



Configuring Console Access

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Booting the Cisco Catalyst 8000V as the VM

Cisco Catalyst 8000V boots when the VM is powered on. Depending on your configuration, you can monitor the installation process on the virtual VGA console or the console on the virtual serial port.



Note If you want to access and configure Cisco Catalyst 8000V from the serial port on the hypervisor instead of the virtual VGA console, you should provision the VM to use this setting before powering on the VM and booting the router.

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- Step 1** Power-up the VM. Within 5 seconds of powering on the VM, choose a console described from one of the following two steps (steps 2 or 3) to select a console to view the router bootup and to access the Cisco Catalyst 8000V CLI.
- Step 2** (Optional) Select **Virtual Console**
- If you choose to use the virtual console, the rest of the steps in this procedure do not apply. Cisco Catalyst 8000V boots using the Virtual Console if you do not select any other option within the 5 second timeframe. The Cisco Catalyst 8000V instance starts the boot process.
- Step 3** (Optional) Select **Serial Console**
- Choose this option to use the virtual serial port console on the VM.
- The virtual serial port must already be present on the VM for this option to work.
- Note** The option to select the console port during the boot process is available only the first time Cisco Catalyst 8000V boots. To change the console port access after Cisco Catalyst 8000V has booted for the first time, see [Changing the Console Port Access After Installation, on page 5](#).
- The Cisco Catalyst 8000V starts the boot process.
- Step 4** Telnet to the VM using one of the following two commands: **telnet://host-ipaddress:portnumber** or, from a UNIX xTerm terminal: **telnet host-ipaddress portnumber**. The following example shows the Cisco Catalyst 8000V initial boot output on the VM.

The system first calculates the SHA-1, which may take a few minutes. Once the SHA-1 is calculated, the kernel is brought up. Once the initial installation process is complete, the .iso package file is removed from the virtual CD-ROM, and the VM is rebooted. This enables Cisco Catalyst 8000V to boot normally off the virtual Hard Drive.

Note The system reboots during first-time installation only.

The time required for the Cisco Catalyst 8000V to boot may vary depending on the release and the hypervisor you use.

Step 5 After booting, the system presents a screen showing the main software image and the Golden Image, with an instruction that the highlighted entry is booted automatically in three seconds. Do not select the option for the Golden Image and allow the main software image to boot.

Note Cisco Catalyst 8000V does not include a ROMMON image that is included in many Cisco hardware-based routers. During installation, a backup copy of the installed version is stored in a backup partition. This copy can be selected to boot from in case you upgraded your boot image, deleted the original boot image, or somehow corrupted your disk. Booting from the backup copy is equivalent to booting a different image from ROMMON. For more information on changing the configuration register settings to access GRUB mode, see [Accessing the GRUB Mode](#).

You can now enter the router configuration environment by entering the standard commands **enable** and then **configure terminal**.

When you boot a Cisco Catalyst 8000V instance for the first time, the mode the router boots in depends on the release version.

You must install the software license or enable an evaluation license to obtain the supported throughput and features. Depending on the release version, you must enable the boot level or change the maximum throughput level, and reboot Cisco Catalyst 8000V.

The installed license technology package must match the package level configured with the **license boot level** command. If the license package does not match the setting you have configured, the throughput is limited to 100 Kbps.

(VMware ESXi only) If you manually created the VM using the .iso file, you need to configure the basic router properties. You can either use the Cisco IOS XE CLI commands or you can manually configure the properties in the vSphere GUI.

Accessing the Cisco Catalyst 8000V Console

Accessing the Cisco Catalyst 8000V Through the Virtual VGA Console

When installing the Cisco Catalyst 8000V software image, the setting to use is the Virtual VGA console. You do not require any other configuration changes to access the Cisco Catalyst 8000V CLI through the virtual VGA console if:

- You do not change the console setting during the bootup process
- You do not add two virtual serial ports to the VM configuration. This is applicable if you're using automatic console detection.

Accessing the Cisco Catalyst 8000V Through the Virtual Serial Port

Introduction to Accessing the Cisco Catalyst 8000V through the Virtual Serial Port

By default, you can access a Cisco Catalyst 8000V instance using the virtual VGA console. If you use the automatic console detection and two virtual serial ports are detected, the Cisco Catalyst 8000V CLI will be available on the first virtual serial port.

You can also configure the VM to use the Serial Console, which always attempts to use the first virtual serial port for the Cisco Catalyst 8000V CLI. See the following sections to configure the virtual serial port on your hypervisor.



Note Citrix XenServer does not support access through a serial console.

Creating Serial Console Access in VMware ESXi

Perform the following steps using VMware VSphere. For more information, refer to the VMware VSphere documentation.

