Overview

This chapter includes the following sections:

Overview of the Cisco UCS S-Series Rack-Mount Server S3260

The Cisco UCS S3260 is a modular, dense storage server with dual M3, M4 or M5 server nodes, optimized for large datasets used in environments such as big data, cloud, object storage, and content delivery.

The UCS S3260 chassis is a modular architecture consisting of the following modules:

- Base chassis: contains four redundant, hot-pluggable power supplies, eight redundant, hot-pluggable fans, and a rail kit.

- Server Node: one or two M3, M4 or M5 server nodes, each with two CPUs, 64, 128, 256, or 512 GB of DIMM memory, and a pass-through controller or a RAID card with a 1 GB or 4 GB cache.

- System I/O Controller (SIOC): one or two System I/O Controllers, each of which includes an integrated 1300-series or 1400-series virtual interface capability.

- Optional Drive Expansion Node: Large Form Factor (LFF) 3.5-inch drives in a choice of capacities.

- Solid State Drives: Up to 14 solid-state disks (SSDs) of 400GB, 800 GB, 1.6TB, and 3.2 TB capacities. These replace the previously supported top-loading LFF HDDs.

- Solid-State Boot Drives: up to two SSDs per M3, M4, or M5 server node. On the M4 server node, boot drives support hardware RAID connected to the RAID controller on the server node.

- I/O Expander: provides one storage mezz slot with two PCIe expansion slots and up to two NVMe SSDs.

The enterprise-class UCS S3260 storage server extends the capabilities of Cisco's Unified Computing System portfolio in a 4U form factor that delivers the best combination of performance, flexibility, and efficiency gains.

Note An M3 Server Node has Intel E5-2600 V2 CPUs and DDR-3 DIMMs. An M4 Server Node has Intel E5-2600 v4 CPUs and DDR-4 DIMMs

Overview of the Server Software

The Cisco UCS S-Series Rack-Mount Server ships with the Cisco IMC firmware.

Cisco IMC Firmware

Cisco IMC is a separate management module built into the motherboard. A dedicated ARM-based processor, separate from the main server CPU, runs the Cisco IMC firmware. The system ships with a running version of the Cisco IMC firmware. You can update the Cisco IMC firmware, but no initial installation is needed.

Server OS

The Cisco UCS S-Series rack server supports operating systems such as Windows, Linux, Oracle and so on. For more information on supported operating systems, see the *Hardware and Software Interoperability for Standalone C-series servers* at http://www.cisco.com/en/US/products/ps10477/prod_technical_reference_list.html. You can use Cisco IMC to install an OS on the server using the KVM console and vMedia.

Note You can access the available OS installation documentation from the *Cisco UCS C-Series Servers Documentation Roadmap* at http://www.cisco.com/go/unifiedcomputing/c-series-doc.

Server Ports

Following is a list of server ports and their default port numbers:

Table 1: Server Ports

Port Name	Port Number
LDAP Port 1	389
LDAP Port 2	389
LDAP Port 3	389
LDAP Port 4	3268
LDAP Port 5	3268
LDAP Port 6	3268
SSH Port	22

Port Name	Port Number
HTTP Port	80
HTTPS Port	443
SMTP Port	25
KVM Port	2068
Intersight Management Port	8889
Intersight Cloud Port	8888
SOL SSH Port	2400
SNMP Port	161
SNMP Traps	162
External Syslog	514

Cisco Integrated Management Controller

The Cisco IMC is the management service for the C-Series servers. Cisco IMC runs within the server.

Note The Cisco IMC management service is used only when the server is operating in Standalone Mode. If your C-Series server is integrated into a UCS system, you must manage it using UCS Manager. For information about using UCS Manager, see the configuration guides listed in the *Cisco UCS B-Series Servers Documentation Roadmap* at http://www.cisco.com/go/unifiedcomputing/b-series-doc.

