



Hardware and Software Interoperability Matrix

This document provides interoperability matrices for Cisco Unified Computing System components and configurations that have been tested and validated by Cisco, by Cisco partners, or both. Use this document as a reference for supported hardware and software.

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Audience

This document is designed for use by Cisco TAC, sales, support engineers, professional service partners, and systems administrators responsible for the design and deployment of the Unified Computing System in the data center environment.

The content of this document is updated on a regular basis. The current version of this document applies to the C Series servers in Cisco Unified Computing System Release 1.0(1).

Operating System Interoperability Matrix

Table 1 lists the operating systems that the Unified Computing System C Series Servers support.

Table 1: Operating System

UCS Server	Vendor	Operating System Version	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	Microsoft	Windows Server 2003 x86 SP2	Note 1

UCS Server	Vendor	Operating System Version	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	Microsoft	Windows Server 2003 R2 x86 SP2	Note 1
		Windows Server 2003 x64 SP2	Note 1
		Windows Server 2003 R2 x64 SP2	Note 1
		Windows Server 2008 x64 SP1 w/Hyper-V	Note 1
		Windows Server 2008 R2 x64 w/Hyper-V	Note 1
	Redhat	Enterprise Linux 4.8 64bit	
		Enterprise Linux 5.3 64bit	
		Enterprise Linux 5.4 64bit	
	Novell	SUSE Linux Enterprise Server 10.3 64bit	
		SUSE Linux Enterprise Server 11 64bit	
	VMware	ESX 3.5 Update 4	
		vSphere 4.0	
		vSphere 4.0i	

Adapters Interoperability Matrix

Table 2 lists the network adapters that the Unified Computing System C Series Servers support.

Table 2: Adapters

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C250 M1 Rack Mount Server	Broadcom	NetXtreme II 5709 Quad Port Gigabit Ethernet Onboard Controller	Windows Server 2003 x86 SP2	5.0.13.0 / 5.0.9.0 (iSCSI)	5.0.15	5.0.5	Note 5, 9

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C250 M1 Rack Mount Server	Broadcom	NetXtreme II 5709 Quad Port Gigabit Ethernet Onboard Controller	Windows Server 2003 x64 SP2	5.0.13.0 / 5.0.9.0 (iSCSI)	5.0.15	5.0.5	Note 5, 9
			Windows Server 2008 x64 SP1 w/Hyper-V				Note 5
			Windows Server 2008 R2 x64 w/Hyper-V				Note 5
			Enterprise Linux 4.8 64bit	1.7.9-2	5.0.6	5.0.5	Note 3, 5
			Enterprise Linux 5.3 64bit	1.7.9-1			
			Enterprise Linux 5.4 64bit	1.9.3	5.0.15	5.0.5	Note 3, 5
			SUSE Linux Enterprise Server 10.3 64bit	2.0.1			Note 3, 5
			SUSE Linux Enterprise Server 11 64bit	1.8.0			Note 3, 5
			ESX 3.5 Update 4	1.5.10b			Note 3, 5
			vSphere 4.0	1.6.9			Note 3, 5

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C250 M1 Rack Mount Server	Broadcom	NetXtreme II 5709 Quad Port Gigabit Ethernet Onboard Controller	vSphere 4.0i	1.6.9	5.0.15	5.0.5	Note 3, 5
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server		NetXtreme II 5709 Dual and Quad Port Gigabit Ethernet PCIe Adapter Card	Windows Server 2003 x86 SP2	5.0.13.0 / 5.0.9.0 (iSCSI)	5.0.6		Note 9
			Windows Server 2003 x64 SP2				Note 9
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	1.7.9-2	Note 3		
			Enterprise Linux 5.3 64bit	1.7.9-1			
			Enterprise Linux 5.4 64bit	1.9.3	Note 3		
			SUSE Linux Enterprise Server 10.3 64bit	2.0.1	Note 3		

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	Broadcom	NetXtreme II 5709 Dual and Quad Port Gigabit Ethernet PCIe Adapter Card	SUSE Linux Enterprise Server 11 64bit	1.8.0	5.0.6	5.0.5	Note 3
			ESX 3.5 Update 4	1.5.10b			Note 3
			vSphere 4.0	1.6.9			Note 3
			vSphere 4.0i				Note 3
		NetXtreme II 57711 Dual Port 10 Gigabit Ethernet PCIe Adapter Card	Windows Server 2003 x86 SP2	5.0.13.0 / 5.0.9.0 (iSCSI)	5.0.11	5.0.15	Note 9
			Windows Server 2003 x64 SP2				Note 9
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	1.50.13			
			Enterprise Linux 5.3 64bit				
			Enterprise Linux 5.4 64bit				

