# Cisco HyperFlex Systems Customized Installation Method

## Overview

This chapter describes the process for manually preparing the HyperFlex servers, before moving to the installation steps. This customized installation method can be used during the following scenarios:

- Adding a compute-only node to the HyperFlex cluster.

- Redeploying your Cisco HyperFlex System.

The tasks to perform are essentially the same as for deploying pre-configured HyperFlex Systems. The new task specific to non pre-configured systems is, installing VMware ESXi.

## Installation and Configuration Workflow for Non Pre-Configured Cisco HyperFlex Systems

**Before you begin**

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

**Step 1** Clean up the existing environment by deleting the cluster in vCenter. Remove the vCenter MOB entries, UCS Manager service profiles, and VLANs in Cisco UCS.

**Step 2** Download the **Cisco HyperFlex Data Platform Installer OVA** file from Download Software.

**Example:**

```
Cisco-HX-Data-Platform-Installer-v2.5.1b-26284.ova
```

**Step 3** Launch the HX Data Platform Installer and sign-in.

a) Select **Customized Workflow**.

b) Select **Run UCS Manager configuration** to configure UCS service profiles. Follow the steps as described in Configuring Cisco UCS Manager and HX Data Platform section of the Cisco HyperFlex Systems Installation Guide for VMware ESXi.

**Step 4** Perform a fresh ESXi installation using the vMedia method.

**Note** Using Dynamic Host Configuration Protocol (DHCP) for automatic IP address assignment in not recommended. By default, the HX Data Platform Installer assigns static IP addresses to the ESXi servers. If you are using DHCP, configure the networking in the ESXi manually with the proper VLANs.

**Step 5** Launch the HX Data Platform Installer again.

a) Select **Customized Workflow**.

b) Select **Run ESX Configuration**, **Deploy HX Software**, and **Create HX Cluster**.

Ensure that you select **Delete Existing Partitions** in the wizard.

# Installing VMware ESXi

The servers must have a supported version of VMware ESXi. To attain the best HX snapshot performance and functionality, Cisco recommends installing ESXi 7.0 U2 or later. See the latest Release notes for Cisco HX Data Platform for a list of supported ESXi versions.

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**Important** Install ESXi on each HX server.

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.

The HX custom ISO is based on the Cisco custom ESXi release.

For example,

```
HX-Vmware-ESXi-60U2-4192238-Cisco-Custom-6.0.2.3.iso
```

.

**What to do next**

- Configure vMedia and Boot Policies through Cisco UCS Manager.

- Open a remote KVM console.

- Reboot the servers to begin installation.

• Undo vMedia and Boot Policy changes through Cisco UCS Manager.

# Configure vMedia and Boot Policies Through Cisco UCS Manager

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

### Before you begin

Log into HX Data Platform Installer. Run the **Create Cluster** workflow for standard cluster. up to Cisco UCS Manager configuration.

| **Note** | Create a cluster with name as *Temporary*, so it is easier to identify it during service profile disassociation from the server. |

| | |
|---|---|
| **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** | Enter a name for the mount, for example: **ESX**. |
| **Step 6** | Select the **CDD option**. |
| **Step 7** | Select the **HTTP** as the protocol. |
| **Step 8** | Enter 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** | Enter **HX-Vmware-ESXi-6.0.0-3380124-Custom-Cisco-6.0.1.2.iso** as the Remote File. |
| **Step 11** | Enter **/images/** as the **Remote Path**. |
| **Step 12** | Click **Save Changes**, and click **OK**. |
| **Step 13** | In the Configuration Pane, select **Servers** > **Service Profile Templates** > **root** > **Sub-Organizations** > **hx-cluster** > **Service Template hx-nodes** |
| **Step 14** | Click the **vMedia Policy** tab. |
| **Step 15** | Click **Modify vMedia Policy**. |
| **Step 16** | Choose the **HyperFlex vMedia Policy** from the drop-down 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 the entry labeled **Add CIMC Mounted CD/DVD**. |
| **Step 20** | Select the **CIMC Mounted CD/DVD** entry in the Boot Order list, and click the **Move Up** button until the CIMC Mounted CD/DVD entry is listed first. |
| **Step 21** | Click **Save Changes**, and click **OK**. |

**What to do next**

Delete the Sub-Organization *Temporary*.

# Opening a Remote KVM Console

To monitor the progress of one or more servers, it is advisable to open a remote KVM console session to watch the installation.

To open the KVM console, complete 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, click 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.

**Step 6**    Repeat Steps 2-4 for any additional servers whose **KVM Console** you wish to monitor during the installation.

# Rebooting Servers

Reboot the servers to begin the installation after modifying the vMedia policy, boot policy, and service profile template.

To reboot servers, complete the following steps:

**Before you begin**

Open a remote KVM Console sessions to monitor the progress of rebooting servers.

**Step 1**    In Cisco UCS Manager, click **Servers** in the Navigation pane.

**Step 2**    Expand **Equipment** > **Rack Mounts** > **Servers**.

**Step 3**    In the Work pane, click the first server to be rebooted, then `shift+click` the last server to be rebooted, selecting them all.

**Step 4**    `Right-click` the mouse, and click **Reset**.

**Step 5**    Click **OK**.

**Step 6**    Select **Power Cycle** and click **OK**.

Now, the servers that you are monitoring in the KVM console windows immediately reboot, then boot from the remote vMedia mount, and install the Cisco customized ESXi ISO. If there are any error messages, they can be safely ignored.

# 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**.

### What to do next

**New Node**

If you are adding a new node, never used before in the cluster, expand the HX cluster. See Expanding Cisco HyperFlex System Clusters for more details.

**Reinstalling an Existing Node**

If this node was part of the cluster in the past and was reimaged to fix something, contact Cisco TAC for guidance.