Management Interfaces

You can use a web-based GUI or SSH-based CLI or an XML-based API to access, configure, administer, and monitor the server. Almost all tasks can be performed in either interface, and the results of tasks performed in one interface are displayed in another. However, you cannot do the following:

- Use Cisco IMC GUI to invoke Cisco IMC CLI
- View a command that has been invoked through Cisco IMC CLI in Cisco IMC GUI
- Generate Cisco IMC CLI output from Cisco IMC GUI

Tasks You Can Perform in Cisco IMC

You can use Cisco IMC to perform the following chassis management tasks:

- Power on, power off, power cycle, reset and shut down the server
- Toggle the locator LED

- Configure the server boot order

- View server properties and sensors

- Manage remote presence

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

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

- Configure communication services, including HTTP, SSH, IPMI Over LAN, and SNMP

- Manage certificates

- Configure platform event filters

- Update Cisco IMC firmware

- Monitor faults, alarms, and server status

- Set time zone and view local time

- Install and activate Cisco IMC firmware

- Install and activate BIOS firmware

- Install and activate CMC firmware

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

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- Configure communication services, including HTTP, SSH, IPMI Over LAN, and SNMP

- Manage certificates

- Configure platform event filters

- Update Cisco IMC firmware

- Monitor faults, alarms, and server status

- Set time zone and view local time

No Operating System or Application Provisioning or Management

Cisco IMC provisions servers, and as a result, 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 Windows or 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-Cisco IMC user accounts

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

Overview of the Cisco IMC User Interface

The Cisco IMC user interface is a web-based management interface for Cisco C-Series servers. The web user interface is developed using HTML5 with the eXtensible Widget Framework (XWT) framework. You can launch the user interface and manage the server from any remote host that meets the following minimum requirements:

- Microsoft Internet Explorer 6.0 or higher, Mozilla Firefox 3.0 or higher

- Microsoft Windows 7, Microsoft Windows XP, Microsoft Windows Vista, Apple Mac OS X v10.6, Red Hat Enterprise Linux 5.0 or higher operating systems

- Transport Layer Security (TLS) version 1.3

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 Cisco UCS C-Series server installation and service guide for your server. This guide is available from the *Cisco UCS C-Series Servers Documentation Roadmap* at http://www.cisco.com/go/unifiedcomputing/c-series-doc.

Cisco IMC Home Page

When you first log into Cisco IMC GUI, the user interface looks similar to the following illustration:

Note There may be user interface changes, which do not have functionality impact, from release to release.
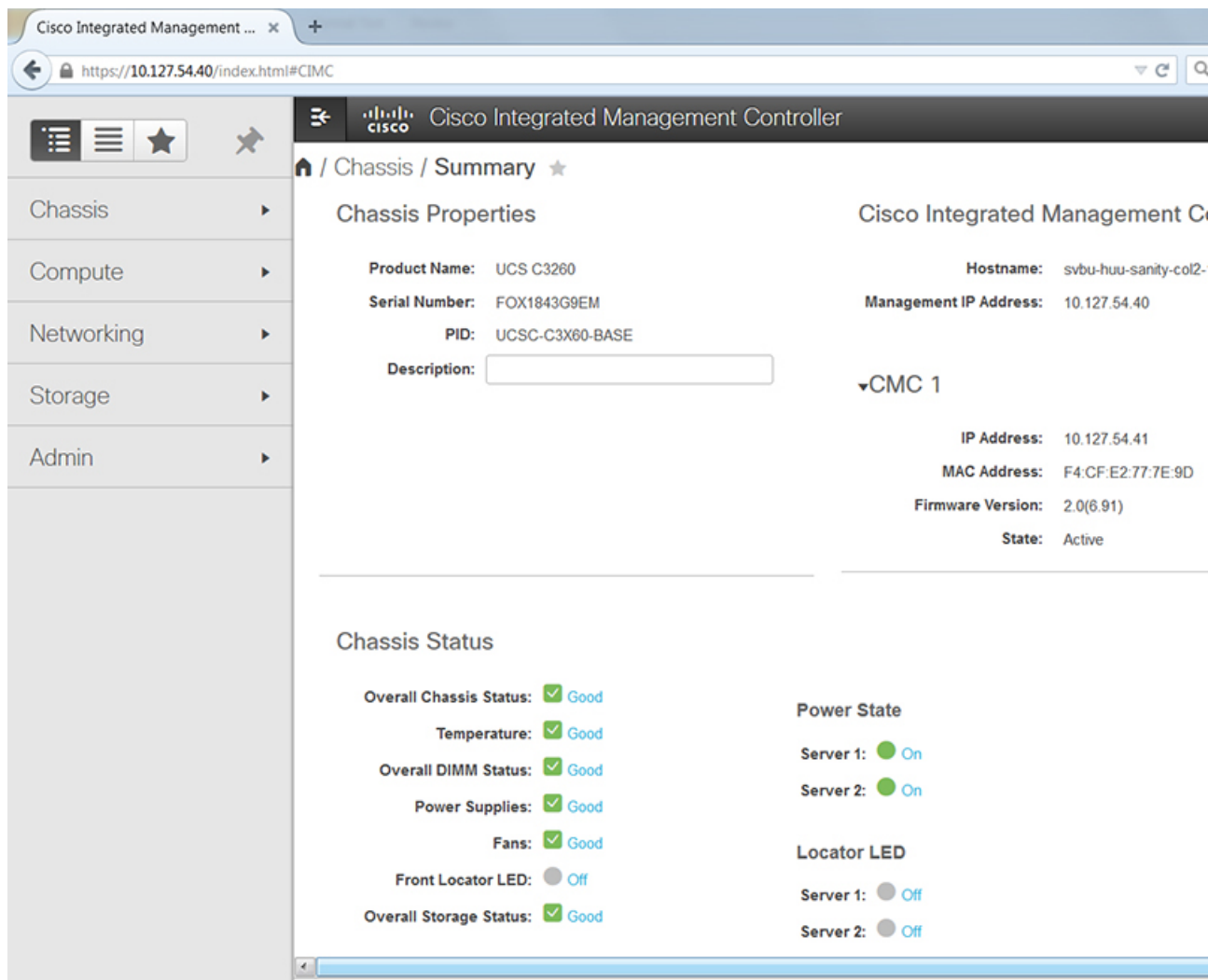
Navigation and Work Panes