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	Broadcom	NetXtreme II 57711 Dual Port 10 Gigabit Ethernet PCIe Adapter Card	SUSE Linux Enterprise Server 10.3 64bit	1.50.13	5.0.11	5.0.15	
			SUSE Linux Enterprise Server 11 64bit				
			vSphere 3.5 Update 4	No Support			Note 6
			vSphere 4.0				Note 6
			vSphere 4.0i				Note 6
	Emulex	LightPulse LPe11002 4-Gbps Fibre Channel PCI Express Host Bus Adapter	Windows Server 2003 x86 SP2	5.2.20.6	2.82a3	2.02a2	
			Windows Server 2003 x64 SP2	7.2.20.6			
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	8.0.16.46		Note 3	

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	Emulex	LightPulse LPe11002 4-Gbps Fibre Channel PCI Express Host Bus Adapter	Enterprise Linux 5.3 64bit	8.2.0.33.3p	2.82a3	2.02a2	
			Enterprise Linux 5.4 64bit	8.2.0.48.2p			Note 3
			SUSE Linux Enterprise Server 10.3 64bit				Note 3
			SUSE Linux Enterprise Server 11 64bit	8.2.8.14			Note 3
			ESX 3.5 Update 4	7.4.0.13			Note 3
			vSphere 4.0	8.2.0.30.49vmw			Note 3
			vSphere 4.0i				Note 3
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	X520 Dual Port 10 Gigabit Ethernet PCIe Adapter Card	Windows Server 2003 x64 SP2	2.3.36.0	2.1.50		
			Windows Server 2003 x86 SP2				
			Windows Server 2008 x64 SP1 w/Hyper-V				
UCS C200 M1 and C210 M1	Intel	X520 Dual Port 10 Gigabit	Windows Server 2008 R2	2.3.36.0	2.1.50		

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
Rack Mount Server		Ethernet PCIe Adapter Card	x64 w/Hyper-V				
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	X520 Dual Port 10 Gigabit Ethernet PCIe Adapter Card	Enterprise Linux 4.8 64bit	2.0.44.14	2.1.50		
			Enterprise Linux 5.3 64bit				
			Enterprise Linux 5.4 64bit				
			SUSE Linux Enterprise Server 10.3 64bit				
			SUSE Linux Enterprise Server 11 64bit				
			ESX 3.5 Update 4	No Support			
			vSphere 4.0	2.0.44.14.4	2.1.50		
			vSphere 4.0i				
		82576 based Quad Port Gigabit Ethernet PCIe Adapter Card	Windows Server 2003 x64 SP2	11.1.6.0		1.3.35	Note 5
			Windows Server 2003 x86 SP2				Note 5

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	82576 based Quad Port Gigabit Ethernet PCIe Adapter Card	Windows Server 2008 x64 SP1 w/Hyper-V	10.6.15.0		1.3.35	Note 5
			Windows Server 2008 R2 x64 w/Hyper-V	11.0.103.0			Note 5
			Enterprise Linux 4.8 64bit	1.3.28.4			Note 5
			Enterprise Linux 5.3 64bit				Note 5
			Enterprise Linux 5.4 64bit	2.0.6			Note 5
			SUSE Linux Enterprise Server 10.3 64bit				Note 5
			SUSE Linux Enterprise Server 11 64bit	1.3.28.4			Note 5
			ESX 3.5 Update 4	1.3.8.6			Note 5, 11
			vSphere 4.0	1.3.19.12			Note 5, 11
			vSphere 4.0i				Note 5, 11
UCS C200 M1 and	Intel	82576 Gigabit	Windows Server	11.1.6.0		1.3.35	Note 5

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
C210 M1 Rack Mount Server		Ethernet Onboard Controller	2003 x64 SP2				
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	82576 Gigabit Ethernet Onboard Controller	Windows Server 2003 x86 SP2	11.1.6.0		1.3.35	Note 5
			Windows Server 2008 x64 SP1 w/Hyper-V	10.6.15.0			Note 5
			Windows Server 2008 R2 x64 w/Hyper-V	11.0.103.0			Note 5
			Enterprise Linux 4.8 64bit	1.3.28.4			Note 5
			Enterprise Linux 5.3 64bit				Note 5
			Enterprise Linux 5.4 64bit	2.0.6			Note 5
			SUSE Linux Enterprise Server 10.3 64bit				Note 5
			SUSE Linux Enterprise Server 11 64bit	1.3.28.4			Note 5
			ESX 3.5 Update 4	1.3.8.6			Note 5, 11

