# Overview

This chapter includes the following sections:

# Cisco UCS E-Series M6 Servers Overview

The Cisco UCS E-Series M6 Servers are size-,weight-, and power-efficient blade servers that are housed within the Cisco Catalyst 8300 Series Edge platforms. These servers provide a general-purpose compute platform for branch-office applications deployed either as bare-metal on operating systems, such as Linux, or as virtual machines on hypervisors, such as VMware vSphere Hypervisor.

The UCS E-Series M6 Server is purpose-built with powerful Intel IceLake-D processors for general purpose compute. It comes in the double-wide form factor, that fits into two SM slots.

**Note**  For information about the E-Series M6 Servers, and the maximum number of servers that can be installed per router, see the "Hardware Requirements" section in the Hardware Installation Guide for Cisco UCS E-Series M6 Servers.

# Server Software

The UCS E-Series M6 Servers require three major software systems:

- CIMC firmware
- BIOS firmware
- Operating system or hypervisor

### CIMC Firmware

Cisco Integrated Management Controller (CIMC) is a management module built into the motherboard of the UCS E-Series M6 Servers. A dedicated processor, separate from the main server CPU, runs the CIMC firmware. CIMC is the management service for the E-Series M6 Servers. You can use a web-based GUI or SSH-based CLI to access, configure, administer, and monitor the server.

The system ships with a running version of the CIMC firmware. You can update the CIMC firmware, but no initial installation is required.

### BIOS Firmware

BIOS initializes the hardware in the system, discovers bootable devices, and boots them in the provided sequence. It boots the operating system and configures the hardware for the operating system to use. BIOS manageabilityfeatures allow you to interact with the hardware and use it. In addition, BIOS provides options to configure the system, manage firmware, and create BIOS error reports.

The system ships with a running version of the BIOS firmware. You can update the BIOS firmware, but no initial installation is required.

### Operating System or Hypervisor

The main server CPU runs on an operating system, such as Linux; or on a hypervisor. You can purchase the E-Series M6 Servers with a preinstalled operating system or hypervisor.

**Note** For information about the operating systems and hypervisors that are available for the E-Series M6 Servers, see the "Software Requirements" section in the *Release Notes for Cisco UCS E-Series M6 Servers*.

# CIMC Overview

The Cisco Integrated Management Controller (CIMC) is the management service for the E-Series M6 Servers. CIMC runs within the server. You can use a web-based GUI or the SSH-based CLI to access, configure, administer, and monitor the server.

You can use CIMC to perform the following server management tasks:

- Power on, power off, power cycle, reset, and shut down the server.

- Configure the server boot order.

- View serverproperties, router information, and chassis status.

- Manage remote presence.

- Create and manage local user accounts, and enable remote user authentication through the Active Directory.

- Configure network-related settings, including NIC properties, IPv4, VLANs, and network security.

- Configure communication services, including HTTP, SSH, IPMI over LAN, SNMP, and Redfish.

- Manage certificates.

- Configure platform event filters.

- Monitor power supply, fan, temperature, voltage, current, LED and storage sensors.

- Update CIMC firmware.

- Update BIOS firmware.

- Install the host image from an internal repository.

- Monitor faults, alarms, and server status.

- Set the time zone and view local time.

- Collect technical support data in the event of server failure.

Most tasks can be performed in either the GUI interface or CLI interface, and the results of tasks performed in one interface are displayed in another. However, you *cannot*:

- Use the CIMC GUI to invoke the CIMC CLI.

- View a command that has been invoked through the CIMC CLI in the CIMC GUI.

- Generate CIMC CLI output from the CIMC GUI.

The CIMC exists below the operating system on a server. Therefore, you cannot use it to provision or manage operating systems or applications on servers. For example, you cannot do the following:

- Deploy an OS, such as Linux.

- Deploy patches for software, such as an OS or an application.

- Install base software components, such as anti-virus software, monitoring agents, or backup clients.

- Install software applications, such as databases, application server software, or web servers.

- Perform operator actions, including restarting an Oracle database, restarting printer queues, or handling non- user accounts.

- Configure or manage external storage on the SAN or NAS storage.

# Overview of the CIMC User Interface

The CIMC user interface is a web-based management interface for the Cisco UCS E-Series M6 servers. You can launch the user interface and manage the server from a remote host. Supported browsers are:

- Chrome

- Microsoft Edge

- Mozilla Firefox

**Note**    In case you lose or forget the password that you use to log in to Cisco IMC, see the password recovery instructions in the *Hardware Installation Guide for Cisco UCS E-Series Servers.*

# Logging Into CIMC

**Procedure**

**Step 1**  In your web browser, type or choose the web link for the CIMC.

**Step 2**  If a security dialog box displays, do the following:

a)  (Optional) Check the check box to accept all content from Cisco.

b)  Click **Yes** to accept the certificate and continue.

**Step 3**  In the log in window, enter your username and password.

**Tip**    When logging in for the first time to an unconfigured system, use **admin** as the username and **password** as the password.

The following situations occur when you login to the Web UI for the first time:

- You cannot perform any operation until you change default admin credentials on the Web UI.

- You cannot close or cancel the password change pop-up window and opening it in a tab or refreshingthe browser page will continue to display the pop-up window. This pop-up window appears when you login after a factory reset.

