Release Notes for Cisco UCS E-Series Servers, Release 1.0

October 3, 2012

OL-27723-01

This document provides a brief introduction of the Cisco UCS E-Series Servers, system requirements, compatibility information, open caveats, and related documentation.

Note Documentation is sometimes updated after original publication; therefore, review the documentation on Cisco.com for any updates.

Contents

This document contains the following sections:

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Introduction

The Cisco UCS E-Series Servers (E-Series Servers) are the next generation of Cisco UCS Express servers. E-Series Servers are a family of size, weight, and power efficient blade servers that are housed within Generation 2 Cisco Integrated Services Routers (ISR G2). These servers provide a general purpose compute platform for branch-office applications deployed either as bare-metal on operating systems, such as Microsoft Windows or Linux; or as virtual machines on hypervisors, such as VMware vSphere Hypervisor™, Microsoft Hyper-V, or Citrix XenServer.

System Requirements

This section describes the hardware and software requirements. It contains the following information:

Hardware Requirements

E-Series Servers reside in the Cisco 2900 series or 3900 series ISR G2. The following E-Series Servers are supported:

- UCS-E140S—Single-wide E-Series Server
- UCS-E140D—Double-wide E-Series Server, 4 core CPU
- UCS-E160D—Double-wide E-Series Server, 6 core CPU
- UCS-E140DP—Double-wide E-Series Server, 4 core CPU, with PCIe
- UCS-E160DP—Double-wide E-Series Server, 6 core CPU, with PCIe

Table 1 provides hardware information about the E-Series Servers.

Table 1 E-Series Server Hardware at a Glance

Feature	UCS-E140S Single-Wide E-Series Server)	UCS-E140D and UCS-E160D Double-Wide E-Series Servers	UCS-E140DP and UCS-E160DP Double-Wide E-Series Servers with PCIe
Form Factor	Single-wide SM	Double-wide SM	Double-wide SM
CPU	Intel Xeon™ E3-1105C	Intel Xeon™ E5-2428L and E5-2418L	Intel Xeon™ E5-2428L and E5-2418L
CPU Cores	4 Core	4 Core and 6 Core	4 Core and 6 Core
DIMM Slots	2 Slots	3 Slots	3 Slots
RAM	8 GB - 16 GB Supports DDR3 1333MHz VLP UDIMM 1.5 V, 4 GB, and 8 GB	8 GB - 48 GB Supports DDR3 1333 MHz RDIMM 1.35 V, 4 GB, 8 GB and 16 GB	8 GB - 48 GB Supports DDR3 1333 MHz RDIMM 1.35 V, 4 GB, 8 GB, and 16 GB
RAID	RAID 0 and RAID 1	RAID 0, RAID 1, and RAID 5	RAID 0 and RAID 1
Storage Type	SATA, SAS, SSD, and SED	SATA, SAS, SSD, and SED	SATA, SAS, SSD, and SED

Table 1 E-Series Server Hardware at a Glance (continued)

HDD	SAS 10K RPM, SATA 7200 RPM, and SAS SSD Drives[1] Supports 2 Drives	SAS 10K RPM, SATA 7200 RPM, and SAS SSD Drives[1] Supports 3 Drives	SAS 10K RPM, SATA 7200 RPM, and SAS SSD Drives[1] Supports 2 Drives
Storage Capacity	200 GB - 2 TB	200 GB - 3 TB	200 GB - 2 TB
Internal Network Interface	2 Gigabit Ethernet Interfaces	2 Gigabit Ethernet Interfaces	2 Gigabit Ethernet Interfaces
External Interfaces	1 USB Connector 1 RJ-45 Gigabit Ethernet Connector 1 Management Port 1 KVM Port (Supports VGA, 1 USB, 1 Serial DB9)	2 USB Connectors 2 RJ-45 Gigabit Ethernet Connectors 1 Management Port 1 VGA Port 1 Serial DB9	2 USB Connectors 2 RJ-45 Gigabit Ethernet Connectors 1 Management Port 1 VGA Port 1 Serial DB9
Router Platforms	2911, 2921, 2951, 3925, 3925e, 3945, 3945e	2921, 2951[2], 3925, 3925e, 3945, 3945e	2921, 2951[2], 3925, 3925e, 3945, 3945e
Maximum Number of E-Series Servers Per ISR G2	2900 ISR G2—1 E-Series Server 2951 ISR G2—2 E-Series Servers 3925 ISR G2—2 E-Series Servers 3945 ISR G2—4 E-Series Servers	2900 ISR G2—1 E-Series Server 3900 ISR G2—1 E-Series Server	2900 ISR G2—1 E-Series Server 3900 ISR G2—1 E-Series Server

1. All hardware drives within the E-Series Server must be installed with the same type of storage device; either all SAS drives or all SATA drives.
2. 2921 and 2951 support 4-core only.

