



KVM Console

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KVM Console

The KVM console is an interface accessible from the Cisco UCS Manager GUI or the KVM Launch Manager that emulates a direct keyboard, video, and mouse (KVM) connection to the server. It allows you to connect and control the server from a remote location and also to map physical locations to virtual drives that can be accessed by the server during this Virtual KVM (vKVM) session. Unlike the KVM dongle, which requires you to be physically connected to the server, the KVM console allows you to connect to the server from a remote location across the network.

Beginning with Cisco UCS Manager Release 4.1(1), the KVM console is available as an HTML5-based application on Cisco UCS M4 and M5 servers. The console is no longer available as a Java-based application. For more information, see [KVM Console for Cisco UCS B-Series M4, C-Series M4, and C-Series M5 Servers, on page 2](#)

You must ensure that either the server or the service profile associated with the server is configured with a CIMC IP address if you want to use the KVM console to access the server. The KVM console uses the CIMC IP address assigned to a server or a service profile to identify and connect with the correct server in a Cisco UCS domain.

Instead of using CD/DVD or floppy drives directly 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 virtual drives:

- CD/DVD or floppy drives on your computer
- Disk image files on your computer
- CD/DVD or floppy drives on the network

- Disk image files on the network



Note When you launch the KVM console from the physical server, the system checks if the server is associated to a service profile. If the server is associated to a service profile with an associated management IP address, the KVM console is launched using that management IP address. If no management IP address is associated in the service profile, then the system launches the KVM console using the physical server.

Recommendations for Using the KVM Console to Install a Server OS

To install an OS from a virtual CD/DVD or floppy drive, you must ensure that the virtual CD/DVD or floppy drive is set as the first boot device in the service profile.

Installing an OS using the KVM console may be slower than using the KVM dongle because the installation files must be downloaded across the network to the server. If you map a disk drive or disk image file from a network share to a virtual drive, the installation may be even slower because the installation files must be downloaded from the network to the KVM console (your computer) and then from the KVM console to the server. When using this installation method, we recommend that you have the installation media as close as possible to the system with the KVM console.

KVM Console for Cisco UCS B-Series M4, C-Series M4, and C-Series M5 Servers

Beginning with Cisco UCS Manager Release 4.1(1), the UCS Manager provides the KVM console to access and manage the vKVM sessions on Cisco UCS M4 and M5 servers.

The following menu and the menu options are available on this KVM Console:

Server Actions Menu

Choose the remote server operation you want to execute on the system.

Menu Item	Description
Boot Server	Powers on the system from the virtual console session.
Shutdown Server	Powers off the system from the virtual console session.
Reset	Resets the system from the virtual console 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. Note This option is only available on the KVM tab.
Paste Text From Clipboard	Allows you to paste content from the clipboard.

Menu Item	Description
Exit button	Closes the KVM console.

View Menu

Menu Item	Description
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
Static Macros menu	Displays a predefined set of macros.
User Defined Macros menu	Displays the user-defined macros that have been created.
Server Defined Macros menu	Displays the server 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 Settings dialog box that lets you specify: <ul style="list-style-type: none"> • Scaling allows you to choose how the aspect ratio is displayed on the KVM screen. • This defines which mouse acceleration to use on the target system. The default is Absolute Positioning.
Session User List	Opens the Session User List dialog box that shows all the user IDs that have an active KVM session.
Chat	Opens group chat window for any admins logged into the current KVM session.
Virtual Keyboard	Opens an onscreen keyboard for the current KVM session.
Playback Controls	Opens a dialog box to select DVC recording files created by Java KVM.

