Commvault HyperScale™ X Appliance HS4300 Deployment Guide

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About this guide

Use this guide to prepare an environment for the Commvault HyperScale™ HS4300 appliance installation. This document is a quick start guide to ensure successful preparation of the environment for an HS4300 appliance deployment. Complete the prerequisites listed within this guide prior to scheduling the included 4-hour remotely assisted installation with the Commvault Customer Care team.

Use this guide to:

- Prepare the environment for the HS4300 appliance installation.

- Install the HS4300 3-node appliance in a rack enclosure.

Review:

- Cabling options for the environment.

- Technical specifications and power requirements for the HS4300 appliance.

- Complete the pre-installation checklist and have available during installation.

This guide is not for:

- Setting up the appliance, see Commvault's Documentation Online for setup procedures.

Before you begin

- Prior to unpacking, inspect packages for shipping damage. If damage is apparent, photograph it and contact Commvault Technical Support (www.commvault.com/contact-us/support) before proceeding. Save cartons and packing material in case return shipment to Commvault is necessary.

- Space requirements: each appliance node uses 2 Rack Units (2U) of space.

- Network cabling is not included with the HS4300 appliance. Please gather and run all needed cables before setting up the appliance. See cabling section of this document for details.

- Optional fibre channel or SAS cables will be required for connecting to the fibre channel and SAS controllers. Cables are not provided with the appliance.

- Use a local console capability available during install.

What's in the box?

A Commvault HyperScale™ X Appliance shipment consists of three boxes. Ensure that each box contains the following:

- 2x Power Cables 1 m C13 to C14 connector

- Commvault HyperScale™ X Appliance 2U Bezel

- Microsoft Client Access License Certificate

- Commvault HS4300 first information

- Deployment guide (this document)

- Server guide

- Commvault HS4300 safety notes and regulations

Microsoft Windows Server 2019 License

Please find the Microsoft Windows Server 2019 Standard Product Key sticker on the top of the server. Carefully scratch the remainder of the key and make note of the Windows Product Key. Each node will have an individual license.

Figure 1: HS4300 node with Windows Server License

Preparing the environment for the appliance

The following prerequisites must be completed to ensure a successful installation of the HS4300.

Completing the pre-installation checklist

Complete the pre-installation checklist. Each node requires at least three IP addresses on at least two network subnets. DNS is optional but not required for the appliance nodes.

The HS4300 appliance will use the data network to communicate to the client/servers to be managed and protected in the environment. This connection requires an IP address for each node in the appliance. The storage network is a private network for the nodes in the appliance to communicate for the storage cluster. This network IP address does not need a name in DNS or a gateway and should be a private subnet. Isolation of the storage network using a private vLAN is the recommended best practice to avoid high packet collision rates. Please visit Commvault's online documentation to download the pre-installation checklist.

Additional site requirements

Prior to scheduling an installation, please ensure the following items are ready:

- Completed pre-installation checklist
- Appliance racked, cabled to the network and powered
- Ability to connect to the appliance remotely for support setup

Important notice: If installing or adding a single node to an existing cluster, the new node must be cabled and the network configuration must be the same as the existing nodes in the storage pool. The single-node should be added to the same data and storage subnet and vLAN as the existing nodes.

Racking and cabling the HS4300 appliance

Installing the rails

This section provides information on installing the HS4300 chassis into a rack unit with the rails provided. The following is a basic guideline for installing the system into a rack with the rack mounting hardware provided. You should also refer to the installation instructions that came with the specific rack you are using.

Identifying the rack rails

Note: This rail will fit a rack between 26" and 33.5" deep.

The chassis package includes two rail assemblies in the rack mounting kit. Each assembly consists of three sections: an inner chassis rail which secures directly to the chassis, an outer rail that secures to the rack, and a middle rail which extends from the outer rail. These assemblies are specifically designed for the left and right side of the chassis.

