Cisco HyperFlex Systems Server Imaging for Factory Shipped Servers

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.

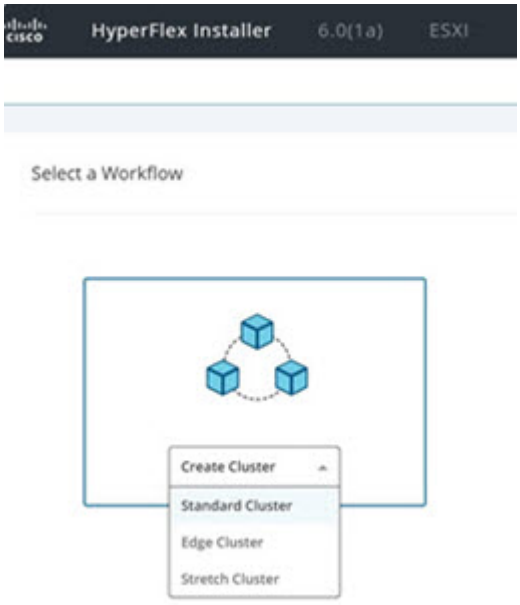
Example:

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

Step 2 Launch the HX Data Platform Installer and sign-in.

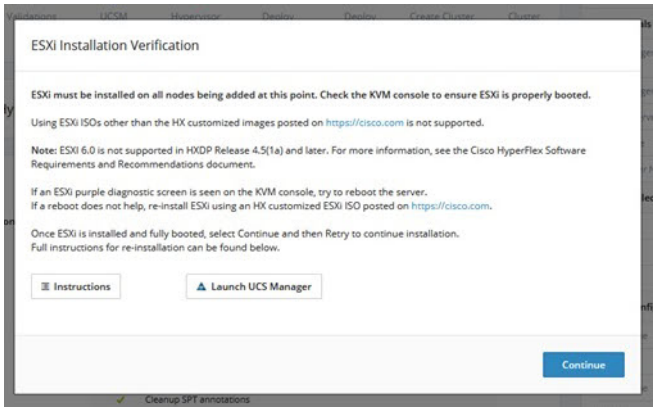
a) Select **Standard Workflow**.

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.



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 pane.

Step 2 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**.

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:

Step 8 Continue to Undo vMedia and Boot Policy Changes, on page 5.

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.