The Cisco Integrated Management Controller 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**, **Networking**, **Storage** or **Admin** menu in the **Navigation** pane displays the associated tabs in the 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 select 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.

On the right of the GUI header is a gear icon. Click on the gear icon and the drop-down lists the **Change Password** and **Logout** options. You can use the change password option to change your password.

Note When you change your password you will be logged out of Cisco IMC.

Note **Change Password** option is not available when you login as an admin, you can only change the password of the configured users with read-only user privileges.

When you change your password you will be logged out of Cisco IMC.

The Logout option allows you to log out of Cisco IMC.

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.

Note User interface options may vary depending on the server.

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

- **Chassis** Menu

- **Compute** Menu

- **Networking** Menu

- **Storage** Menu

- **Admin** Menu

Chassis Menu

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

Chassis Menu Node Name	Work Pane Provide Information About...
Summary	Chassis properties, Chassis status, Cisco Integrated Management Controller (Cisco IMC) Information, IP and MAC addresses of CMC 1 and CMC 2, Firmware versions, SIOC PIDs, State of CMC 1 and CMC 2, Power Utilization, and Server Utilization.
Inventory	Servers, Power Supplies, Cisco VIC adapters, Dynamic Storage.
Sensors	Power Supply, Fan, Temperature, Voltage, Current, LEDs
Power Management	Power Cap Configuration and Power Monitoring.
Faults and Logs	Fault summary, Fault history, System Event Log, Cisco IMC Log, and logging controls.

Compute Menu

The **Compute** menu contains information about the server, and the following information is displayed in the **Work** pane.