Locking tabs

Each inner rail has a locking tab. This tab locks the chassis into place when installed and pushed fully into the rack. These tabs also lock the chassis in place when fully extended from the rack. This prevents the server from coming completely out of the rack when the chassis is pulled out for servicing.
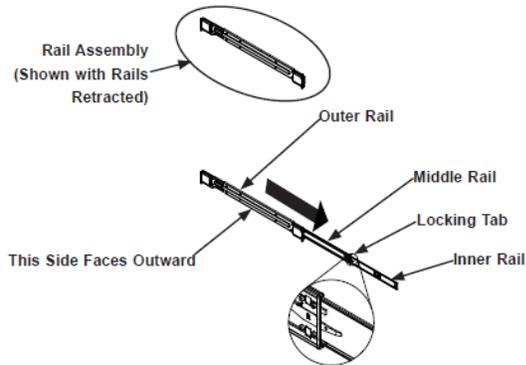
Figure 2: Identifying the rail sections

Note: Slide rail mounted equipment is not to be used as a shelf or a workspace.

⚠ **Warning: Do not pick up the server with the front handles. They are designed to pull the system from a rack only.**

Releasing the inner rail

Each inner rail has a locking latch. This latch prevents the server from coming completely out of the rack when the chassis is pulled out for servicing.

To mount the rail onto the chassis, first release the inner rail from the outer rails.

Releasing inner rail from the outer rails

1. Pull the inner rail out of the outer rail until it is fully extended as illustrated below.
2. Press the locking tab down to release the inner rail.
3. Pull the inner rail all the way out.
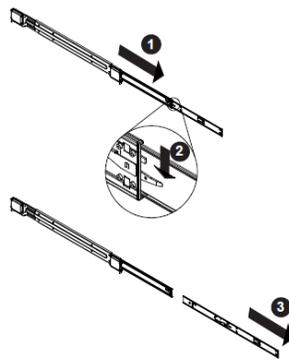4. Repeat for the other outer rail.

Figure 3: Extending and releasing the inner rails

Installing the inner rails on the chassis

Installing the inner rails

1. Identify the left and right inner rails. They are labeled.

2. Place the inner rail firmly against the side of the chassis, aligning the hooks on the side of the chassis with the holes in the inner rail.

3. Slide the inner rail forward toward the front of the chassis until the quick release bracket snaps into place, securing the rail to the chassis.

4. Optionally, you can further secure the inner rail to the chassis with a screw.
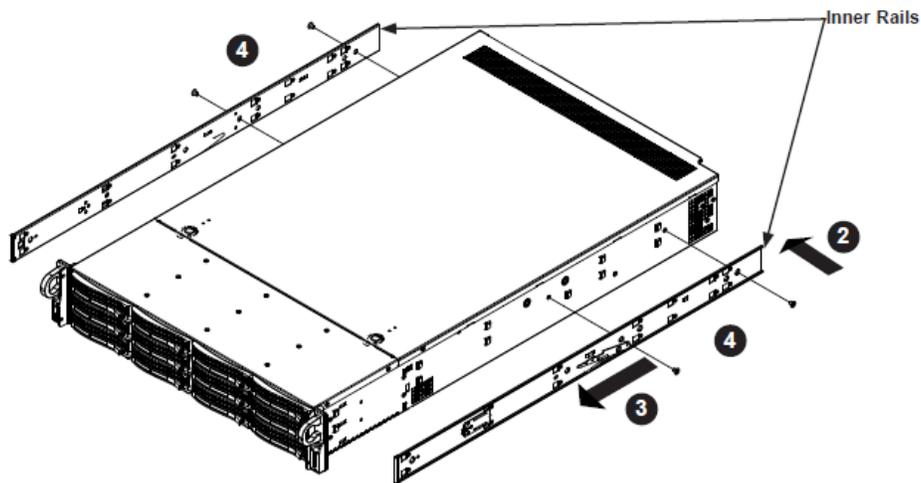
5. Repeat for the other inner rail.
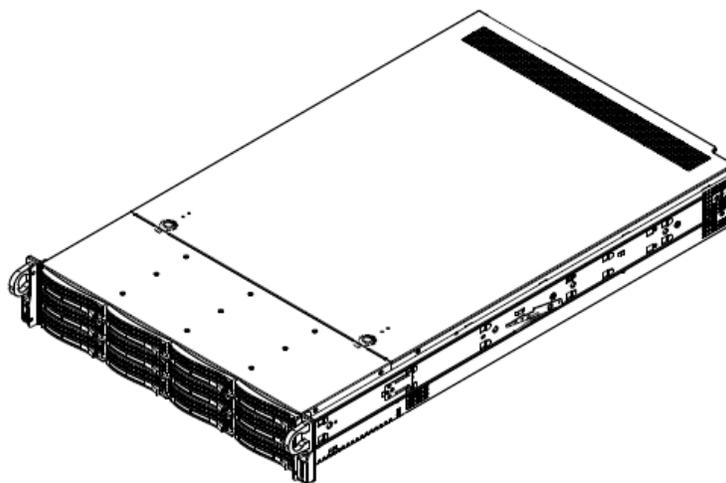

