



Managing Remote Presence

This chapter includes the following sections:

- [Configuring Serial Over LAN, on page 1](#)
- [Configuring Virtual Media, on page 3](#)
- [KVM Console, on page 8](#)
- [Launching KVM Console, on page 9](#)
- [Virtual KVM Console \(HTML Based\), on page 9](#)
- [Comparison Between Java Based KVM and HTML5 Based KVM, on page 12](#)
- [Configuring the Virtual KVM, on page 13](#)
- [Host Image Mapping, on page 15](#)

Configuring Serial Over LAN

Serial over LAN enables the input and output of the serial port of a managed system to be redirected over IP. Configure and use serial over LAN on your server when you want to reach the host console with .

Before you begin

You must log in as a user with admin privileges to configure serial over LAN.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the work pane, click the **Remote Management** tab.
- Step 3** In the **Remote Management** pane, click the **Serial over LAN** tab.
- Step 4** In the **Serial over LAN Properties** area, update the following properties:

Name	Description
Enabled check box	If checked, Serial over LAN (SoL) is enabled on the server.

Name	Description
Baud Rate drop-down list	<p>The baud rate the system uses for SoL communication. This can be one of the following:</p> <ul style="list-style-type: none"> • 9600 bps • 19.2 kbps • 38.4 kbps • 57.6 kbps • 115.2 kbps
Com Port drop-down list	<p>The serial port through which the system routes SoL communication.</p> <p>Note This field is available only on some E-Series servers. If it is not available, the server always uses COM port 0 for SoL communication.</p> <p>You can select one of the following:</p> <ul style="list-style-type: none"> • com0—SoL communication is routed through COM port 0, an externally accessible serial port that supports either a physical RJ45 connection to an external device or a virtual SoL connection to a network device. <p>If you select this option, the system enables SoL and disables the RJ45 connection, which means that the server can no longer support an external serial device.</p> <ul style="list-style-type: none"> • com1—SoL communication is routed through COM port 1, an internal port accessible only through SoL. <p>If you select this option, you can use SoL on COM port 1 and the physical RJ45 connection on COM port 0.</p> <p>Note Changing the Com Port setting disconnects any existing SoL sessions.</p>
SSH Port field	<p>The port through which you can access Serial over LAN directly. The port enables you to by-pass the Cisco IMC shell to provide direct access to SoL.</p> <p>The valid range is 1024 to 65535. The default value is 2400.</p> <p>Note Changing the SSH Port setting disconnects any existing SSH sessions.</p>

Step 5 Click **Save Changes**.

Configuring Virtual Media

Before you begin

You must log in as a user with admin privileges to configure virtual media.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the work pane, click the **Remote Management** tab.
- Step 3** In the **Remote Management** pane, click the **Virtual Media** tab.
- Step 4** In the **Virtual Media Properties** area, update the following properties:

Name	Description
Enabled check box	If checked, virtual media is enabled. Note If you clear this check box, all virtual media devices are automatically detached from the host.
Active Sessions field	The number of virtual media sessions that are currently running.
Enable Virtual Media Encryption check box	If checked, all virtual media communications are encrypted.

- Step 5** Click **Save Changes**.

Creating a Cisco IMC Mapped vMedia Volume

Before you begin

You must log in with admin privileges to perform this task.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the work pane, click the **Remote Management** tab.
- Step 3** In the **Remote Management** tab, click the **Virtual Media** tab.
- Step 4** In the Current Mappings area, click **Add New Mapping**.
- Step 5** In the **Add New Mapping** dialog box, update the following fields:

Name	Description
Volume field	The identity of the image mounted for mapping.

Name	Description
Mount Type drop-down list	<p>The type of mapping. This can be one of the following:</p> <p>Note Ensure that the communication port of the mount type that you choose is enabled on the switch. For example, when you are using CIFS as your mount type, ensure port 445 (which is its communication port) is enabled on the switch. Similarly, enable ports 80 for HTTP, 443 for HTTPS and 2049 for NFS when you use them.</p> <ul style="list-style-type: none"> • NFS—Network File System. • CIFS—Common Internet File System. • WWW(HTTP/HTTPS)—HTTP-based or HTTPS-based system. <p>Note Before mounting the virtual media, tries to verify reachability to the end server by pinging the server.</p>
Remote Share field	<p>The URL of the image to be mapped. The format depends on the selected Mount Type:</p> <ul style="list-style-type: none"> • NFS—Use serverip:/share. • CIFS—Use //serverip/share. • WWW(HTTP/HTTPS)—Use http[s]://serverip/share.
Remote File field	The name and location of the .iso or .img file in the remote share.

