Release Notes for Cisco UCS C-Series Software, Release 1.4(8)

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This document describes the new features, system requirements, open caveats and known behaviors for C- series software release 1.4(8) 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 on page 12.

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

Table 1 shows the online change history for this document.

Table 1 Online History Change

Part Number	Revision	Date	Description
OL-28231-01	A0	November 16, 2012	Created release notes for Release 1.4(8d)
	B0	December 13, 2012	Updated the HUU version to 1.4(8d).1.
	C0	March 15, 2013	The following changes were made: • Updated the HUU version to 1.4(8e)1 • Updated the Resolved Caveats section

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Contents

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Introduction

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Overview of the Server Model

This section includes the following section:

Overview of Cisco UCS C420 Rack Servers

The Cisco UCS C420 M3 Rack Server is a high-density, enterprise-class, four-socket, two-rack-unit (2RU) rack server designed for compute, I/O, storage, and memory-intensive standalone and virtualized applications. The addition of the Intel® Xeon® processor E5-4600 product family delivers an optimal combination of performance, flexibility, and efficiency gains.

The Cisco UCS C420 M3 server is part of the Cisco UCS solution, which combines rack and blade servers with networking and storage access into a single unified system. Centrally configured through unified, model-based management, Cisco UCS simplifies and accelerates deployment of enterprise-class applications running in bare-metal, virtualized, and cloud-computing environments.

Designed for enterprise-class performance and scalability, the Cisco UCS C420 M3 combines the advantages of 4-socket computing with the cost-effective Intel Xeon processor E5-4600 product family for demanding virtualization, database, and high-end high-performance computing (HPC) workloads. The dense and expandable Cisco UCS C420 M3 is a balanced, high-performance platform that complements the Cisco UCS Rack Server portfolio. The 2RU Cisco UCS C420 M3 supports 48 DIMM

slots, 16 disk drives, seven PCIe expansion slots, and four 1 Gigabit Ethernet LAN-on-motherboard (LOM) ports. It uses unique Cisco UCS and virtual interface card (VIC) technology and delivers one-wire participation in Cisco UCS domains. The Cisco UCS C420 M3 interfaces with Cisco UCS using another Cisco innovation: the Cisco UCS VIC 1225. The Cisco UCS VIC 1225 is a dual-port Enhanced Small Form-Factor Pluggable (SFP+) 10 Gigabit Ethernet and Fibre Channel over Ethernet (FCoE)-capable PCI Express (PCIe) card designed exclusively for Cisco UCS C-Series Rack Servers. It incorporates Cisco's next-generation converged network adapter (CNA), providing investment protection for feature releases. The card enables a policy-based, stateless, agile server infrastructure that can present up to 256 PCIe standards-compliant interfaces to the host that can be dynamically configured as either network interface cards (NICs) or host bus adapters (HBAs). In addition, the Cisco UCS VIC 1225 supports Cisco® Data Center Virtual Machine Fabric Extender (VM-FEX) technology, which extends the Cisco UCS fabric interconnect ports to virtual machines, simplifying server virtualization deployment.

The Cisco UCS C420 M3 server is also part of a large family of rack servers: the Cisco C-Series Rack Servers. Designed to operate both in standalone environments and as part of Cisco UCS, the Cisco UCS C-Series servers employ Cisco technology to help customers handle the most challenging workloads. The Cisco UCS C-Series complements a standards-based unified network fabric with Cisco Data Center VM-FEX virtualization support, Cisco UCS Manager Software, Cisco fabric extender and fabric interconnect architectures, and Cisco Extended Memory Technology.

Overview of the Pre-Installed Cisco Flexible Flash Card

The Cisco UCS C420 M3 supports 1 internal Cisco FlexFlash drive. The Cisco Flexible Flash card is pre-installed with three software bundles, each on one of the four preconfigured virtual drives (VDs). The fourth VD allows you to install an OS or an embedded hypervisor.

The VDs are configured with the following content:

- Cisco UCS Server Configuration Utility (SCU).
- Hypervisor (HV). This is a VD that you can use for your own purposes.
- Cisco Drivers (Drivers).
- Cisco Host Upgrade Utility (HUU).

