



Compatibility Matrix for Cisco UCS Director, Release 4.1

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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.

This document contains the following sections:

- [Overview, page 1](#)
- [Requirements, page 2](#)
- [Virtualization Support, page 3](#)
- [Server Support, page 5](#)
- [Network and Fabric Support, page 8](#)
- [Security and Firewall Support, page 10](#)
- [Storage Support, page 10](#)

Overview

Cisco UCS Director represents the next generation of software for the management and orchestration of datacenter 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 and network 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, NetApp FlexPod™ and FlexPod Express, EMC VSPEX and VCE Vblock™ based on Cisco UCS and Cisco Nexus.



Cisco UCS Director automates the provisioning of resource pools across physical, virtual and bare metal 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.

Requirements

This section includes the following topics:

- [Cisco UCS Director, page 2](#)
- [Cisco UCS Director Baremetal Agent, page 3](#)

Cisco UCS Director

Cisco UCS Director is a self-contained virtual machine that can be imported into, and run within either a VMware vSphere or Microsoft Hyper-V environment. Cisco UCS Director is packaged and delivered to the end-user in two forms; in the Open Virtualization Format (OVF) for deployment on VMware vSphere and as a compressed .ZIP file for deployment on Microsoft Hyper-V. Depending on the hosting virtualization platform (VMware vSphere or Microsoft Hyper-V), download and import the appropriate Cisco UCS Director format.



Note

Prior versions of Cisco UCS Director were released as a 32 bit appliance only. As of this release, Cisco UCS Director is now released solely as a 64 bit appliance. When upgrading from a previous version to the current release, please revisit the minimum requirements.

[Table 1](#) outlines the minimum system requirements for Cisco UCS Director.

Table 1 *Cisco UCS Director minimum requirements*

Resource	Minimum Requirements
vCPUs	4
Memory	4 GB (8 GB recommended)
Hard disk	100 GB
VMware ESXi Host version	As described in VMware vSphere Versions, page 3 .
Microsoft Hyper-V Manager version	As described in Microsoft Hyper-V Versions, page 4 .



Note

We recommend that you reserve 8 GB of memory and 2000 MHz of CPU resources for Cisco UCS Director.

Cisco UCS Director Baremetal Agent

The Cisco UCS Director Baremetal Agent is a separate virtual machine appliance that works in conjunction with the Cisco UCS Director appliance to provide additional supporting services necessary in a PXE boot environment. These functions include services such as Dynamic Host Control Protocol (DHCP), Hypertext Transfer Protocol (HTTP) and Trivial File Transfer Protocol (TFTP).

[Table 2](#) outlines the minimum system requirements for the Cisco UCS Director Baremetal Agent.

Table 2 *Cisco UCS Director Baremetal Agent minimum requirements*

Resource	Minimum Requirements
vCPUs	2
Memory	3 GB
Hard disk	40 GB

Virtualization Support

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

This section contains the following topics:

- [Hypervisor and Management Support, page 3](#)
- [Microsoft Hyper-V Versions, page 4](#)

Hypervisor and Management Support

This section contains the following topics:

- [VMware vSphere Versions, page 3](#)
- [Microsoft Hyper-V Versions, page 4](#)

VMware vSphere Versions

[Table 3](#) outlines the versions of VMware vSphere that are supported by 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.

Table 3 *VMware vSphere Support*

Software Components	Software Versions
VMware vSphere Hypervisor (ESX/ESXi)	<ul style="list-style-type: none"> • 3.5 • 4.0 including Updates 1 & 2 • 4.1 including Updates 1, 2 & 3 • 5.0 including Updates 1 & 2 • 5.1 including Update 1 • 5.5
VMware vSphere vCenter Server	<ul style="list-style-type: none"> • 4.0 including Updates 1 & 2 • 4.1 including Updates 1, 2 & 3 • 5.0 including Updates 1 & 2 • 5.1 including Update 1 • 5.5

Microsoft Hyper-V Versions

Table 4 outlines the versions of Microsoft Hyper-V that are supported by 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 software versions. Certain features may not be available in older versions of Microsoft software.

Table 4 *Microsoft Hyper-V Support*

Software Components	Software Versions
Microsoft Hyper-V Hypervisor	<ul style="list-style-type: none"> • 2008 R2 SP1 (Hyper-V 2.0) • 2012 (Hyper-V 3.0) • 2012 R2 (Hyper-V 3.0)
Microsoft System Center Virtual Machine Manager (SCVMM)	<ul style="list-style-type: none"> • 2008 R2 SP1 • 2012 • 2012 SP1 • 2012 R2

Guest Operating System Support

This section contains the following topics:

- [VMware vSphere OS Support, page 5](#)
- [Microsoft Hyper-V OS Support, page 5](#)

VMware vSphere OS 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 OS 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](#)

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.

This section includes the following topics:

- [Cisco Server Support, page 5](#)
- [HP Server Support, page 6](#)
- [Dell Server Support, page 7](#)

Cisco Server Support

[Table 5](#) outlines support for Cisco UCS servers and related hardware and software.



