



# Managing Remote Presence

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## Managing the Virtual KVM

### KVM Console

The KVM console is an interface accessible from Cisco IMC 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.

**Note**

To configure the KVM console successfully for the Cisco UCS C3260 server, you need to configure IP addresses for the Cisco IMC, CMC, and BMC components. You can configure the IP addresses for these components using the CLI interface or Web UI. For the CLI, use the command **scope network**, or view the setting using **scope <chassis/server1/2><cmc/bmc><network>**.

To configure IP addresses for network components on the web interface, see the steps described in the section **Configuring Network-Related Settings**.

**Note**

The KVM Console is operated only through the GUI. To launch the KVM Console, see the instructions in the *Cisco UCS C-Series Servers Integrated Management Controller GUI Configuration Guide*.

## Enabling the Virtual KVM

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server</b> {1   2}	Enters server command mode of server 1 or 2.
<b>Step 2</b>	Server /server # <b>scope kvm</b>	Enters KVM command mode.
<b>Step 3</b>	Server /server/kvm # <b>set enabled yes</b>	Enables the virtual KVM.
<b>Step 4</b>	Server /server/kvm # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /server/kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example enables the virtual KVM:

```
Server# scope server 1
Server /server # scope kvm
Server /server/kvm # set enabled yes
Server /server/kvm *# commit
Server /server/kvm # show detail
KVM Settings:
  Encryption Enabled: yes
  Max Sessions: 4
  Local Video: yes
  Active Sessions: 1
  Enabled: yes
  KVM Port: 2068

Server /server/kvm #
```

## Disabling the Virtual KVM

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server</b> {1   2}	Enters server command mode of server 1 or 2.
<b>Step 2</b>	Server /server # <b>scope kvm</b>	Enters KVM command mode.
<b>Step 3</b>	Server /server /kvm # <b>set enabled no</b>	Disables the virtual KVM.  <b>Note</b> Disabling the virtual KVM disables access to the virtual media feature, but does not detach the virtual media devices if virtual media is enabled.
<b>Step 4</b>	Server /server/kvm # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /server/kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example enables the virtual KVM:

```
Server# scope server 1
Server /server # scope kvm
Server /server/kvm # set enabled no
Server /server/kvm *# commit
Server /server/kvm # show detail
KVM Settings:
  Encryption Enabled: yes
  Max Sessions: 4
  Local Video: yes
  Active Sessions: 0
  Enabled: no
  KVM Port: 2068

Server /server/kvm #
```

## Configuring the Virtual KVM

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server</b> {1   2}	Enters server command mode of server 1 or 2.

	Command or Action	Purpose
<b>Step 2</b>	Server /server# <b>scope kvm</b>	Enters KVM command mode.
<b>Step 3</b>	Server /server/kvm # <b>set enabled {yes   no}</b>	Enables or disables the virtual KVM.
<b>Step 4</b>	Server /server/kvm # <b>set encrypted {yes   no}</b>	If encryption is enabled, the server encrypts all video information sent through the KVM.
<b>Step 5</b>	Server /server/kvm # <b>set kvm-port port</b>	Specifies the port used for KVM communication.
<b>Step 6</b>	Server /server/kvm # <b>set local-video {yes   no}</b>	If local video is <b>yes</b> , the KVM session is also displayed on any monitor attached to the server.
<b>Step 7</b>	Server /server/kvm # <b>set max-sessions sessions</b>	Specifies the maximum number of concurrent KVM sessions allowed. The <i>sessions</i> argument is an integer between 1 and 4.
<b>Step 8</b>	Server /server/kvm # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 9</b>	Server /server/kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example configures the virtual KVM and displays the configuration:

```
Server# scope server 1
Server /server # scope kvm
Server /server/kvm # set enabled yes
Server /server/kvm *# set encrypted no
Server /server/kvm *# set kvm-port 2068
Server /server/kvm *# set max-sessions 4
Server /server/kvm *# set local-video yes
Server /server/kvm *# commit
Server /server/kvm # show detail
KVM Settings:
  Encryption Enabled: no
  Max Sessions: 4
  Local Video: yes
  Active Sessions: 0
  Enabled: yes
  KVM Port: 2068

Server /server/kvm #
```

### What to Do Next

Launch the virtual KVM from the GUI.

