



Cisco UCS Director Compatibility Matrix, Release 6.5

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Compatibility Matrix

Revision History

Release	Date	Description
6.5	July 11, 2017	Created compatibility matrix for Cisco UCS Director, Release 6.5.
6.5(0.1)	October 9, 2017	<p>Updated the compatibility matrix for Cisco UCS Director, Release 6.5(0.1).</p> <ul style="list-style-type: none">• Added support for Microsoft System Center Virtual Machine Manager (SCVMM) 2016 Rollup 2 and Rollup 3. See Microsoft Hyper-V Versions, on page 4• Added support for VMware vSphere vCenter Server 6.5 Update 1 and VMware Site Recovery Manager version 6.1.1. See VMware vSphere Versions, on page 3.• Added support for Cisco Application Centric Infrastructure Controller, release 3.0. See Cisco Application Centric Infrastructure and Related Software Support, on page 17.

Overview

Cisco UCS Director represents the next generation of software for the management and orchestration of data center infrastructure.

Cisco UCS Director delivers unified management and orchestration for the industry's leading converged infrastructure solutions that are based on Cisco Unified Computing System (Cisco UCS) and Cisco Nexus. Cisco UCS Director extends the unification of compute, network, and storage layers through Cisco UCS to provide data center professionals with single pane-of-glass management and storage solution choice. Cisco UCS Director supports the industry's leading converged infrastructure solutions, including NetApp FlexPod™ and FlexPod Express, EMC VSPEX, EMC VPLEX, and VCE Vblock™.

Cisco UCS Director automates the provisioning of resource pools across physical, virtual and baremetal environments from a unified, centralized management console reducing time-to-value for both applications and end users. Cisco UCS Director delivers native automated monitoring, OS and software updates and resource utilization analysis to free up your IT staff from mundane maintenance tasks allowing them to focus on competitive innovation for your business.

This document provides information regarding the physical and virtual devices and software supported by Cisco UCS Director. The information has been segmented into different functional areas and is organized by vendor within each functional area.

Deprecation Announcement for Cisco UCS Invicta

The following Cisco UCS Invicta Series Storage accounts have been deprecated:

- Cisco UCS Invicta Appliance
- Cisco UCS Invicta Scaling System

You can no longer create a new Cisco UCS Invicta account. The *Cisco UCS Director Invicta Series Management Guide* will also no longer be updated.



Note For End-of-Life milestones and dates, see the [End-of-Sale and End-of-Life Announcement for the Cisco UCS Invicta Series](#).

Supported Languages

Cisco UCS Director supports the following languages:

- English (United States)
- Japanese (Japan)
- Spanish (Latin America)
- French (France)
- Korean (Korea)
- Chinese (China)
- Russian (Russia)

Supported Git Repositories

Cisco UCS Director supports only GitHub (github.com or an enterprise GitHub instance). It does not support other Git hosting services such as BitBucket, GitLab, Perforce, or Codebase.

Virtualization Support

Cisco UCS Director enables the management and orchestration of multiple virtualization platforms.

Hypervisor and Management Support

VMware vSphere Versions

The following table outlines the versions of VMware vSphere that are supported by this release of Cisco UCS Director.



Note Ensure proper compatibility between VMware vSphere Hypervisor and VMware vSphere vCenter Server versions as listed in the VMware vSphere compatibility matrix.

All Cisco UCS Director functionality may not be available across all supported VMware software versions. Certain features may not be available in older versions of VMware software.

Software Components	Supported Versions	Limitations on Support for VMware Features in Cisco UCS Director
VMware vSphere Hypervisor (ESX/ESXi)	5.0, including Update 1 and Update 2	None
	5.1, including Update 1	None
	5.5, including Update 1b, Update 2d, and Update 3b	None
	6.0, including Update 1, Update 2 and Update 3	Backwards compatibility for existing features supported for VMware vSphere 6.0. This release does not support the VM-FEX adapter feature of VMware vSphere 6.0.
	6.5 including Update 1	None

Software Components	Supported Versions	Limitations on Support for VMware Features in Cisco UCS Director
VMware vSphere vCenter Server	5.0, including Update 1 and Update 2	None
	5.1, including Update 1	None
	5.5, including Update 1b, Update 2d, and Update 3b	None
	5.5 (Linux)	None
	6.0, including Update 1, Update 2 and Update 3.	Backwards compatibility for existing features supported for VMware vSphere 6.0. This release does not support the VM-FEX adapter feature of VMware vSphere 6.0.
	6.5 6.5 Update 1	None
VMware Virtual SAN	5.5, with VMware vSphere 5.5 Update 1	None
	5.5, with VMware vSphere 5.5 Update 2	None
	6.0, with VMware vSphere 6.0	Backwards compatibility for existing features supported for VMware Virtual SAN 5.5.
	6.1, with VMware vSphere 6.0 Update 1	Backwards compatibility for existing features supported for VMware Virtual SAN 5.5.
VMware Site Recovery Manager	5.5	None
	5.8	None
	6.0	None
	6.1.1	

Microsoft Hyper-V Versions

The following table outlines the versions of Microsoft Hyper-V that are supported by this release of Cisco UCS Director.



Note

Ensure proper compatibility between Microsoft Hyper-V and Microsoft System Center versions as listed in the Microsoft Hyper-V compatibility matrix.

