Commvault HyperScale™ X Appliance HS2300 Deployment Guide

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About this guide

Use this guide to prepare an environment for the Commvault HyperScale™ X HS2300 appliance installation. This document is a quick start guide to ensure successful preparation of the environment for an HS2300 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 HS2300 appliance installation.

- Install the HS2300 3-node appliance in a rack enclosure.

Review:

- Cabling options for the environment.

- Technical specifications and power requirements for the HS2300 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 1 Rack Unit (1U) of space.

- Network cabling is not included with the HS2300 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 may be required for connecting to the fibre channel and SAS controllers.

- 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 C14 to C13 connector

- Commvault HyperScale X Appliance 1U Bezel

- Microsoft Client Access License Certificate

- Commvault HS2300 First Information

- Deployment Guide (this document)

- Commvault HS2300 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: HS2300 Node with Windows Server License

Preparing the environment for the appliance

The following prerequisites must be completed to ensure a successful installation of the HS2300.

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. Choose the redundant or basic networking method. The pre-installation checklist for each method can be found in Books Online here: https://documentation.commvault.com/commvault/v11/article?p=127736.htm.

The HS2300 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.

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

Racking and cabling the HS2300 appliance

Installing the rails

This section provides information on installing the HS2300 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 rack rail assemblies in the rack mounting kit. Each assembly consists of two sections: an inner fixed chassis rail that secures directly to the server chassis and an outer fixed rack rail that secures directly to the rack itself.
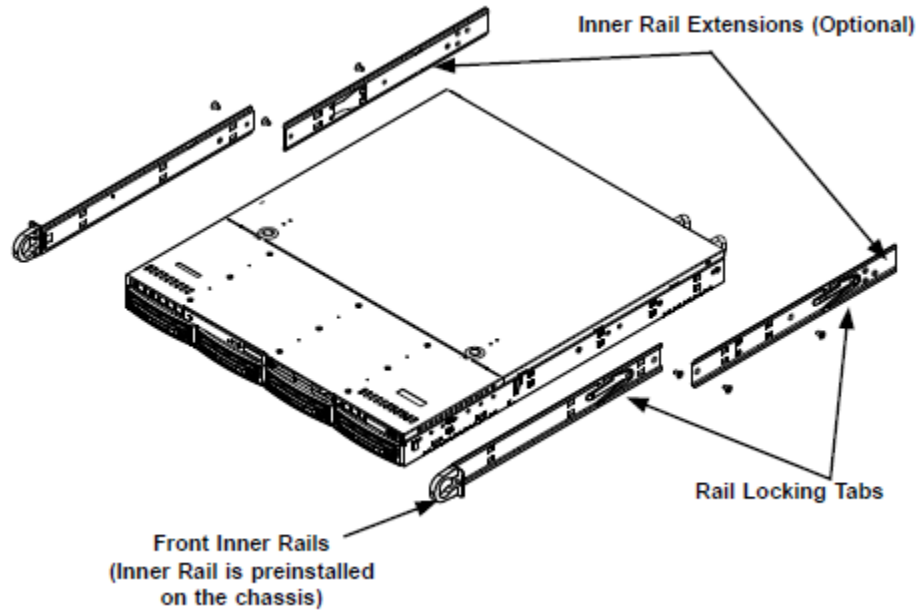
Figure 2: Identifying the sections of the Rack Rails

Locking tabs

Each inner rail has a locking tab. The tabs lock the server into place when installed and pushed fully into the rack. These tabs also lock the server in place when fully extended from the rack. This prevents the server from coming completely out of the rack when you pull it out for servicing.
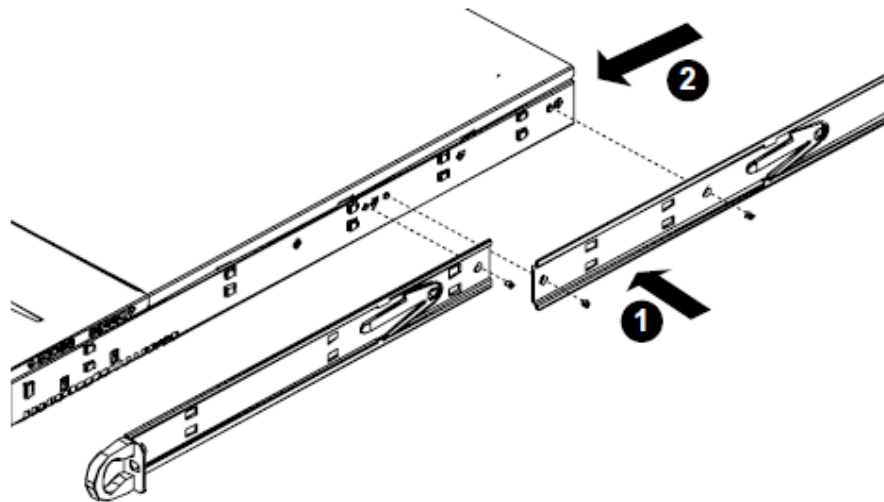

Figure 3: Identifying the Sections of the Rack Rails (right side rail shown)

The inner rail extension (optional)

The inner rails are pre-attached and do not interfere with normal use of the chassis if you decide not to use a server rack. Attach the inner rail extension to stabilize the chassis within the rack. If you are not using a rack, you do not have to install the inner rail extensions.