Refer to the following documents for more information about these tasks:

- Replacing a card: Refer to the following:
  - *Cisco UCS C420 Server Installation and Service Guide*
- Enabling and booting a VD: *Cisco UCS C-Series Servers Integrated Management Controller GUI Configuration Guide* or the *Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide*
- Monitoring and managing a card with CIMC: *Cisco UCS C-Series Servers Integrated Management Controller GUI Configuration Guide* or the *Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide*

The links to these documents are in the C-Series documentation road map:

http://www.cisco.com/go/unifiedcomputing/c-series-doc

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

Transceivers Specifications

The Cisco UCS C-Series servers supports a wide variety of 10 Gigabit Ethernet connectivity options using Cisco 10GBASE SFP+ modules.

Table 2 and Table 3 details the controllers and the supported transceivers.

Table 2 Controllers and SFP+ Twinax Transceivers Support Matrix

Controllers (LOM and PCIe)	10GBASE-CU SFP+ Cable 1 Meter, passive	10GBASE-CU SFP+ Cable 3 Meter, passive	10GBASE-CU SFP+ Cable 5 Meter, passive	10GBASE-CU SFP+ Cable 7 Meter, active	10GBASE-CU SFP+ Cable 10 Meter, active
	SFP-H10GB-CU1M	SFP-H10GB-CU3M	SFP-H10GB-CU5M	SFP-H10GB-ACU7M	SFP-H10GB-ACU10M
Cisco UCS Virtual Interface Cards	x	x	x	x	x
Intel x520	x	x	x	x	x
Broadcom 57712	x	x	x	x	x

Table 3 Controllers and SFP+Optical Transceivers Support Matrix

Controllers (LOM and PCIe)	Intel SR Optics	JDSU (PLRXPL-SC-S43-22-N) SFP+	Cisco SFP-10G-SR
Cisco UCS Virtual Interface Cards	NA	NA	x
Intel x520	x	NA	Not supported
Broadcom 57712	NA	x	x

Firmware Files

This C-Series software release includes the following software files:

Table 4 Files in this release

CCO Software Type	File name(s)	Comment
Unified Computing System (UCS) Server Firmware	ucs-c420-huu-1.4.8e1.iso	Host Upgrade Utility
Unified Computing System (UCS) Drivers	ucs-cxx-drivers.1.4.7.iso ucs-cxxx-drivers.1.4.7.iso	Drivers
Unified Computing System (UCS) Utilities	ucs-cxxx-utils-efi.1.4.7.iso ucs-cxxx-utils-linux.1.4.7.iso ucs-cxxx-utils-vmware.1.4.7.iso ucs-cxxx-utils-windows.1.4.7.iso	Utilities
Unified Computing System (UCS) Adapter Firmware	ucs-cxxx-fw.1.4.7.iso	Third-Party Firmware

Note Always upgrade both the BIOS and the CIMC from the HUU ISO. Do not upgrade individual components (only BIOS or only CIMC), since this could lead to unexpected behavior.

Note If you choose to upgrade BIOS and the CIMC individually and not from the HUU ISO, make sure to upgrade both CIMC and BIOS to the same container release. If the BIOS and the CIMC versions are from different container releases, it could result in unexpected behavior.

Host Upgrade Utility

The Cisco Host Upgrade Utility (HUU) is a tool that upgrades the following firmware:

- Cisco Integrated Management Controller (CIMC)
- System BIOS
- LAN on motherboard (LOM)
  - Intel Ethernet i350 PCI Server Adapter
- LSI
  - LSI MegaRAID SAS 9271CV-8i
  - LSI MegaRAID SAS 9286CV-8e
- Cisco UCS VIC 1225
- Broadcom PCI adapters
  - 5709 Dual and Quad port adapters
  - 57712 Dual port adapter

  - 57712 10GBaseT
  - 57810 Dual port adapter
- Intel i350 Quad port adapter
- Intel x520 port adapter
- Intel x540 port adapter

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

Starting with this 1.4 release, separate ISO images of Host Upgrade Utility are available for different server platforms.

The ISO image is now named as ucs-<*server_platform*>-huu-<*version_number*>.iso.