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- Step 1** Power-down the VM.
- Step 2** Select the VM and configure the virtual serial port settings.
- Choose **Edit Settings > Add**.
 - Choose **Device Type > Serial port**. Click **Next**.
 - Choose **Select Port Type**.
Select **Connect via Network**, and click **Next**.
- Step 3** Select **Select Network Backing > Server (VM listens for connection)**.
- Enter the **Port URI** using the following syntax:
- ```
telnet://:portnumber
```
- where *portnumber* is the port number for the virtual serial port.
- Under the I/O mode, select the **Yield CPU on poll** option, and click **Next**.
- Step 4** Power on the VM.
- Step 5** When the VM is powered on, access the virtual serial port console.
- Step 6** Configure the security settings for the virtual serial port.
- Select the ESXi host for the virtual serial port.
  - Click the **Configuration** tab and click **Security Profile**.
  - In the Firewall section, click **Properties**, and then select the **VM serial port connected over Network** value.
- You can now access the Cisco IOS XE console using the Telnet port URI. When you configure the virtual serial port, the Cisco Catalyst 8000V is no longer accessible from the VM's virtual console.

**Note** To use these settings, either the **Auto Console** option or the **Serial Console** option in the GRUB menu should be selected during the Cisco Catalyst 8000V bootup. If you have already installed the Cisco Catalyst 8000V software using the virtual VGA console, you must configure either the Cisco IOS XE **platform console auto** command or the Cisco IOS XE **platform console serial command** and reload the VM for the console access through the virtual serial port to work.

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## Creating the Serial Console Access in KVM

Perform the following steps using the KVM console on your server. For more information, refer to the KVM documentation.

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- Step 1** Power off the VM.
  - Step 2** Click on the default **Serial 1** device (if it exists) and then click **Remove**. This removes the default pty-based virtual serial port which would otherwise count as the first virtual serial port.
  - Step 3** Click **Add Hardware**.
  - Step 4** Select **Serial** to add a serial device.
  - Step 5** Under **Character Device**, choose the **TCP Net Console (tcp)** device type from the drop-down menu.
  - Step 6** Under **Device Parameters**, choose the mode from the drop-down menu.
  - Step 7** Under **Host**, enter 0.0.0.0. The server will accept a telnet connection on any interface.
  - Step 8** Choose the port from the drop-down menu.
  - Step 9** Choose the **Use Telnet** option.
  - Step 10** Click **Finish**.

You can now access the Cisco IOS XE console using the Telnet port URI. For more information, see [Opening a Telnet Session to the Cisco Catalyst 8000V Console on the Virtual Serial Port, on page 4](#).

**Note** To use these settings, either the **Auto Console** option or the **Serial Console** option in the GRUB menu should be selected while the Cisco Catalyst 8000V booted. If you have already installed the Cisco Catalyst 8000V software using the virtual VGA console, you must configure either the Cisco IOS XE **platform console auto** command or the **platform console serial** command and reload the VM in order for the console access through the virtual serial port to work.

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## Opening a Telnet Session to the Cisco Catalyst 8000V Console on the Virtual Serial Port

Perform the following steps using the Cisco IOS XE CLI commands:

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- Step 1** Telnet to the VM.
    - Use the following command **telnet://host-ipaddress:portnumber**
    - Or, from a UNIX terminal use the command  
**telnet host-ipaddress portnumber**

**Step 2** At the Cisco Catalyst 8000V IOS XE password prompt, enter your credentials. The following example shows an entry of the password *mypass*:

**Example:**

```
User Access Verification
Password: mypass
```

**Note** If no password has been configured, press **Return**.

**Step 3** From the user EXEC mode, enter the **enable** command as shown in the following example:

**Example:**

```
Router> enable
```

**Step 4** At the password prompt, enter your system password. The following example shows entry of the password *enablepass*:

**Example:**

```
Password: enablepass
```

**Step 5** When the enable password is accepted, the system displays the privileged EXEC mode prompt:

**Example:**

```
Router#
```

**Step 6** You now have access to the CLI in the privileged EXEC mode and you can enter the necessary commands to complete your desired tasks.

**Step 7** To exit the Telnet session, use the **exit** or **logout** command as shown in the following example:

**Example:**

```
Router# logout
```

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## Changing the Console Port Access After Installation

After the Cisco Catalyst 8000V instance has booted successfully, you can change the console port access to the router using Cisco IOS XE commands. After you change the console port access, you must reload or power-cycle the router.

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**Step 1** **enable**

**Example:**

```
Router> enable
```

Enables the privileged EXEC mode. Enter your password, if prompted.

**Step 2** **configure terminal**

**Example:**

```
Router# configure terminal
```

Enters the global configuration mode.

**Step 3** Do one of the following:

- **platform console virtual**
- **platform console serial**

**Example:**

```
Router(config)# platform console virtual
```

**Example:**

```
Router(config)# platform console serial
```

Options for **platform console x**:

- **virtual** - Specifies that the Cisco Catalyst 8000V is accessed through the hypervisor virtual VGA console.
- **serial** - Specifies that the Cisco Catalyst 8000V is accessed through the serial port on the VM.

**Note:** Use this option only if your hypervisor supports serial port console access.

**Step 4** **end**

**Example:**

```
Router(config)# end
```

Exits the configuration mode.

**Step 5** **copy system:running-config nvram:startup-config**

**Example:**

```
Router# copy system:running-config nvram:startup-config
```

Copies the running configuration to the NVRAM startup configuration.

**Step 6** **reload**

**Example:**

```
Router# reload
```

Reloads the operating system.

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### What to do next

After you configure the console access, install the Cisco Catalyst 8000V licenses. To know how to install and use the licenses, see the *Licensing* chapter in this guide.