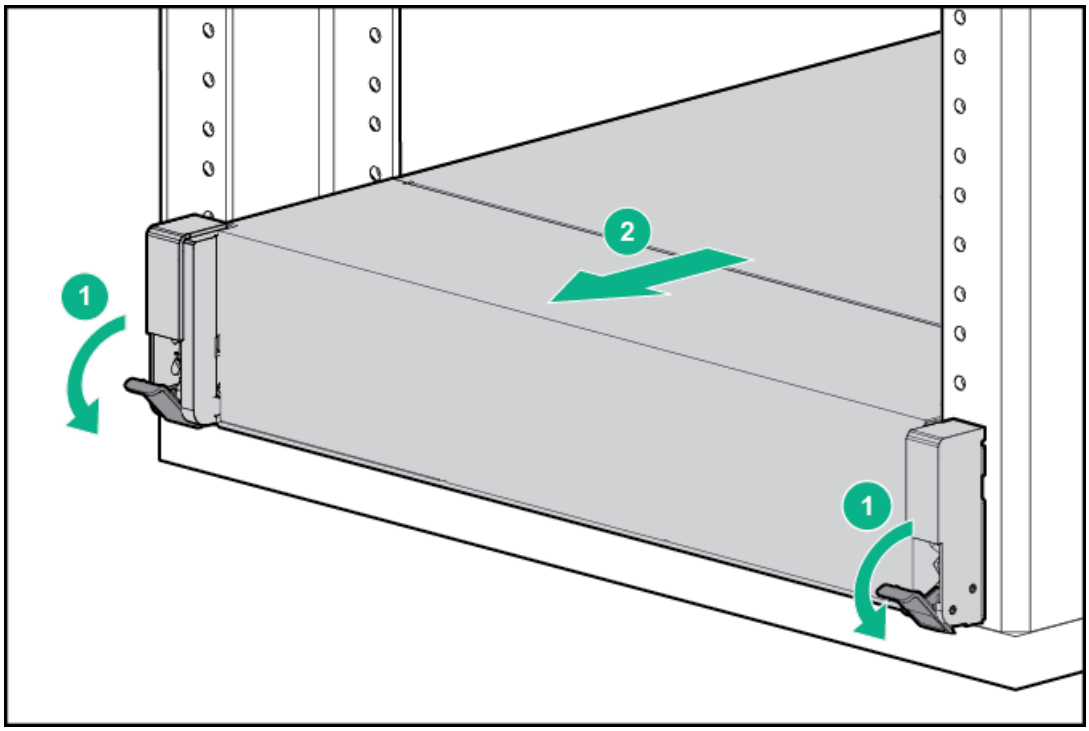
About this task

StoreOnce Systems may have Capacity Upgrade Kits attached. StoreOnce 5260 and 5660 Systems will have storage enclosures attached.

> **WARNING:**
> To reduce the risk of personal injury or equipment damage, be sure that the rack is adequately stabilized before extending a component from the rack.

Procedure

1. Ensure that the power cord will not snag when the server is extended from the rack.
2. If applicable, disconnect the SAS cable between the head server and the first storage enclosure before extending the server from the rack.
3. Extend the server from the rack.
   a. Pull down the quick release levers on each side of the server.
   b. Extend the server from the rack. For more information, refer to the documentation that ships with the rack mounting option.



4. Remove the access panel as follows:
   a. Open or unlock the locking latch on the server rear panel
   b. Slide the access panel to the rear of the chassis
   c. Remove the access panel

Removing the PCIe riser cage and installing the PCIe card

About this task

> **IMPORTANT:**
> When installing a card in slots 1 or 2, or slots 4 or 5, PCIe slots 3 and 6 are already populated with RAID controller cards. Take care not to dislodge either of those cards.

The illustrations following show the installation of a card in slot 1 of the primary riser cage. The procedure is the same for installations into the secondary riser cage.

Procedure

1. Make a note of the external cable connections before you disconnect them.

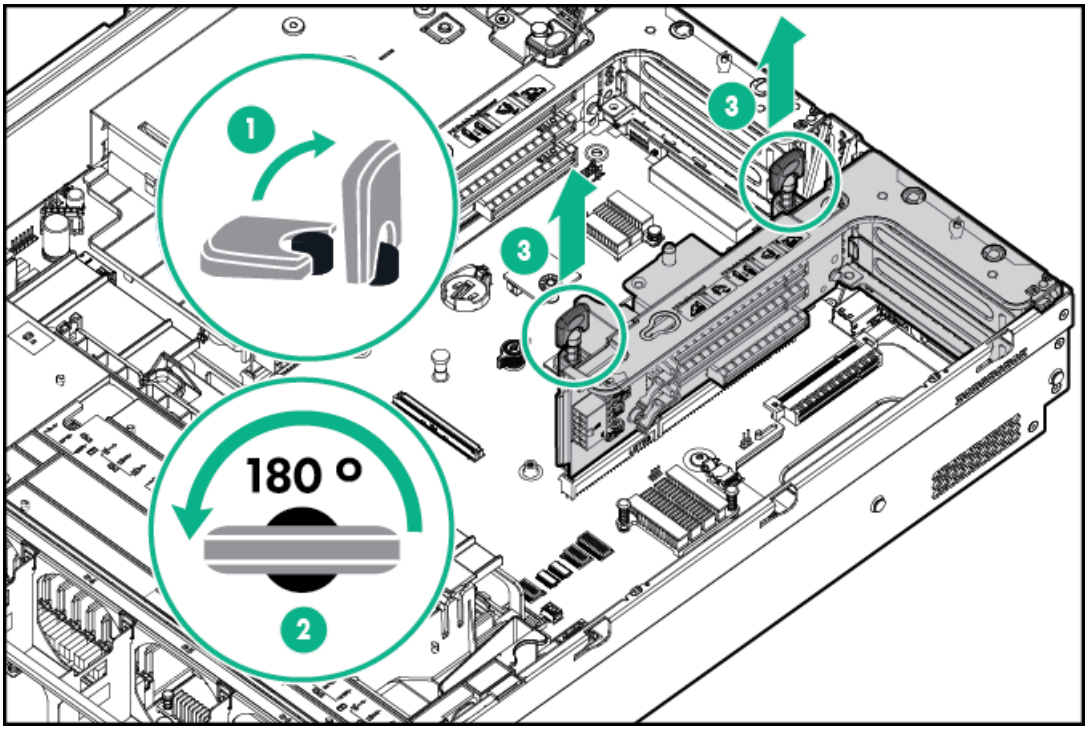
   Reconnect the cables correctly for the system to work.