Figure 4: Installing the inner rails

Figure 5: Inner rails installed on the chassis

Installing the outer rails onto the rack.

Installing the outer rails

1. Press upward on the locking tab at the rear end of the middle rail.

2. Push the middle rail back into the outer rail.

3. Hang the hooks on the front of the outer rail onto the square holes on the front of the rack. If desired, use screws to secure the outer rails to the rack.

4. Pull out the rear of the outer rail, adjusting the length until it just fits within the posts of the rack.

5. Hang the hooks of the rear section of the outer rail onto the square holes on the rear of the rack. Take care that the proper holes are used so the rails are level. If desired, use screws to secure the rear of the outer rail to the rear of the rack.
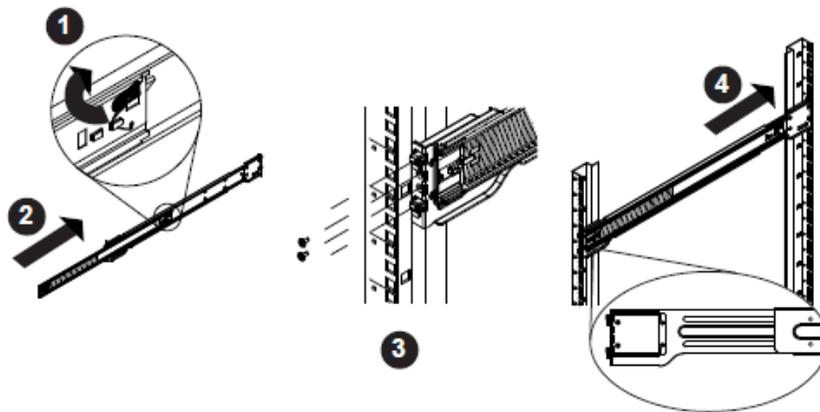
6. Repeat for the other outer rail.

Figure 6: Extending and releasing the outer rails

Note: Figure is for illustrative purposes only. Always install servers to the bottom of a rack first.

⚠ Warning: Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.

Sliding the chassis onto the rack rails

⚠ Warning: Mounting the system into the rack requires at least two people to support the chassis during installation. Please follow safety recommendations printed on the rails.

Installing the chassis into a rack

1. Extend the outer rails as illustrated above.

2. Align the inner rails of the chassis with the outer rails on the rack.

3. Slide the inner rails into the outer rails, keeping the pressure even on both sides. When the chassis has been pushed completely into the rack, it should click into the locked position.

