

Cisco HyperFlex Systems Server Imaging for Factory Shipped Servers

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Standard Installation Overview

Beginning in April 2024, HyperFlex servers are being shipped from the factory without VMware ESXi preinstalled. This chapter describes the process for manually preparing factory shipped servers for the Cisco HyperFlex install. It is imperative that the ESXi ISO is installed before starting the HyperFlex Installation...

This standard installation method is used for the following install scenarios:

- New cluster deployment.
- Converged node expansion.

Installation and Configuration of Factory Shipped Cisco HyperFlex Systems

Before you begin

Review the installation and configuration requirements for Cisco HyperFlex Systems. See Installation Prerequisites for more details.

Step 1 Download the Cisco HyperFlex Data Platform Installer OVA file from Download Software.

Example:

Cisco-HX-Data-Platform-Installer-v5.5.1a-43232-esx.ova

- **Step 2** Launch the HX Data Platform Installer and sign-in.
 - a) Select Standard Workflow.

b) Select Create Cluster > Create Standard.



- c) Follow the install wizard to provide required details. Refer Installation Workflow for more information.
 - **Note** In Hyperflex standard installation, factory shipped servers are shipped without VMware ESXi preinstalled. Therefore, workflow may fail or pause during Hypervisor configuration.

soons	UCSM	Hypervisor	Deploy	Deploy	Create Cluster	Guster
ESXi Inst	allation Ver	ification				
ESXi must	be installed on	all nodes being add	ded at this point. (heck the KVM	console to ensure ES	Xi is properly booted.
Using ESXi	ISOs other than	the HX customized	images posted on	https://cisco.co	om is not supported.	
Note: ESXI Requireme	6.0 is not suppo nts and Recomm	nted in HXDP Relea	se 4.5(1a) and late ent.	r. For more info	ormation, see the Cisc	o HyperFlex Software
lf an ESXi p If a reboot	urple diagnosti does not help, r	screen is seen on t e-install ESXi using	the KVM console, t an HX customized	ry to reboot the ESXI ISO posted	e server. d on https://cisco.com	
Once ESXi i Full instruc	s installed and t tions for re-inst	fully booted, select i allation can be four	Continue and then id below.	Retry to contin	ue installation.	
I Instru	ctions	A Launc	h UCS Manager			
						Continue
_	1 -0	leanup SPT apportatio	05			

- **Step 3** Perform the ESXi installation using the vMedia method. See Installing VMware ESXi for more details.
 - **Note** By default, the HX Data Platform Installer assigns static IP addresses to the ESXi servers. Using Dynamic Host Configuration Protocol (DHCP) for automatic IP address assignment is not recommended. If you are using DHCP, configure the networking in the ESXi manually with the proper VLANs.
- Step 4
 Return to the HX Data Platform Installer and click the Retry button.

Ensure that you select **Clear Disk Partitions** in the wizard.

Installing VMware ESXi

A supported version of VMware ESXi must be installed on all HX servers in your deployment. At the time this was authored, Cisco recommended installing ESXi 7.0 U2 or later to attain the best HX snapshot performance and functionality. See the Cisco HyperFlex Software Requirements and Recommendations document for the current list of supported ESXi versions.

To install VMware ESXi complete the following tasks in order.

- 1. Download the ESXi Image.
- 2. Upload VMware ESXi ISO to the Installer, on page 3
- 3. Configure vMedia and Boot Policies Through Cisco UCS Manager, on page 3
- 4. Start the VMware ESXi Installation, on page 4
- 5. Undo vMedia and Boot Policy Changes, on page 5

To get started, download the ESXi image:

Step 1 Download the VMware ESXi image from the Cisco HyperFlex Data Platform Download Software page. Select a networked location that can be accessed through Cisco UCS Manager.

Example:

The ESXi image name may vary based on the recommended version for your deployment.

HX-ESXi-7.0U3-21930508-Cisco-Custom-7.3.0.16-install-only.iso

Step 2 Continue to Upload VMware ESXi ISO to the Installer, on page 3.

Upload VMware ESXi ISO to the Installer

To upload the VMware ESXi ISO, complete the following task:

Step 1 Execute the SCP command to upload the VMware ESXi ISO from user's machine to the installer at the
/var/www/localhost/images path.
Example:
scp ~/Downloads/HX*ESX.iso root@<installer_ip>:/var/www/localhost/images
Step 2 Continue to the Configure vMedia and Boot Policies Through Cisco UCS Manager, on page 3.

