

Release Notes for Cisco UCS C-Series Software, Release 3.1(1)

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Cisco UCS C-Series Servers

Cisco UCS C-Series Servers deliver unified computing in an industry-standard form factor to reduce total cost of ownership and increase agility. Each product addresses varying workload challenges through a balance of processing, memory, I/O, and internal storage resources.

About the Release Notes

This document describes the new features, system requirements, open caveats and known behaviors for C-Series software release 3.1(1) including Cisco Integrated Management Controller software and any related BIOS, firmware, or drivers. Use this document in conjunction with the documents listed in the [Related Documentation](#) section.



Note We sometimes update the documentation after original publication. Therefore, you should also refer to the documentation on Cisco.com for any updates.

Revision History

Revision	Date	Description
A0	August 17, 2017	Created release notes for Release 3.1(1).

System Requirements

The management client must meet or exceed the following minimum system requirements:

- Sun JRE 1.8.0_92 or later (Till 1.8.0_121)
- HTML based interfaces are supported on:
 - Microsoft Internet Explorer 10.0 or 11
 - Mozilla Firefox 30 or higher
 - Google Chrome 38 or higher
 - Safari 7 or higher



Note If the management client is launched using an unsupported browser, check the help information from the `For best results use supported browsers` option available in the login window for the supported browser versions.

- For Classic View - all browsers must have Adobe Flash Player 11 plug-in or higher. Supported browsers are:
 - Microsoft Internet Explorer 11 or higher
 - Mozilla Firefox 54 or higher
 - Google Chrome 61 or higher
 - Safari 11 or higher
- Microsoft Windows 7, Microsoft Windows XP, Microsoft Windows Vista, Microsoft Windows 10, Apple Mac OS X v10.6, Red Hat Enterprise Linux 5.0 or higher operating systems
- Transport Layer Security (TLS) version 1.2.

Overview of the Server Models

Supported Platforms

The following servers are supported in this release:

- UCS-C240 M5
- UCS-C220 M5
- UCS-C480 M5

For information about these servers, see [Overview of Servers](#)

Hardware and Software Interoperability

For detailed information about storage switch, operating system, adapter, adapter utility, and storage array interoperability, see the *Hardware and Software Interoperability Matrix* for your release located at:

http://www.cisco.com/en/US/products/ps10477/prod_technical_reference_list.html

For details about transceivers and cables that are supported on VIC cards, see the [Transceiver Modules Compatibility Matrix](#)

You can also see the VIC data sheets for more compatibility information: [Cisco UCS Virtual Interface Card Data Sheets](#)

Cisco UCS C-Series and Cisco UCS Manager Release Compatibility Matrix for C-Series Rack-Mount Servers

Cisco UCS C-Series Rack-Mount Servers are managed by built-in standalone software — Cisco Integrated Management Controller (Cisco IMC). However, when a C-Series Rack-Mount Server is integrated with Cisco UCS Manager, the Cisco IMC does not manage the server anymore.

The following table lists the C-Series software standalone and Cisco UCS Manager releases for C-Series Rack-Mount Servers:

Table 1: Cisco C-Series and UCS Manager Software Releases for C-Series Servers

C-Series Standalone Release	Cisco UCS Manager Release	C-Series Servers
3.1(1d)	3.2(1d)	C220 M5/C2540 M5
3.0(3a)	3.1(3a)	C220 M4/C240 M4 only
3.0(2b)	No Support Note We support discovery and upgrade or downgrade functions with Cisco UCS Manager.	C220 M4/C240 M4 only
3.0(1d)	No Support Note We support discovery and upgrade or downgrade functions with Cisco UCS Manager.	All M3/M4 except C420 M3
2.0(13e)	3.1(2b)	All M3/M4 except C420 M3
2.0(10b)	3.1(1g)	C220 M4/C240 M4 only
2.0(9c)	3.1(1e)	All other M3/M4
2.0(9f)	2.2(7b)	For all other M3/M4
2.0(10b)	2.2(7b)	C220 M4/C240 M4 only
1.5(9d)	2.2(7b)	C420-M3, C260-M2, C460-M2 only
1.5(9d)	2.2(8f)	C420-M3, C260-M2, C460-M2 only
2.0(9c)	2.2(8f)	For all other M3/M4
2.0(10b)	2.2(8f)	C220 M4/C240 M4 only
2.0(12b)	2.2(8f)	C460 M4 only
1.5(8a)	2.2(6g)	C420 M3, C260 M2, C460 M2 only