All Cisco UCS Director functionality may not be available across all supported Microsoft Hyper-V software versions. Certain features may not be available in older versions of Microsoft software.

Software Components	Supported Versions	Windows Versions
Microsoft Hyper-V Hypervisor	Version 2.0	2008 R2 SP1
	Version 3.0	2012 2012 R2 2016
Microsoft System Center Virtual Machine Manager (SCVMM)	Version 2.0.xxxx.x	2008 R2 SP1
	Version 3.0.xxxx.x	2012
	Version 3.0.xxxx.x	2012 Update, Rollup 7
	Version 3.2.7xxx.x	2012 R2 RTM
	Version 3.1.3xxx.x	2012 SP1
	Version 3.1.5xxx.x	
	Version 3.1.6xxx.x	
	Version 3.1.7xxx.x	2012 R2
	Version 3.2.7xxx.x	2012 R2, Rollup 12
Version 3.2.8xxx.x	2016, Rollup 3	
Version 4.0.xxxx.x	2016 RTM	



Note For integrations with Cisco Application Centric Infrastructure, you must use Windows 2012 R2, Rollup 9.

RedHat Enterprise Virtualization Versions

The following table outlines the versions of RedHat Enterprise Virtualization that are supported by this release of Cisco UCS Director.

Software Components	Supported Versions
Red Hat Enterprise Virtualization Manager (RHEVM/RHEV-M)	3.2
	3.3
Red Hat Enterprise Virtualization Hypervisor (RedHat KVM)	3.2.5-0.49.el6ev

Operating System Support

VMware vSphere Operating System Support

Cisco UCS Director supports all guest operating systems compatible with VMware vSphere. For a complete list of VMware vSphere compatible guest operating systems, see the [VMware Compatibility Guide](#).

Microsoft Hyper-V Operating System Support

Cisco UCS Director supports all guest operating systems compatible with Microsoft Hyper-V. For a complete list of Microsoft Hyper-V compatible guest operating systems, see the following Microsoft Hyper-V documentation:

- [Windows Server 2008, 2008 R2 and 2008 R2 SP1](#)
- [Windows Server 2012, Windows Server 2012 R2](#)
- Windows Server 2016

RedHat Virtualization Operating System Support

Cisco UCS Director supports the following guest operating systems that are compatible with RedHat Virtualization:

- CentOS
- Windows Server 2008
- Windows Server 2012

Bare Metal Operating System Support

Cisco UCS Director and Cisco UCS Director Bare Metal Agent support all types of Linux and Microsoft Windows operating systems in baremetal provisioning workflows. Certain operating systems are packaged out-of-the-box with Cisco UCS Director Bare Metal Agent. However, additional operating systems can be added as necessary.

The following table outlines the bare metal operating systems that are supported by this release of Cisco UCS Director.

Operating System	Versions	Legacy-BIOS	UEFI
CentOS	CentOS 6.x	√	
	CentOS 7.0	√	√
	CentOS7.1	√	√
	CentOS7.2	√	√
	CentOS7.3	√	
VMware ESXi	ESXi 5.0	√	
	ESXi 5.1	√	
	ESXi 5.5	√	
	ESXi 6.0	√	√
	ESXi 6.5	√	√

Operating System	Versions	Legacy-BIOS	UEFI
Microsoft Windows	Windows 2008 R2	√	
	Windows 2012	√	√
	Windows 2012 R2	√	√
	Windows 2016	√	√
Red Hat Enterprise Linux	RHEL 6.x	√	
	RHEL 7.0	√	√
	RHEL 7.1	√	√
	RHEL 7.2	√	√
	RHEL 7.3	√	
SUSE Linux	SUSE 11 SP3 on local disk	√	
	SUSE 12 and above on local disk	√	√

Third-Party Authentication Software Support

The following table outlines support for third party authentication software.

Software	Supported Versions
Microsoft Active Directory	Windows 2008 Windows 2012
OpenLDAP	slapd 2.4.23 (Feb 3 2014 19:11:35) \$ mockbuild@c6b10.bsys.dev.centos.org:/builddir/build/ BUILD/openldap-2.4.2 3/openldap-2.4.23/build-servers/servers/slapd

Server Support

Cisco UCS Director enables the management and orchestration of multiple server platforms from various server vendors. This support information is grouped by vendor.

Cisco Server Support

The following table outlines support for Cisco UCS servers and related hardware and software. Where a version includes an asterisk (*), all patches for that version are supported. For example, Release 3.0(1*) includes support for 3.0(1c), 3.0(1d) and so on.



Note All Cisco UCS Director functionality may not be available across all supported Cisco UCS software versions. Certain features may not be available in older versions of Cisco UCS software.

The following table shows Cisco UCS Director compatibility with Cisco UCS hardware and software. This table does not reflect the compatibility between Cisco UCS hardware and software. For information regarding Cisco UCS compatibility, see the [Cisco UCS hardware and software interoperability matrices](#) for the appropriate release.