2. Disconnect the external SAS cables.

   The StoreOnce 5260 and 5660 Systems will have external SAS cables. If the StoreOnce 3660 System has capacity upgrades installed, it will have external SAS cables.

3. If you are installing a card in slots 1 or 2, remove the primary PCIe riser cage. If you are installing a card in slots 4 or 5, remove the secondary PCIe riser cage.

4. The following example illustrates the removal process. There may already be cards installed.



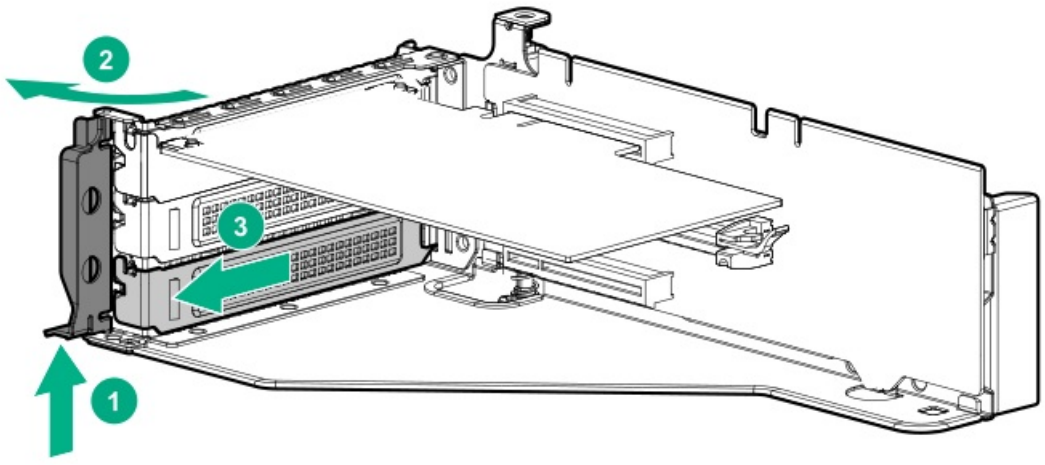
5. Make a note of the internal cable connections before you disconnect them.

   Reconnect the cables correctly for the system to work.

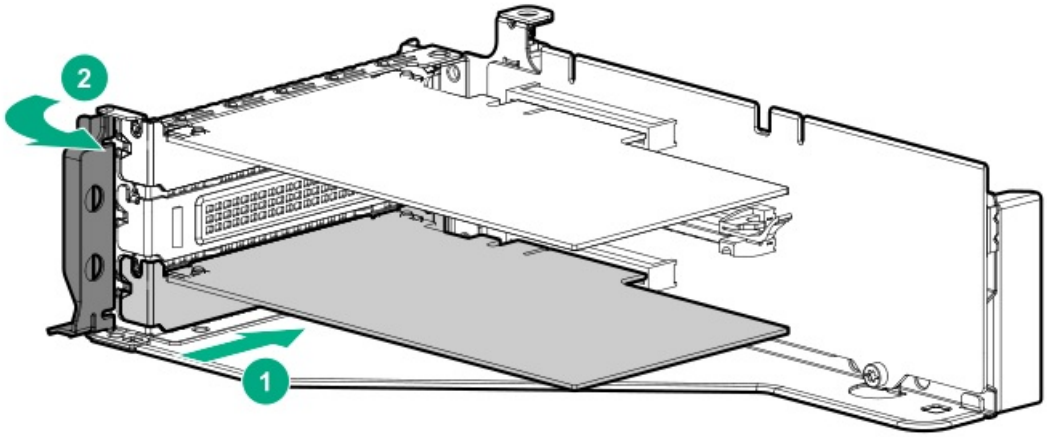
6. Disconnect the cables from the storage controller card and expander cards, as necessary.

7. Remove the blanking plate for the appropriate slot.

8. The following example illustrates where the first 10 GbE card is being installed in slot 1. The Raid Controller expander card occupies slot 3.



9. Install the PCIe card.



Completing the PCIe card installation

Procedure

1. Reconnect the cables from the storage controller card and expander cards.
2. Replace the PCIe riser cage.
3. Replace the access panel.
   a. Place the access panel on top of the server with the latch open.

      Allow the panel to extend past the rear of the server approximately 1.25 cm (0.5 in).

   b. Push down on the latch.

      The access panel slides to a closed position.

   c. Tighten the security screw on the latch.
4. Slide the server back into the rack and secure it.

   WARNING:

   To reduce the risk of personal injury, be careful when pressing the server rail-release latches and sliding the server into the rack. The sliding rails could pinch your fingers.
5. Reconnect the external SAS cables.
6. Power on the StoreOnce System manually, or by using the iLO interface.

Installing SFP transceivers, if necessary, and connecting to the network or SAN

Procedure

1. Install SFP transceivers as follows:
   a. 10/25Gb SFP Network card:
      - For 10GbE connectivity, use the supplied optical 10 Gb SR SFP+ transceivers (Part Number: 455884-B21).
      - For 25GbE connectivity, 25 Gb SFP+ transceivers (Part Number: 845398-B21) must be purchased separately.

   NOTE:

The 10GbE-T Network card does not require SFP+ transceivers.

b. Fibre Channel card: use the supplied 16 Gb SFP+ transceivers (Part Number: E7Y09-63001) or the supplied 32 Gb SFP+ transceivers (Part Number: P9H30-63001), as appropriate.