Installing the inner rails

1. Place the inner rack extensions on the side of the chassis aligning the hooks of the chassis with the rail extension holes. Make sure the extension faces "outward" just like the pre-attached inner rail.

2. Slide the extension toward the front of the chassis.

3. Secure the chassis with two screws as illustrated. Repeat steps for the other inner rail extension.

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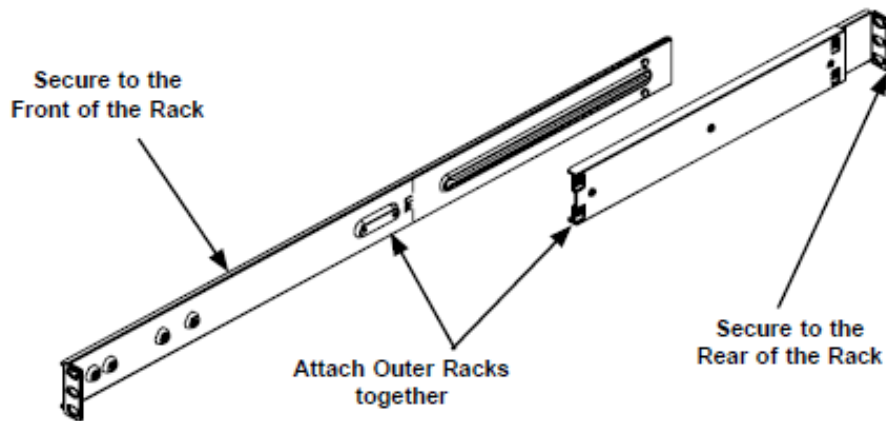

Figure 4: Assembling the Outer Rails

Outer rack rails

Outer rails attach to the server rack and hold the server in place. The outer rails for the SC815 chassis extend between 30 inches and 33 inches.

Installing the outer rails to the rack

1. Attach the short bracket to the outside of the long bracket. You must align the pins with the slides. Also, both bracket ends must face the same direction.

2. Adjust both the short and long brackets to the proper distance so that the rail fits snugly into the rack.

3. Secure the long bracket to the front side of the outer rail with two M5 screws and the short bracket to the rear side of the outer rail with three M5 screws.

4. Repeat steps 1-3 for the left outer rail.

Installing the chassis into a rack

1. Confirm that chassis includes the inner rails and rail extensions. Also, confirm that the outer rails are installed on the rack.

2. Line chassis rails with the front of the rack rails.

3. Slide the chassis rails into the rack rails, keeping the pressure even on both sides (It may be necessary to depress the locking tabs when inserting). When the server has been pushed completely into the rack, the locking tabs will "click" into the locked position.

4. (Optional) Insert and tightening the thumbscrews that hold the front of the server to the rack.

⚠ **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.**
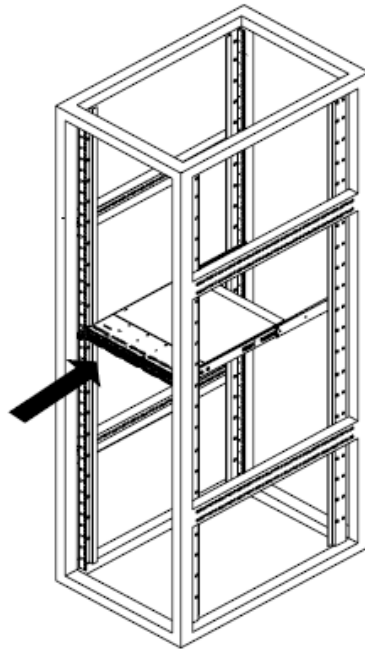

Figure 5: Installing into a Rack

Note: figures are for illustrative purposes only. Always install nodes into racks from the bottom up.

Installing the chassis into a mid-mount position (telco) rack

1. Use the two L-shaped brackets on either side of the chassis (four total).

2. Determine how far the chassis will extend out the front of the rack. Larger chassis should be positioned to balance the weight between front and back. If a bezel is included on your server, remove it.

3. Attach the two front brackets to each side of the chassis, then the two rear brackets positioned with just enough space to accommodate the width of the telco rack.