C-Series Standalone Release	Cisco UCS Manager Release	C-Series Servers
2.0(8d)	2.2(6c)	For all other M3/M4
1.5(7f)	2.2(5b)	C420 M3, C260 M2, C460 M2 only
2.0(6d)	2.2(5a)	For all other M3/M4
1.5(7a)2	2.2(4b)	C420 M3, C260 M2, C460 M2 only
2.0(4c)	2.2(4b)	For all other M3/M4
1.5(7c)1	2.2(3b)	C420 M3, C260 M2, C460 M2 only
2.0(3d)1	2.2(3a)	For all other M3/M4

Upgrade Paths for Release 3.1(x)

The section provides information on the upgrade paths to release 3.1(x). Refer to the table for upgrade paths for various Cisco UCS C-series IMC versions.

Table 2: Upgrade Paths to Release 3.1(x)

Upgrade From Release	Upgrade To Release	Recommended Upgrade Path
For all M5 Servers	3.1(x)	<p>Follow below upgrade path:</p> <ul style="list-style-type: none"> You can use Interactive HUU or Non-Interactive HUU (NIHUU) script to update the server. While updating the firmware using the Non-Interactive HUU (NIHUU) tool, use the Python scripts that are released with version 3.1(2b). Use OpenSSL 1.0.1e-fips on the client side (where the NIHUU python scripts are running). Download HUU iso from here. Download NIHUU script from here.

Firmware Upgrade Details

Firmware Files

The C-Series software release 3.1(1) includes the following software files:

CCO Software Type	File name(s)	Comment
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Unified Computing System (UCS) Server Firmware	ucs-c240m5-huu-3.1.1.iso ucs-c220m5-huu-3.1.1.iso For release specific ISO versions, see Cisco UCS C-Series Integrated Management Controller Firmware Files, Release 3.1	Host Upgrade Utility
Unified Computing System (UCS) Drivers	ucs-cxxx-drivers.3.1.1.iso	Drivers
Unified Computing System (UCS) Utilities	ucs-cxxx-utils-efi.3.1.1.iso ucs-cxxx-utils-linux.3.1.1.iso ucs-cxxx-utils-vmware.3.1.1.iso ucs-cxxx-utils-windows.3.1.1.iso	Utilities



Note Always upgrade the BIOS, the Cisco IMC and CMC from the HUU ISO. Do not upgrade individual components (only BIOS or only Cisco IMC), since this could lead to unexpected behavior. If you choose to upgrade BIOS, and the Cisco IMC individually and not from the HUU ISO, make sure to upgrade both Cisco IMC, and BIOS to the same container release. If the BIOS and the Cisco IMC versions are from different container releases, it could result in unexpected behavior. Cisco recommends that you use the Update All option from the Host Upgrade Utility to update the firmware versions of Cisco IMC, BIOS, and all other server components (VIC, RAID Controllers, PCI devices, and LOM) together.

Host Upgrade Utility

The Cisco Host Upgrade Utility (HUU) is a tool that upgrades the Cisco UCS C-Series firmware.

The image file for the firmware is embedded in the ISO. The utility displays a menu that allows you to choose which firmware components to upgrade. For more information on this utility see:

http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html

For details of firmware files in Cisco Host Upgrade Utility for individual releases, see [Cisco UCS C-Series Integrated Management Controller Firmware Files, Release 3.1](#)

Updating the Firmware

Use the Host Upgrade Utility to upgrade the C-Series firmware. Host Upgrade Utility can upgrade the following software components:

- BIOS
- Cisco IMC
- SIOC
- Cisco VIC Adapters
- LSI Adapters
- LAN on Motherboard

- PCIe adapter firmware
- HDD firmware
- SAS Expander firmware

All firmware should be upgraded together to ensure proper operation of your server.