Virtual Media Menu

Name	Description
Activate Virtual Devices	<p>Activates a vMedia session that allows you to attach a drive or image file from your local computer or network.</p> <p>Note If you have not allowed unsecured connections, you will be prompted to accept the session. If you reject the session, the virtual media session is terminated.</p>
CD/DVD	<p>Choose the CD/DVD that you want to access, and click the Map Drive button to map it to the host server device.</p> <p>Note If the Read Only checkbox is checked, the server cannot write to the vMedia device even if the device has write capability.</p>
Removable Disk	<p>Choose the removable disk that you want to access, and click the Map Drive button to map it to the host server device.</p> <p>Note If the Read Only checkbox is checked, the server cannot write to the vMedia device even if the device has write capability.</p>
Floppy Disk	<p>Choose the floppy that you want to access, and click the Map Drive button to map it to the host server device.</p> <p>Note If the Read Only checkbox is checked, the server cannot write to the vMedia device even if the device has write capability.</p>

Online Help Menu

Name	Description
Contents and Index	Opens Online Help.
About KVM Viewer	Displays build version information about HTML5 KVM Viewer.

KVM Direct Access

KVM direct access allows the administrators that manage the blade and rack servers in your Cisco UCS Manager domain to access the KVM console for their servers directly using a web browser. This feature allows you to restrict access to the IP addresses of the fabric interconnects, while still allowing your administrators to access the KVM console for the servers they manage.

Until Cisco UCS Manager Release 4.0, only out-of-band IPv4 management interface addresses were supported for KVM direct access. Cisco UCS Manager Release 4.0 introduces KVM direct access support for inband IPv4 or IPv6 management interface addresses as well.



Note KVM direct access over Inband is supported on blade servers only.

KVM direct access over outband also supports custom applications from which users can navigate to a server management IP address without using the Cisco UCS Manager GUI interface or the KVM Launch Manager.

KVM direct access is supported by providing a management IP address assigned directly to the server or associated to the server with a service profile by the server's administrator. The server administrator enters the assigned inband or outband IP address into a browser, and navigates to the Cisco UCS KVM Direct login page. In the login page, the users enter their username and password, and, for outband address, may choose an authentication domain. When they launch Cisco UCS KVM Direct, the console for the server is displayed, the same way it would if they had accessed the server from the Cisco UCS Manager GUI. Next to the **Launch** button, you can select a list of available outband and inband addresses associated with the server. To launch the Java KVM console, select the **Launch Java KVM Console** checkbox and then click **Launch KVM**.

KVM direct access over inband employs self-signed certificates for authentication. When users access a server management IP address or service profile IP address for the first time, a dialog box will be displayed to alert them that they need to add a certificate exception to their browser's cache.

The default communications service that supports Cisco UCS KVM direct access is HTTPS. This cannot be disabled. When a user enters a management IP in a browser using HTTP as part of the address, they will be automatically redirected to the HTTPS service.

To accommodate KVM direct access over outband, ensure that the CIMC Web Service communication service in Cisco UCS Manager is enabled.



Note The CIMC Web Service is enabled by default in Cisco UCS Manager.

KVM Direct Users

Cisco UCS Manager users with appropriate privileges can log into any blade server in the chassis through KVM direct over inband. To have login credentials specific to a blade server, you can use login privileges based on the IPMI profile associated with the blade server. These login privileges are:

- Read-Only—User does not have access to Host keyboard or mouse inputs, vMedia, Power Controls, or Macros.
- Admin—User has all privileges.

Starting the KVM Console from a Server

You can start multiple KVM Console sessions using the addresses assigned to the server.

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Expand **Equipment** > **Chassis** > *Chassis Number* > **Servers**.
- Step 3** Choose the server that you want to access through the **KVM Console**.
- Step 4** In the **Work** pane, click the **General** tab.
- Step 5** Scroll down to the **Actions** area and then click the >> button to the right of **KVM Console**.

The **KVM Console** opens in a separate window and displays a list of available outband and inband addresses associated with the server. The "Launch Java KVM Console" checkbox is also available if you want to run Java KVM.

Note If you click **KVM Console** and not the >> button, your session will be started using server addresses in the preferential order of inband IPv6 first, inband IPv4 second, and out-of-band IPv4 third.

- Step 6** Choose an address from the **Select IP Address** list.
Addresses displayed as **(Inband)** access the server via the uplink ports and those displayed as **(Outband)** access the server via the management interface port.