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	82576 Gigabit Ethernet Onboard Controller	vSphere 4.0	1.3.19.12		1.3.35	Note 5, 11
			vSphere 4.0i	No Support			Note 13
		I/O Controller Hub 10 RAID (ICH10R)	Windows Server 2003 x86 SP2	13.12.1009.2009			Note 5, 12
			Windows Server 2003 x64 SP2				Note 5, 12
			Windows Server 2008 x64 SP1 w/Hyper-V				Note 5, 12
			Windows Server 2008 R2 x64 w/Hyper-V				Note 5, 12
			Enterprise Linux 4.8 64bit				Note 5, 12
			Enterprise Linux 5.3 64bit				
			Enterprise Linux 5.4 64bit				Note 5, 12
			SUSE Linux Enterprise Server 10.3 64bit			13.13.1021.2009	

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1 and C210 M1 Rack Mount Server	Intel	I/O Controller Hub 10 RAID (ICH10R)	SUSE Linux Enterprise Server 11 64bit	13.12.1009.2009			Note 5, 12
			ESX 3.5 Update 4	No Support			Note 12
			vSphere 4.0				Note 12
			vSphere 4.0i				Note 12
	LSI	1064E Controller Based Mezzanine Card	Windows Server 2003 x86 SP2	1.30.04.00	1.29.00.00	6.28.00.00	
			Windows Server 2003 x64 SP2				
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	3.20.00.00			
			Enterprise Linux 5.3 64bit	4.20.00.02			
			Enterprise Linux 5.4 64bit		Note 4		

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1 and C210 M1 Rack Mount Server	LSI	1064E Controller Based Mezzanine Card	SUSE Linux Enterprise Server 10.3 64bit	4.20.00.02	1.29.00.00	6.28.00.00	
			SUSE Linux Enterprise Server 11 64bit				
			ESX 3.5 Update 4	2.06.48			Note 3
			vSphere 4.0	40037.0021vmw			Note 3
			vSphere 4.0i				Note 3
UCS C250 M1 Rack Mount Server		SAS3081E-R PCIe RAID Controller	Windows Server 2003 x86 SP2	1.30.04.00			
			Windows Server 2003 x64 SP2				
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	3.20.00.00			

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C250 M1 Rack Mount Server	LSI	SAS3081E-RAID Controller	Enterprise Linux 5.3 64bit	4.20.00.02	1.29.00.00	6.28.00.00	
			Enterprise Linux 5.4 64bit				Note 4
			SUSE Linux Enterprise Server 10.3 64bit				
			SUSE Linux Enterprise Server 11 64bit				
			ESX 3.5 Update 4	2.06.48			Note 3
			vSphere 4.0	4.0037.0023vmw			Note 3
			vSphere 4.0i				Note 3
UCS C200 M1 Rack Mount Server		MegaRAID SAS 8708EM2	Windows Server 2003 x86 SP2	3.9.0.32	1.40.62-0665	2.07.00	
			Windows Server 2003 x64 SP2	3.9.0.64			
			Windows Server 2008 x64 SP1 w/Hyper-V				
UCS C200 M1 Rack	LSI	MegaRAID SAS 8708EM2	Windows Server	4.5.0.64	1.40.62-0665	2.07.00	Note 3

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
Mount Server			2008 R2 x64 w/Hyper-V				
UCS C200 M1 Rack Mount Server	LSI	MegaRAID SAS 8708EM2	Enterprise Linux 4.8 64bit	00.00.04.10	140.62-0665	2.07.00	
			Enterprise Linux 5.3 64bit				
			Enterprise Linux 5.4 64bit	00.00.04.08-RH2			Note 3
			SUSE Linux Enterprise Server 10.3 64bit	00.00.04.08			Note 3
			SUSE Linux Enterprise Server 11 64bit	00.00.04.10			
			ESX 3.5 Update 4	3.0.9			Note 10
			vSphere 4.0	3.0.21.11vmw			Note 10
			vSphere 4.0i				Note 10
			UCS C210 M1 and C250 M1 Rack Mount Server				MegaRAID 9261-8i PCIe RAID Controller
Windows Server 2003 x64 SP2	4.16.0.64						