## Configuring Virtual Media

### Before You Begin

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

**Procedure**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	Server# <b>scope vmedia</b>	Enters virtual media command mode.
<b>Step 2</b>	Server /vmedia # <b>set enabled {yes   no}</b>	Enables or disables virtual media. By default, virtual media is disabled.  <b>Note</b> Disabling virtual media detaches the virtual CD, virtual floppy, and virtual HDD devices from the host.
<b>Step 3</b>	Server /vmedia # <b>set encryption {yes   no}</b>	Enables or disables virtual media encryption.
<b>Step 4</b>	Server /vmedia # <b>set low-power-usb-enabled {yes   no}</b>	Enables or disables low power USB.  <b>Note</b> While mapping an ISO to a server which has a UCS VIC P81E card and the NIC is in Cisco Card mode: <ul style="list-style-type: none"> <li>• If the low power USB is enabled, after mapping the ISO and rebooting the host the card resets and ISO mapping is lost. The virtual drives are not visible on the boot selection menu.</li> <li>• If the low power USB is disabled, after mapping the ISO, and rebooting the host and the Cisco IMC, the virtual drivers appear on the boot selection menu as expected.</li> </ul>
<b>Step 5</b>	Server /vmedia # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 6</b>	Server /vmedia # <b>show [detail]</b>	(Optional) Displays the virtual media configuration.

This example configures virtual media encryption:

```
Server# scope vmedia
Server /vmedia # set enabled yes
Server /vmedia *# set encryption yes
Server /vmedia *# set low-power-use-enabled no
Server /vmedia *# commit
Server /vmedia # show detail
vMedia Settings:
  Encryption Enabled: yes
  Enabled: yes
  Max Sessions: 1
  Active Sessions: 0
  Low Power USB Enabled: no

Server /vmedia #
```

**What to Do Next**

Use the KVM to attach virtual media devices to a host.

## Configuring a Cisco IMC-Mapped vMedia Volume

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server</b> {1   2}	Enters server command mode of server 1 or 2.
<b>Step 2</b>	Server /server# <b>scope vmedia</b>	Enters the virtual media command mode.
<b>Step 3</b>	Server /server/vmedia # <b>map-cifs</b> { <b>volume-name</b>   <b>remote-share</b>   <b>remote-file-path</b> [ <i>mount options</i> ]	Maps a CIFS file for vMedia. You must specify the following: <ul style="list-style-type: none"> <li>• Name of the volume to create</li> <li>• Remote share including IP address and the exported directory</li> <li>• Path of the remote file corresponding to the exported directory.</li> <li>• (Optional) Mapping options</li> <li>• Username and password to connect to the server</li> </ul>
<b>Step 4</b>	Server /server/vmedia # <b>map-nfs</b> { <b>volume-name</b>   <b>remote-share</b>   <b>remote-file-path</b> } [ <i>mount options</i> ]	Maps an NFS file for vMedia. You must specify the following: <ul style="list-style-type: none"> <li>• Name of the volume to create</li> <li>• Remote share including IP address and the exported directory</li> <li>• Path of the remote file corresponding to the exported directory.</li> <li>• (Optional) Mapping options</li> </ul>
<b>Step 5</b>	Server /server/vmedia # <b>map-www</b> { <b>volume-name</b>   <b>remote-share</b>   <b>remote-file-path</b> [ <i>mount options</i> ]	Maps an HTTPS file for vMedia. You must specify the following: <ul style="list-style-type: none"> <li>• Name of the volume to create</li> <li>• Remote share including IP address and the exported directory</li> <li>• Path of the remote file corresponding to the exported directory.</li> <li>• (Optional) Mapping options</li> <li>• Username and password to connect to the server</li> </ul>