- Step 7** Click **OK**.

The KVM Console is launched using the address you selected.

Tip If the **Caps Lock** key on your keyboard is on when you open a KVM session, and you subsequently turn off your **Caps Lock** key, the **KVM Console** may continue to act as if Caps Lock is turned on. To synchronize the KVM Console and your keyboard, press **Caps Lock** once without the **KVM Console** in focus and then press **Caps Lock** again with the **KVM Console** in focus.

- Step 8** To start another KVM session for the same server, repeat steps 5 through 7.

Another KVM session is started. You can start up to six sessions for a server, depending on the number of addresses that have been configured for it.

Starting the KVM Console from a Service Profile

Procedure

- Step 1** In the **Navigation** pane, click **Servers**.

Step 2 Expand **Servers** > **Service Profiles**.

Step 3 Expand the node for the organization which contains the service profile for which you want to launch the KVM console.

If the system does not include multi tenancy, expand the **root** node.

Step 4 Choose the service profile for which you need KVM access to the associated server.

Step 5 In the **Work** pane, click the **General** tab.

Step 6 Scroll down to the **Actions** area then click the >> button to the right of **KVM Console**.

The **KVM Console** opens in a separate window and displays a list of available out-of-band and inband addresses associated with the server. The "Launch Java KVM Console" checkbox is also available if you want to run Java KVM.

Note If you click **KVM Console** and not the >> button, your session will be started using server addresses in the preferential order of inband IPv6 first, inband IPv4 second, and outband IPv4 third.

Step 7 Choose an address from the **Select IP Address** list.

Addresses displayed as **(Inband)** access the server via the uplink ports and those displayed as **(Outband)** access the server via the management interface port.

Step 8 Click **OK**.

The KVM Console is launched using the address you selected.

Tip If the **Caps Lock** key on your keyboard is on when you open a KVM session, and you subsequently turn off your **Caps Lock** key, the **KVM Console** may continue to act as if Caps Lock is turned on. To synchronize the KVM Console and your keyboard, press **Caps Lock** once without the **KVM Console** in focus and then press **Caps Lock** again with the **KVM Console** in focus.

Step 9 To start another session for the same server, repeat steps 6 through 8.

Another KVM session is started. You can start up to six sessions for a server, depending on the number of addresses that have been configured for it.

Starting the KVM Console from the Cisco UCS KVM Direct Web Page

The Cisco UCS KVM Direct login page enables you to access a server directly from a web browser without logging in to Cisco UCS Manager.

Before you begin

To access the KVM console for a server using the Cisco UCS KVM Direct login page, you need the following:

- A Cisco UCS username and password.

- The server CIMC or service profile IPv4 outband or IPv4/IPv6 inband management address for the server you want to access.

Procedure

- Step 1** In your web browser, type or select the web link for the management IP address of the server you want to access.
- Step 2** If a **Security Alert** dialog box appears, click **Yes** to create a security exception. The security exception is permanently stored in your browser's cache.
- Step 3** In the Cisco UCS **KVM Direct** dialog box, specify the name, password, and domain.
- Step 4** Click the **Launch KVM** button to start HTML5 KVM. Next to the Launch button, you can select a list of available outband and inband addresses associated with the server. The "Launch Java KVM Console" checkbox is also available if you want to run Java KVM.
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Starting the KVM Console from the KVM Launch Manager

To access the KVM console for a server through the KVM Launch Manager, you need the following:

- Cisco UCS username and password.
- Name of the service profile associated with the server for which you want KVM access.

The KVM Launch Manager enables you to access a server through the KVM console without logging in to Cisco UCS Manager.

Procedure

- Step 1** In your web browser, type or select the web link for Cisco UCS Manager GUI.