2. Connect the server to the 10/25GbE network and/or Fibre Channel SAN, as appropriate. Cables are not supplied and must be purchased separately. Refer to the HPE StoreOnce Systems QuickSpecs for the recommended cables for each interface.
3. Power on the StoreOnce System manually, or by using the iLO interface.
4. To view the status of optional hardware and license it for use, use the StoreOnce Management Console, described in Complete new hardware installation using the StoreOnce Management Console.

Complete the new hardware installation using the StoreOnce Management Console

If optional hardware has been installed before delivery, it will already be licensed.

When installing optional hardware after initial delivery, use the StoreOnce Management Console to apply licenses and validate optional hardware.

Subtopics

Redeeming and applying the optional hardware license

Redeeming and applying the optional hardware license

About this task

The optional hardware kit includes a license entitlement certificate, which contains the information required to obtain your unique LTU (License to Use) key.

NOTE:
Redeem licenses individually so that you obtain a license key for each Network or Fibre Channel controller card.

Procedure

1. Navigate to the StoreOnce System and log in to the StoreOnce Management Console.
2. On the main menu, select Settings. In the System section, select the License Management panel.
3. On the License Management screen, Overview tab, make a note of the Locking ID (Serial Number).
4. Go to the My License Portal at **https://myenterpriselicense.hpe.com/cwp-ui/auth/login**, as directed in the License Entitlement Certificate.
5. Log in using your HPE Passport user ID and password.
6. Enter your Entitlement Order Number to search for your license.
7. Follow the steps to obtain and activate your license.

   You can obtain the license file by downloading it directly from the website or from an email with a .zip attachment.
8. Return to the License Management screen in the StoreOnce Management Console.
9. Expand the Actions menu (▪▪▪) and click the Add License icon (+). Follow the onscreen instructions.

Troubleshooting optional hardware installation

Subtopics

Error messages for optional hardware

Table 1. Error messages for Optional Hardware

Short message	Error message	Recommended action
Unrecognized	Unrecognized Hardware	Remove and replace with correct hardware.
Unsupported	Hardware installed but not a supported model	Replace the card with a supported model or remove it.
Hardware Fault	Hardware installed but reporting fault	Contact Hewlett Packard Enterprise Support.
Load order	Hardware install in wrong order	Move the card to the correct location.
Hardware Missing	Hardware expected but not found	Replace the card or use the Remove Cards option on the Optional Hardware panel, and restart the system.
Hardware degraded	Hardware installed but in degraded state	Contact Hewlett Packard Enterprise Support.
Empty Slot	Empty slot	Install the optional hardware and try again.

Table 2. Error messages for licensing

Short message	Error message	Recommended action
Not Checked	Slot {x} could not be checked due to other errors	Resolve the hardware issues and try again.
No Hardware	Slot {x} does not contain any optional hardware	Install the optional hardware and try again.
Hardware Error	A hardware error is preventing a license being applied to Slot {x}	Resolve the hardware issues and try again.
Load Order	A license is available for Slot {x} but the preceding slot in the load order must be licensed first.	Install the correct licenses in order.
Unlicensed	Slot {x} is unlicensed	Install the license.

Removing and replacing optional hardware cards

About this task

If you receive an error about the newly installed optional card that requires moving or replacing the card, use the following procedure.

Procedure

1. Log in to the StoreOnce Management Console.
2. On the main menu, select Settings.
3. In the System section, click the License Management panel.
4. On the License Management screen, select Actions > Remove Cards.

5. To make the necessary changes, follow the steps in Install PCIe cards.

   You can reinstall cards in the same slot or different slots, as long as you follow the load order and licensing rules.

The Initialization Console

The Initialization Console supports features that cannot be accessed from the HPEStoreOnce Management Console or REST API. The Initialization Console also includes functions that pertain to the Initialization Console.

- Accessing the Initialization Console
- Determining the initial DHCP network address
- Configuring the initial system networking
- Resetting the local admin password
- Changing the Initialization Console password

  The Initialization Console password can also be changed from the HPEStoreOnce Management Console.
- Enabling support access

Subtopics

Accessing the Initialization Console

Determining the initial DHCP network address

Configuring the initial system networking

Resetting the local Admin password

Changing the Initialization Console password

Enabling support access

Accessing the Initialization Console

Procedure

Log in to the physical, iLO, or hypervisor console.

- User:
  `console`
- Password: The current console password. This password is changed the first time someone logs in to the Initialization Console or runs the First Time Setup wizard. The default is
  `changeme`
  .

Determining the initial DHCP network address

About this task

The first time the StoreOnce System accesses the network, it attempts to obtain an IPv4 or IPv6 DHCP address.

Procedure

Log in to the Initialization Console.

If the system obtained a DHCP address, it is displayed on the StoreOnce dialog.

Configuring the initial system networking

About this task

Configure the StoreOnce System networking from the Initialization Console in the following cases:

- The initial DHCP configuration fails.
- The StoreOnce System is in an environment without DHCP.

This procedure results in a basic network configuration with a single address.

Procedure

1. Access the Initialization Console.
2. Select Configure initial network.
3. Select either Configure static (IPv4 or IPV6) address or Configure dynamic address.

   When configuring a static address, enter the network configuration parameters. When configuring a dynamic address, select the protocols.
4. Click OK.

Resetting the local Admin password

About this task

This procedure resets the password for the local Admin user to `admin`, which forces a password change at the next log in.

This password reset only applies to systems using local authentication. This procedure does not affect LDAP or Active Directory users.

Procedure

1. Access the Initialization Console.
2. Select Reset admin password.
3. Click OK.
4. Once the reset has been applied, navigate to the StoreOnce Management Console in a new browser tab to be presented with the password dialog.

Changing the Initialization Console password

About this task

The Initialization Console password can also be changed from the StoreOnce Management Console in the Security area.

Procedure

1. Access the initialization console.
2. Select Change console password.
3. Enter the current and new passwords.
4. Click OK.