	Command or Action	Purpose
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This example shows how to create a CIFS Cisco IMC-mapped vmedia settings:

```
Server # scope server 1
Server /server #scope vmedia
Server /server/vmedia # map-cifs sample-volume //10.10.10.10/project /test/sample
Server username:
Server password: ****
Confirm password: ****

Server /server/vmedia #
```

## Viewing Cisco IMC-Mapped vMedia Volume Properties

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server {1   2}</b>	Enters server command mode of server 1 or 2.
<b>Step 2</b>	Server /server # <b>scope vmedia</b>	Enters the virtual media command mode.
<b>Step 3</b>	Server /server/vmedia # <b>show mappings detail</b>	Displays information on all the vmedia mapping that are configured.

This example shows how to view the properties of all the configured vmedia mapping:

```
Server # scope server 1
Server /server #scope vmedia
Server /server/vmedia # show mappings
```

Volume	Map-status	Drive-type	remote-share	remote-file	mount-type
Huu	OK	removable	http://10.104.236.99/	rhel-server-6.1-x86_64.iso	www
Rhel	OK	CD	http://10.104.236.99/	rhel-server-6.1-x86_64.iso	www

```
Server /server/vmedia #
```

# Managing Serial over LAN

## Serial Over LAN

Serial over LAN (SoL) is a mechanism that enables the input and output of the serial port of a managed system to be redirected via an SSH session over IP. SoL provides a means of reaching the host console via Cisco IMC.

### Guidelines and Restrictions for Serial Over LAN

For redirection to SoL, the server console must have the following configuration:

- console redirection to serial port A
- no flow control
- baud rate the same as configured for SoL
- VT-100 terminal type
- legacy OS redirection disabled

The SoL session will display line-oriented information such as boot messages, and character-oriented screen menus such as BIOS setup menus. If the server boots an operating system or application with a bitmap-oriented display, such as Windows, the SoL session will no longer display. If the server boots a command-line-oriented operating system (OS), such as Linux, you may need to perform additional configuration of the OS in order to properly display in an SoL session.

In the SoL session, your keystrokes are transmitted to the console except for the function key F2. To send an F2 to the console, press the Escape key, then press 2.

## Configuring Serial Over LAN

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server # <b>scope server</b> {1   2}	Enters server command mode of server 1 or 2.
<b>Step 2</b>	Server /server# <b>scope sol</b>	Enters SoL command mode.
<b>Step 3</b>	Server /server/sol # <b>set enabled</b> {yes   no}	Enables or disables SoL on this server.
<b>Step 4</b>	Server /server/sol # <b>set baud-rate</b> {9600   19200   38400   57600   115200}	Sets the serial baud rate the system uses for SoL communication. <b>Note</b> The baud rate must match the baud rate configured in the server serial console.



	Command or Action	Purpose
<b>Step 5</b>	Server /server/sol # <b>set comport {com0   com1}</b>	<p>(Optional) Sets the serial port through which the system routes SoL communications.</p> <p><b>Note</b> This field is only available on some C-Series servers. If it is not available, the server always uses COM port 0 for SoL communication.</p> <p>You can specify:</p> <ul style="list-style-type: none"> <li>• <b>com0</b>—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.</li> </ul> <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"> <li>• <b>com1</b>—SoL communication is routed through COM port 1, an internal port accessible only through SoL.</li> </ul> <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><b>Note</b> Changing the comport setting disconnects any existing SoL sessions.</p>
<b>Step 6</b>	Server /sol # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 7</b>	Server /sol # <b>show [detail]</b>	(Optional) Displays the SoL settings.

This example configures SoL:

```

Server# scope server 1
Server /server #scope sol
Server /server/sol # set enabled yes
Server /server/sol *# set baud-rate 115200
Server /server/sol *# set comport com1
Server /server/sol *# commit
Server /server/sol # show
Enabled Baud Rate(bps) Com Port
-----
yes      115200          com1
Server /sol # show detail
Serial Over LAN:
  Enabled: yes
  Baud Rate(bps): 115200
  Com Port: com1
Server /server/sol #
    
```