Components	Supported Models	Supported Software
Cisco UCS Manager	Software All fabric interconnect, servers, and other hardware models supported by the version of Cisco UCS Manager (see the hardware and software interoperability matrices)	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release: <ul style="list-style-type: none"> • 2.2(1*) • 2.2(2*) • 2.2(3*) • 2.2(4*) • 2.2(5*) • 2.2(6*) • 2.2(7*) • 2.2(8*) • 3.1(1*) • 3.1(2*) • 3.1(3*) • 3.2(1) <p>Note vMedia policy support is only available from Release 3.1(1*) onwards.</p>
Cisco UCS Central	Software	Cisco UCS Central, Release: <ul style="list-style-type: none"> • 1.2(1*) • 1.3(1*) • 1.4(1*) • 1.5(1*) • 2.0(1*)

Components	Supported Models	Supported Software
Cisco UCS Mini	Solution Components	Cisco UCS B-Series Blade Server, and Cisco UCS Infrastructure and Cisco UCS Manager Software Bundles, Release: <ul style="list-style-type: none"> • 3.0(1*) • 3.0(2*) • 3.1(1*) • 3.1(2*) • 3.1(3*) • 3.2(1)
Cisco UCS C-Series Rack Servers (Standalone through Rack accounts)	All models supported by the firmware versions for Cisco IMC Supervisor, Release 2.2 (see the Cisco IMC Supervisor Release Notes, Release 2.2).	All software versions supported by Cisco IMC Supervisor (see the Cisco IMC Supervisor Release Notes, Release 2.2).
Cisco 8-Socket C-Series Rack Mount Servers for SAP HANA	Cisco C880 M4	Firmware versions: <ul style="list-style-type: none"> • BA14099 • BA15013
Cisco UCS E-Series Servers (Standalone through Rack accounts)	All models supported by the firmware versions for Cisco IMC Supervisor, Release 2.2 (see the Cisco IMC Supervisor Release Notes, Release 2.2).	All software versions supported by Cisco IMC Supervisor (see the Cisco IMC Supervisor Release Notes, Release 2.2).

HP Server Support

The following table outlines support for HP servers and related management software.

Components	Supported Models	Supported Software
HP Servers with HP Integrated Lights-Out 2 (iLO2)	Any HP server model or platform that supports iLO2	iLO 2.29
HP Servers with HP Integrated Lights-Out 3 (iLO3)	Any HP server model or platform that supports iLO3	iLO 1.57
HP Servers with HP Integrated Lights-Out 4 (iLO4)	Any HP server model or platform that supports iLO4	iLO 1.01

Components	Supported Models	Supported Software
HP Servers with HP Onboard Administrator (OA)	HP OA chassis with c7000 blade servers	HP OA 4.3 HP OA 4.22 HP OA 3.60

Dell Server Support

The following table outlines support for Dell servers and related hardware and software.



Note Cisco UCS Director leverages the IPMI interface on Dell servers for all management and orchestration capabilities across both blade and rack-mount form factors. Cisco UCS Director does not support any other Dell management interface as of this publication.

Components	Supported Models	Supported Software
Dell Servers with Intelligent Platform Management Interface (IPMI) 2.0	Any Dell server model that supports IPMI 2.0	IPMI 2.0

Network and Fabric Support

Cisco UCS Director enables the management and orchestration of multiple network and fabric platforms from various vendors. This support information is grouped by vendor.

Cisco Network and Fabric Support

The following table outlines support for Cisco network and fabric devices.



Note This support includes the Nexus Operating System (NX-OS) kickstart and system software images. Nexus support currently includes the Layer 2 feature-set only. The Layer 3 feature-set is not supported at this time.

Components	Supported Models	Supported Software
Cisco Nexus 1000 Series Distributed Virtual Switch	Nexus 1000V for VMware vSphere	NX-OS, Release: <ul style="list-style-type: none"> • 4.2(1)SV2(1.1a) • 4.2(1)SV2(2.1) • 4.2(1)SV2(2.1a) • 4.2(1)SV2(2.3) • 5.2(1)SV3(1.2) • 5.2(1)SV3 (1.3) for VMware vCenter 5.5 • 5.2(1)SV3(1.4) for VMware vCenter 6.0 • 5.2(1)SV3(1.6) for VMware vCenter 6.0 • 5.2(1)SV3(1.10) • 5.2(1)SV3(1.15) • 5.2(1)SV3(2.1) • 5.2(1)SV3(3.1) for VMware 6.5
	Nexus 1000V for Microsoft Hyper-V	NX-OS, Release: <ul style="list-style-type: none"> • 5.2(1)SM1(5.2b) • 5.2(1)SM3(1.1) • 5.2(1)SM3(1.1a)
Cisco Nexus 1100 Series Cloud Services Platform	Nexus 1110	NX-OS, Release: <ul style="list-style-type: none"> • 4.2(1)SP1(5.1a) • 5.2(1)SP1(7.2)

Components	Supported Models	Supported Software
Cisco Nexus 3000 Series Data Center Switches	Nexus 3016Q Nexus 3064T Nexus 3064X	NX-OS, Release 5.0(3)U5(1e)
	Nexus 3048	NX-OS, Release: <ul style="list-style-type: none"> • 5.0(3)U5(1e) • 6.0(2)U2(1) • 6.0(2)U2(2)
	Nexus 3172	NX-OS, Release: <ul style="list-style-type: none"> • 7.0(3)I2(2a) • 7.0(3)I3(1) • 7.0(3)I4 • 7.0(3)I5(1)
	Nexus 3548	NX-OS, Release 5.0(3)U5(1c)