Example:

The default web link for HTTP access is `http://UCSManager_IP` for an IPv4 address, or `http://UCSManager_IP6` for an IPv6 address. The default web link for HTTPS access is `https://UCSManager_IP` for an IPv4 address, or `https://UCSManager_IP6` for an IPv6 address. In a standalone configuration, `UCSManager_IP` or `UCSManager_IP6` are the IPv4 or IPv6 addresses, respectively, for the management port on the fabric interconnect. In a cluster configuration, `UCSManager_IP` or `UCSManager_IP6` are the IPv4 or IPv6 addresses, respectively, assigned to Cisco UCS Manager.

- Step 2** On the Cisco UCS Manager launch page, click **Launch KVM Manager**.
- Step 3** If a **Security Alert** dialog box appears, click **Yes** to accept the security certificate and continue.
- Step 4** On the **UCS - KVM Launch Manager Login** page, do the following:
- Enter your Cisco UCS username and password.
 - (Optional) If your Cisco UCS implementation includes multiple domains, select the appropriate domain from the **Domain** drop-down list.
 - Click **OK**.

- Step 5** In the **Service Profiles** table of the KVM Launch Manager, do the following:
- Locate the row containing the service profile and associated server for which you need KVM access.
 - In the **Launch KVM** column for that server, click **Launch**. Next to the Launch button, you can select a list of available outband and inband addresses associated with the server. The "Launch Java KVM Console" checkbox is also available if you want to run Java KVM.

The KVM console opens in a separate window.

Tip If the **Caps Lock** key on your keyboard is on when you open a KVM session, and you subsequently turn off your **Caps Lock** key, the **KVM Console** may continue to act as if Caps Lock is turned on. To synchronize the KVM Console and your keyboard, press **Caps Lock** once without the **KVM Console** in focus and then press **Caps Lock** again with the **KVM Console** in focus.

KVM Folder Mapping

KVM Folder Mapping is supported in UCS Manager 3.2(1). Folder mapping provides external file access to the KVM console through the HTML5 KVM interface for remote system updates. This feature is available for B-series and C-series servers with systems running Google Chrome version 57 and higher.

Procedure

- Step 1** Start the KVM console.
 - Step 2** Click the **Create Image** button.
 - Step 3** Drag and drop any files into the Create Image dialog box.
 - Step 4** Click **Download ISO Image File** to create the ISO image. Only ISO images are available through the HTML5 KVM interface. For IMG image file creation use the Java KVM.
 - Step 5** Click the **Virtual Media** button, then select **Activate Virtual Devices**. Wait a few seconds for the virtual devices to load.
 - Step 6** Click the **Virtual Media** button, then select **CD/DVD**.
 - Step 7** Drag the new ISO file or a folder into the Virtual Disk Management dialog box then click **Map Drive**. The new files are now mapped to this KVM session for read only access.
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KVM Certificate

Changing the KVM Certificate

You can use this procedure to change the KVM certificate to a user-generated public certificate.

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Expand **Equipment > Chassis > Chassis Number > Servers**.
- Step 3** Click the server for which you want to change the KVM certificate.
- Step 4** In the **Work** pane, click the **Inventory** tab.
- Step 5** Click the **CIMC** subtab.
- Step 6** In the **Actions** area, click **Change KVM Certificate**:
- Step 7** In the **Change KVM Certificate** dialog box, complete the following fields:

Field	Description
Certificate field	A user-generated public certificate.
Key field	The corresponding user-generated private key. Note Password protected X.509 certificate private key is not supported.

- Step 8** Click **OK**.
- Step 9** If a confirmation dialog box appears, click **Yes**.
This operation will result in a reboot of the CIMC
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Clearing the KVM Certificate

Procedure

- Step 1** In the **Navigation** pane, click **Equipment**.
- Step 2** Expand **Equipment > Chassis > Chassis Number > Servers**.
- Step 3** Click the server for which you want to clear the KVM certificate.
- Step 4** In the **Work** pane, click the **Inventory** tab.
- Step 5** Click the **CIMC** subtab.
- Step 6** In the **Actions** area, click **Clear KVM Certificate**:
- Step 7** In the **Clear KVM Certificate** dialog box, click **Yes**.
This operation will result in a reboot of the CIMC
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