Table 2 shows the Cisco EtherSwitch Enhanced High-Speed WAN Interface Cards (EHWICs) and Cisco EtherSwitch Service Modules that are supported on the E-Series Server.

Table 2 Supported Cisco EtherSwitch EHWIC and Cisco EtherSwitch Service Modules

Cisco EtherSwitch EHWIC	Cisco EtherSwitch Service Module
EHWIC-D-8ESG-P=, EHWIC-D-8ESG-P, EHWIC-D-8ESG=, EHWIC-D-8ESG, EHWIC-4ESG-P=, EHWIC-4ESG-P, EHWIC-4ESG=, and EHWIC-4ESG	SM-D-ES3G-48-P, SM-D-ES3-48-P, SM-D-ES2-48, SM-ES3G-24-P, SM-ES3-24-P, SM-ES2-24-P, SM-ES2-24, and SM-ES3G-16-P

Software Requirements

E-Series Servers require three major software systems:

- CIMC Firmware, page 4
- BIOS Firmware, page 4
- Operating System or Hypervisor, page 4

CIMC Firmware

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

CIMC is the management service for the E-Series Servers. CIMC runs within the server. You can use CIMC to access, configure, administer, and monitor the server.

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 manageability features 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 needed.

Operating System or Hypervisor

The main server CPU runs on an operating system such as Microsoft Windows, Linux, or Hypervisor. You can purchase an E-Series Server with a pre-installed operating system such as Microsoft Windows or VMware vSphere Hypervisor™, or you can install your own operating system.

The following operating systems are supported on the E-Series Servers:

- Microsoft Windows:
  - Windows Server 2008 R2 Standard 64-bit
  - Windows Server 2008 R2 Enterprise 64-bit
- Linux:
  - Red Hat Enterprise Linux 6.2
  - SUSE Linux Enterprise 11, service pack 2
  - Oracle Enterprise Linux 6.0, update 2
- Hypervisor:
  - VMware vSphere Hypervisor™ 5.0, update 1
  - Hyper-V (Windows 2008 R2)
  - Citrix XenServer 6.0

E-Series Server Options

E-Series Servers are available in the following options:

- Option 1—E-Series Server without preinstalled operating system or hypervisor
- Option 2—E-Series Server with preinstalled Microsoft Windows Server

  At the time of purchase, you can choose the appropriate RAID option that you want enabled on the E-Series Server.

Note If you purchase this option, the Microsoft Windows Server license is preactivated.

- Option 3—E-Series Server with preinstalled VMware vSphere Hypervisor™

  At the time of purchase, you can choose the appropriate RAID option that you want enabled on the E-Series Server.

Router, E-Series Server, and Cisco IOS Software Version Compatibility

Table 3 provides the router, E-Series Server, and Cisco IOS software version compatibility information.

Table 3 Cisco Routers, E-Series Server, and Cisco IOS Version Compatibility

Router	Cisco IOS Software Version for Single-Wide E-Series Servers	Cisco IOS Software Version for Double-Wide E-Series Servers
2911	15.2(4)M and later versions	—
2921	15.2(4)M and later versions	15.2(4)M and later versions **Note** Supports 4-core only
2951	15.2(4)M and later versions	15.2(4)M and later versions **Note** Supports 4-core only
3925	15.2(4)M and later versions	15.2(4)M and later versions
3925e	15.2(4)M and later versions	15.2(4)M and later versions
3945	15.2(4)M and later versions	15.2(4)M and later versions
3945e	15.2(4)M and later versions	15.2(4)M and later versions

Important Information About VMWare FL-SRE-V-HOST License

If you are using VMware FL-SRE-V-HOST license (equivalent to VMware vSphere Hypervisor™ 5.X), make sure that the RAM that you are using is 32 GB or less. If the RAM is more than 32 GB, you will get an error message, and you will not be able to apply the license. If you want to use 48 GB RAM, upgrade your license to FL-SRE-V-HOSTVC.

Open Caveats

Table 4 lists the caveats that are open for the E-Series Servers.