Components	Supported Models	Supported Software
Cisco Nexus 5000 Series Data Center Switches	Nexus 5596Q	NX-OS, Release 7.0(7)N1(1)
	Nexus 5596UP Nexus 5596T	NX-OS, Release 6.0(2)N2(5)
	Nexus 5548UP	NX-OS Release: <ul style="list-style-type: none"> • 5.2(1)N1(4) • 6.0(2)N2(5)
	Nexus 5548P	NX-OS, Release: <ul style="list-style-type: none"> • 5.2(1)N1(4) • 5.2(1)N1(7) • 5.2(1)N1(8b) • 5.2(1)N1(9) • 6.0(2)N2(5)
	Nexus 5696Q	NX-OS, Release: <ul style="list-style-type: none"> • 7.1(1)N1(1) • 7.2(1)N1(1) • 7.3(1)N1(1)
	Nexus 5672UP	NX-OS, Release: <ul style="list-style-type: none"> • 7.0(1) • 7.2(1)N1(1)
	Nexus C5624Q	NX-OS, Release: <ul style="list-style-type: none"> • 7.1(1)N1(1) • 7.2(1)N1(1)
	Nexus 5648Q	NX-OS, Release: <ul style="list-style-type: none"> • 7.1(1)N1(1) • 7.1(2)N1(1)
	Nexus 56128P	NX-OS, Release: <ul style="list-style-type: none"> • 7.1(1)N1(1) • 7.3(0)N1(1)

Components	Supported Models	Supported Software
Cisco Nexus 6000 Series Switches	Nexus 6001-64P	NX-OS, Release: <ul style="list-style-type: none"> • 6.0(2)N1(2) • 7.0(1)N1(1)
Cisco Nexus 7000 Series Data Center Switches (M-series I/O modules are not listed as they do not support Fabric Path)	Nexus 7702 Nexus 7706 Nexus 7710 Nexus 7718	NX-OS, Release 6.2(8a)
	Nexus 7004 Nexus 7009 Nexus 7018	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(8a) • 7.3(1)D1(1) • 8.0.1
	Nexus 7010	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(8a) • 6.2(12) • 6.2(14)
	Supervisors	NX-OS, Release 6.1(3)
	Supervisor 2E Supervisor 2	NX-OS, Release 6.1(2)
	Supervisor 1	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(2) • 6.2(2a) • 6.2(12) • 6.2(14) • 8.0.1
	F-Series I/O Modules: <ul style="list-style-type: none"> • N7K-F132XP-15 • N7K-F248XP-25 • N7K-F248XP-25E • N7K-F248XT-25E 	

Components	Supported Models	Supported Software
Cisco Nexus 9000 Series Data Center Switches (standalone mode only)	Nexus 9396 PX	NX-OS, Release: <ul style="list-style-type: none"> • 6.1(2)I2(1) • 7.0(3)I2(2a)
	Nexus 9508	NX-OS, Release 6.1(2)I2(2)
	Nexus 9504	NX-OS, Release: <ul style="list-style-type: none"> • 7.0(3)I1(2) • 7.0(3)I2(2a)
	C93180YC-EX	NX-OS Release: <ul style="list-style-type: none"> • 7.0(3)I5(1)
	C9372PX-E	NX-OS Release: <ul style="list-style-type: none"> • 7.0(3)I5(1)
	C93108TC-EX	NX-OS Release: <ul style="list-style-type: none"> • 7.0(3)I5(1)
	Nexus C9516	NX-OS, Release: <ul style="list-style-type: none"> • 7.0(3)I1(1) • 7.0(3)I2(2a)
	Nexus 9372TX	NX-OS, Release: <ul style="list-style-type: none"> • 6.1(2)I3(1) • 7.0(3)I4(1)
	Nexus 9396TX	NX-OS, Releases: <ul style="list-style-type: none"> • 6.1(2)I3(1) • 7.0(3)I1(2)
	Nexus 9332PQ	NX-OS, Release 7.0(3)I1(1)
	Nexus 9372PX standalone	NX-OS, Release: <ul style="list-style-type: none"> • 6.1(2)I3(1) • 7.0(3)I2(2a) • 7.0(3)I3(1)

Components	Supported Models	Supported Software
	Nexus 93120	NX-OS, Release 7.0(3)I2(2)
	Nexus 93128	NX-OS, Release: <ul style="list-style-type: none"> • 7.0(3)I2(1a) • 7.0(3)I2(2d)
Unified Fabric Automation	Data Center Network Manager	Release Versions: <ul style="list-style-type: none"> • 7.0(x) • 7.1(x) • 7.2 • 7.2(x) • 10.0(x) • 10.1 • 10.1(x)
Cisco MDS 91xx Series Data Center Fabric Switches	MDS 9124	NX-OS, Release: <ul style="list-style-type: none"> • 5.2(6b) • 6.2(17)
	MDS 914xx	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(x) • 6.2(xx) • 7.3.1.D1(1) • 7.3(1)D1(1)
Cisco MDS 93xx Series Multilayer Fabric Switches		NX-OS, Release: <ul style="list-style-type: none"> • 7.3.1D1(1) • 7.3(1)D1(1)
Cisco MDS 92xx Series Multiservice Switches		NX-OS, Release: <ul style="list-style-type: none"> • 7.3.1D1(1) • 7.3(1)D1(1)

