Cisco UCS M5 Blade and Rack Servers

General

Q **What is Cisco announcing?**

A Cisco is announcing the Cisco Unified Computing System™ (Cisco UCS®) M5 blade and rack servers, our fifth generation of x86 servers based on the Intel® Xeon® Scalable processors.

Q **Can I mix M5 servers with previous-generation servers?**

A You can mix M5 and older servers if you are running at least Cisco UCS Manager Release 3.2(1). See the Cisco UCS Hardware Compatibility List (HCL – https://www.cisco.com/c/en/us/support/servers-unified-computing/unified-computing-system/products-technical-reference-list.html) for information about the previous server generations supported.

Q **Are DDR4 (2133 and 2400 MHz) DIMMs supported on the M5 servers?**

A No. Only DDR4 (2600 MHz) DIMMs are supported. The speed of the memory varies by Intel Xeon processor support:

- Intel Xeon Bronze processors: DDR4 2133 MHz
- Intel Xeon Silver processors: DDR4 2400 MHz
- Intel Xeon Gold processors: DDR4 2400 and DDR4 2666 MHz
- Intel Xeon Platinum processors: DDR4 2600 MHz

Q **Where can I find more detailed information about the new Cisco UCS M5 servers?**

A See https://cisco.com/go/UCS.

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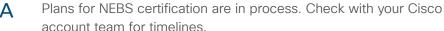**What versions of Cisco UCS management software are required for the M5 servers?**

Table 1 lists the required software and the planned First Customer Shipment (FCS) dates.

Table 1. Cisco UCS M5 management software

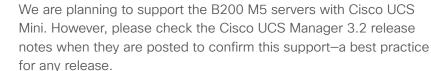| Server	Minimum Release	Planned FCS date
Cisco UCS B200 M5 Blade Server, Cisco UCS C220 M5 and C240 M5 Rack Servers	Cisco UCS Manager Release 3.2.1	July 11, 2017
Cisco UCS B480 M5 Blade Server and C480 M5 Rack Server	Cisco UCS Manager Release 3.2(2)	August 30, 2017
Cisco UCS B200 M5 Blade Server, Cisco UCS C220 M5 and C240 M5 Rack Servers	Cisco® Integrated Management Controller (IMC) Release 3.1(1)	July 11, 2017
C480 M5 Rack Server	Cisco IMC Release 3.1(2)	August 30, 2017

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Are the new M5 servers NEBS certified?

Plans for NEBS certification are in process. Check with your Cisco account team for timelines.

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Does Cisco UCS Mini support the new M5 servers?

We are planning to support the B200 M5 servers with Cisco UCS Mini. However, please check the Cisco UCS Manager 3.2 release notes when they are posted to confirm this support–a best practice for any release.

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Are the blade and rack server disk drives interchangeable?

M5 blade and rack server Hard-Disk Drives (HDD) and Solid-State Disk (SSD) drives are not interchangeable because they have different sleds. The Secure Digital (SD) card and M.2 SSD drives are interchangeable.

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Will the new M5 servers support the same drives as the previous-generation M4 servers?

Although most of the drives themselves are the same for the M4 and M5 servers, the M5 rack servers require new, lower-profile drive sleds. The new sleds enable better cooling and enables better drive density on the 1-Rack-Unit (1RU) C220 M5 server (up to 10 Small-Form-Factor [SFF] drives compared to 8 drives on the C220 M4). Therefore, a new drive part number is required for the M5 rack servers.

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Can all CPUs support 1.5 Terabytes (TB) of memory?

No. Only CPU model names that end with "M" can support 1.5 TB of memory.

Q **Can I install my Cisco UCS Virtual Interface Card (VIC) 1200 series adapter in my M5 server?**

A The M5 servers support the Cisco UCS VIC 1300 series adapters and 1400 series adapters (available late 2017).

Q **Which fabric interconnects do the M5 servers support?**

A The M5 servers support the Cisco UCS 6200 and 6300 Series Fabric Interconnects.

Q **How are the M.2 drives mirrored on the M5 servers? Are they visible in Cisco UCS Manager?**

A The M.2 drives are visible in Cisco UCS Manager. However, there is no out-of-band mechanism to manage the embedded software RAID, so error reporting under Cisco UCS Manager is limited. If there is an issue with the drives when installed, this will be reported upon discovery; however, if the drives fail later, they will not be dynamically updated. M.2 drives are connected through software RAID or Advanced Host Controller Interface (AHCI). Mirroring is performed through the operating system only if the OS supports software RAID. Note that mirroring is not supported with VMware because VMware does not support software RAID. Under Cisco UCS Manager, assuming RAID 1 support, if one of the drives fails, the server will boot from the OS from the mirrored M.2 device.