Enabling support access

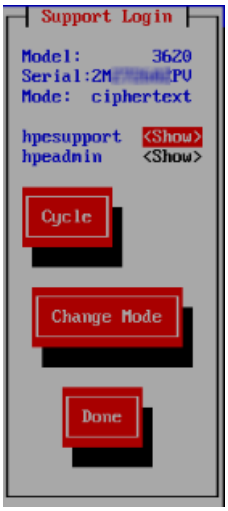
About this task

A support engineer can obtain the information used to generate the temporary support password from the Initialization Console. Accessing the support access feature is only required if the StoreOnce Management Console is inaccessible. For more information about using and generating temporary support passwords, see the user guide.

Procedure

1. Access the Initialization Console.
2. Select Enable support access.

   The Support Login screen is displayed. The default support access mode is ciphertext.



3. Select a support user:
   `hpesupport`
   or
   `hpeadmin`
   .

   The system displays the ciphertext for the user. This ciphertext is required to generate the secure support password.

   To change the ciphertext for the support users, click Cycle.

   Changing the ciphertext invalidates any passwords that were generated using the old ciphertext.
4. To switch the support access mode between ciphertext and TOTP (Time based), click Change Mode and then click OK.

   When in TOTP mode, the model and serial number required to generate the secure support password is displayed.

Reference

Subtopics

Guidelines for power cabling

- Each PCBM and PCM power cable must be plugged into an independent power source (PDU) outlet that supports the entire power load of a connected enclosure.
- Keep power off to any component in the rack until all power cables have been connected to the storage system. PCBMs and PCMs do not have power switches. To keep power off, unplug the power cables from the power source.

Redundant power cabling

Provide power to the storage system using redundant power supplies and redundant power distribution units (PDUs). Redundant power cabling stays operational when a power failure occurs with an input power source, a PDU, or a power supply.

Each power cable must be plugged into an outlet that supports the entire power load of a connected enclosure.

> ⚠ **WARNING:**
>
> To avoid possible injury, damage to storage system equipment, and potential loss of data, do not use any extra PDU outlets. Never use PDU outlets to power components that do not belong to the storage system or that reside in other racks.

To achieve redundant power, the storage system must have the following redundant power configuration.

- **Customer power source:** Each main, independent, grounded-electrical power source should be controlled and protected by its own circuit breaker.
- **PDU:** The number of PDUs in a rack can vary depending on the number of enclosures that are installed in a rack and power type (such as single- or three-phase power).
    - The even-numbered PDUs should be connected to customer power source (A).

- The odd-numbered PDUs should be connected to customer power source (B).

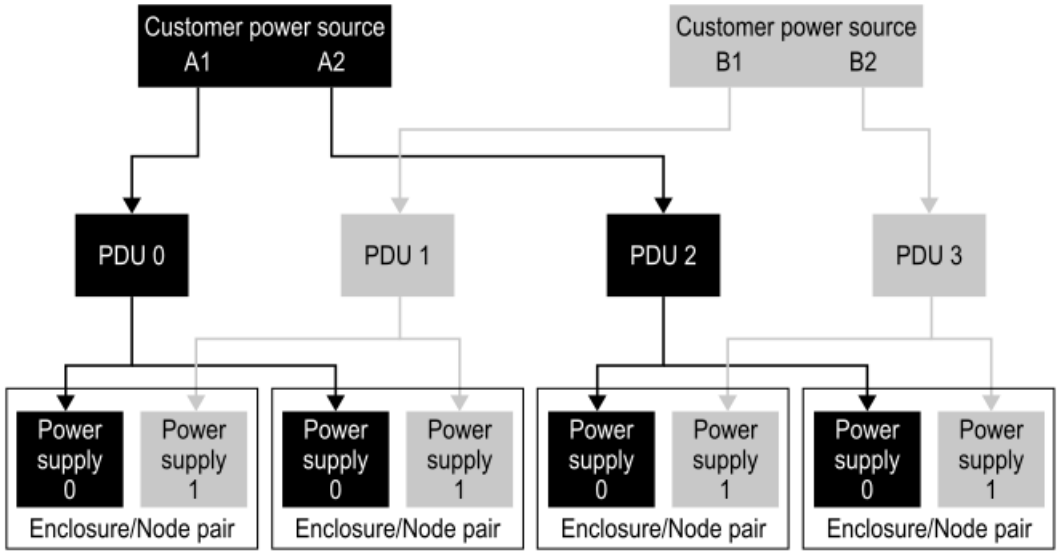
- **Power supply**:
  The generic term "power supply" refers to various types of power components. These power components include power supply unit (PSU), power cooling module (PCM), or a power cooling battery module (PCBM).

  Each power supply 0 should be connected to an even-numbered PDU using a black power cable.

  Each power supply 1 should be connected to an odd-numbered PDU using a gray power cable.

  - **Controller node pair**: Each power supply should be connected to a separate PDU.
  - **Drive enclosure**: Each power supply should be connected to a separate PDU.

Figure 1. Redundant power configuration



3-2-1 strategy

For hardware and software appliances:

- Save three copies of your data.
- Keep two copies of data on different media (example: StoreOnce Catalyst copy of a backup).
- Keep one copy of your data off site.

Data cabling guidelines

Review Data cable types and specifications for more information on data cable types, length and specifications.

- Use the 0.6m cable when connecting from one drive enclosure to an adjacent drive enclosure within the same rack.
- Use the 1m cable if the rack unit distance between the drive enclosure and controller node is less than or equal to 8U. Use the 2m cable if the distance is more than 8U.
- Use the 10m AOC cable if the controller node and expansion rack is less than 10 meters apart.
- Use the 25m AOC cable if the controller node and expansion rack is more than 10 meters apart.

Data cable types and specifications

Mini-SAS cables connect:

- Controller node enclosure to drive enclosures
- Drive enclosure to drive enclosure

Ethernet cables connect controller node enclosure to drive enclosures.