Components	Supported Models	Supported Software
Cisco MDS 95xx Series Data Center Fabric Switches (Module level support exists, but is not listed here.)		NX-OS, Release: <ul style="list-style-type: none"> • 6.2(x) • 6.2(xx) • 7.3.1.D1(1)
Cisco MDS 97xx Series Data Center Fabric Switches	MDS 9706	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(xx) • 7.3.1.D1(1) • 7.3(1)D1(1)
	MDS 9710	NX-OS, Release: <ul style="list-style-type: none"> • 6.2(x) • 6.2(xx)
Cisco IOS Devices	C2960S Other devices that support the software version	IOS 12.2(55)SE5

Cisco Application Centric Infrastructure and Related Software Support

The following table outlines support for Cisco Application Centric Infrastructure (Cisco ACI) components. Where a version includes an asterisk (*), all patches for that version are supported. For example, Release 1.1(1*) includes support for 1.1(1o), 1.1(1j) and so on.

Software	Supported Versions
Cisco Application Centric Infrastructure Controllers	<ul style="list-style-type: none"> • 1.0(2*) • 1.0(3*) • 1.0(4*) • 1.1(1*) <p>Note Releases 1.1(1*) and later require you to enable TLSv1 in Cisco APIC</p> <ul style="list-style-type: none"> • 1.1(2*) • 1.1(3*) • 1.1(4*) • 1.2(1*) • 1.2(2*) • 1.3(1*) • 1.3(2*) • 2.0(1*) • 2.0(2*) • 2.1(1*) • 2.2(1*) • 2.2(2f) • 3.0
Cisco Application Virtual Switch	NX-OS, Release: <ul style="list-style-type: none"> • 4.2(1)SV2(2.3) • 5.2(1)SV3(1.5) • 5.2(1)SV3(1.6) • 5.2(1)SV3(1.10a) • 5.2(1)SV3(1.15) • 5.2(1)SV3(1.20) • 5.2(1)SV3(1.20)

Support for Related Software with Cisco ACI

The following table outlines support for related software used with Cisco ACI.

Components	Supported Hardware Versions	Supported Software Versions	Supported Device Packages
Citrix NetScaler VPX		10.1 and later	Major Version: 1.0, Minor Version: 52.41 Major Version: 1.0, Minor Version: 10.1-129.52 Major Version 1.0, Minor Version 10.1-129.62 Major Version 10.5 Minor Version 52.1155
Citrix NetScaler SDX	8015	10.1 and later	Major Version: 1.0, Minor Version: 52.41 Major Version: 1.0, Minor Version: 10.1-129.52 Major Version 1.0, Minor Version 10.1-129.62 Major Version 10.5 Minor Version 56.22
Citrix NetScaler 1000V		10.1 and later	Major Version: 1.0, Minor Version: 52.41 Major Version: 1.0, Minor Version: 10.1-129.52 Major Version 1.0, Minor Version 10.1-129.62
Cisco ASAv		9.1(2) 9.2(0) 9.3(1) 9.3(2) 9.4(2) 9.5(2.200) 9.5(2)	1.0 1.0.1(1) 1.1(1.2) 1.2(3.11) 1.2(3.15) 1.2(4.8) 1.2(5.5)
Cisco ASA	5515-X	8.6(1) 9.1(2)	1.2(5.5) 1.2(6.15)
	5555-X	9.1(2)	1.2(5.5) 1.2(6.15)

Brocade Network and Fabric Support

The following table outlines support for Brocade network and fabric devices.

Components	Supported Models	Supported Software
Brocade DCX Backbone	DCX 8510-4 Backbone	Fabric OS v7.0.2c Fabric OS v7.3.1c
VDX Network & Fabric/Storage Switches	VDX 6700 Series	Brocade Network Operating System v2.1.1 Brocade Network Operating System v7.1.0
Brocade Silkworm SAN Switches	Brocade 300 SAN Switch	Fabric OS v6.3.0a

F5 Network and Load Balancer Support

The following table outlines support for F5 network and load balancer devices.



Note

Remote user authentication is not supported for F5 Load Balancer with a version less than 12.0.0. To use remote authentication, you must have F5 Load Balancer 12.0.0(0.0.606) and follow the instructions provided by F5.

Components	Supported Models	Supported Software
F5 Load Balancer (physical device only)	Big-IP LTM 2200	11.5.1 11.6.0 (4.0.420) 11.6.1(*) 12.0.0 (0.0.606) 12.1.1(*) 13.0.0
	Big-IP VPR 2200	12.0.0 (0.0.606)
	Big-IP VPR C2400	11.6.1

Security and Firewall Support

Cisco UCS Director enables the management and orchestration of Cisco security and firewall platforms.

Cisco Security and Firewall Support

The following table outlines support for Cisco security and firewalls.

