Cisco Unity Connection 12.x Supported Platforms List

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This document provides information about the platforms supported for Cisco Unity Connection 12.x. The Unity Connection installation application prevents installation on servers that do not meet the exact specifications or models listed in this document.

Platform Overlays for Unity Connection

Unity Connection 12.x supports only virtual machines for installation. The Table 1: Specifications for Virtual Platform Overlays for Currently Shipping Unity Connection Servers lists the virtualization specifications, and the user and port limits when you install Unity Connection 12.x on a virtual machine.

> **Note** Unity Connection is not pre-installed on any platform. Unity Connection can only be installed on virtual machines.

Specifications for Virtual Platform Overlays for Currently Shipping Unity Connection Servers

This section describes specifications and limits for Unity Connection installed on a virtual machine.

For information on system requirements for a virtual environment, see the "Requirements for Installing Unity Connection on a Virtual Machine" section in the *System Requirements for Cisco Unity Connection Release 12.x* at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/requirements/b_12xcucsysreqs.html.

For platform/part number, see the link:
http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unity-connection.html

	Virtual Platform Overlay for up to 200 Users	Virtual Platform Overlay for up to 1,000 Users	Virtual Platform Overlay for up to 5,000 Users	Virtual Platform Overlay for up to 10,000 Users	Virtual Platform Overlay for up to 20,000 Users
(Applicable for Unity Connection 12.5SU6 and later releases) vCPU (Number of Virtual Processors)[1] Cores and Speed per Core[2] If a virtual machine uses ESXi 6.7 and later see section Steps to update CPU Reservation for Virtual machine Hardware Version 14 and above, on page 6 for additional settings.	1@a minimum of 1.8 GHz	1@a minimum of 2 GHz (2 GHz reserved) or 2 @ minimum of 1.8 GHz each (3.6 GHz reserved).	2@a minimum of 2.50 GHz each (5.00 GHz reserved) .	4@a minimum of 2.50 GHz each(10 GHz reserved).	7@a minimum of 2.50 GHz each (17.5 GHz reserved).
(Applicable for Unity Connection 12.5SU5 and earlier releases) vCPU (Number of Virtual Processors)[3] Cores and Speed per Core[4] If a virtual machine uses ESXi 6.7 and later see section Steps to update CPU Reservation for Virtual machine Hardware Version 14 and above, on page 6 for additional settings.	1@a minimum of 1.8 GHz	1@a minimum of 2.13 GHz (2.13 GHz reserved) or 2 @ minimum of 1.8 GHz each (3.6 GHz reserved).	2@a minimum of 2.53 GHz each (5.06 GHz reserved)	4@a for Xeon 5600 and 7500 processors-minimum of 2.53 GHz each(10.12 GHz reserved) or 4@a for Xeon E7 processors-minimum of 2.4 GHz each(9.6 GHz reserved)	7@a for Xeon Gold 6132 processors - minimum of 2.60 GHz each (18.2 GHz reserved) 7@a for Xeon 5600 and 7500 processors - minimum of 2.53 GHz each (17.71 GHz reserved) 7@a for Xeon E7 processors - minimum of 2.4 GHz each (16.8 GHz reserved)
vRAM (Amount of Virtual RAM)	4 GB reserved	4 GB reserved	6 GB reserved	6 GB reserved	8 GB reserved 10 GB reserved (for secure Jabber endpoints)

	Virtual Platform Overlay for up to 200 Users	Virtual Platform Overlay for up to 1,000 Users	Virtual Platform Overlay for up to 5,000 Users	Virtual Platform Overlay for up to 10,000 Users	Virtual Platform Overlay for up to 20,000 Users
vDisk (Size of Virtual Hard Disks) [5]	1 x 160GB	1 x 160GB, file system aligned at 64KB blocks	1 x 200 GB, file system aligned at 64KB blocks	Select the required OVA configuration from the drop-down list available for up to 10,000 users: • 2 x 146 GB • 2 x 300 GB • 2 x 500 GB File system aligned at 64KB blocks	Select the required OVA configuration from the drop-down list available for up to 20,000 users: • 2 x 300 GB • 2 x 500 GB File system aligned at 64KB blocks
Total number of Tenants supported on Unity Connection	-	5	20	30	60
Total number of available ports per virtual machine: Voice + TTS + Voice recognition	8[6]	24	100	150	250
Total number of available ports in a cluster [4]	16	48	200	300	500
Total number of concurrent video calls on each virtual machine (cluster/standalone deployment [7]	0	2	2	2	20
Total number of users with mailboxes	200	1,000	5,000	10,000	20,000
Number of Cisco Personal Communications Assistant users	200	1,000	5,000	10,000	20,000