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.

[Table 5](#) 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.

Table 5 *Cisco UCS Hardware and Software Support*

Components	Supported Models	Supported Software	
		From Version	To Version
Cisco UCS Manager	Software	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 1.0	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 2.1(3a)
Cisco UCS Central	Software	Cisco UCS Central, Release 1.1	Cisco UCS Central, Release 1.1
Cisco UCS 6000 Series Fabric Interconnects	6120 6140 6248UP 6296UP	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 1.0	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 2.1(3a)
Cisco UCS 5000 Series Chassis	5108	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 1.0	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 2.1(3a)
Cisco UCS 2000 Series FEX Modules	2104 2204XP 2208XP	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 1.0	Cisco UCS Infrastructure Bundle and Cisco UCS Manager Software Bundle, Release 2.1(3a)
Cisco UCS B-Series Blade Servers	All models supported by the version of Cisco UCS Manager	Cisco UCS B-Series Blade Server Software Bundle, Release 1.0	Cisco UCS B-Series Blade Server Software Bundle, Release 2.1(3a)
Cisco UCS C-Series Rack-Mount Servers (Managed by Cisco UCS Manager)	All models supported by the version of Cisco UCS Manager	Cisco UCS C-Series Rack-Mount Server Software Bundle, Release 1.0	Cisco UCS C-Series Rack-Mount Server Software Bundle, Release 2.1(3a)
Cisco UCS C-Series Rack-Mount Servers (Standalone)	All models supported by the version of Cisco Integrated Management Controller (CIMC)	Cisco UCS C-Series Rack-Mount Server CIMC Software, Release 1.4	Cisco UCS C-Series Rack-Mount Server CIMC Software, Release 1.5

HP Server Support

Table 6 outlines support for HP servers and related management software.



Note

Cisco UCS Director leverages the HP Integrated Lights-Out interface for all management and orchestration capabilities across both blade and rack-mount form factors. Cisco UCS Director does not support HP Onboard Administrator (OA) or any other HP management interface as of this publication.

Table 6 *HP Server and Software Support*

Components	Supported Models	Supported Software	
		From Version	To Version
HP Servers with HP Integrated Lights-Out 2 (iLO2)	Any HP server model or platform that supports iLO2	iLO 1.61	iLO 2.07
HP Servers with HP Integrated Lights-Out 3 (iLO3)	Any HP server model or platform that supports iLO3	iLO 1.57	iLO 1.57
HP Servers with HP Integrated Lights-Out 4 (iLO4)	Any HP server model or platform that supports iLO4	iLO 1.01	iLO 1.01

Dell Server Support

[Table 7](#) outlines support for Dell servers and for 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.

Table 7 *Dell Server and Software Support*

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

Bare Metal Operating System Support

Cisco UCS Director in conjunction with the Cisco UCS Director Bare Metal Agent supports all types of Linux and Microsoft Windows operating systems in bare metal provisioning workflows. Certain operating systems are packaged out-of-the-box with the Cisco UCS Director Baremetal Agent. However, additional operating systems can be added as necessary. Any operating system that supports PXE boot and/or install is supported and can be leveraged in bare metal provisioning workflows.

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.

This section includes the following topics:

- [Cisco Network and Fabric Support, page 8](#)
- [Brocade Network and Fabric Support, page 9](#)

Cisco Network and Fabric Support

[Table 8](#) 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.

Table 8 *Cisco Network and Fabric Support*

Components	Supported Models	Supported Software	
		From Version	To Version
Cisco Nexus 1000 Series Distributed Virtual Switch	Nexus 1000V for VMware vSphere	NX-OS Software, Release 4.0(4)	NX-OS Software, Release 4.2(1)
Cisco Nexus 1100 Series Cloud Services Platform	Nexus 1110	NX-OS Software, Release 4.2(1)	NX-OS Software, Release 4.2(1)
Cisco Nexus 3000 Series Data Center Switches	Nexus 3016 Nexus 3048 Nexus 3064T Nexus 3064X Nexus 3548	NX-OS Software, Release 5.0(3)	NX-OS Software, Release 5.0(3)
Cisco Nexus 5000 Series Data Center Switches	Nexus 5010 Nexus 5020 Nexus 5548P Nexus 5548UP Nexus 5596UP Nexus 5596T	NX-OS Software, Release 5.0(1)	NX-OS Software, Release 5.2(1)
Cisco Nexus 6000 Series Switches	Nexus 6001 Nexus 6004	NX-OS Software, Release 6.0(2)	NX-OS Software, Release 6.0(2)

