Installing the Server Operating System or Hypervisor

Operating System or Hypervisor Installation Methods

The UCS E-Series M6 Servers support several operating systems and hypervisors. Regardless of the platform being installed, you can install it on your server using one of the following methods:

- KVM Console
- PXE installation server
- Host image mapping

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Caution   You must use only one method to map virtual drives. Using a combination of methods will cause the server to be in an undefined state.

vKVM Console

The vKVM console is an interface accessible from that emulates a direct keyboard, video, and mouse (KVM) connection to the server. The vKVM console allows you to connect to the server from a remote location and to map physical locations to virtual drives that can be accessed by the server during a vKVM session.

Instead of using CDs/DVDs physically connected to the server, the vKVM console uses virtual media, which are actual disk drives or disk image files that are mapped to virtual drives. You can map any of the following to a virtual drive:

- Disk image files (ISO files) on your computer
- USB flash drive on your computer

  • Disk image files (ISO files) on the network

  • USB flash drive on the network

You can use the KVM console to install an operating system on the server and to do the following:

  • Access the BIOS setup menu by pressing **F2** during bootup.

  • Access the CIMC Configuration Utility by pressing **F8** during bootup.

Installing an Operating System or Hypervisor Using the KVM Console

Before you begin

Locate the operating system or hypervisor installation disk or disk image file.

Note	The VMware vSphere Hypervisor requires a customized image. To download the customized image, see Downloading the Customized VMware vSphere Hypervisor Image.

Procedure

Step 1 Load the operating system or hypervisor installation disk into vKVM-mapped vDVD, or copy the disk image files to your computer.

Step 2 Log into the CIMC GUI.

Step 3 To launch the console from the CIMC Home page, click **Launch vKVM** from the **Toolbar**.

Step 4 Alternatively, in the **Navigation** pane, click the **Compute** menu, and then click the **Remote Management** tab.

Step 5 In the **Remote Management** pane, click the **Virtual KVM** tab.

Step 6 In the **Virtual KVM** tab, click the **Launch vKVM** link.

Step 7 From the **vKVM** console, click the **Virtual Media** tab.

Step 8 In the **Virtual Media** tab, map the virtual media using either of the following methods:

  • Check the **Mapped** check box for the vKVM-mapped vDVD, containing the operating system or hypervisor installation disk.

  • Click **Add Image**, navigate to and select the operating system or hypervisor installation disk image, click **Open** to mount the disk image, and then check the **Mapped** check box for the mounted disk image.

Note	You must keep the Virtual Media tab open during the installation process. Closing the tab unmaps all virtual media.

Step 9 Set the boot order to make the vKVM-mapped vDVD as the boot device.

Step 10 Reboot the server. When the server reboots, it begins the installation process from the vKVM-mapped vDVD. Refer to the installation guide for the platform being installed to guide you through the rest of the installation process.

Step 11   If disk drives are not displayed after you install the operating system or hypervisor, you must install drivers. See the appropriate operating system or hypervisor documentation for instructions on how to install drivers.

PXE Installation Servers

A Preboot Execution Environment (PXE) installation server allows a client to boot and install an operating system or hypervisor from a remote location. To use this method, a PXE environment must be configured and available on your VLAN, typically a dedicated provisioning VLAN. In addition, the server must be set to boot from the network. When the server boots, it sends a PXE request across the network. The PXE installationserver acknowledges the request, and starts a sequence of events that installs the operating system or hypervisor on the server.

PXE servers can use installation disks, disk images, or scripts to install the operating system or hypervisor. Proprietary disk images can also be used to install the platform, additional components, or applications.

Note   PXE installation is an efficient method for installing a platform on a large number of servers. However, considering that this method requires setting up a PXE environment, it might be easier to use another installation method.

Installing an Operating System or Hypervisor Using a PXE Installation Server

Before you begin

Verify that the server can be reached over a VLAN.

Procedure

Step 1   Set the boot order to **PXE**.

See section Configuring the Boot Order for details.

Step 2   Reboot the server.

Caution   If you are using the shared LOM interfaces to access CIMC, make sure that you do not use the CIMC GUI during the server reboot process. If you use the CIMC GUI, the GUI will disconnect duringPXE installation as the boot agent overrides the IP address that was previously configured on the Ethernet ports.

If a PXE install server is available on the VLAN, the installation process begins when the server reboots. PXE installations are typically automated and require no additional user input. Refer to the installation guide for the operating system or hypervisor being installed to guide you through the rest of the installation process.