The Cisco Host Upgrade Utility contains the following files:

Table 5 Files in ucs-c420-huu-1.4.8e1.iso

Server(s)	Component	Version
C420 M3	CIMC	1.4(8e)
	BIOS	1.4.8b.0
	UCS VIC 1225	2.1(1aS5) - uboot - 2.1(1aS5)
	LOM INTEL-I350	1.61 - 02.12 - 2.7.111 - 1.3.98 - 5.1.01 - 2.7.111
	EEPROM VERSION	1.61
	CISCO VERSION	02.12
	iSCSI VERSION	2.7.111
	PXE VERSION	1.3.98
	UEFI VERSION	5.1.01
	CLP VERSION	2.7.111
	PCIe Adapters	
	BCM-5709-Dual-Port	A0907GT7441.0-7.4.0
	BCM-5709-Quad-Port	A0906GT7441.0-7.4.0
	BCM-57712-Dual-Port	A1213GT7441.0
	BCM-57712-10G-BaseT	A1202T7441.0
	BCM-57810-Dual-Port	A1006GT7441.0
	INTEL-I350	1.61 - 02.03 - 2.7.111 - 1.3.98 - 5.1.01 - 2.7.111
	INTEL-X520	2.7.111 - 2.2.07 - 3.2.01 - 2.7.111
	iSCSI VERSION	2.7.111
	PXE VERSION	2.2.07
	UEFI VERSION	3.2.01
	CLP VERSION	2.7.111
	INTEL-X540	4.03 - 02.02 - 2.7.111 - 2.2.07 - 3.2.01 - 2.7.111
	EEPROM VERSION	4.03
	CISCO VERSION	02.02
	iSCSI VERSION	2.7.111
	PXE VERSION	2.2.07
	UEFI VERSION	3.2.01
	CLP VERSION	2.7.111
	LSI	
	9271CV-8i	3.190.55-1868
	9286CV-8e	3.190.55-1868

System Requirements

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

- Sun JRE 1.6.0_14 or later
- 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

Updating the Firmware

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

- BIOS
- CIMC
- LAN on Motherboard Settings
- PCIe adapter Firmware

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

Upgrading BIOS and CIMC Firmware

Caution When you upgrade the BIOS firmware, you must also upgrade the CIMC firmware from the same HUU ISO, or the server may not boot. Do not power off the server until the BIOS and CIMC firmware are updated.

Cisco provides the Cisco Host Upgrade Utility to assist you in upgrading the BIOS, CIMC, LOM, LSI storage controller, and Cisco UCS Virtual Interface Cards firmware to compatible levels.

Note When upgrading the CIMC firmware for the UCS C-series M3 platforms, ensure that you update using the full image (for example upd-pkg-c2XX-m3-cimc.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

Supported Features

This section includes the following topics:

Supported Software Features

This is the first software release for UCS C420 servers.

Software Utilities

The following standard utilities are available:

- Host Update Utility (HUU)
- Server Config Utility (SCU) including Interactive Offline Diagnostics (IOD)
- BIOS and CIMC Firmware Update utilities

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.

Supported Platforms

The following platform is supported in Release 1.4(8):

- UCS-C420

SNMP

The supported MIB definition for Release 1.4(3) 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.

Supported Storage Controllers

SNMP supports the following storage controllers:

In C420

- 9286CV-8e
- 9271CV-8i

Resolved Caveats

This section lists the resolved caveats for Release 1.4(8e)1.

Release 1.4(8e)1

BIOS

Symptom Allow the user to manage the memory refesh rates from the BIOS setup menu.

Workaround None (CSCuf28394)

Open Caveats

This section lists the open caveats for Release 1.4(8d):

CIMC

Symptom LSI storage controllers with external ports (-8e cards) do not show up in CIMC local storage management.

Workaround There is no workaround. (CSCud18756)

Symptom Repeated VIC adapter resets using CIMC Web UI or CLI adapter-reset can cause VIC card to hang.

Workaround Do not reset the VIC adapter unless necessary. It should normally never be necessary to reset the VIC adapter manually. (CSCuc83809)

Symptom C420 CIMC log can often contain many messages similar to this.

```
2012 Nov 13 20:55:02 Debug         BMC:kernel:-
<7>[i2c_controller_transfer_bytes]:1267:Receiver NACK to data byte on bus 0x17 and device
0xE0
```

Workaround Disable Debug logging in CIMC log. (CSCuc72105)

Symptom When there are too many PCIe option ROMs enabled on C420, BIOS POST SEL messages will be generated but not decoded correctly by CIMC. These messages will be displayed as "System Firmware Error #0x06".