4. Optional screws may be used to hold the front of the chassis to the rack.
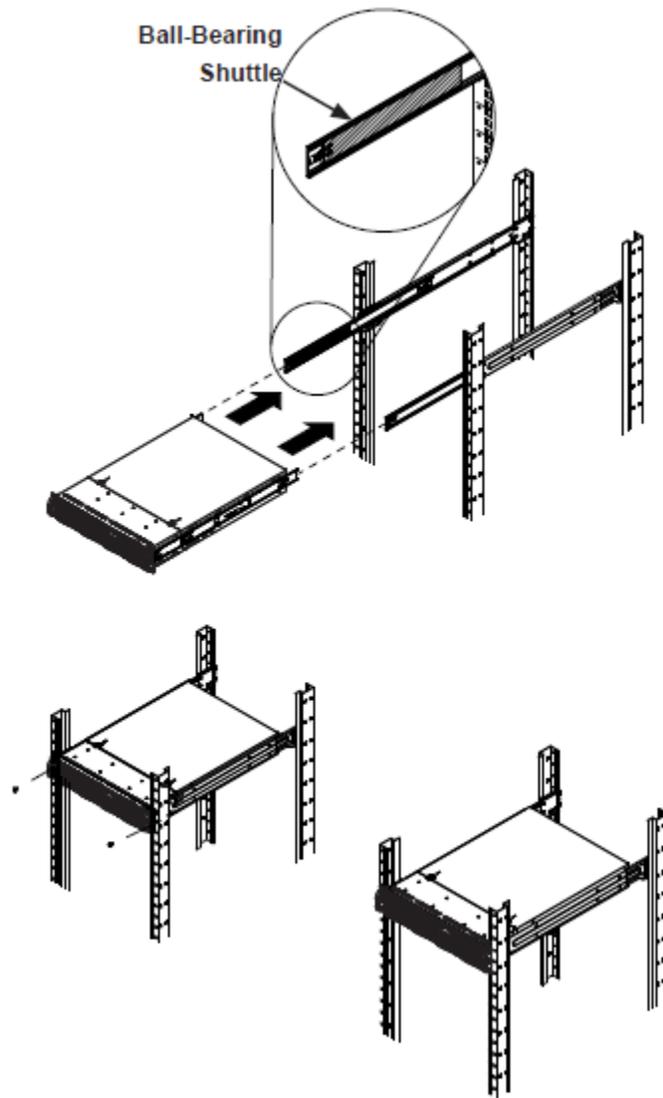
Figure 7: Installing into a rack

Note: The figure above is for illustrative purposes only. Always install servers to the bottom of the rack first.

⚠ Caution: Do not pick up the server with the front handles. They are designed to pull the system from a rack only.

Cabling the power supplies

Each node has redundant power supplies which can be connected to two independent power sources.

The supplied cables will fit the power receptacles in a typical enclosure. Alternate power cables may be needed if the enclosure does not support C13 connections. Each node should be connected to two power sources.

Steps

1. Connect the first power supply (PSU) of each node to the first power source in the enclosure rack.

2. Connect the second power supply (PSU) of each node to the second power source in the enclosure rack.

The two 1-meter power cables provided with each node are compatible with 110 VAC or 250 VAC.

Figure 8: C13 to C14 AC Cable

Cabling the HS4300 appliance network

Up to two 10 GbE ports can be connected to the data protection network and up to two 10 GbE ports can be connected to the private storage cluster network. The 1 GbE Ethernet integrated baseboard management controller (BMC) port is connected to the management or utility network for "lights out" access.

- All data management tasks including backups and restores, including virtual CommServe® connectivity, are established through the 10 GbE data protection port. See the Data Connections in the cabling diagrams.

- All storage related tasks, including all cluster connectivity for the storage network, will be through the private storage network 10 GbE port. See cabling diagrams.

- Each node has two dual port 10 GbE adapters with an LC SFP+ transceiver installed in each port. These can be used for 10 GbE fiber cabling or, can be removed for copper Twinax cabling if desired.

Figure 9: LC SFP+ Transceiver Modules (included)

Figure 10: SFP+ Multimode LC/LC (not included)

Figure 11: Optional 10G SFP+ Twinax Cabling (not included)

Each node of the HS4300 ships with 2x dual port 10 Gb Network Interface Adapters. These can be cabled as single network connections or bonded connections. Follow the procedures below to match the desired network configuration.

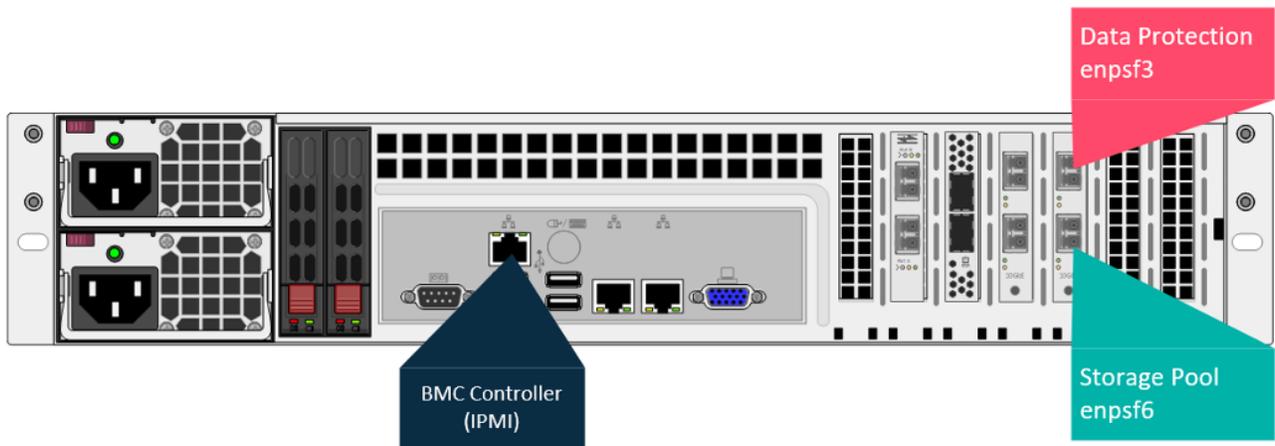## Cabling a single connection for each network