Name	Description
Mount Options field	

Name	Description
	<p>Industry-standard mount options entered in a comma separated list. The options vary depending on the selected Mount Type.</p> <p>If you are using NFS, leave the field blank or enter one or more of the following:</p> <ul style="list-style-type: none"> • ro • rw • nolock • noexec • soft • port=VALUE • timeo=VALUE • retry=VALUE <p>If you are using CIFS, leave the field blank or enter one or more of the following:</p> <ul style="list-style-type: none"> • soft • nounix • noserverino • guest • username=VALUE—ignored if guest is entered. • password=VALUE—ignored if guest is entered. • sec=VALUE <p>The protocol to use for authentication when communicating with the remote server. Based on the configuration of CIFS share, the VALUES can be one of the following:</p> <ul style="list-style-type: none"> • None—No authentication is used • Ntlm—NT LAN Manager (NTLM) security protocol. Use this option only with Windows 2008 R2 and Windows 2012 R2. • Ntlmi—NTLMI security protocol. Use this option only when you enable Digital Signing on the CIFS Windows server. • Ntlmssp—NT LAN Manager Security Support Provider (NTLMSSP) protocol. Use this option only with Windows 2008 R2 and Windows 2012 R2. • Ntlmsspi—NTLMSSPi protocol. Use this option only when you enable Digital Signing on the CIFS Windows server.

Name	Description
	<ul style="list-style-type: none"> • Ntlmv2—NTLMv2 security protocol. Use this option only with Samba Linux. • Ntlmv2i—NTLMv2i security protocol. Use this option only with Samba Linux. <p>If you are using WWW(HTTP/HTTPS), leave the field blank or enter the following:</p> <ul style="list-style-type: none"> • noauto <p>Note Before mounting the virtual media, tries to verify reachability to the end server by pinging the server.</p> <ul style="list-style-type: none"> • username=VALUE • password=VALUE
User Name field	The username for the specified Mount Type , if required.
Password field	The password for the selected username, if required.

Step 6 Click **Save**.

Viewing Cisco IMC-Mapped vMedia Volume Properties

Before you begin

You must log in with admin privileges to perform this task.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the **Compute** menu, select a server.
- Step 3** In the work pane, click the **Remote Management** tab.
- Step 4** In the **Remote Management** tab, click the **Virtual Media** tab
- Step 5** Select a row from the **Current Mappings** table.
- Step 6** Click **Properties** and review the following information:

Name	Description
Add New Mapping button	Opens a dialog box that allows you to add a new image.
Properties button	Opens a dialog box that allows you to view or change the properties for the selected image.
Unmap button	Unmaps the mounted vMedia.

Name	Description
Last Mapping Status	The status of the last mapping attempted.
Volume column	The identity of the image.
Mount Type drop-down list	The type of mapping.
Remote Share field	The URL of the image.
Remote File field	The exact file location of the image.
Status field	The current status of the map. This can be one of the following: <ul style="list-style-type: none"> • OK—The mapping is successful. • In Progress—The mapping is in progress. • Stale— displays a text string with the reason why the mapping is stale. • Error— displays a text string with the reason for the error.

Removing a Cisco IMC-Mapped vMedia Volume

Before you begin

You must log in with admin privileges to perform this task.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the **Compute** menu, select a server.
- Step 3** In the work pane, click the **Remote Management** tab.
- Step 4** In the **Remote Management** tab, click the **Virtual Media** tab.
- Step 5** Select a row from the **Current Mappings** table.
- Step 6** Click **Unmap**.

KVM Console

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

Instead of using CD/DVD or floppy drives physically connected to the server, the KVM 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 KVM console to install an OS on the server.

Launching KVM Console

You can launch the KVM console from either the Home page or from the Remote Management area.