Workaround Disable unwanted option ROMs until these SEL messages disappear. (CSCuc17045)

Symptom Activating Locator LED for an HDD causes a fault for that HDD to appear in the SEL log.

Workaround Ignore this error as it is not an actual HDD fault. (CSCuc03945)

Symptom There is no CIMC notification of Closed Loop Thermal Throttling (CLTT) when it occurs. CLTT happens automatically when the DIMM temperature crosses the UC (upper critical) temperature.

Workaround There is no workaround. (CSCua94308).

Symptom C420 SEL can get sporadic messages similar to the following:

```
2012-10-18 06:51:54 Normal        "FRU_PSU2 PSU2_PIN: Power Supply sensor for FRU_PSU2,
warning event, Upper Non-Critical going high was deasserted"
2012-10-18 06:51:54 Warning       "FRU_PSU2 PSU2_PIN: Power Supply sensor for FRU_PSU2,
failure event, Upper Critical going high was deasserted"
2012-10-18 06:51:52 Informational "LED_PSU_STATUS: Platform sensor, AMBER was asserted"
2012-10-18 06:51:52 Informational "FRU_MB LED_HLTH_STATUS: Platform sensor for FRU_MB,
AMBER was asserted"
2012-10-18 06:51:47 Critical      "FRU_PSU2 PSU2_PIN: Power Supply sensor for FRU_PSU2,
failure event, Upper Critical going high (1496 > 1400 Watts) was asserted"
2012-10-18 06:51:47 Warning       "FRU_PSU2 PSU2_PIN: Power Supply sensor for FRU_PSU2,
warning event, Upper Non-Critical going high (1496 > 1376 Watts) was asserted"
```

These messages are benign.

Workaround None. (CSCuc79211)

Intel Adapters

Symptom When multiple Intel network adapters are present and you enter the iSCSI configuration from one card, it allows you to change the configuration on all Intel cards. After the change, when one of the cards is removed, it appears that the option ROM of the remaining cards is overwritten by the card that was removed.

Workaround Enter the iSCSI configuration of the card that must be modified. Do not modify other cards when they are visible. This issue is only with iSCSI configuration and not with PXE configuration. (CSCuc52172)

LSI

Symptom When a drive rebuild is ongoing in C420 and C260 servers, the SEL will show the following entries for the drive on which the rebuild is occurring:

```
Platform alert LED_HLTH_STATUS #0x01 | LED color is amber | Asserted
Drive slot (Bay) HDD4_STATUS #0xe8 | Drive Fault | Deasserted
```

Workaround Ignore these messages as they do not indicate a bad drive. When the rebuild is done, the messages do not show up in the SEL. (CSCuc45639)

Symptom The operating system is installed with the LSI inbox drivers even if it is pointed to the out of box driver v00.00.06.18.

Workaround Reinstall the drivers after OS install, which has dkms.rpm as dependency or use inbox drivers. (CSCuc39070)

Symptom SSD Caching is enabled even when SSD is not part of the virtual drive.

Workaround None. When virtual drives do not have SSD, there is no impact to performance. (CSCuc13837)

Symptom The LSI controller CLI Application MegaCli does not properly work under Windows Power Shell. A failure message is displayed when creating virtual drives for RAID levels 1,5,10,50 and 60.

Workaround MegaCli is not supported in Power Shell. Use the command prompt on Windows for running all MegaCli commands and options. (CSCub49559)

Web UI

Symptom Sometimes, on Windows 2008 servers and Internet Explorer 8.0 version, the CIMC WEB UI login prompt will not be seen.

Workaround Add CIMC IP to IE 8.0 trusted sites list. In the Internet Explorer window, click Tools -> Internet options -> Security -> Trusted Sites -> Sites -> Add. (CSCuc19323)

Related Documentation

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

- *Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide*
- *Cisco UCS C-Series Servers Integrated Management Controller Configuration Guide*
- *Cisco UCS C-Series Servers Integrated Management Controller CLI Command Reference*

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*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html.

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