Cable	Length
HPE CA mSAS HD to mSAS HD EXT 4-LANE 0.6	0.6m
HPE CA mSAS HD to mSAS HD EXT 4-LANE 1M	1m
HPE CA mSAS HD to mSAS HD EXT 4-LANE 2M	2m
HPE CA mSAS HD to mSAS HD EXT 4-LANE 3M	3m
HPE 10m HD Active Optical Cable (AOC)	10m
HPE 25m HD Active Optical Cable (AOC)	25m (not included in the shipment. Have to be ordered separately)

Cable	Length
HPE 100Gb QSFP28/QSFP28 1m DAC	1m
Aruba 100G QSFP28 to QSFP28 7m AOC	7m
Aruba 100G QSFP28 to QSFP28 15m AOC	15m
Aruba 100G QSFP28 to QSFP28 2m AOC	2m

Redundant hardware connectivity guidelines

For the hardware appliances:

- Use dual Power Distribution Units (PDUs) to provide AC power to the controller node and the disk enclosures. Connect one PDU to the first Power Supply Units (PSUs) in the controller node and the disk enclosures. Connect the other PDU to the second PSUs in the controller node and disk enclosure. Provide an AC phase to each PDU.
- To maintain the redundant hardware design of the system, correctly install the dual SAS cabling following the user instructions and SAS cabling diagrams.

2U enclosure kit parts

2U shipping kit part numbers

Description	Part number
Node shipping kit	P12610-002
Drive shipping kit	P12610-001

Description	Part number

Description	Part number
2U rail kit	870033-001

Quantity	Description
2	Rear support bracket
4	Screw, T15 pan head
1	Left rail
1	Right rail
5 (1 for the front and rear of each rail, and 1 extra)	Rail safety screw

Capacity upgrade kit contents

HPE StoreOnce 3660 capacity upgrade kit contains:

- 2U storage enclosure containing one dual integrated SAS I/O module and twelve 8TB HDD disks
- Rail kit
- One 1m SAS cable
- One 2m SAS cable
- Two power cables
- Capacity upgrade LTU (license)
- One front bezel

HPE StoreOnce 5260/5660 capacity upgrade kit contains:

- 2U storage enclosure containing one dual integrated SAS IO module and twelve 16TB disks
- Rail kit
- One 1 m SAS cable
- One 2 m SAS cable
- Two power cords
- Capacity upgrade LTU (license)
- Read This First and Important cards

Capacity upgrade planning considerations

The StoreOnce System remains available and the existing storage remains accessible during the capacity upgrade process. However, Hewlett Packard Enterprise recommends the following:

- Schedule the capacity upgrade as a maintenance activity during a quiet period.
- Notify administrators of the upgrade plan.
- Check to see how any scheduled jobs, such as replication, might be affected by decreased performance.
- Check the status of the existing storage and resolve any issues before proceeding with the capacity upgrade.

The length of the upgrade process, including installing, cabling, licensing, and configuring the new storage, depends on the size of the upgrade. The entire upgrade process takes from 8 -24 hours depending on the system.

- StoreOnce 3660, 5260 and 5660 systems support only **OFFLINE** expansion. The server node and enclosures must be powered off

before connecting the new enclosure for offline expansion.

- Cable installation and cable movements **must** follow the numbered sequence.
- When additional shelves are added to a system, the Smart Array must initialize parity of the new logical volume.
- Parity initialization on newly connected enclosures can take up to 24 hours.
- If multiple shelves are added, parity is initialized in parallel.

Please ensure the following steps are taken when installing a new enclosure:

1. Cleanly shut down the server node and all existing enclosures.
2. Disconnect all power cables from the server and enclosures.
3. Perform the storage expansion, remembering the numbered sequence required to connect the enclosures. Ensure that only necessary changes are made to complete the expansion.

   WARNING: Incorrect connections can lead to Data Loss.
4. Connect back all of the SAS cables correctly the same order, following the configuration diagrams.
5. Connect back the **enclosure** power cables only and wait for a few minutes until the enclosures are powered up.
6. When the enclosures are powered up, connect the **server** power cables and power on the server.

Safety considerations

For detailed safety information, see the rack documentation and the Safety Guide provided with the rack product.

WARNING:

Use extreme caution when installing and pulling units from the rack. They can slip and fall, damaging the StoreOnce System or causing personal injury.

Hewlett Packard Enterprise is not responsible for any injury or damage caused by the mishandling of the StoreOnce System. Always use at least two people to lift and install a storage enclosure into the rack.

To reduce the risk of personal injury or damage to the equipment, be sure that:

- The leveling jacks are extended to the floor.
- The full weight of the rack rests on the leveling jacks.
- The stabilizing feet are attached to the rack of a single-rack installation.
- Only one component is extended at a time. A rack may become unstable if more than one component is extended for any reason.

Cable labels

The StoreOnce capacity upgrade kit (enclosure) includes a sheet of preprinted cable label pairs. Each pair contains two identical labels, one for each end of the SAS cable.

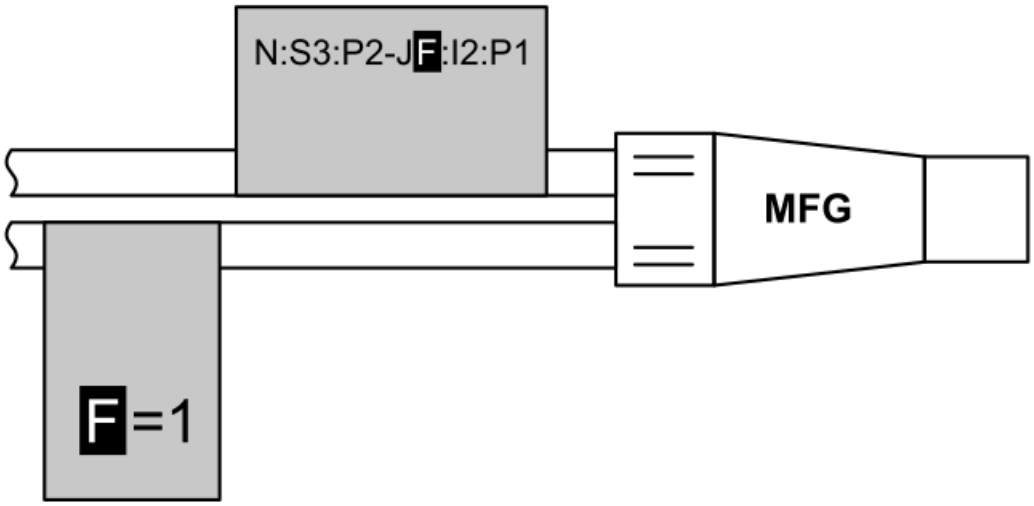
These labels use this convention: N:S6:P1 - J1:I1:P1, where:

- N = Node (server node)
- S = Slot
- P = Port
- J = JBOD
- I = I/O module
- F = Floating number (for moving cables)

Apply the correct pair of labels to each SAS cable as you cable the storage enclosure.