Compute Menu Node Name	Work Pane Tabs Provide Information About...
General	Server properties that include product name, serial number, product ID, UUID, BIOS version, hostname, Cisco IMC firmware version, IP address, and MAC address and description.
Inventory	CPU, Memory, PCI Adapters, vNICs, Storage, TPM, IO Expander, Network Adapters, and GPU Inventory.
Sensors	Temperature, Voltage, LEDs, and Storage.
BIOS	The installed BIOS firmware version and BIOS profile configuration, server boot order configuration, I/O, Server management, Security, Processor, Memory, Power or Performance.
Remote Management	Virtual KVM, Virtual Media, and Serial over LAN.
Troubleshooting	Bootstrap Process Recording Actions include Play Recording and Download Recording, and Crash Recording Actions include Play Recording, Capture Recording, and Download Recording.
Power Policies	Power restore policy settings.
PID Catalog	CPU, memory, PCI adapters, and the HDD details.
Secure Key Management	Details of KMIP Servers, KMIP Root CA and Client Certificate details, KMIP login details, KMIP Client Private key status

Networking Menu

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

Networking Menu Node Name	Work Pane Tabs Provide Information About...
General	Adapter card properties, firmware, external ethernet interfaces, and actions to export or import configurations, and reset status.
External Ethernet Interfaces	External ethernet interfaces information such as port, admin speed, MAC address, link state.
vNICs	Host ethernet interfaces information such as name, CDN, MAC address, MTU and individual vNIC properties.
vHBAs	Host fibre channel interfaces information such as name, WWPN, WWNN, boot, uplink, port profile, channel number, and individual vHBA properties.

Storage Menu

Each node in the **Storage** menu corresponds to the LSI MegaRAID controllers or Host Bus Adapters (HBA) that are installed in theCisco UCS C-Series Rack-Mount Servers. Each node leads to one or more tabs that display in the **Work** pane and provide information about the installed controllers.

Storage Menu Node Name	Work Pane Tabs Provide Information About...
Controller Info	General information about the selected LSI MegaRAID controller or HBA.
Physical Drive Info	General drive information, RAID information, and physical drive information.
Virtual Drive Info	General information about virtual drives, RAID information, and physical drives information
Battery Backup Unit	Backup battery information for the selected MegaRAID controller.
Storage Log	Storage messages.

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, LDAP, and Session Management.
Networking	Network, Network Security, and NTP Setting.
Communication Services	Communication Services tab includes HTTP, SSH, XML API, Redfish Properties, IPMI over LAN Properties, SNMP tab includes SNMP Properties, User Settings, and Trap Destinations, and Mail Alert tab includes SNTP Properties and SMTP Recipients.
Security Management	Certificate Management and Security Configuration.
Event Management	List of Platform Event Filters
Firmware Management	Cisco IMC and BIOS firmware information and management.
Utilities	Technical support data collection export to remote and local download, system configuration import and export options, Generate to NMI host, restore factory defaults settings, add or update Cisco IMC Banner, generate inventory data, export hard inventory data to remote, upload PID catalog, enable or disable secure adapter update.
Device Connector	Intersight management and network settings.

Toolbar

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

Button Name	Description
Refresh	Refreshes the current page.
Host Power	Launches the **Server Power Management** pop-up window.
Launch KVM	Launches the **Launch KVM** pop-up window.
	Launches the **Launch KVM** pop-up window.
Ping	Launches the **Ping Details** pop-up window.
Reboot	Enables you to reboot BMC 1, BMC 2, CIMC 1 or CIMC 2 depending on the option you choose from the drop-down menu.
Locator LED	Launches the **Locator LED** pop-up window.

Cisco Integrated Management Controller Online Help Overview

The GUI for the Cisco Integrated Management Controller (Cisco IMC) software is divided into two main sections, a **Navigation** pane on the left and a **Work** pane on the right.

This help system describes the fields on each Cisco IMC GUI page and in each dialog box.

To access the page help, do one of the following:

- In a particular tab in the Cisco IMC GUI, click the **Help** icon in the toolbar above the **Work** pane.

- In a dialog box, click the **Help** button in that dialog box.

> **Note** For a complete list of all C-Series documentation, see the *Cisco UCS C-Series Servers Documentation Roadmap* available at the following URL: http://www.cisco.com/go/unifiedcomputing/c-series-doc.

Logging into Cisco IMC

Step 1 In your web browser, type or select the web link for Cisco IMC.

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 Cisco IMC Web UI.

- You cannot close or cancel the password change pop-up window and opening it in a tab or refreshing the 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**.

Logging out of Cisco IMC

Step 1   In the upper right of Cisco IMC, click the gear icon and click **Log Out** from the drop-down list.

Logging out returns you to the Cisco IMC log in page.

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