Components	Supported Models	Supported Software
Cisco ASA 5500 Series Firewall	5510	8.4(5) 9.1(5) 9.7.1
	5515	9.1(1) 9.1(2) 9.3(1) 9.7.1
Cisco ASA 5500-X Series Firewall	5555-X	9.5(2) 9.7.1
	5585-X	9.3(1) 9.4(1) 9.4(3) 9.5(2) 9.7.1
	5520-X	9.7.1
	5550-X	9.7.1
Cisco ASA v		9.1(2) 9.2(0) 9.3(1) 9.3(2) 9.4(2) 9.5(2) 9.7.1
Cisco Virtual Security Gateway		4.2(1)VSG2(1.1)
Cisco Prime Network Services Controller		3.2 3.4.1*
Cisco Identity Services Engine		1.2.0.899

Storage Support

Cisco UCS Director enables the management and orchestration of multiple storage platforms from various vendors. This support information is grouped by vendor.

EMC Storage Support

The following table outlines support for EMC storage devices.

Components	Supported Models	Supported Software	Supported Management Interfaces
Symmetrix VMAX (block only)	VMAX 10K	Enginuity 5876.x.x	Linux-based Solutions Enabler v7.5
	VMAX 20K	Symmetrix CLI (symcli) v7.5.1.0	Linux-based Solutions Enabler v7.6
	VMAX 40K	Symmetrix CLI (symcli) v7.6.1.0	Linux-based Solutions Enabler v8.0
		Symmetrix CLI (symcli) v8.0.2.0	Windows-based Solutions Enabler v 8.0
		Symmetrix CLI (symcli) 8.1.0.24	Linux-based Solutions Enabler 8.1.0.24
		Symmetrix CLI (symcli) 8.2.0.18	Linux-based Solutions Enabler 8.2.0.18
		Symmetrix CLI (symcli) 8.3.0.22	Linux-based Solutions Enabler 8.3.0.22
			Windows-based Solutions Enabler 8.1.0.24
		Windows-based Solutions Enabler 8.2.0.18	
		Windows-based Solutions Enabler 8.3.0.22	

Components	Supported Models	Supported Software	Supported Management Interfaces
Symmetrix VMAX3	VMAX 100K	Enginuity 5977.x.x Symmetrix CLI (symcli) v8.0.2.0 Symmetrix CLI (symcli) v8.1.0 Symmetrix CLI (symcli) 8.1.0.24 Symmetrix CLI (symcli) 8.2.0.18 Symmetrix CLI (symcli) 8.3.0.22	Linux-based Solutions Enabler v8.0 Linux-based Solutions Enabler v8.1.0 Linux-based Solutions Enabler 8.1.0.24 Linux-based Solutions Enabler 8.2.0.18 Linux-based Solutions Enabler 8.3.0.22 Windows-based Solutions Enabler v8.0 Windows-based Solutions Enabler v8.1.0 Windows-based Solutions Enabler 8.1.0.24 Windows-based Solutions Enabler 8.2.0.18 Windows-based Solutions Enabler 8.3.0.22
	VMAX 200K	Enginuity 5977.x.x Symmetrix CLI (symcli) v8.0.2.0 Symmetrix CLI (symcli) v8.1.0 Symmetrix CLI (symcli) 8.1.0.24 Symmetrix CLI (symcli) 8.2.0.18 Symmetrix CLI (symcli) 8.3.0.22	

Components	Supported Models	Supported Software	Supported Management Interfaces
			Linux-based Solutions Enabler v8.0 Linux-based Solutions Enabler v8.1.0 Linux-based Solutions Enabler 8.1.0.24 Linux-based Solutions Enabler 8.2.0.18 Linux-based Solutions Enabler 8.3.0.22 Windows-based Solutions Enabler v8.0 Windows-based Solutions Enabler v8.1.0 Windows-based Solutions Enabler 8.1.0.24 Windows-based Solutions Enabler 8.2.0.18 Windows-based Solutions Enabler 8.3.0.22
	VMAX3 400K	Enginuity 5977.x.x Symmetrix CLI (symcli) v8.0.2.0 Symmetrix CLI (symcli) v8.1.0 Symmetrix CLI (symcli) 8.1.0.24 Symmetrix CLI (symcli) 8.2.0.18 Symmetrix CLI (symcli) 8.3.0.22	

Components	Supported Models	Supported Software	Supported Management Interfaces
			Linux-based Solutions Enabler v8.0 Linux-based Solutions Enabler v8.1.0 Linux-based Solutions Enabler 8.1.0.24 Linux-based Solutions Enabler 8.2.0.18 Linux-based Solutions Enabler 8.3.0.22 Windows-based Solutions Enabler v8.0 Windows-based Solutions Enabler v8.1.0 Windows-based Solutions Enabler 8.1.0.24 Windows-based Solutions Enabler 8.2.0.18 Windows-based Solutions Enabler 8.3.0.22

Components	Supported Models	Supported Software	Supported Management Interfaces
VNX (File, Block, Unified)	VNX 5100 VNX 5500	File: DART 8.1.9.184 Block: Flare OS 05.33.009.5.184	Navisphere navisecli Revision 7.30.15.0.44 NaviCLI installed on one of the following: <ul style="list-style-type: none"> • CentOS 6.4 • Windows 2008
	VNX 5700 VNX 7500	File: DART 8.1.9.184 Block: Flare OS 05.33.009.5.184	Navisphere navisecli Revision 7.30.15.0.44 NaviCLI installed on one of the following: <ul style="list-style-type: none"> • CentOS 6.4 • Windows 2008
	VNX 5300	File: <ul style="list-style-type: none"> • DART 7.0.53-x • DART 7.1.79-8 • DART 8.1.9.184 Block: <ul style="list-style-type: none"> • Flare OS 05.31.000.5.x • Flare OS 05.32.000.5.218 • Flare OS 05.33.009.5.184 	Navisphere navisecli Revision 7.30.15.0.44 NaviCLI installed on one of the following: <ul style="list-style-type: none"> • CentOS 6.4 • Windows 2008