What to do next

After the installation is complete, reset the LAN boot order to its original setting.

Downloading the Customized VMware vSphere Hypervisor Image

Procedure

Step 1 Navigate to https://my.vmware.com/web/vmware/login.

The VMware login page appears.

Step 2 Enter your VMware credentials, and then click **Log In**.

If you do not have an account with VMware, click **Register** to create a free account.

Step 3 Click **Downloads**, and then select **All Products** from the drop-down list.

Step 4 To download the VMware vSphere Hypervisor 7.0U3G image, enter **VMware-ESXi-7.0.3-Custom-Cisco-20328353-4.11.1-a.iso** in the **Search** field, and then click the **Search** icon. From the **Search Results**, click **VMware vSphere > Drivers & Tools > Cisco Custom Image for ESXi 7.0U3G GA Install CD**, and then click **Download**.

What to do next

Install the VMware vSpere Hypervisor image.

Host Image Mapping

The Host Image Mapping feature allows you to download, map, unmap, or delete a host image. Download a host image, such as Linux or VMware, from a remote FTP or HTTP server onto the CIMC internal repository, and then map the image onto the virtual drive of a USB controller in the E-Series M6 Servers. After you map the image, set the boot order to make the virtual drive, in which the image is mounted, as the first boot device, and then reboot the server. The host image must have .iso as the file extension.

Mapping the Host Image

Before you begin

- Log in to CIMC as a user with admin privileges.

- Obtain the host image file from the appropriate third party.

Note If you start an image update while an update is already in process, both updates will fail.

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the **Work** pane, click the **Host Image Mapping** tab.

Step 3   From the **Host Image Mapping** page, click **Add Image**.

The **Add New Mapping** dialog box opens. Complete the following fields:

Name	Description
Server Type drop-downlist	The type of remote server on which the image is located. This can be one of the following: • **FTP** • **FTPS** • **HTTP** • **HTTPS** • **SCP** **Note** The displayed fields change depending on the remote server that you choose.
Server IP Address field	The IP address of the remote FTP or HTTP server.
File Path field	The path and filename of the remote FTP or HTTP server. The path and filename can contain up to 235 characters. **Note** If you are installing a host image, that image must have .iso as the file extension.
Username field	The username of the remote server. **Note** If the username is not configured, enter **anonymous** for the username and any character(s) for the password.
Password field	The password for the username. **Note** If the username is not configured, enter **anonymous** for the username and any character(s) for the password.

Step 4   Click **Download**.

The **Host Image Mapping** page opens. You can view the status of the image download in the **Host Image Mapping Status** area. After the image is downloaded and processed successfully, refresh the page. After the page refreshes, the new image status is reflected in the **Host Image Mapping Information** area.

Step 5   From the **Current Mappings** area, select the image to map, and then click **Map Selected Image**.

The image is mapped and mounted on the virtual drive. The virtual drive can be one of the following:

   • HDD—Hard disk drive

Step 6   Set the boot order to make the virtual drive in which the image is mounted as the first boot device.

> **Tip**   To determine in which virtual drive the image is mounted, see the **Host Image Update Status** area in the **Host Image Mapping** page.

Step 7   Reboot the server.

Step 8   If the image contains an answer file, the operating system or hypervisor installation is automated and the image is installed. Otherwise, the installation wizard is displayed. Follow the wizard steps to install the image.

Step 9   If disk drives are not displayed after you install the operating system or hypervisor, you must install drivers. See the appropriate operating system or hypervisor documentation for instructions on how to install drivers.

What to do next

   • After the installation is complete, reset the virtual media boot order to its original setting.

Unmapping the Host Image

Before you begin

Log in to CIMC as a user with admin privileges.

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the **Work** pane, click the **Host Image Mapping** tab.

Step 3   In the **Current Mappings** area, choose the image to unmap.

Step 4   Click **Unmap Image**.

The mapped image is unmounted.

Deleting the Host Image

Before you begin

Log in to CIMC as a user with admin privileges.

Procedure

Step 1	In the**Navigation** pane, click the **Compute** menu.
Step 2	In the work pane, click the **Host Image Mapping** tab.
Step 3	From the **Current Mappings** area, choose the image to delete.
Step 4	**(Optional)** If the image that you want to delete is mapped, click **Unmap Image**.
Step 5	Click **Delete Selected Image**.

The image is removed.