Table 4 Open Caveats in E-Series Servers

Bug ID	Summary	Additional Information
CSCtz86835	The Virtual Drive information is missing after a CIMC upgrade.	**Symptom** The Virtual Drive information may not show any Virtual Drives that were configured previously. **Conditions** This may occur immediately after a CIMC upgrade. **Workaround** Refresh GUI page. If that does not help, reboot host and enter into LSI WebBIOS to verify the Virtual Drives.
CSCty86334	The VMware vSphere Hypervisor 5.0 installation crashes with purple screen if Virtual D rive stripe size is less than 64 KB.	**Symptom** The VMware vSphere Hypervisor installation fails with Purple Screen of Death (PSOD). **Conditions** The raid array was created with a stripe size of less than 64 KB. **Workaround** Use the default 64 KB stripe size during raid array creation.
CSCty61983	The rebuild is stuck at 0% when the host is in pre-boot environment.	**Symptom** The rebuild does not proceed and seems to get stuck. **Conditions** The host is not booted up and is not at LSI WebBIOS environment. **Workaround** Boot the host or press **Ctrl+H** and enter LSI WebBIOS. The rebuild reconstruction will now proceed.
CSCua39277	Sensor: Error in DIMM temperature reading when the temperature is increased.	**Symptom** The DDR temperature reading for some DIMM are not correct after a few days of uptime. **Conditions** There is no user input that causes this condition. After a few days of operation, the temperature reading does not change from its last reading. **Workaround** There is no workaround.
CSCua40167	The DDR3_P1_B0_ECC event with sensor reading exceeding 253 are found in P3.	**Symptom** The DDR3_P1_B0_ECC event is seen in System Event Log. **Conditions** The number of ECC events exceed 253. **Workaround** There is no workaround.

Table 4 Open Caveats in E-Series Servers (continued)

Bug ID	Summary	Additional Information
CSCtz71108	Cannot create (secure) Virtual Drive from CIMC GUI using SED drives.	**Symptom** The raid arrays that were created from CIMC GUI are not secured even if SED physical drives were used. **Conditions** Using CIMC GUI to create raid array on SED drives does not create secure drives. **Workaround** Use LSI WebBIOS to create raid array.
CSCty86437	SNMP: Operstate/Operability values when the X86 is powered down.	**Symptom** The current operstate operability (cucsProcessorUnitOperState and cuscProcessorUnitOperabilit) MIB values is operable even when the X86 is powered down. **Conditions** The X86 CPU status is powered down. **Workaround** Use CIMC, CLI to get the correct status.
CSCua29947	The inventory of memory does not display correct information in the web.	**Symptom** On E-Series Single Wide Servers, some of the information under **Server > Inventory > Memory** is not filled with correct information. This is mainly the memory manufacturer, serial number, asset tag and part number. **Workaround** There is no workaround.
CSCtx48993	The Platform Event Filters are not triggering the actions based on the events.	**Symptom** There are no actions executed after a critical event. **Conditions** Temperature in critical events. **Workaround** There is no workaround.
CSCub20023	The lock power button locks the reset button.	**Symptom** The front panel reset button does not work. **Conditions** The lock power button is active in CIMC. **Workaround** Unlock the power button from CIMC.

Table 4 Open Caveats in E-Series Servers (continued)

Bug ID	Summary	Additional Information
CSCtz81924	The clear configuration does not clean all the partitions created by an old operating system.	**Symptom** The installation of a newer operating system can still see some of the partitions that were created by the previous operating system. **Conditions** This happens while trying to install Windows operating system on a system that previously had VMware vSphere Hypervisor on it. The Windows operating system installation may show several partitions that does not correspond to the created raid arrays / JBOD disks. **Workaround** Perform the following steps to delete old partitions created by an old operating system: 1. Use **Drive options (advanced)** from the windows installation window. 2. Delete all the other partitions that have the name **Disk _ Partition _**. Do not delete the **Disk _ Unallocated Space** partition. 3. After all the other partitions are deleted, the **Unallocated Space** partition should show full drive capacity. 4. Windows installation should now proceed as expected. Another way to avoid running into this issue is to do a full initialization at the time of raid array creation. Note that full initialization takes several hours to complete depending on the disk size.
CSCub20011	The CIMC management interface stops working when the connection is changed from 100 Mbps to 10 Mbps.	**Symptom** The connectivity to CIMC is lost. **Conditions** The CIMC is connected to the dedicated management port and the connection is changed from 100 Mbps to 10 Mbps. **Workaround** Perform the following steps for the workaround: 1. Login to CIMC console. 2. Scope the CIMC/network. 3. Set the mode to **dedicated**. 4. Commit.
CSCub58962	The Host Image Mapping does not accept URL with http port number in CIMC.	**Symptom** The following error message is seen: `URL:Please enter a valid IP address` **Conditions** The port number is entered in the URL under Host Image Mapping section in CIMC. **Workaround** Do not use the port number in the URL.

Table 4 Open Caveats in E-Series Servers (continued)

Bug ID	Summary	Additional Information
CSCua29511	The full initialization on STEC SSD reports offline array and failed drives.	**Symptom** After creating a raid array, it appears offline and all the drives in the physical drive information page appears failed. **Conditions** This happens when a full initialization is issued on STEC SSDs at the time of raid array creation. **Workaround** The full initialization on STEC SSD drives is not currently supported. Use quick initialization instead to create optimal raid arrays.