When labeling moving cables that require the additional " F=" label:

- Wrap each label around one cable only.
- Apply the labels so the orientation of the lettering matches the orientation of the manufacturer's mark.
- Place the "F=" label farthest from the connector.



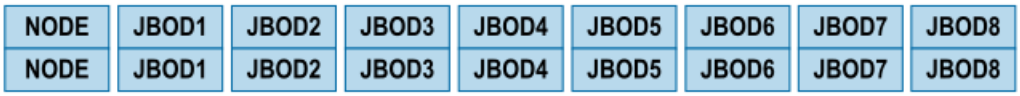
Drive enclosure labels

The storage system is shipped with labels for each drive enclosure in a rack.

IMPORTANT:
Only label the drive enclosures that are installed. Do not label any rack units reserved for future use.

The drive enclosure labels come as stickers ranging from **JBOD1 - JBOD8**. The following figure illustrates a drive enclosure label packet.

Figure 1. Drive enclosure labels



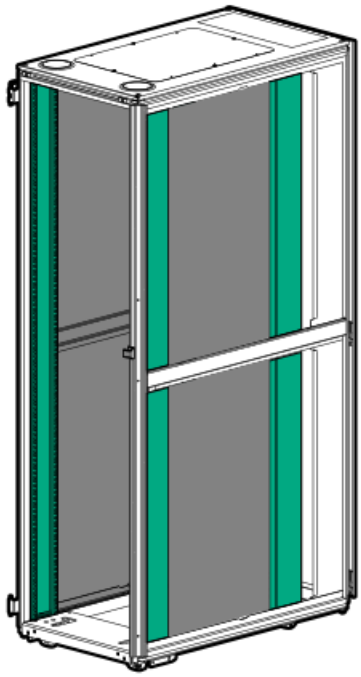
Use the labels to identify a drive enclosure when cabling it.

Guidelines for the rail kit installation in a rack

- Ensure that the rack is compatible with the storage system.

  The storage system is compatible with most industry standard, four-post, EIA-310, 48.3 cm (19 in) racks with square mounting holes. The rail kit supports rack post depths of 26.5 inches to 32.5 inches.

- The rail kits require a minimum width of 18.38mm between the inner RETMA column edge and any rack component between the columns. In the following image, the gray indicates a rail, which takes up the full space between the front and rear RETMA rails.



- Install a rail kit in the rack for each enclosure in your storage system.

Planning the rack layout for the HPE StoreOnce 3660

Installing the HPE StoreOnce 3660 R7M22A capacity upgrade kit

Install the first capacity upgrade enclosure below the server node.

Install a second capacity upgrade enclosure below the first capacity upgrade enclosure.

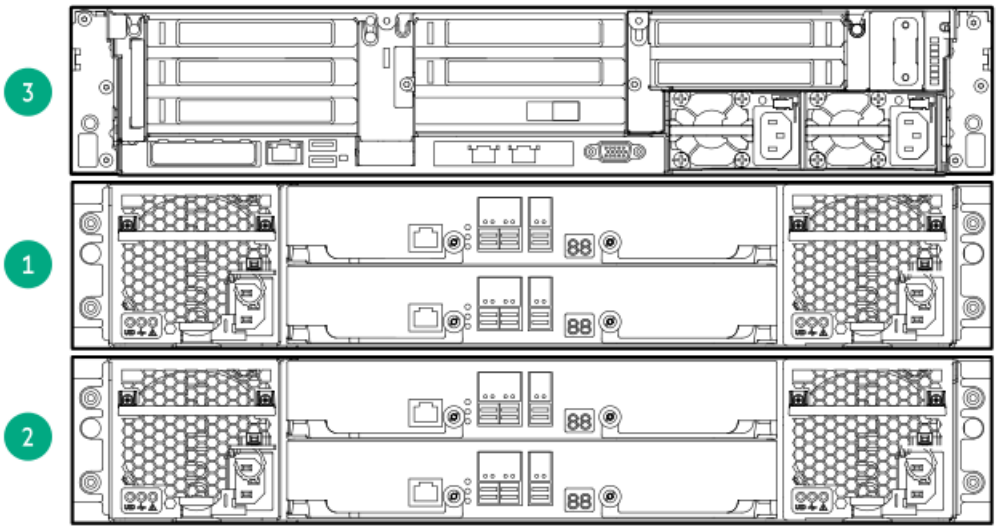


Table 1.

Item	Component

Item	Component
3	Server node.
1	JBOD 1: First capacity upgrade kit. Install directly below the server node.
2	JBOD 2: Second capacity upgrade kit. Install directly below JBOD 1.

Planning the rack layout for the HPE StoreOnce 5260 enclosure

Installing the HPE StoreOnce 5260/5660 R7M23A capacity upgrade kit

Install the first capacity upgrade enclosure immediately above the server node. Add capacity upgrade enclosures to the system by alternating them preceding and following the server node. A maximum configuration for a 5260 system has two storage enclosures directly above the server and two following the server.