Q **Will the Microsoft Azure Stack solution that Cisco is selling in 2HCY17 be based on M5 servers?**

A This solution will be qualified on M4 servers and later updated for M5 servers.

Cisco UCS B200 M5 Blade Server

Q **Will 205-Watt (W) CPUs be supported on B200 M5 servers?**

A We are currently investigating this. We expect to add support for 205W CPUs after FCS.

Cisco UCS B480 M5 Blade Server

Q **Does the B480 M5 support a dual CPU configuration?**

A Support for a dual CPU configuration is planned. Check with your Cisco account team for details.

Q **Will 205W CPUs be supported on B480 M5 servers?**

A We are currently investigating this. We expect to be able to add support for 205W CPUs after FCS.

Cisco UCS C220 M5 Rack Server

Q **Does the RAID controller on the C220 M5 and C240 M5 server consume a PCI express (PCIe) slot?**

A No. The RAID controller plugs into a dedicated slot, leaving all PCIe slots available for other cards.

Q **Can I use my M4 rack server RAID controller on my M5 rack server?**

A The M5 servers use new RAID controllers, so you should order those new part numbers. Check the specifications sheets for information about the RAID controllers supported.

Q **Can the hard drives used in the M5 rack servers also be used in the previous generation of rack servers?**

A No. They use different drive sleds.

Q **Are the 10-Gbps LAN-On-Motherboard (LOM) modules on the C220 M5 1-Gbps capable?**

A Yes.

Q **Will InfiniBand adapters be supported on the M5 rack servers?**

A InfiniBand adapters will be supported after FCS.

Cisco UCS C240 M5 Rack Server

Q **Can the C240 M5 server support dual NVIDIA GPUs in addition to one or more Cisco UCS VICs?**

A Yes. The C240 M5 server can support up to two NVIDIA GPUs and up to three VICs.

Q **Does the RAID controller on the C220 M5 and C240 M5 servers consume a PCIe slot?**

A No. The RAID controller plugs into a dedicated slot, leaving all PCIe slots available for other cards.

Q **Can I use my M4 rack server RAID controller on my M5 rack server?**

A The M5 servers use new RAID controllers, so you should order only those new part numbers. Check the specifications sheets for information about the RAID controllers supported.

Q **Can the hard drives used in the M5 rack servers also be used in the previous generation of rack servers?**

A No. They use different drive sleds.

Q **Which rack servers support full-length, full-height PCIe slots?**

A The C240 M5 and C480 M5 servers support full-height, full-length slots.

Q **Are the 10-Gbps LOM modules on the C240 M5 1-Gbps capable?**

A Yes.

Cisco UCS C480 M5 Rack Server

Q **Can the hard drives used in the M5 rack servers also be used in the previous generation of rack servers?**

A No. They use different drive sleds.

Q **Which rack servers support full-length, full-height PCIe slots?**

A The C240 M5 and C480 M5 servers support full-height, full-length slots.

Q **Are the 10-Gbps LOM modules on the C480 M5 1-Gbps capable?**

A Yes.

Q **Can I upgrade the C480 M5 drive cages (internal and front external) in the field?**

A Yes.

Q **Can the internal drives on the C480 M5 be hot-swapped?**

A Yes. These drives are top loading, similar to the top-loading drives on the Cisco UCS S3260 Storage Server.

Q **Can I populate the C480 M5 with the maximum number of NVMe devices and just two CPUs?**

A No. Four CPUs are required to support the maximum number of NVMe devices.

GPUs

Q **Can the C240 M5 server support dual NVIDIA GPUs in addition to one or more Cisco VICs?**

A Yes. The C240 M5 can support up to two NVIDIA GPUs and up to three VICs.

Q **Does the C220 M5 support GPUs?**

A P4 support for deep-learning inferences is planned for Q1CY18 FCS. The P4 is a single-width GPUs and can fit in the 1RU server form factor. Double-wide GPUs will not be supported in the C220 M5 servers.

Can I populate the C480 M5 with the maximum number of NVMe devices and just two CPUs?

No. Four CPUs are required to support the maximum number of NVMe devices.

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