Configure vMedia and Boot Policies Through Cisco UCS Manager

To configure the Cisco UCS vMedia and Boot Policies, complete the following steps:

Step 1	In Cisco UCS Manager, click the Servers tab in the Navigation Pane.						
Step 2	Expand Servers > Policies > root > Sub-Organizations > hx-cluster > vMedia Policies						
Step 3	Click vMedia Policy HyperFlex.						
Step 4	In the Configuration Pane, click Create vMedia Mount.						
Step 5	Type a name for the mount, for example: ESX .						
Step 6	Select CDD option.						
Step 7	Select HTTP as the protocol.						
Step 8	Type the IP Address of the HyperFlex installer VM, for example: 192.168.10.210.						
Step 9	Select None as the Image Variable Name.						
Step 10	Type the installed ESXi file name as the Remote File.						
	Example:						
	ESXi file name HX-ESXi-7.0U3-21930508-Cisco-Custom-7.3.0.16-install-only.iso						
Step 11	Type /images/ as the Remote Path.						
Step 12	Click Save Changes, and click OK.						
Step 13	In the Configuration Pane, select the HX Node you want to configure in the Configuration Pane. Select Servers > Service Profile Templates > root > Sub-Organizations > hx-cluster > Service Template hx-nodes						
Step 14	Select the vMedia Policy tab.						
Step 15	Click on Modify vMedia Policy.						
Step 16	Select HyperFlex vMedia Policy from the selection, and click OK twice.						
Step 17	$Select \ Servers > Policies > root \ > Sub-Organizations > hx-cluster > Boot \ Policy \ HyperFlex.$						
Step 18	In the Navigation Pane, expand the section titled CIMC Mounted vMedia.						
Step 19	Click on the entry labeled Add CIMC Mounted CD/DVD.						
Step 20	Select the CIMC Mounted CD/DVD entry in the Boot Order list.						
Step 21	Click the Move Up button until the CIMC Mounted CD/DVD entry is listed first.						
Step 22	Click Save Changes and click OK.						
Step 23	When you acknowledge the reboot, then server automatically reboots.						
Step 24	Continue to Start the VMware ESXi Installation, on page 4.						

Start the VMware ESXi Installation

To initiate the VMware ESXi installation and monitor the installation process. It is advisable to open a remote KVM console session to watch the installation. To get started, perform the following steps:

Step 1 In Cisco UCS Manager, click Servers in the Navigation particular servers servers servers in the Navigation particular servers servers in the Navigation particular servers serv	ane.
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- $\label{eq:step2} Step 2 \qquad \text{Expand Servers} > Service \ Profiles > Root > \ Sub-Organizations > \ hx-cluster > \ rack-unit-number.$
- **Step 3** In the Work pane, select the **General** tab.
- Step 4 In the Actions area, click KVM Console.

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	HyperFlex ESAT Installer - 8.0 01 (Build 22088125)
This 19 Runni	50 is designed to be used with HyperFlex HX series converged nodes and supported compute-only nodes ng this installer will re-image a factory fresh ESId with customizations required for HyperFlex.
This IS	50 as booted cannot be used to reimage HyperFlex Edge servers that will be redeployed using the
Hyper	Flex OVA (VM based) installer. You may proceed to re-image a HyperFlex Edge node if redeploying via
the In	tersight installer. If the OVA installer is needed for HyperFlex Edge, first disable secure boot
in the	BIOS (or switch to legacy BIOS boot) and reinstall ESXI. After ESXI is installed, the HX installer
will re	set the server to use UEFI secure boot automatically. Failure to follow these steps will result in
a failu	re during ESXi network provisioning. Consult the field re-image guide for further information.
This n	otice can be ignored for HyperFlex clusters deployed under Cisco Fabric Interconnects (non HX Edge).
	I have read the above notice and wish to continue
	Reboot Server

- **Step 5** Click **Continue** to any security alerts that appear. The remote **KVM Console** window appears shortly and shows the server's local console output.
 - Error messages can be safely ignored.
 - Warning Message: DHCP look-up failed. May prevent access to the system until you customize the network configuration.
- Step 6 Repeat Steps 2-4 for any additional servers whose KVM Console you wish to monitor during the installation.The servers that you are monitoring in the KVM console window immediately reboot, then boot from the remote vMedia mount, and install the Cisco customized ESXi ISO.
- **Step 7** Successful VMware ESXi Installation message:



Undo vMedia and Boot Policy Changes

To prevent the servers from going into a boot loop (constantly booting from the installation ISO file), undo the changes to the boot policy.

Before you begin

Ensure that all the servers have booted from the remote vMedia file and have begun their installation process.

- **Step 1** In Cisco UCS Manager, click **Servers** in the Navigation pane.
- Step 2 Expand Servers > Policies > Root > Sub-Organizations > hx-cluster_name > Boot Policies > Boot Policy HyperFlex
- **Step 3** In the Work pane, click the **General** tab.
- **Step 4** In the Actions area, click **CIMC Mounted CD/DVD**.
- **Step 5** Select the **CIMC Mounted CD/DVD** entry in the **Boot Order** list, and click **Delete**.
- Step 6 Click Save Changes, and click OK.
- **Step 7** Acknowledge the pending changes.

What to do next

Return to the HX Data Platform Installer and click the **Retry** button to proceed with the HyperFlex standard installation.