	Virtual Platform Overlay for up to 200 Users	Virtual Platform Overlay for up to 1,000 Users	Virtual Platform Overlay for up to 5,000 Users	Virtual Platform Overlay for up to 10,000 Users	Virtual Platform Overlay for up to 20,000 Users
Total number of active clients: Cisco Unified Personal Communicator + Third-party IMAP + Cisco Unity conferencing + Cisco Unified Mobile Advantage + RSS + Phone View users (assumes all IMAP Idle clients)	0	1,000	5,000	10,000	20,000
Total number of LDAP Corporate Directory Users	200	1,000	5,000	10,000	20,000
Approximate message storage, G-711 codec, minutes	75,000	72,944	137,298	Depends on the .ova file: • 2 x 146 GB: 252,831 • 2 x 300 GB: 514,287 • 2 x 500 GB: 919,992	Depends on the .ova file: • 2 x 300 GB: 514,287 • 2 x 500 GB: 919,992
Unity Connection locations in the HTTPS network	0	3	10	10	25
Total number of Unity Connection SRSV branches supported	0	10	35	35	35
Maximum number of Microsoft Office 365 users supported	0	For 1 vCPU - 0 For 2 vCPU - 1000 [8]	3000	6000	8000
Maximum number of Unified Messaging (SIB) users supported	0	For 1 vCPU - 0 For 2 vCPU - 1000 [6]	5000	10000	20000

[1] For VMware vSphere ESXi 5.1 and earlier, at least one processor core must be available for the VMware ESXi hypervisor / scheduler.

2 For Spec- based processor requirements, see
http://docwiki.cisco.com/wiki/Unified_Communications_in_a_Virtualized_Environment

3 For VMware vSphere ESXi 5.1 and earlier, at least one processor core must be available for the VMware ESXi hypervisor / scheduler.

4 For Spec- based processor requirements, see
http://docwiki.cisco.com/wiki/Unified_Communications_in_a_Virtualized_Environment

5 Opus codec doubles the Disk size when used as line codec with PCM linear as recording codec.

6 For UCS E blade, though you are allowed to create more than 8 ports on Cisco Unity Connection Administration, it is recommended to create a maximum of 8 ports to avoid performance issues.

7 For more information on MediaSense capabilities and supported concurrent video calls, see
http://docwiki.cisco.com/wiki/Virtualization_for_Cisco_MediaSense. For lab testing purpose, any lower end MediaSense OVAs can be deployed.

8 To change the number of CPUs(1vCPU to 2vCPU) for 1000 users overlay, see "Modifying the CPU" section in the ReadMe of the applicable OVAs at
https://software.cisco.com/download/release.html?mdfid=283062758&flowid=77763&softwareid=282074348&release=OVA-12.0&relind=AVAILABLE&rellifecycle=&reltype=latest

Steps to update CPU Reservation for Virtual machine Hardware Version 14 and above

If a virtual machine uses ESXi 6.7 and later(VM version 14) then 100% CPU reservation is a mandatory requirement to power it on. This is required for exclusive assignment of the CPU cores.

For more information, see VMWare documents available at https://docs.vmware.com/en/VMware-Cloud-on-AWS/services/vmc-aws-performance/GUID-2808758A-1605-4729-9D03-6C68A6C19DCD.html.

To power on virtual machine, you need to manually set the CPU reservation. Follow below steps to update the CPU reservation:

1. After OVA deployment open the virtual machine in VMWare.

2. Select **Edit Settings > CPU > Reservation**.

3. Manually update the CPU reservation value to (Speed per Core * Number of Cores). For example, if you pick a 2.6 GHz CPU the VM will not power on unless the CPU reservation is manually altered. If you have a 7 core 2.6 GHz CPU, the CPU reservation need to be set as (Speed per Core * Number of Cores). In this case the CPU reservation should be set to (2.6*7) = 18.2 GHz.

Additional Information Related to Platform-Overlay Specifications

Unity Connection Cluster

The Unity Connection cluster feature provides high-availability voice messaging with two Unity Connection servers that are configured in a cluster. In this configuration, also known as active-active high availability, a single node consists of two servers, and the number of ports depends on the server model. The total number of node ports is additive (meaning a single node can support up to 500 ports, but the total number of users supported is applicable only to the primary server. The primary and secondary servers in a cluster must match in CPU and amount of memory, or the configuration is not supported.

If the hard disk space does not match on the two servers that you are using for a cluster, the smaller amount of disk space determines the storage capacity for each server in the cluster. See also the "Requirements for a Unity Connection Cluster" section in *System Requirements for Cisco Unity Connection Release 12.x* at
https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/requirements/b_12xcucsysreqs.html.

IMAP Idle Clients

The calculations for the total number of active clients assume the use of IMAP clients that support IMAP Idle. Cisco Unified Personal Communicator 7.0 and earlier, Cisco Unified Mobility Advantage, and Cisco Unified Mobile Communicator do not support IMAP

Idle. As a result, each active instance of each of these clients (that does not support IMAP Idle) that is accessing Unity Connection voice messages counts as four active clients.