Components	Supported Models	Supported Software	Supported Management Interfaces
VNX2 (File, Block, Unified)	VNX 5200 VNX 5400 VNX 5600 VNX 5800 VNX 7600 VNX 8000	File: <ul style="list-style-type: none"> Operating Environment (OE), v8.1.0 Operating Environment (OE), v8.1.0.15 Operating Environment (OE), v8.1.9.184 Block: Flare OS 5.33.009.5.184	Navisphere naviseccli Revision 7.33.9.1.55 VM: CentOS 6.4 NaviCLI installed on Windows 2008
VPLEX	Local	V5.2.1.01.00.02 V5.3.0.01.00.04 V5.4 V6.0.1.01.00.04 (Version: 6.0 Service Pack-1, Patch-1)	
	Metro	V5.2.1.01.00.02 V5.3.0.01.00.04 V5.4 V6.0.1.01.00.04 (Version: 6.0 Service Pack-1, Patch-1)	
VNXe	VNXe-3200	V3.0.1.4029529 V3.1.5.6801782 V3.1.5.8711957	
RecoverPoint	RecoverPoint EX	V4.0.2 V4.1.SP2.P1 4.4.SP1.P1 5.0 SP1	
	RecoverPoint Cluster	V 4.4 SP1	

Components	Supported Models	Supported Software	Supported Management Interfaces
Isilon	S200-2U-Dual-24GB-2x1GE-2x10GE SFP+-7373GB X200-2U-Single-6144MB-2x1GE-2x10GE SFP+-6144GB NL400-4U-Dual-12GB-4x1GE-36TB	V7.1.0.0 V7.2.0.3	
EMC Unity		UnityOS: 4.1.1.9138882	
XtremIO		V4.0.1 V4.0.2-80	
	XIOS	4.0.15	
	XMS	4.2.1	

NetApp Storage Support

The following table outlines support for NetApp storage devices.



Note For NetApp Data-ONTAP 7-Mode, Cisco UCS Director can connect either directly to the storage controllers or it can leverage the NetApp OnCommand Unified Manager Core to proxy the management of each storage controller.

Components	Supported Models	Supported Versions	Supported Management Interfaces
NetApp FAS (Data-ONTAP 7-Mode)	NetApp FAS (Data-ONTAP 7-Mode)	Data-ONTAP 8.2.2P1 Data-ONTAP 8.1.4P1 Data-ONTAP 8.2.1 Data-ONTAP 8.2.0 Data-ONTAP 7.3.x Data-ONTAP 8.2.2P2	Direct Data ONTAP Ether

Components	Supported Models	Supported Versions	Supported Management Interfaces
NetApp FAS (Clustered Data ONTAP)	All FAS models supported by NetApp Clustered Data-ONTAP, except All Flash FAS	Data-ONTAP 8.2.2P1 Data-ONTAP 8.2.0 Data-ONTAP 8.2.1 Data-ONTAP 7.3.x Data-ONTAP 8.3GA Data-ONTAP 8.3RC2 Data-ONTAP 8.3.1GA Data-ONTAP 8.3.2 Data-ONTAP 9.0 Data-ONTAP 9.1	NetApp Clustered Data ONTAP- Management Logical Interface (LIF)
NetApp OnCommand Unified Manager Core (7-Mode only)	Software	NetApp OnCommand Data Fabric Manager 4.0 NetApp OnCommand Unified Manager Core 5.0.2 (formerly named Data Fabric Manager)	
Netapp AFF(ALL Flash FAS ONTAP)	ALL Flash FAS	Data-ONTAP 9.0 Data-ONTAP 9.1	
Virtual Storage Console	Plugin for VMware vCenter.	4.2.1 6.0	

IBM Storwize Storage Support

The following table outlines support for IBM Storwize storage devices:

Components	Supported Versions	Supported Management Interfaces
IBM Storwize V5000	7.6.1.3 (build 125.0.1604262218000)—validated for FibreChannel only 7.8.0.0 (build 133.17.1612071632000)	SSH (Secure Shell)
IBM Storwize V7000 Unified	1.5.0.6-4, 7.3.0.8 (build 97.5.1411110000) 1.5.1.2-1, 7.4.0.2 (build 103.21.1412180000) 7.2.0.3 (build 87.4.1402180000) 1.6.1.0-44, 7.6.0.4 (build 122.23.1602250020000)	SSH (Secure Shell)

Components	Supported Versions	Supported Management Interfaces
IBM Storwize V7000	7.4.0.2 (build 103.21.1412180000) 7.3.0.6 (build 97.5.1409050000) 7.2.0.3 (build 87.4.1402180000) 7.6.0.4 (build 122.23.1602250020000)	SSH (Secure Shell)
IBM Storwize V9000	7.6.1.4 (build 125.0.1605241053000.199.100)—validated for FibreChannel only 7.8.0.2 (build 133.17.1701251545000)—validated for FibreChannel only	SSH (Secure Shell)
IBM SAN Volume Controller	7.2.0.3 (build 87.4.1402180000) 7.8.0.2 (build 133.17.1701251545000)	SSH (Secure Shell)

Hyperconverged Storage Support

The following table outlines support for hyperconverged storage.