Figure 1. StoreOnce 5260 system rack layout

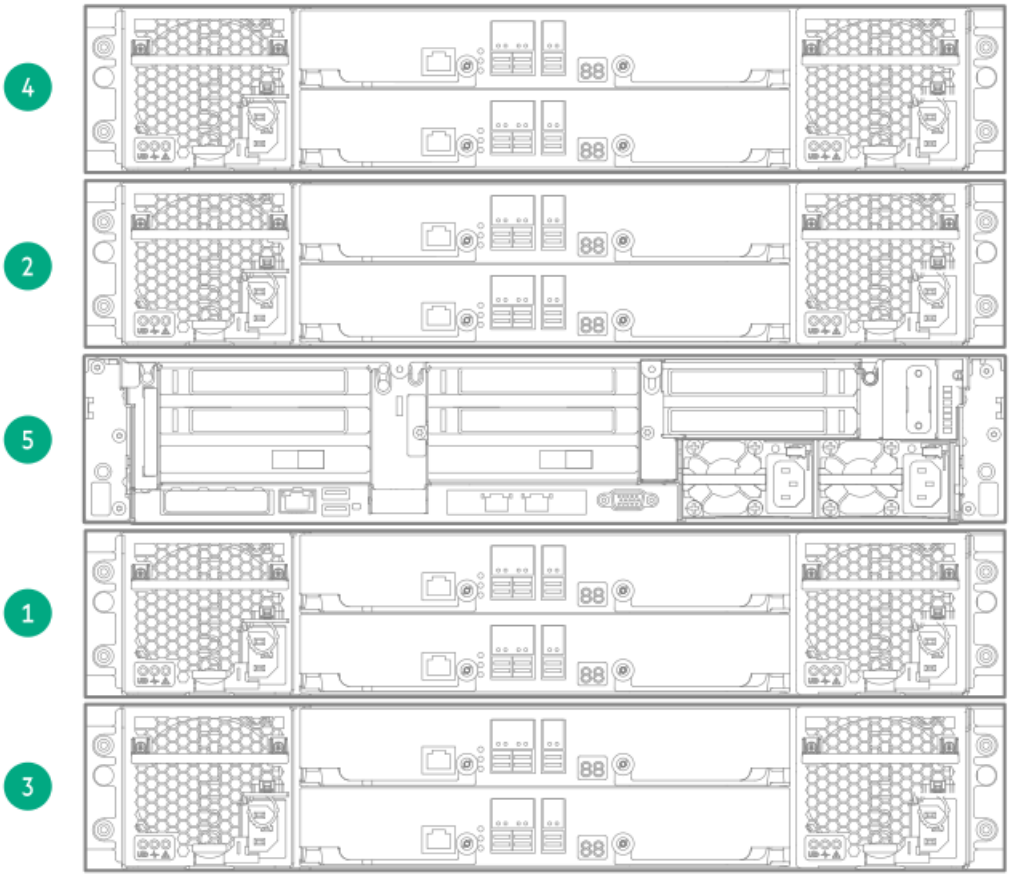


Table 1.

Item	Component
4	JBOD 4: Fourth capacity upgrade kit. Install this component above JBOD 2.
2	Server node JBOD 2: Second capacity upgrade kit. Install this component above the server node.
5	Server node
1	JBOD 1: Base Enclosure. Install this below the server node.
3	JBOD 3: Third capacity upgrade kit. Install the following JBOD.

Planning the rack layout for the HPE StoreOnce 5660 enclosure

Installing the HPE StoreOnce 5260/5660 R7M23A capacity upgrade kit

Install the first capacity upgrade enclosure immediately above the server node. Add capacity upgrade enclosures to the system by alternating them preceding and following the server node. A 5660 system at maximum configuration has four storage enclosures above and four below the server.

