



# Installing the Server OS

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This chapter includes the following sections:

- [OS Installation Methods, on page 1](#)
- [Virtual KVM Console, on page 1](#)
- [PXE Installation Servers, on page 3](#)
- [Booting an Operating System from a USB Port, on page 4](#)

## OS Installation Methods

C-Series servers support several operating systems. Regardless of the OS being installed, you can install it on your server using one of the following tools:

- KVM console
- PXE installation server

For more information on Cisco UCS Server Configuration Utility, see [Cisco UCS Server Configuration Utility Quick Start Guide](#).

## Virtual KVM Console

The vKVM console is an interface accessible from Cisco IMC that emulates a direct keyboard, video, and mouse (vKVM) connection to the server. The vKVM console allows you to connect to the server from a remote location.

Here are a few major advantages of using Cisco KVM Console:

- The Cisco KVM console provides connection to KVM, SOL, and vMedia whereas the Avocent KVM provides connection only to KVM and vMedia.
- In the KVM Console, the vMedia connection is established at the KVM Launch Manager and is available for all users.
- The KVM console offers you an advanced character replacement options for the unsupported characters while pasting text from the guest to the host.
- The KVM console provides you an ability to store the vMedia mappings on CIMC.

Instead of using CD/DVD or floppy drives 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 CD/DVD or floppy drives. You can map any of the following to a virtual drive:

- CD/DVD or floppy drive on your computer
- Disk image files (ISO or IMG files) on your computer
- USB flash drive on your computer
- CD/DVD or floppy drive on the network
- Disk image files (ISO or IMG files) on the network
- USB flash drive on the network

You can use the vKVM console to install an OS on the server.

## Installing an OS Using the KVM Console




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**Note** This procedure describes only the basic installation steps. Detailed guides for installing Linux, VMware, and Windows can be found at this URL: [http://www.cisco.com/en/US/products/ps10493/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps10493/products_installation_and_configuration_guides_list.html).

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### Before you begin

- Locate the OS installation disk or disk image file.
- You must log in as a user with admin privileges to install an OS.

### Procedure

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- Step 1** Load the OS installation disk into your CD/DVD drive, or copy the disk image files to your computer.
- Step 2** If Cisco IMC is not open, log in.
- Step 3** In the **Navigation** pane, click the **Compute** menu.
- Step 4** In the **Compute** menu, select a server.
- Step 5** In the work pane, click the **Remote Management** tab.
- Step 6** In the **Remote Management** pane, click the **Virtual KVM** tab.
- Step 7** In the **Actions** area, click **Launch KVM Console**.  
The **KVM Console** opens in a separate window.
- Step 8** From the KVM console, click the **VM** tab.
- Step 9** In the **VM** tab, map the virtual media using either of the following methods:
  - Check the **Mapped** check box for the CD/DVD drive containing the OS installation disk.
  - Click **Add Image**, navigate to and select the OS 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 **VM** tab open during the OS installation process. Closing the tab unmaps all virtual media.

**Step 10** Reboot the server and select the virtual CD/DVD drive as the boot device.

When the server reboots, it begins the installation process from the virtual CD/DVD drive. Refer to the installation guide for the OS being installed to guide you through the rest of the installation process.

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#### What to do next

After the OS installation is complete, reset the LAN boot order to its original setting. Always follow your OS vendors recommended configuration, including software interoperability and driver compatibility. For more information on driver recommendations and installation, follow the Cisco UCS Hardware Compatibility list here:

<https://ucsheltool.cloudapps.cisco.com/public/>

## PXE Installation Servers

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

PXE servers can use installation disks, disk images, or scripts to install an OS. Proprietary disk images can also be used to install an OS, additional components, or applications.



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**Note** PXE installation is an efficient method for installing an OS 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.

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## Installing an OS Using a PXE Installation Server

#### Before you begin

- Verify that the server can be reached over a VLAN.
- You must log in as a user with admin privileges to install an OS.

#### Procedure

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

**Step 2** Reboot the server.

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 OS being installed to guide you through the rest of the installation process.

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#### What to do next

After the OS installation is complete, reset the LAN boot order to its original setting. Always follow your OS vendors recommended configuration, including software interoperability and driver compatibility. For more information on driver recommendations and installation, follow the Cisco UCS Hardware Compatibility list here:

<https://ucshcltool.cloudapps.cisco.com/public/>

## Booting an Operating System from a USB Port

All Cisco UCS C-series servers support booting an operating system from any USB port on the server. However, there are a few guidelines that you must keep in mind, prior to booting an OS from a USB port.

- To maintain the boot order configuration, it is recommended that you use an internal USB port for booting an OS.
- The USB port must be enabled prior to booting an OS from it.

By default, the USB ports are enabled. If you have disabled a USB port, you must enable it prior to booting an OS from it. For information on enabling a disabled USB ports, see topic *Enabling or Disabling the Internal USB Port* in the server-specific installation and service guide available at the following link:

[http://www.cisco.com/en/US/products/ps10493/prod\\_installation\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps10493/prod_installation_guides_list.html).

- After you boot the OS from the USB port, you must set the second-level boot order so that the server boots from that USB source every time.