Note We recommend that you use the **Update All** option from the Host Upgrade Utility to update the firmware versions of Cisco IMC, BIOS and all other server components (VIC, RAID Controllers, PCI devices, and LOM) together. Click **Exit** once you deploy the firmware.

For more information on how to upgrade the firmware using the utility, see:

<http://www.cisco.com/c/en/us/support/servers-unified-computing/ucs-c-series-rack-servers/products-user-guide-list.html>

Supported Features

Supported Software Features

The following new software features are supported in Release 3.1(1):

- **Cisco FlexUtil Controller**—Supports hosting of microSD memory card for storage of server software tools and utilities. The user visible partitions that can be created on the microSD card are Server Configuration Utility (SCU) with a fixed size of 1.25 GB, diagnostics with a fixed size of 0.25 GB, Host Update Utility (HUU) with a fixed size of 1.5 GB, Drivers with a fixed size of 8 GB, and user partition.
- **Smart Access USB**—By default the USB connected to the front dongle is connected to the host. Enabling Smart USB connects the USB to Cisco IMC. With this feature enabled, you can perform the following operations:
 - Importing or exporting Cisco IMC configuration
 - Updating Cisco IMC, BIOS, and VIC firmware
 - Exporting technical support data from Cisco IMC

- **Device Connector**—Enabling the device connector establishes a bi-directional communication between Cisco Intersight (the cloud-hosted server management system) and Cisco IMC. It is enabled by default. When enabled, you can manage the C220 M5 and C240 M5 servers from Cisco Intersight.

The device connector makes connections to the cloud when Cisco IMC is being upgraded to Release 3.1.

- **Cisco System Event Log (SEL) Enhancement**—Logs up to 131068 system events. When Cisco SEL reaches its full capacity of 131068 system events, the oldest entries are overwritten with the most recent ones. The **System Event Log** tab on the Graphic User Interface displays only the most recent 3008 entries.
- **Dynamic Front Panel Temperature Threshold**—Allows you to set the upper critical threshold for the front panel temperature sensor.
- **Flex Flash Logs**— Allows you to view the Flex Flash logs.

New Hardware in Release 3.1(1d)

M5 Servers

- Support for C220 M5 and C240 M5 rack-mount servers

Peripherals

- Support for new SAS Expander (SasExpM5).
- Support for the following Drive Controllers and SAS options:
 - Cisco 12G Modular Raid Controller with 2GB cache (UCSC-RAID-M5)
 - Cisco 12G Modular Raid Controller with 4GB cache (UCSC-RAID-M5HD)
 - Cisco 12G Modular SAS HBA (max 16 drives) (UCSC-SAS-M5)
 - Cisco 12G Modular SAS HBA (max 26 drives) (UCSC-SAS-M5HD)
- Support for Rear Backplanes:
 - UCSC-RSAS-C240M5 in UCSC-C240-M5S and UCSC-C240-M5L
 - UCSC-RSAS-C240M5X in UCSC-C240-M5SX
 - UCSC-RNVME-240M5 in all C240 M5
- Support for the following new NVMe devices with relevant M5 servers:
 - Cisco 2.5" U.2 800GB HGST SN200 NVMe High Perf. High Endurance (UCSC-NVMEHW-H800)
 - Cisco 2.5" U.2 1.6 TB HGST SN200 NVMe High Perf. High Endurance (UCSC-NVMEHW-H1600)
 - Cisco 2.5" U.2 3.2 TB HGST SN200 NVMe High Perf. High Endurance (UCSC-NVMEHW-H3200)
 - Cisco 2.5" U.2 6.4 TB HGST SN200 NVMe High Perf. High Endurance (UCSC-NVMEHW-H6400)
 - Cisco 2.5" U.2 7.7 TB HGST SN200 NVMe High Perf. High Endurance (UCSC-NVMEHW-H7680)
 - Cisco HHHL AIC 1.6TB HGST SN260 NVMe Extreme Perf High Endurance (UCSC-F-H16003)
 - Cisco HHHL AIC 3.2TB HGST SN260 NVMe Extreme Perf High Endurance (UCSC-NVME-H32003)
 - Cisco HHHL AIC 3.8TB HGST SN260 NVMe Extreme Perf High Endurance (UCSC-NVME-H38401)
 - Cisco HHHL AIC 6.4TB HGST SN260 NVMe Extreme Perf High Endurance (UCSC-NVME-H64003)
 - Cisco HHHL AIC 7.7TB HGST SN260 NVMe Extreme Perf High Endurance (UCSC-NVME-H76801)
- Support for the following GPUs with the C240 M5 rack-mount servers:
 - Nvidia M10 P2405-070
 - Nvidia P100 12GB PH400-202
 - Nvidia P100 16GB P2H400-201