Procedure

- Step 1** To launch the console from Home page, in the **Navigation** pane, click the **Chassis** menu.
 - Step 2** In the **Chassis** menu, click **Summary**.
 - Step 3** From the tool bar, click **Launch KVM** and select **Java based KVM** or **HTML based KVM**.
 - Step 4** Alternatively, in the **Navigation** pane, click the **Compute** menu.
 - Step 5** In the **Compute** menu, select a server.
 - Step 6** In the work pane, click the **Remote Management** tab.
 - Step 7** In the **Remote Management** pane, click the **Virtual KVM** tab.
 - Step 8** In the **Virtual KVM** tab, click **Launch Java based KVM console** or **Launch HTML based KVM console**.
 - Step 9** Required: Click the URL link displayed in the pop-up window (HTML based KVM console only) to load the client application. You need to click the link every time you launch the KVM console.
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Virtual KVM Console (HTML Based)

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

File Menu

Menu Item	Description
Capture to File button	Opens the Save dialog box that allows you to save the current screen as a JPG image.
Exit button	Closes the KVM console.

View Menu

Menu Item	Description
Keyboard	Displays the virtual keyboard for the KVM console, which you can use to input data.
Refresh	Updates the console display with the server's current video output.
Full Screen	Expands the KVM console so that it fills the entire screen.

Macros Menu

Choose the keyboard shortcut you want to execute on the remote system.

Menu Item	Description
Server Macros menu	Displays the server side macros downloaded from the Cisco IMC, if any. If no server side macros have been downloaded, then the menu item is disabled.
Static Macros menu	Displays a predefined set of macros.
User Defined Macros menu	Displays the user-defined macros that have been created.
Manage button	Opens the Configure User Defined Macros dialog box, which allows you to create and manage macros. System-defined macros cannot be deleted.

Tools Menu

Menu Item	Description
Session Options	Opens the Session Options dialog box that lets you specify: <ul style="list-style-type: none"> • Scaling—Specify whether or not you want to maintain the aspect ratio of the screen. Check or uncheck the Maintain Aspect Ratio checkbox (checked by default). • The mouse acceleration to use on the target system. The default is Absolute positioning (Windows, Newer Linux & MAC OS X). Other options are: <ul style="list-style-type: none"> • Relative Positioning, no acceleration • Relative Positioning (RHEL, Older Linux)

Menu Item	Description
Session User List	Opens the Session User List dialog box that shows all the user IDs that have an active KVM session.
Chat	Opens the Chat box to communicate with other users.

Power Menu

Menu Item	Description
Power On System button	Powers on the system. This option is disabled when the system is powered on and it is enabled when the system is not powered.
Power Off System button	Powers off the system from the virtual console session. This option is enabled when the system is powered on and disabled when the system is not powered on.
Reset System (warm boot)button	Reboots the system without powering it off. This option is enabled when the system is powered on and disabled when the system is not powered on.
Power Cycle System (cold boot) button	Turns off system and then back on. This option is enabled when the system is powered on and disabled when the system is not powered on.

Virtual Media Menu

Name	Description
Activate Virtual Devices	Activates a vMedia session that allows you to attach a drive or image file from your local computer or network.
Map CD/DVD	You can map a CD or a DVD image from your local machine and map the drive to the image. Note This option is available when you click Activate Virtual Devices .
Map Removable Disk	You can map a removable disk image from your local machine and map the drive to the image. Note This option is available when you click Activate Virtual Devices .

Name	Description
Map Floppy Disk	You can map a floppy disk image from your local machine and map the drive to the image. Note This option is available when you click Activate Virtual Devices .

Help Menu

Name	Description
Help Topics	Clicking this option brings you back to this window.
About KVM Viewer	Displays the version number of the KVM viewer.

Settings

The **Settings** icon is located on the top right hand corner of the HTML KVM viewer window.

Name	Description
Logged in as:	Displays your user role ID.
Host Name	Displays the host name.
Log Out	Allows you to log out of the KVM viewer.

Comparison Between Java Based KVM and HTML5 Based KVM

The following table lists the differences between Java based KVM and HTML5 based KVM.

Menu Option	Action	Available in Java Based KVM	Available in HTML5 Based KVM
File	Open	Yes	NA
	Capture to file	Yes	Yes
	Paste Text from Clipboard	Yes	No
	Paste Text from File	Yes	No
	Exit	Yes	Yes
View	Refresh	Yes	Yes
	Fit	Yes	No
	Video-Scaling	Yes	No
	Full-Screen	Yes	Yes