Figure 1. StoreOnce 5660 rack layout

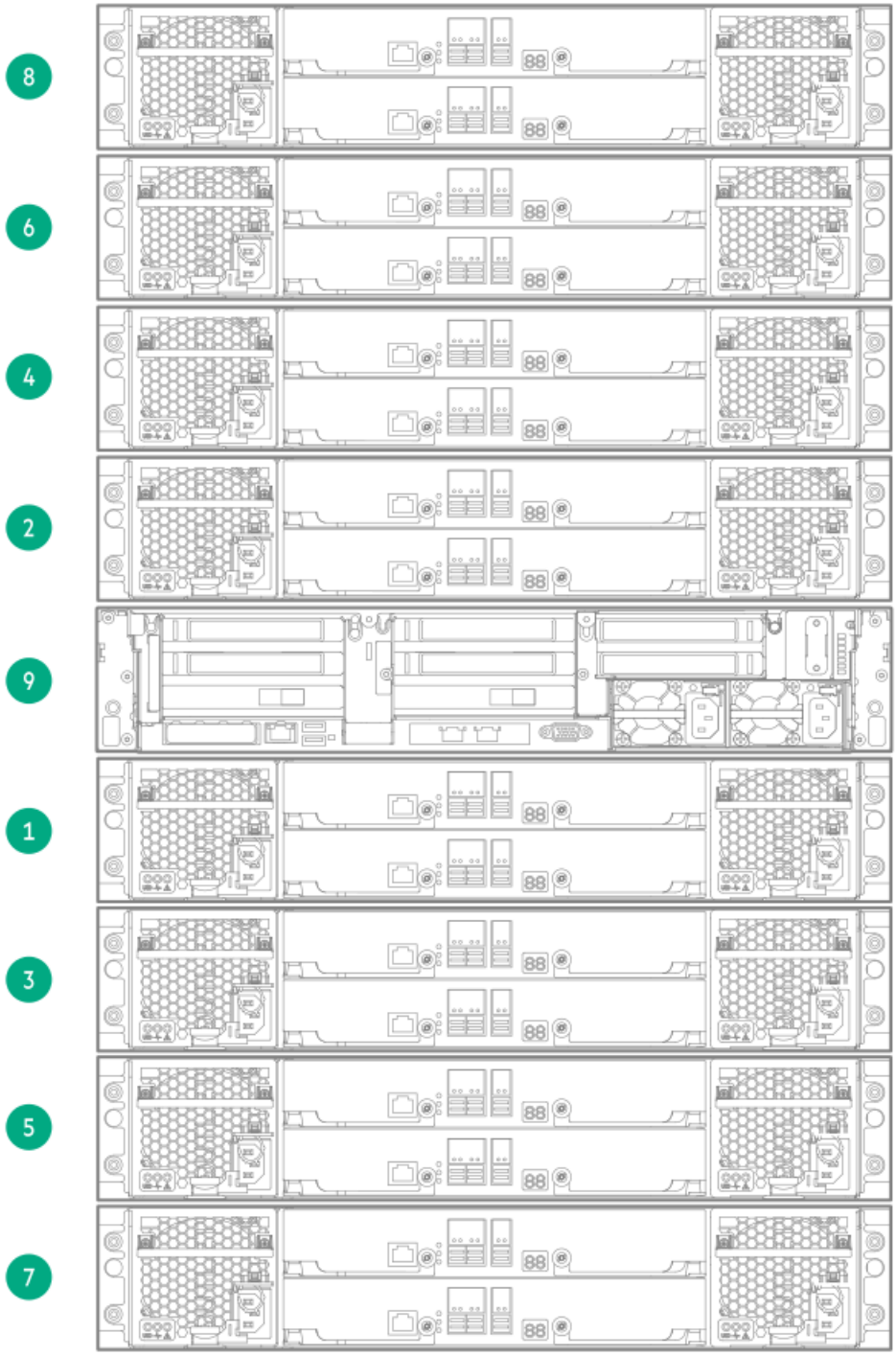


Table 1.

Item	Component
8	JBOD 8: Eighth capacity upgrade kit. Install above JBOD 6.
6	JBOD 6: Sixth capacity upgrade kit. Install above JBOD 4.
4	JBOD 4: Fourth capacity upgrade kit. Install above JBOD 2.

Item	Component
2	JBOD 2: Second capacity upgrade kit. Install directly above server node.
9	Server node.
1	JBOD 1: Base Enclosure. Install below the server node.
3	JBOD 3: Third capacity upgrade kit. Install below JBOD 1.
5	JBOD 5: Fifth capacity upgrade kit. Install below JBOD 3.
7	JBOD 7: Seventh capacity upgrade kit. Install below JBOD 5.

Required tools

About this task

Gather the following tools before you begin the unpacking and installation process.

Purpose	Tools
Preventing ESD	• ESD mat • ESD grounding strap
Opening shipping boxes	• Scissors or snips • Box cutter
Installing rail kits in a rack and installing storage system components	• P2 Phillips screwdrivers • T25 Torx bit and driver • T15 Torx bit and driver • Long shank extension for Torx bits (10-12 inches long)
Lifting storage system enclosures into a rack	• Mechanical lift

StoreOnce websites

HPE Support Center Knowledge Base for StoreOnce products

www.hpe.com/info/storeonce/docs

HPE StoreOnce Support Matrix

www.hpe.com/storage/StoreOnceSupportMatrix

HPE StoreOnce Systems QuickSpecs

www.hpe.com/support/StoreOnceQuickSpecs

HPE StoreOnce Data Protection Backup Appliances information page

www.hpe.com/storage/storeonce

General websites

Storage white papers and analyst reports

www.hpe.com/storage/whitepapers

Enter "StoreOnce" into the keyword search box.

Subtopics

Other sources of information for HPE StoreOnce Systems

The following documents include information that is not incorporated into this document and are available from the HPE website at:

http://www.hpe.com/info/storeonce/docs

- HPE StoreOnce Optional Hardware Installation and Configuration Guide
  This guide describes how to install and license StoreOnce Optional Hardware that is installed after the initial installation.
- HPE StoreOnce System User Guide
  This guide contains detailed information about the StoreOnce Management Console and troubleshooting information.
- HPE StoreOnce System Linux and UNIX Configuration Guide
  This guide explains how to configure StoreOnce Systems with supported Linux and UNIX operating systems.
- OST plug-in documents:
  Various guides are available describing how to configure backup applications for use with StoreOnce Catalyst.

Support and other resources

Subtopics

Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

  https://www.hpe.com/info/assistance
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

  https://www.hpe.com/support/hpesc

Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages

- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:

  Hewlett Packard Enterprise Support Center

  https://www.hpe.com/support/hpesc

  Hewlett Packard Enterprise Support Center: Software downloads

  https://www.hpe.com/support/downloads

  My HPE Software Center

  https://www.hpe.com/software/hpesoftwarecenter
- To subscribe to eNewsletters and alerts:

  https://www.hpe.com/support/e-updates
- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center More Information on Access to Support Materials page:

  https://www.hpe.com/support/AccessToSupportMaterials

IMPORTANT:
Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Onepass set up with relevant entitlements.

Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which initiates a fast and accurate resolution based on the service level of your product. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

HPE Get Connected

https://www.hpe.com/services/getconnected

HPE Pointnext Tech Care

https://www.hpe.com/services/techcare

HPE Complete Care

https://www.hpe.com/services/completecare

Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider.

Warranty information

To view the warranty information for your product, see the links provided below:

HPE ProLiant and IA-32 Servers and Options

https://www.hpe.com/support/ProLiantServers-Warranties

HPE Enterprise and Cloudline Servers

https://www.hpe.com/support/EnterpriseServers-Warranties

HPE Storage Products

https://www.hpe.com/support/Storage-Warranties

HPE Networking Products

https://www.hpe.com/support/Networking-Warranties

Regulatory information

To view the regulatory information for your product, view the Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products, available at the Hewlett Packard Enterprise Support Center:

https://www.hpe.com/support/Safety-Compliance-EnterpriseProducts

Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

https://www.hpe.com/info/reach

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

https://www.hpe.com/info/ecodata

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

https://www.hpe.com/info/environment

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, use the Feedback button and icons (located at the bottom of an opened document) on the Hewlett Packard Enterprise Support Center portal (**https://www.hpe.com/support/hpesc**) to send any errors, suggestions, or comments. All document information is captured by the process.