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C210 M1 and C250 M1 Rack Mount Server	LSI	MegaRAID 9261-8i PCIe RAID Controller	Windows Server 2008 x64 SP1 w/Hyper-V	4.16.0.64	2.0.03-0673	3.07.00	
			Windows Server 2008 R2 x64 w/Hyper-V	4.5.0.64			Note 3
			Enterprise Linux 4.8 64bit	00.00.04.10			
			Enterprise Linux 5.3 64bit				
			Enterprise Linux 5.4 64bit	00.00.04.08-RH2			Note 3
			SUSE Linux Enterprise Server 10.3 64bit	00.00.04.08			Note 3
			SUSE Linux Enterprise Server 11 64bit	00.00.04.10			
			ESX 3.5 Update 4	No Support			
			vSphere 4.0				
			vSphere 4.0i				

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	QLogic	QLE8152 Dual Port 10-Gbps Ethernet to PCIe Converged Network Adapter	Windows Server 2003 x86 SP2	9.1.8.17 / 1.0.0.1 (NIC)	5.01.03	2.13 / 1.04 (NIC)	
			Windows Server 2003 x64 SP2				
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	No Support			
			Enterprise Linux 5.3 64bit	8.03.00.10.04.1019 (NIC)	5.01.03	2.13 / 1.04 (NIC)	
			Enterprise Linux 5.4 64bit	8.03.00.10.05.04-k / 1.0.0.20 (NIC)			Note 3
			SUSE Linux Enterprise Server 10.3 64bit	8.03.00.10.10.3-k4 / 1.0.0.20 (NIC)			Note 3
			SUSE Linux Enterprise Server 11 64bit	8.03.00.08.11.0-k4 / 1.0.0.19 (NIC)			
			ESX 3.5 Update 4	No Support			

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	QLogic	QLE8152 Dual Port 10-Gbps Ethernet to PCIe Converged Network Adapter	vSphere 4.0	831.k1.23vmw / 1.0.0.36 (NIC)	5.01.03	2.13 / 1.04 (NIC)	Note 11
			vSphere 4.0i				Note 11
		SANblade QLE2462 4-Gbps Fibre Channel to PCI Express Host Bus Adapter	Windows Server 2003 x86 SP2	9.1.8.17	With Driver	2.10	
			Windows Server 2003 x64 SP2				
			Windows Server 2008 x64 SP1 w/Hyper-V				
			Windows Server 2008 R2 x64 w/Hyper-V				
			Enterprise Linux 4.8 64bit	8.02.09.02.04.08-d			Note 3
			Enterprise Linux 5.3 64bit	8.03.00.09.05.04-k			
			Enterprise Linux 5.4 64bit	8.03.00.10.05.04-k			Note 3
			SUSE Linux Enterprise Server 10.3 64bit	8.03.00.10.10.3-k4			Note 3

UCS Server	Vendor	Adapter Model	Operating System	Adapter Driver	Adapter Firmware	Adapter Boot Code / BIOS	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	QLogic	SANblade QLE2462 4-Gbps Fibre Channel to PCI Express Host Bus Adapter	SUSE Linux Enterprise Server 11 64bit	8.03.00.08.11.0-k4	With Driver	2.10	
			ESX 3.5 Update 4	7.08-vm32			
			vSphere 4.0				Note 3
			vSphere 4.0i				Note 3

Storage Array Interoperability Matrix

Table 3 lists the storage array models that the Unified Computing System adapters support.

Table 3: Storage Array

UCS Adapters	Vendor	Storage Array Model	Notes
UCS C200 M1, C210 M1 and C250 M1 Rack Mount Server	EMC	Supported; Refer to the Storage Vendor's support list	Note 2, 7
	NetApp		Note 2, 7
	HDS		Note 2, 7
	All Others	See Vendor Support List for equivalent supported PCIe adapters	Note 2, 8

**Note**

- 1 Requires Intel 55xx chipset drivers from download.intel.com
- 2 Non-default adapter settings are typically required by storage vendors and found on their support list
- 3 Driver included in OS image
- 4 Requires reboot after driver installation
- 5 Onboard device
- 6 Driver pending from device vendor
- 7 Multiple array and switch models supported with UCS by the storage vendor are on their support list
- 8 Fiber Channel Storage that supports equivalent adapters and drivers is supported by UCS
- 9 In an iSCSI Boot environment, Microsoft KB943295 must be installed
- 10 Requires firmware: 1.10.02-0197. This requires a driver CD whose ISO is available at:
<http://www.vmware.com/support/vi3/doc/drivercd/esx301-cciss-2.4.66.html>
- 11 Netqueue not supported
- 12 Driver version is for Software RAID
- 13 OS Installation requires an add-in NIC

Related Documentation

Links to the latest versions of related Cisco documentation are available in the *Cisco UCS Rack-Mount Servers Documentation Roadmap*, located at:

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

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