Menu Option	Action	Available in Java Based KVM	Available in HTML5 Based KVM
	Mini-Mod	Yes	No
	Keyboard	NA	Yes
Macros	Server Macros	Yes	Yes
	Static Macros	Yes	Yes
	User Defined Macros	Yes	Yes
	Manage	Yes	Yes
Tool	Session Option	Yes	Yes
	Single Cursor	Yes	No
	Stats	Yes	No
	Session User List	Yes	Yes
	Chat	Yes	Yes
	Recorder/Playback Controls	Yes	No
	Export Video	Yes	No
Power	Power On	Yes	Yes
	Power OFF	Yes	Yes
	Reset System	Yes	Yes
	Power Cycle system	Yes	Yes
Virtual Media	Create Image	Yes	No
	Activate Virtual Devices	Yes	Yes
	Physical Device Mapping	Yes	No

Configuring the Virtual KVM

Before you begin

You must log in as a user with admin privileges to configure the virtual KVM.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the **Compute** menu, select a server.
- Step 3** In the work pane, click the **Remote Management** tab.
- Step 4** In the **Remote Management** pane, click the **Virtual KVM** tab.
- Step 5** On the **Virtual KVM** tab, complete the following fields:

Name	Description
Enabled check box	If checked, the virtual KVM is enabled. Note The virtual media viewer is accessed through the KVM. If you disable the KVM console, also disables access to all virtual media devices attached to the host.
Max Sessions drop-down list	The maximum number of concurrent KVM sessions allowed. You can select any number between 1 and 4.
Active Sessions field	The number of KVM sessions running on the server.
Remote Port field	The port used for KVM communication.
Enable Video Encryption check box	If checked, the server encrypts all video information sent through the KVM.
Enable Local Server Video check box	If checked, the KVM session is also displayed on any monitor attached to the server.

- Step 6** Click **Save Changes**.
-

Enabling the Virtual KVM

Before you begin

You must log in as a user with admin privileges to enable the virtual KVM.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
- Step 2** In the **Compute** menu, select a server.
- Step 3** In the work pane, click the **Remote Management** tab.
- Step 4** In the **Remote Management** pane, click the **Virtual KVM** tab.
- Step 5** On the **Virtual KVM** tab, check the **Enabled** check box.

Step 6 Click **Save Changes**.

Disabling the Virtual KVM

Before you begin

You must log in as a user with admin privileges to disable the virtual KVM.

Procedure

- Step 1** In the **Navigation** pane, click the **Compute** menu.
 - Step 2** In the **Compute** menu, select a server.
 - Step 3** In the work pane, click the **Remote Management** tab.
 - Step 4** In the **Remote Management** pane, click the **Virtual KVM** tab.
 - Step 5** On the **Virtual KVM** tab, uncheck the **Enabled** check box.
 - Step 6** Click **Save Changes**.
-

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 Microsoft Windows, 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 Server or NCE. 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 or .img as the file extension.

The Host Image Mapping feature also allows you to download and mount a diagnostics image. The diagnostics image must have .diag 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 The VMware vSphere Hypervisor requires a customized image. To download the customized image, see [Downloading the Customized VMware vSphere Hypervisor Image](#).



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-down list	<p>The type of remote server on which the image is located. This can be one of the following:</p> <ul style="list-style-type: none"> • FTP • FTPS • HTTP • HTTPS <p>Note Depending on the remote server that you select, the fields that display change.</p>
Server IP Address field	The IP address of the remote FTP or HTTP server.
File Path field	<p>The path and filename of the remote FTP or HTTP server.</p> <p>The path and filename can contain up to 80 characters.</p> <ul style="list-style-type: none"> • If you are installing a host image, that image must have .iso or .img as the file extension. • If you are installing a diagnostics image, that image must have .diag as the file extension.
Username field	<p>The username of the remote server.</p> <p>The username can contain 1 to 20 characters.</p> <p>Note If the username is not configured, enter anonymous for the username and any character(s) for the password.</p>
Password field	<p>The password for the username.</p> <p>The password can contain 1 to 20 characters.</p> <p>Note If the username is not configured, enter anonymous for the username and any character(s) for the password.</p>

- 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 displays in the **Image Information** area.
- Step 5** From the **Image Information** area, select the image to map, and then click **Map Selected Image**.
- The image is mapped and mounted on the virtual drive of a USB controller. The virtual drive can be one of the following:
- HDD—Hard disk drive
 - FDD—Floppy disk drive
 - CD/DVD—Bootable CD-ROM or DVD 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 work pane, click the **Host Image Mapping** tab.
- Step 4** Click **Unmap Image**.
- The mapped image is unmounted from the virtual drive of the USB controller.
-

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 Information** area, select the image to delete.
- Step 4** Click **Delete Selected Image**.

The image is removed from the SD card.