Table 8 *Cisco Network and Fabric Support (continued)*

Components	Supported Models	Supported Software	
		From Version	To Version
Cisco Nexus 7000 Series Data Center Switches	Nexus 7004 Nexus 7009 Nexus 7010 Nexus 7018	NX-OS Software, Release 6.1(3)	NX-OS Software, Release 6.2(2a)
Cisco Nexus 9500 Series Switches	Nexus 9508	NX-OS Software, Release 6.1(2)	NX-OS Software, Release 6.1(2)
Cisco MDS 9100 Series Data Center Fabric Switches	MDS 9124	NX-OS Software, Release 5.2(6b)	NX-OS Software, Release 5.2(8b)
	MDS 9148	NX-OS Software, Release 5.2(1)	NX-OS Software, Release 6.2(1)
Cisco MDS 9200 Series Multiservice Switches	MDS 9250i	NX-OS Software, Release 6.2(3)	NX-OS Software, Release 6.2(3)
Cisco MDS 9500 Series Data Center Fabric Switches	MDS 9506 MDS 9509 MDS 9513	NX-OS Software, Release 6.2(1)	NX-OS Software, Release 6.2(3)
Cisco MDS 9700 Series Data Center Fabric Switches	MDS 9710	NX-OS Software, Release 5.2(1)	NX-OS Software, Release 6.2(1)
Cisco IOS Devices	C2960S Other devices that support the software version	IOS 12.2(55)SE5	IOS 12.2(55)SE5

Brocade Network and Fabric Support

[Table 9](#) outlines support for Brocade network and fabric devices.

Table 9 *Brocade Network and Fabric Support*

Components	Supported Models	Supported Software	
		From Version	To Version
VDX Network & Fabric/Storage Switches	VDX 6700 Series	Brocade Network Operating System v2.1.1	Brocade Network Operating System v2.1.1
Brocade Silkstorm SAN Switches	Brocade 300 SAN Switch	Fabric OS v6.3.0a	Fabric OS v6.3.0a

Security and Firewall Support

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

[Table 10](#) outlines support for Cisco security and firewalls.


Note

All Cisco ASA functionality may not be available in Cisco UCS Director at this time. Cisco ASA functionality is implemented in Cisco UCS Director as part of the application container offering. See the Cisco UCS Director task library for full information on which Cisco ASA functionality is supported.

Table 10 *Cisco Firewall Support*

Components	Supported Models	Supported Software	
		From Version	To Version
Cisco ASA 5500 Series Firewall	All ASA 5000 Series	7.0	9.1
Cisco Virtual Security Gateway	4.2(1)VSG2(1.1)	4.2(1)VSG2(1.1)	4.2(1)VSG2(1.1)
Cisco Prime Network Services Controller	3.0.2e	3.0.2e	3.0.2e

Storage Support

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

This section includes the following topics:

- [EMC Storage Support, page 10](#)
- [NetApp Storage Support, page 11](#)
- [Cisco UCS Invicta Series Storage Support, page 12](#)

EMC Storage Support

[Table 11](#) outlines support for EMC storage devices.


Note

Cisco UCS Director currently only supports a Linux-based Solutions Enabler for managing EMC VMAX storage. The Windows-based Solutions Enabler is not yet supported.

Table 11 EMC Storage Support

Components	Supported Models	Supported Software	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	
VNX (File, Block, Unified)	VNX 5100	DART 7.0.53-x and higher (File-based)	VNX Control Station v7.0.53-x and higher
	VNX 5300	Flare OS 05.31.000.5.x and higher (Block-based)	
	VNX 5500		
	VNX 5700		
	VNX 7500		
VNX2 (File, Block)	VNX 5400	MCx OS, v8.1.0 and higher	VNX Control Station
	VNX 5600		
	VNX 5800		
	VNX 7600		
	VNX 8000		

NetApp Storage Support

Table 12 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.

Table 12 NetApp Storage Support

Components	Supported Models	Supported Software		Management Interfaces
		From Version	To Version	
NetApp FAS (Data-ONTAP 7-Mode)	All FAS models supported by NetApp ONTAP 7-Mode	Data-ONTAP 7.3.6	ONTAP 8.2.0	Direct Data ONTAP Ether
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 OnCommand Unified Manager Core (7-Mode only)
NetApp FAS (Clustered Data-ONTAP)	All FAS models supported by NetApp Clustered Data-ONTAP	Data-ONTAP 8.1	ONTAP 8.2	NetApp Data-ONTAP Cluster-Management Logical Interface (LIF)

Cisco UCS Invicta Series Storage Support

Table 13 outlines support for Cisco UCS Invicta Series storage devices, formerly WhipTail Accela and WhipTail Invicta.


Note

Cisco UCS Invicta displays as WhipTail Accela and WhipTail Invicta in Cisco UCS Director.

Table 13 *Cisco UCS Invicta Storage Support*

Components	Supported Models	Supported Software	Management Interfaces
Cisco UCS Invicta C3124SA Appliance (formerly WhipTail Accela)	Cisco UCS Invicta C3124SA Appliance	Cisco UCS Invicta OS, Version 4.1.1	Cisco UCS Invicta C3124SA Appliance
Cisco UCS Invicta Scaling System (formerly WhipTail Invicta)	<ul style="list-style-type: none"> Cisco UCS Invicta C710SR Router Cisco UCS Invicta C3124SN Node 	Cisco UCS Invicta OS, Version 4.1.1	

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), 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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