4. Finish by sliding the chassis into the rack and tightening the brackets to the rack.
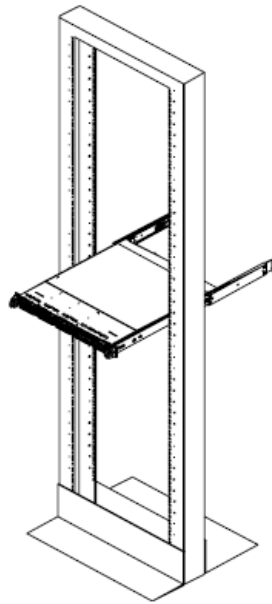
Figure 6: Installing into an Open Rack

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 7: C13 to C14 AC Cable

Cabling the HS2300 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 8: LC SFP+ Transceiver Modules (included)

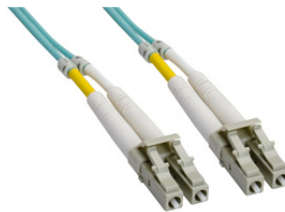**Figure 9: SFP+ Multimode LC/LC (not included)**

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

Each node of the HS2300 ships with 2x dual-port NICs. 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
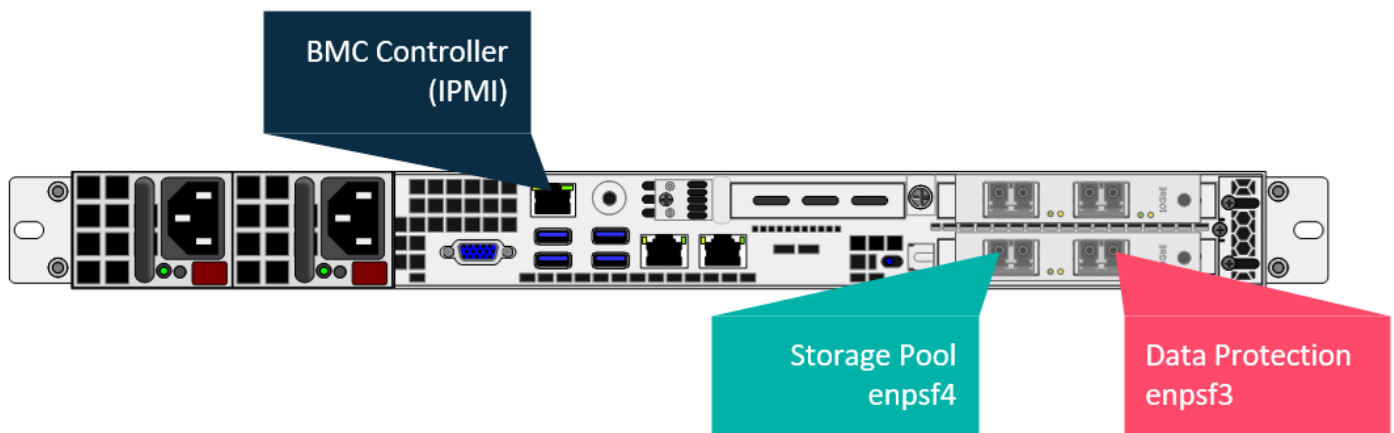
Steps

- 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 iRMC 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 11: 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 1 GbE iRMC, 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: 10 GbE Bonding Connection per node
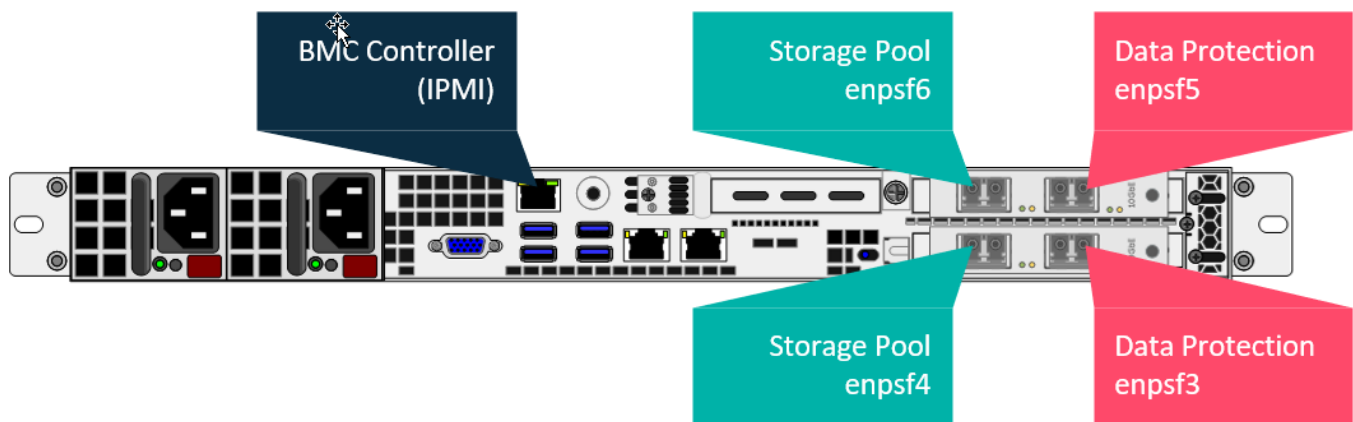
What to do next?

- 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.