- Nvidia P40 PASCAL PASSIVE 250W FF 3.0 24GB
- AMD FirePro S7150X2
- Support for following Qlogic adapters:
 - Qlogic QLE2692 16Gb dual Port FC HBA (UCS-PCIE-QD16GF)
 - Qlogic QLE2742 dual-port 32G FC HBA (UCSC-PCIE-QD32GF)
- Support for M.2 SD storage modules (UCS-MSTOR-SD) on M5 servers
- Support for M.2 SATA storage modules (UCS-MSTOR-M2) on M5 servers
- Support for the following M.2 SATA drives:
 - 240GB M.2 6G SATA SSD (UCS-M2-240GB)
 - 960GB M.2 6G SATA SSD (UCS-M2-960GB)
- Support for the following Emulex Cards:
 - Emulex LPe31002 Dual-Port 16G FC HBA
 - Emulex LPe32000 Single-port 32G FC HBA
 - Emulex LPe32002 Dual-port 32G FC HBA

Software Utilities

The following standard utilities are available:

- Host Update Utility (HUU)
- BIOS and Cisco IMC Firmware Update utilities
- Server Configuration Utility (SCU)
- Server Diagnostic Utility (SDU)

The utilities features are as follows:

- Availability of HUU, SCU on the USB as bootable images. The USB also contains driver ISO, and can be accessed from the host operating system.

SNMP

The supported MIB definition for this release and later releases can be found at the following link:

<ftp://ftp.cisco.com/pub/mibs/supportlists/ucs/ucs-C-supportlist.html>



Note The above link is incompatible with IE 9.0.

Open Caveats

The following section lists open caveats.

Open Caveats in Release 3.1(1d)

The following defects are open in release 3.1(1d):

Table 3: BMC

Defect ID	Symptom	Workaround	First Affected Release
CSCve78250	Delay firmware update using the UCSCFG fails to start. This happens when you try starting a firmware update from the UCSCFG and then set the one time boot order using the KVM or Cisco IMC Web UI.	Do not set the one time boot order after triggering the delay firmware update using UCSCFG.	3.1(1d)
CSCvd85269	When Virtual Media is enabled on a HTML5 KVM client and if you attempt to activate it on a second HTML5 KVM client, the following two messages may repeatedly pop up even after selecting OK on each message: Virtual Media has terminated as a result of Unknown problem. Virtual Media redirection is already in use by another user.	Restart the HTML5 KVM client and activate only one Virtual Media client at a time.	3.1(1d)

Table 4: BIOS

Defect ID	Symptom	Workaround	First Affected Release
CSCve46673	Precision boot order does not list the third party network adapters in legacy mode.	Switch to UEFI mode.	3.1(1d)
CSCve35219	When you select power capping without enabling the allow throttling option, and select a capping value towards the lower end of the allowed capping range, power capping may not be successful achieved.	Select allow throttling option, if you want to set a lower power capping value.	3.1(1d)

Table 5: External Controllers

Defect ID	Symptom	Workaround	First Affected Release
CSCvf03966	Random Critical SEL about HDDX_STATUS drive faults are asserted during reboots. However, no failure of any specific drive slots detected on reboot.	None. This does not have any functional impact and can be ignored.	3.1(1d)

Table 6: Utilities

Defect ID	Symptom	Workaround	First Affected Release
CSCvd34396	Some components or adapters are not visible on HUU when it boots in the UEFI secure boot mode.	Disable the UEFI secure boot using the Cisco IMC web UI and reboot the HUU.	3.1(1d)

Known Behaviors

The following section lists known behaviors.