Steps

- Connect the 10 GbE data network of each node to the data protection network.

- Connect the 10 GbE storage network of each node to a port on a private non-routable subnet, preferably private vLAN, on the network.

Important: The storage network and data protection network must be on two separate subnets, and preferably the Storage network should be on a private vLAN.

- Connect the 1 GbE IPMI to the management network.

Important: If the CommServe® is configured on the appliance, this network must have a route to the data protection network.

Figure 12: Single connection per node

Cabling a bonded connection for each network

Use the following steps to connect each node for bonding.

Steps

- Connect the 10 GbE data protection network of each node to the data protection network on switch A and switch B.

- Connect the 10 GbE storage network of each node to the private storage network on switch A and switch B.

Important: The storage network and data protection network must be on two separate subnets. Best practice is to isolate the storage network on a private vLAN.

- Connect the 1G bE IPMI, to the management network.

Important: If the CommServe® is configured on the appliance, this network must have a route to the data protection network.

Figure 13: 10 GbE bonding connection per node
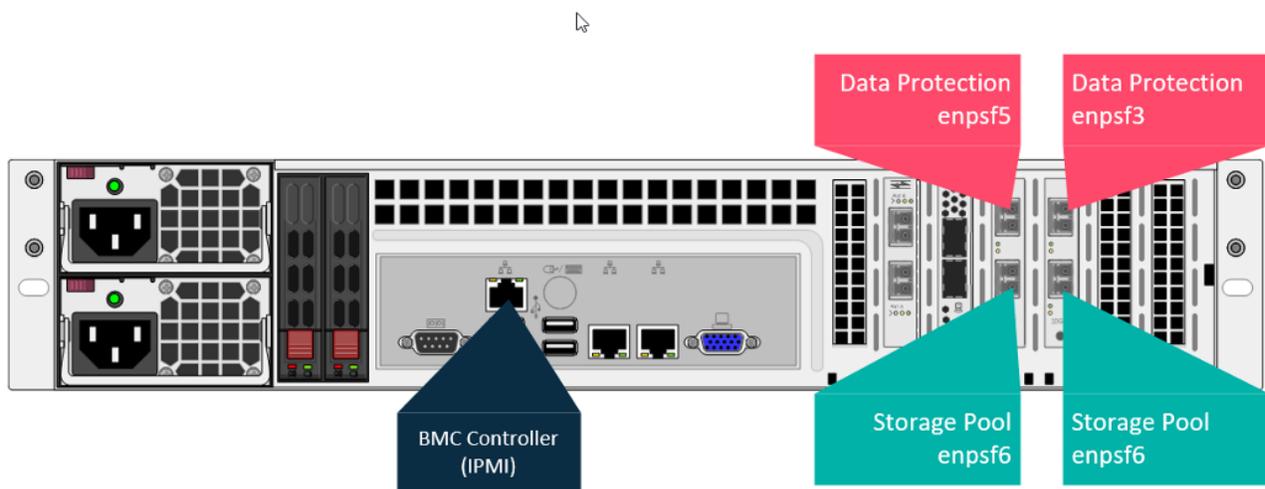
What to do next?

- Each Commvault HyperScale™ X Appliance comes with Commvault Professional Services setup assistance. Please contact your local Commvault team to schedule your appliance setup services.

- For further setup and configuration information visit https://documentation.commvault.com/HyperScale.

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