



## Managing Remote Presence

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## Managing the Virtual KVM

### KVM Console

The KVM console is an interface accessible from CIMC 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**

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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*.

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## 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 kvm</b>	Enters KVM command mode.
<b>Step 2</b>	Server /kvm # <b>set enabled yes</b>	Enables the virtual KVM.
<b>Step 3</b>	Server /kvm # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 4</b>	Server /kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example enables the virtual KVM:

```
Server# scope kvm
Server /kvm # set enabled yes
Server /kvm *# commit
Server /kvm # show
Encryption Enabled Local Video      Active Sessions Enabled KVM Port
-----
no                                   yes                0                yes                2068

Server /kvm #
```

## Disabling the Virtual KVM

### Before You Begin

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

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope kvm</b>	Enters KVM command mode.
<b>Step 2</b>	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 3</b>	Server /kvm # <b>commit</b>	Commits the transaction to the system configuration.

	Command or Action	Purpose
<b>Step 4</b>	Server /kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example disables the virtual KVM:

```
Server# scope kvm
Server /kvm # set enabled no
Server /kvm *# commit
Server /kvm # show
Encryption Enabled Local Video      Active Sessions Enabled KVM Port
-----
no                yes                0                no                2068
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 kvm</b>	Enters KVM command mode.
<b>Step 2</b>	Server /kvm # <b>set enabled {yes   no}</b>	Enables or disables the virtual KVM.
<b>Step 3</b>	Server /kvm # <b>set encrypted {yes   no}</b>	If encryption is enabled, the server encrypts all video information sent through the KVM.
<b>Step 4</b>	Server /kvm # <b>set kvm-port port</b>	Specifies the port used for KVM communication.
<b>Step 5</b>	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 6</b>	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 7</b>	Server /kvm # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 8</b>	Server /kvm # <b>show [detail]</b>	(Optional) Displays the virtual KVM configuration.

This example configures the virtual KVM and displays the configuration:

```
Server# scope kvm
Server /kvm # set enabled yes
Server /kvm *# set encrypted no
Server /kvm *# set kvm-port 2068
Server /kvm *# set max-sessions 4
Server /kvm *# set local-video yes
Server /kvm *# commit
Server /kvm # show detail
KVM Settings:
  Encryption Enabled: no
```

```

Max Sessions: 4
Local Video: yes
Active Sessions: 0
Enabled: yes
KVM Port: 2068

```

```
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

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>scope vmedia</b>	Enters virtual media command mode.
<b>Step 2</b>	Server /vmedia # <b>set enabled</b> {yes   no}	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</b> {yes   no}	Enables or disables virtual media encryption.
<b>Step 4</b>	Server /vmedia # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /vmedia # <b>show</b> [detail]	(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 *# commit
Server /vmedia # show detail
vMedia Settings:
  Encryption Enabled: yes
  Enabled: yes
  Max Sessions: 1
  Active Sessions: 0

Server /vmedia #

```

### What to Do Next

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

# 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 CIMC.

### 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 sol</b>	Enters SoL command mode.
<b>Step 2</b>	Server /sol # <b>set enabled {yes   no}</b>	Enables or disables SoL on this server.
<b>Step 3</b>	Server /sol # <b>set baud-rate {9600   19200   38400   57600   115200}</b>	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 4</b>	Server /sol # <b>commit</b>	Commits the transaction to the system configuration.
<b>Step 5</b>	Server /sol # <b>show [detail]</b>	(Optional) Displays the SoL settings.

This example configures SoL:

```
Server# scope sol
Server /sol # set enabled yes
Server /sol *# set baud-rate 115200
Server /sol *# commit
Server /sol # show
Enabled Baud Rate (bps)
-----
yes      115200

Server /sol #
```

## Launching Serial Over LAN

### Procedure

	Command or Action	Purpose
<b>Step 1</b>	Server# <b>connect host</b>	Opens a serial over LAN (SoL) connection to the redirected server console port. You can enter this command in any command mode.

### What to Do Next

To end the SoL session, you must close the CLI session. For example, to end an SoL session over an SSH connection, disconnect the SSH connection.