Known Behaviors in Release 3.1(1d)

The following are the known behaviors in Release 3.1(1d):

Table 7: BMC

Defect ID	Symptom	Workaround	First Affected Release
CSCve82042	Flexflash Virtual Drives disconnects from the host when you perform multiple flexflash resets. This happens due to the controller not being able to detect the installed SD cards.	Reset the controller again and reconnect the VD to the host.	3.1(1d)
CSCvd00773	When the platform or CPU domain power limit is set to an absolute minimum power value (characterized minimum value) and the correction time to 1 second, sometimes it may take more than 1 second (correction time) to limit power to the set value.	No workaround.	3.1(1d)

Defect ID	Symptom	Workaround	First Affected Release
CSCvf48086	<p>When power cap limit for a platform domain is set close to a minimum power limit value, following critical SEL messages may appear during system boot:</p> <p>Node Manager: Thermal Status Sensor for CPU 1, PROCHOT asserted</p> <p>Node Manager: Thermal Status Sensor for CPU 2, PROCHOT asserted</p> <p>These messages get de-asserted during the boot process. These messages are seen as the system tries to retain the power consumption during system boot within the configured power cap value.</p>	Configure a higher power cap value.	3.1(1d)

Table 8. BIOS

Defect ID	Symptom	Workaround	First Affected Release
CSCvd52950	The SEL "System Software event: Post sensor, Unrecoverable Video Controller Failure [0xFF09] was asserted." is logged and there is no display on the Offboard VGA console. This happens when you have an offboard VGA card that does not have UEFI oprom support and the server is in the UEFI boot mode (default mode).	Clear the CMOS to reset the VGA priority to use onboard VGA as the primary video console.	3.1(1d)

Recommended Best Practices

Upgrading BIOS and Cisco IMC Firmware

Cisco provides the Cisco Host Upgrade Utility to assist you in upgrading the BIOS, Cisco IMC, CMC LOM, LSI storage controller, and Cisco UCS Virtual Interface Cards firmware to compatible levels. On the C220 M3, C240 M3, C22 M3, and C24 M3 servers, we recommend that you reboot Cisco IMC before performing the Cisco IMC and BIOS firmware update using NIHUU, HUU, web UI, CLI, or XML API.



Note When upgrading the Cisco IMC firmware for the UCS C-series platforms, ensure that you update using the full image (for example upd-pkg-cXXX-mx-Cisco IMC.full.*.bin).

The correct and compatible firmware levels for your server model are embedded in the utility ISO.

To use this utility, use the Cisco Host Upgrade Utility User Guide which includes the instructions for downloading and using the utility ISO. Select the guide from this URL:

http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html

Related Documentation

Related Documentation

For configuration information for this release, refer to the following:

- [Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide](#)
- [Cisco UCS C-Series Servers Integrated Management Controller GUI Configuration Guide](#)
- [Cisco UCS Rack-Mount Servers Cisco IMC API Programmer's Guide](#)

For information about installation of the C-Series servers, refer to the following:

- [Cisco UCS C-Series Rack Servers Install and Upgrade Guides](#)

The following related documentation is available for the Cisco Unified Computing System:

- [Cisco UCS C-Series Servers Documentation Roadmap](#)
- [Cisco UCS Site Preparation Guide](#)
- [Regulatory Compliance and Safety Information for Cisco UCS](#)
- For information about supported firmware versions and supported UCS Manager versions for the rack servers that are integrated with the UCS Manager for management, refer to [Release Bundle Contents for Cisco UCS Software](#).

Refer to the release notes for Cisco UCS Manager software and the *Cisco UCS C Series Server Integration with Cisco UCS Manager Guide* at the following locations:

- [Cisco UCS Manager Release Notes](#)
- [Cisco UCS C Series Server Integration with Cisco UCS Manager Guides](#)