Components	Supported Host (Cisco UCS C-Series Rack Servers)	Supported Software
Cisco VSAN Ready Node	C240 M3	VMware VSAN 5.5, with VMware vSphere 5.5 Update 1 VMware VSAN 5.5, with VMware vSphere 5.5 Update 2 VMware VSAN 5.5, with VMware vSphere 6.0 VMware VSAN 6.0 (backward compatibility features of VSAN 5.5), with VMware vSphere 6.0 Update1
	C240 M4	VMware VSAN 5.5, with VMware vSphere 5.5 Update 1 VMware VSAN 5.5, with VMware vSphere 5.5 Update 2 VMware VSAN 5.5, with VMware vSphere 6.0 VMware VSAN 6.0 (backward compatibility features of VSAN 5.5), with VMware vSphere 6.0 Update1

Hyperconverged Infrastructure Support

Cisco UCS Director supports hyperconverged infrastructure. This support information is grouped by vendor.

Cisco HyperFlex System Support

The following table outlines support for Cisco HyperFlex System and related hardware and software.

Components	Supported Models	Supported Software
Cisco HX-Series Server	HX220C-M4	Cisco HX Data Platform, Release 1.7.1
	HX240C-M4	Cisco HX Data Platform, Release 1.8(1*)
	HX220C-M4	Cisco HX Data Platform, Release 2.0(1*)
	HX240C-M4	Cisco HX Data Platform, Release 2.1(1*)
	HXAF240C-M4SX	Cisco HX Data Platform, Release 2.1(1*)
	HXAF220C-M4S	Cisco HX Data Platform, Release 2.5(1*)

Converged Infrastructure Software Support

Cisco UCS Director supports software designed for converged infrastructure. This support information is grouped by vendor.

VCE Software Support

The following table outlines support for VCE converged infrastructure software.

Components	Supported Software
Vision Intelligent Operations	V2.5.3

PowerShell Support

Cisco UCS Director supports Microsoft Windows PowerShell for automation of the administration of system resources. This support information is grouped by PowerShell application.

PowerShell Agent Support

The following table outlines support and system requirements for PowerShell Agent.

Software	Supported Versions
Windows PowerShell	3.0
	4.0
Operating System	Microsoft Windows Server 2008 R2 64-bit
	Microsoft Windows Server 2012

Software	Supported Versions
.Net Framework	4.0 (Full Package) or higher

PowerShell Console Support

The following table outlines support and system requirements for PowerShell Console.

Software	Supported Versions
Windows PowerShell	3.0 4.0
Operating System	Any version of the Windows Operating System
.Net Framework	4.0 (Full Package) or higher

Cisco Solution Partner - Certified Support

This section describes the support for integrations with and solutions for Cisco UCS Director that were developed by Cisco partners and have been tested and certified by Cisco.

The intellectual property for these solutions (developed as Cisco UCS Director Open Automation plug-in software) are owned by the partner that developed the solution. Therefore, the plug-in software is not distributed with Cisco UCS Director software from Cisco. You can download all Cisco certified solutions and plug-in software for Cisco UCS Director directly from the website of the partner who developed the plug-in. You can also contact the sales team for the partner or its vendor for more information. Cisco UCS Director customers can also log in to the [Technology Solution Catalog](#) on [Cisco Market Place](#) and search on the partner name for more information about feature support and benefits.

Hitachi Data Systems - Certified Support

The following table outlines support for integrations with Cisco UCS Director that were developed by Hitachi Data Systems and have been tested and validated by Cisco. This solution is available for download from Hitachi Data Systems. Additional information about the solution is available on the [Hitachi Storage Connector page](#) on Cisco Marketplace.

Solution Name	Solution Version	Supported Models	Certified Software/Firmware Versions
Hitachi Storage Connector for Cisco UCS Director	v2.1.0	Hitachi Virtual Storage Platform G/F800	83-02-04-00/00
		Hitachi Virtual Storage Platform G/F600	83-02-04-00/00
		Hitachi Virtual Storage Platform G/F400	83-02-04-00/00
		Hitachi Virtual Storage Platform G200 (VSP Gx00 and Fx00)	83-02-04-00/00
		Hitachi Virtual Storage Platform G1000 (VSP G1000)	80-03-34-00/00
		Hitachi Virtual Storage Platform (VSP)	70-06-35-00/00
		Hitachi Unified Storage VM (HUS-VM)	73-03-44-00/00

Pure Storage - Certified Support

The following table outlines support for integrations with Cisco UCS Director that were developed by Pure Storage and have been tested and validated by Cisco. Additional information about the solution and a link to download the solution are available on the [Pure Storage Connector for UCS Director page](#) on Cisco Marketplace.

Solution Name	Solution Version	Components	Supported Models	Supported Software
Pure Storage Connector for Cisco UCS Director	v2.2	Pure Storage FlashArray	FlashArray //m FlashArray //x	Purity Operating Environment, Releases: <ul style="list-style-type: none"> • 4.x • 5.x

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