CSCub22157	Unable to turn on the debug for UCSE on IOS.	**Symptom** Unable to turn on the debug for UCSE on IOS.
		
		Conditions Unable to turn on the debug for UCSE on IOS. Some of the help information are missing and the command is not recognized.
		
		`Router# debug ?`
		`  ucse  UCSE debug`
		
		`Router# debug ucse?`
		`ucse`
		
		`Router# debug ucse ?`
		`% Unrecognized command`
		`Router# debug ucse`
		`% Incomplete command.`
		
		Workaround There is no workaround.

CSCub46598	The dedicated port slows down after a few days of uptime.	**Symptom** The CIMC ethernet became very slow at 1 Mbps.
		
		Conditions A dedicated port is used.
		
		Workaround Reset the CIMC ethernet port.
		
		`scope cimc/network`
		`set hostname <same hostname as before>`
		`commit`

CSCub37825	The Windows installation using IDE DVD or KVM failed with 0x80070570.	**Symptom** The installation of windows 2008 R2 sometimes fail with windows code 0x80070570. **Conditions** The failure occurs when using IDE drive and mount it to install windows via KVM. **Workaround** Use direct USB drive and connect it to UCSE USB port.

Table 4 Open Caveats in E-Series Servers (continued)

Bug ID	Summary	Additional Information
CSCua66415	CIMC: Status messages are incorrect after downloading an image.	**Symptom** CIMC: Status messages are incorrect after downloading an image in GUI/CLI. **Conditions** Incorrect status messages after a host image download in GUI/CLI. **Workaround** There is no workaround.
CSCtz67675	The **session host** command shows no output when serial-over-LAN is enabled.	**Symptom** After entering the **ucse x session host** command, there is no serial output from the host. **Conditions** The Serial-over-LAN (SoL) is enabled on the CIMC. **Workaround** Disable SOL from the CIMC GUI or CLI: 1. From the CIMC GUI: a. From the GUI, select **Server -> Remote Presence -> Serial over LAN**. b. Deselect the **Enabled** checkbox. c. Click **Save Changes**. 2. From the CLI: a. Go to the **sol scope**. b. Change the **Enable** setting to **no**. c. Enter **commit**.
CSCua37395	The software becomes unreponsive when booting Centos live in CD.	**Symptom** The CIMC on UCS-E becomes unresponsive if you boot Centos 5.6 or lower versions on X86. **Conditions** Installed a Centos 5.6 or lower version IOS through virtual media or external CD drive. **Workaround** Only the Centos version 5.7 or higher versions are supported on the UCS-E platforms. The Centos 5.6 or lower versions are not supported on the UCS-E platforms because of the incompatibility in the network drivers packaged in the version for BCM5719.

Table 4 Open Caveats in E-Series Servers (continued)

Bug ID	Summary	Additional Information

CSCua63071	Cannot add FTP username and password for remote installation.	**Symptom** If you try to download a host image from a remote FTP/HTTP server, the following CLI does not work if there is a username and password configured on the server:
		`download-image ftp IP pub/hImage.iso --username x --password y</B>`
		Conditions The following CLI are used to download a host image from a remote FTP/HTTP server with username and password configured.
		`download-image ftp IP path/windows.iso --username admin --password abcd`
		`download-image ftp IP path/linux.iso -x admin -y abcd</B>`
		Workaround Use the CIMC Web GUI to download the host image from the FTP/HTTP server that has username and password authentication. If the FTP/HTTP server is not configured with a username and password, then the following download-image CLI command works without any issues:
		`download-image ftp IP path/linux.iso</B>`

CSCuc11612	Wake on LAN is not working in Windows 2008 R2.	**Symptom** Wake on LAN is not working. **Conditions** In windows 2008 R2. **Workaround** There is no workaround.

Related Documentation

The following related documentation is available for E-Series Servers:

- *Documentation Guide for Cisco UCS E-Series Servers, Release 1.0* (provides links to all documents)
- *Release Notes for Cisco UCS E-Series Servers, Release 1.0* (this document)
- *Getting Started Guide for Cisco UCS E-Series Servers, Release 1.0*
- *Hardware Installation Guide for Cisco UCS E-Series Servers*
- *Cisco Network Modules, Server Modules, and Interface Cards Regulatory Compliance and Safety Information*
- *GUI Configuration Guide for Cisco UCS E-Series Servers Integrated Management Controller, Release 1.0*
- *CLI Configuration Guide for Cisco UCS E-Series Servers Integrated Management Controller, Release 1.0*
- *Troubleshooting Guide for Cisco UCS E-Series Servers*
- *Open Source Used in Cisco UCS E-Series Servers, Release 1.0*

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