- You cannot choose the word 'password' as your new password. If this creates problems for any scripts you may be running, you could change it to password by logging back into the user management options, but this is ENTIRELY at your own risk. It is not recommended by Cisco.

**Step 4**  Click **Log In**.

The **Change Password** dialog box appears.

**Note**    The **Change Password** dialog box only appears the first time you log into CIMC. It does not appear for subsequent reboots.

**Step 5**  In the **New Password** field, enter your new password.

**Step 6**  In the **Confirm Password** field, enter the password again to confirm it.

**Step 7**  Click **Save Changes**.

The **Chassis Summary**  page appears, which is the CIMC home page.

# CIMC Homepage

## CIMC Toolbar

The toolbar displays above the **Work** pane.

| Button Name | Description |
|---|---|
| **Refresh** | Refreshes the current page. |

| Host Power | Displays the drop-down menu for you to choose power options. |
|---|---|
| Launch vKVM | Displays the drop-down menu to launch the virtual KVM console. |
| Ping | Launches the Ping Details pop-up window. |
| CIMC Reboot | Enables you to reboot Cisco IMC. |

## Navigation and Work Panes

The CIMC GUI comprises the **Navigation** pane on the left-hand side of the screen and the **Work** pane on the right hand side of the screen. Clicking links on the **Chassis**, **Compute**, or **Admin** menu in the **Navigation** pane displays the associated tabs in the **Work** pane on the right.

The **Navigation** pane header displays action buttons that allow you to view the navigation map of the entire GUI, view the index, or choose a favorite work pane to go to, directly. The **Pin** icon prevents the **Navigation** pane from sliding in once the **Work** pane displays.

The **Favorite** icon is a star shaped button which allows you to make any specific work pane in the application as your favorite. To do this, navigate to the work pane of your choice and click the **Favorite** icon. To access this work pane directly from anywhere else in the application, click the **Favorite** icon again.

The GUI header displays information about the overall status of the chassis and user login information.

The GUI header also displays the total number of faults (indicated in green or red), with a **Bell** icon next to it. However, clicking this icon displays the summary of only the critical and major faults of various components. To view all the faults, click the **View All** button to display the **Fault Summary** pane.

The **Navigation** pane has the following menus:

- **Chassis** Menu

- **Compute** Menu

- **Admin** Menu

### Chassis Menu

Each node in the **Chassis** menu leads to one or more tabs that display in the **Work** pane. These tabs provides access to the following information:

| Chassis Menu Node Name | Work Pane Tabs Provide Information About... |
|---|---|
| Summary | Server Properties, Cisco Integrated Management Controller (Cisco IMC) Information, Router Information, Chassis Status. |
| Inventory | CPUs, Memory, Power Supplies, Network Adapters, Storage Management, and Trusted Platform Module (TPM) information. |
| Sensors | Power Supply, Fan, Temperature, Voltage, Current, LEDs, and Storage sensor readings. |
| Faults and Logs | Fault Summary, Fault History, System Event Log, Cisco IMC Logs, and Logging Controls. |

### Compute Menu

Each node in the **Compute** menu leads to one or more tabs that display in the **Work** pane. These tabs provides access to the following information:

| Compute Menu Node Name | Work Pane Tabs Provide Information About... |
|---|---|
| **BIOS** | Configure BIOS, Configure Boot Order. |
| **Remote Management** | Virtual KVM, Virtual Media, And Serial Over LAN settings. |
| **Troubleshooting** | Bootstrap Process Recording, and Crash Recording information. |
| **Power Policies** | Power Restore Policy settings. |
| **Host Image Mapping** | Host Image Mapping information. |

### Admin Menu

Each node in the **Admin** menu leads to one or more tabs that display in the **Work** pane. These tabs provides access to the following information:

| Admin Menu Node Name | Work Pane Tabs Provide Information About... |
|---|---|
| **User Management** | Local User Management, Lightweight Active Directory Protocol (LDAP), TACACS, and Session Management information. |
| **Networking** | NIC, IPv4, IPv6, VLAN, and Port properties, along with Network Security and NTP settings. |
| **Communication Services** | HTTP, XML API, SSH, Redfish, TLS, IPMI over LAN, and SNMP settings. |
| **Security Management** | Certificate Management, Secure Key Management, and Security Configuration. |
| **Event Management** | Platform Event management. |
| **Firmware Management** | CIMC and BIOS firmware information and management. |
| **Utilities** | Technical support data collection and export, system configuration import and export options, hardware inventory data collection and export, and smart access USB settings. |

# CIMC Online Help

The GUI for the CIMC software is divided into two main sections, a **Navigation** pane on the left and a **Work** pane on the right.

The CIMC online help describes the fields on each CIMC GUI page and in each dialog box. To access the CIMC online help, do one of the following:

- In a particular tab in the CIMC GUI, click the **?** icon in the toolbar above the **Work** pane.

- In a dialog box, click the **?** icon in that dialog box.

# Logging Out of CIMC

**Procedure**

**Step 1** In the upper right pane of CIMC, click **Gear** icon, and choose **Log Out** from the drop-down menu.

Logging out returns you to the CIMC log in page.

**Step 2** (Optional) Log back in or close your web browser.