Compatibility Matrix for Cisco UCS Director, Release 4.0

First Published: August, 2013
Last Revised: October 2013

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

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 Systems, Inc.
www.cisco.com

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	40 GB
VMware ESXi Host version	ESXi 4.1, 5.0, or 5.1
Microsoft Hyper-V Manager version	2008 R2 or 2012

Note We recommend that you reserve 3 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	30 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

This section contains the following topics:

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)	• 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
VMware vSphere vCenter Server	• 4.0 including Updates 1 & 2 • 4.1 including Updates 1, 2 & 3 • 5.0 including Updates 1 & 2 • 5.1 including Update 1

Microsoft Hyper-V Versions

Table 4 outlines the persons 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	• 2008 R2 SP1 (Hyper-V 2.0) • 2012 (Hyper-V 3.0)
Microsoft System Center Virtual Machine Manager (SCVMM)	• 2008 R2 SP1 • 2012 • 2012 SP1

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

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

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	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
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
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
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
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

Table 5 **Cisco UCS Hardware and Software Support (continued)**

Components	Models	Supported Software	
		From Version	To Version
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
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	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	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 9
- Brocade Network and Fabric Support, page 10

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	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 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 7000 Series Data Center Switches	Nexus 7004 Nexus 7009 Nexus 7010 Nexus 7018	NX-OS Software, Release 6.1(3)	NX-OS Software, Release 6.1(3)
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 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(1)
Cisco MDS 9700 Series Data Center Fabric Switches	MDS 9710	NX-OS Software, Release 5.2(1)	NX-OS Software, Release 6.2(1)

Brocade Network and Fabric Support

Table 9 outlines support for Brocade network and fabric devices.

Table 9   Brocade Network and Fabric Support

Components	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 Silkworm 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 Fenced 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	Models	Supported Software	
		From Version	To Version
Cisco ASA 5500 Series Firewall	All ASA 5000 Series	7.0	9.1

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

This section includes the following topics:

EMC Storage Support in Release 4.0

Table 11 outlines support for EMC storage devices in Cisco UCS Director, Release 4.0.

> **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	Models	Supported Software	Management Interfaces
Symmetrix VMAX (block only)	VMAX 10K VMAX 20K VMAX 40K	Enginuity 5876.x.x Symmetrix CLI (symcli) v7.5.1.0	Linux-based Solutions Enabler v7.5
VNX (File, Block, Unified)	VNX 5100 VNX 5300 VNX 5500 VNX 5700 VNX 7500	DART 7.0.53-x and higher (File-based) Flare OS 05.31.000.5.x and higher (Block-based)	VNX Control Station v7.0.53-x and higher

EMC Storage Support in Patch Release 4.0.1.1

Table 12 outlines support for EMC storage devices in Cisco UCS Director, Patch Release 4.0.1.1

Table 12   EMC Storage Support added in Cisco UCS Director, Patch Release 4.0.1.1

Components	Models	Supported Software	Management Interfaces
VNX2 (File, Block)	VNX 5400 VNX 5600 VNX 5800	MCx OS, v8.1.0 and higher	VNX Control Station

NetApp Storage Support

Table 13 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 13   NetApp Storage Support

Components	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)

WHIPTAIL Storage Support

Table 14 outlines support for WHIPTAIL storage devices. This support was added in Cisco UCS Director, Patch Release 4.0.1.1.

Table 14   WHIPTAIL Storage Support

Components	Models	Supported Software	Management Interfaces
WHIPTAIL ACCELA	ACCELA	Racerunner OS, Version 4.1.1 and above	ACCELA Management GUI
WHIPTAIL INVICTA	INVICTA	Racerunner OS, Version 4.1.1 and above	INVICTA Management GUI

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, 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.

Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.