Managing Remote Presence

This chapter includes the following sections:

Managing the Virtual KVM

KVM Console

The KVM console is an interface accessible from the CIMC that emulates a direct keyboard, video, and mouse 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

You can use the KVM console to install an operating system or hypervisor on the server and to do the following:

- Access the BIOS setup menu by pressing **F2** during bootup.
- Access the CIMC Configuration Utility by pressing **F8** during bootup.

Note The CIMC Configuration Utility is not applicable to the EHWIC E-Series NCE.

- Access the WebBIOS to configure RAID, by pressing **Ctrl-H** during bootup.

Java Requirements to Launch the KVM Console

To launch the KVM console, you must have Java release 1.6 or later installed in your system.

If the KVM console fails to launch because the certificate is revoked by Java, you must change your Java settings. Do the following:

1. Access the Java control panel.
2. Click the **Advanced** tab
3. Under **Perform certificate revocation on**, choose the **Do not check (not recommended)** radio button. For more information, see http://www.java.com/en/download/help/revocation_options.xml.

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

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
Step 1	Server# **scope kvm**	Enters KVM command mode.
Step 2	Server /kvm # **set enabled yes**	Enables the virtual KVM.
Step 3	Server /kvm # **commit**	Commits the transaction to the system configuration.
Step 4	Server /kvm # **show** [**detail**]	(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
Step 1	Server# **scope kvm**	Enters KVM command mode.
Step 2	Server /kvm # **set enabled no**	Disables the virtual KVM. **Note** Disabling the virtual KVM disables access to the virtual media feature, but does not detach the virtual media devices if virtual media is enabled.
Step 3	Server /kvm # **commit**	Commits the transaction to the system configuration.
Step 4	Server /kvm # **show** [**detail**]	(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 Virtual Media

Before You Begin

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

Procedure

	Command or Action	Purpose
Step 1	Server# **scope vmedia**	Enters virtual media command mode.
Step 2	Server /vmedia # **set enabled** {**yes** | **no**}	Enables or disables virtual media. By default, virtual media is disabled. **Note** Disabling virtual media detaches the virtual CD, virtual floppy, and virtual HDD devices from the host.
Step 3	Server /vmedia # **set encryption** {**yes** | **no**}	Enables or disables virtual media encryption.
Step 4	Server /vmedia # **set low-power-usb-enabled** {**yes** | **no**}	Enables or disables low power USB.

	Command or Action	Purpose
		Note While mapping an ISO to a server which has a UCS VIC P81E card and the NIC is in Cisco Card mode: • 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. • If the low power USB is disabled, after mapping the ISO, and rebooting the host and the CIMC, the virtual drivers appear on the boot selection menu as expected.
Step 5	Server /vmedia # **commit**	Commits the transaction to the system configuration.
Step 6	Server /vmedia # **show** [**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 *# set low-power-usb-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 CIMC-Mapped vMedia Volume

Before You Begin

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

Procedure

	Command or Action	Purpose
Step 1	Server # **scope vmedia**	Enters the virtual media command mode.
Step 2	Server /vmedia # **map-cifs** {**volume-name** | **remote-share** | **remote-file-path** [*mount options*]	Maps a CIFS file for vMedia. You must specify the following: • Name of the volume to create

	Command or Action	Purpose
		• Remote share including IP address and the exported directory • Path of the remote file corresponding to the exported directory. • (Optional) Mapping options • Username and password to connect to the server
Step 3	Server /vmedia # **map-nfs** {**volume-name** | **remote-share** | **remote-file-path**} [*mount options*]	Maps an NFS file for vMedia. You must specify the following: • Name of the volume to create • Remote share including IP address and the exported directory • Path of the remote file corresponding to the exported directory. • (Optional) Mapping options
Step 4	Server /vmedia # **map-www** {**volume-name** | **remote-share** | **remote-file-path** [*mount options*]	Maps an HTTPS file for vMedia. You must specify the following: • Name of the volume to create • Remote share including IP address and the exported directory • Path of the remote file corresponding to the exported directory. • (Optional) Mapping options • Username and password to connect to the server

This example shows how to create a CIFS CIMC-mapped vmedia settings:

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

Server /vmedia #
```

Viewing CIMC-Mapped vMedia Volume Properties

Before You Begin

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

Procedure

	Command or Action	Purpose
Step 1	Server # **scope vmedia**	Enters the virtual media command mode.
Step 2	Server /vmedia # **show mappings** *detail*	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 vmedia
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_6.iso      www
Rhel    OK           CD           http://10.104.236.99/ rhel-server-6.1-x86_6.iso      www
```

Removing a CIMC-Mapped Mounted vMedia Volume

Before You Begin

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

Procedure

	Command or Action	Purpose
Step 1	Server # **scope vmedia**	Enters the virtual media command mode.
Step 2	Server /vmedia # **unmap** *volume_name*	Specifies the volume name to unmap.

This example shows how to unmap a CIMC-mapped vmedia volume:

```
Server # scope vmedia
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_6.iso      www
Rhel    OK           CD           http://10.104.236.99/ rhel-server-6.1-x86_6.iso      www


Server /vmedia # unmap huu
Server /vmedia # show mappings

Volume  Map-status   Drive-type     remote-share        remote-file               mount-type
------  ----------  ------------  --------------------- -------------------       -----------

Rhel    OK           CD           http://10.104.236.99/ rhel-server-6.1-x86_6.iso      www
```

```
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 the 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 SoL.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope sol**	Enters SoL command mode.
Step 2	Server /sol # **set enabled** {**yes** | **no**}	Enables or disables SoL on this server.
Step 3	Server /sol # **set baud-rate** {**9600** | **19200** | **38400** | **57600** | **115200**}	Sets the serial baud rate the system uses for SoL communication.

	Command or Action	Purpose
		Note The baud rate must match the baud rate configured in the server serial console.
Step 4	Server /sol # **commit**	Commits the transaction to the system configuration.
Step 5	Server /sol # **show** [**detail**]	(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
Step 1	Server# **connect host**	Opens an SoL connection to the redirected server console port. You can enter this command in any command mode.

What to Do Next

Press **Ctrl** and **X** keys to disconnect from SoL and return to the CLI session.

Note When you enable SoL, the output from the serial port is redirected; therefore, when you try to session into the host from Cisco IOS CLI, you will not see any output.