Scaling Platform

Below is the list of supported clients on Unity Connection:

1. Cisco Jabber

2. Cisco Webex

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Note Other clients are also supported on Unity Connection but below qualification numbers are specific to Jabber and Webex.

The table contains information on the number of endpoints of supported clients that Unity Connection supports with single inbox users for specific OVA.

Table 2: Non Secure Endpoints of supported clients with Single Inbox Users

Virtual Platform Overlay	vCPU (Number of Virtual Processors) Cores and Speed per Core	Single Inbox Users	Endpoints on a Standalone Server	Total Endpoints Per CUC Cluster (Load Balancing)[9]	HA Endpoints Per CUC HA Pair [10]
20,000 Users	7 vCPU	20,000	5,000	10,000	5,000
		15,000	7,500	15,000	7,500
		10,000	8,000	16,000	8,000
		5,000	8,500	17,000	8,500
		0	10,000	20,000	10,000
10,000 Users	4 vCPU	10,000	2,000	4,000	2,000
		0	4,000	8,000	4,000
5,000 Users	2 vCPU	5,000	1,000	2,000	1,000
		0	2,000	4,000	2,000
1,000 Users	2 vCPU	1,000	200	400	200
		0	500	1000	500
	1vCPU	0	100	200	100

[9] In Load Balancing, clients are statically configured on either publisher server or subscriber server. If any of the server stops functioning, the services of the clients configured on the server go down.

[10] In HA pair, clients are configured on publisher server. If publisher server stops functioning, the subscriber server provides services to the configured clients.

The table contains information on the number of endpoints of supported clients that Unity Connection supports with office 365 users for specific OVA.

Table 3: Non Secure Endpoints of supported clients with Office 365 Users

Virtual Platform Overlay	vCPU (Number of Virtual Processors) Cores and Speed per Core	Office 365 Users	Endpoints on a Standalone Server	Total Endpoints Per CUC Cluster (Load Balancing) [9]	HA Endpoints Per CUC HA Pair [10]
20,000 Users	7vCPU	8,000	12,000	16,000	12,000

✎

Note Non secure endpoints of supported clients for Office 365 users are yet not qualified with lower end OVAs

The table contains information on the number of secure endpoints of supported clients that Unity Connection supports along with single inbox users.

Table 4: Secure Jabber Endpoints with Single Inbox Users

Virtual Platform Overlay	vCPU (Number of Virtual Processors) Cores and Speed per Core	Single Inbox Users	Secure Endpoints on a Standalone Server	Total Secure Endpoints Per CUC Cluster (Load Balancing) [9]	HA Secure Endpoints Per CUC HA Pair [10]
20,000 Users	7 vCPU(with 8GB RAM)	20,000	2,500	5,000	2,500
		15,000	5,000	10,000	5,000

Table 5: Secure Jabber Endpoints with Single Inbox Users

Virtual Platform Overlay	vCPU (Number of Virtual Processors) Cores and Speed per Core	Single Inbox Users	Secure Endpoints on a Standalone Server	Total Secure Endpoints Per CUC Cluster (Load Balancing) [9]	HA Secure Endpoints Per CUC HA Pair [10]
20,000 Users	7 vCPU(with 10GB RAM)	20,000	5,000	10,000	5,000
		15,000	7,500	15,000	7,500
		10,000	8,000	16,000	8,000
		5,000	8,500	17,000	8,500
		0	10,000	20,000	10,000

✎

Note • The performance numbers qualified given are based on the assumptions that while user is using different clients for voice messaging operation the user is having less telephony usage.

• Secure endpoints of supported clients for Single Inbox users are yet not qualified with lower end OVAs.

Configuring vCPU, vRAM, and vDisk for Unity Connection on Virtual Machines

To simplify deployment of Unity Connection on a virtual machine, Cisco provides OVA templates for the virtual platform overlays defined in Table 1: Specifications for Virtual Platform Overlays for Currently Shipping Unity Connection Servers.

> ⚠️ **Caution**
>
> Modification in the number of virtual CPUs and the amount of virtual RAM is allowed based on the configuration of the supported OVAs. However, change in the number or size of virtual disks is not supported.
>
> Cisco Unity Connection Release 12.5SU6 and later, supports changes in hardware configuration without rebuilding the servers. If virtual RAM is increased to 10GB on supported OVA then you should execute CLI command **utils cuc hwconfig update** after modification. For CLI details, see "Utils Commands" chapter of *Command Line Interface Reference Guide for Cisco Unified Communications Solutions* available at
> https://www.cisco.com/c/en/us/support/unified-communications/unified-communications-manager-callmanager/products-command-reference-list.html.
>
> In Unity Connection 12.5.SU5 and earlier releases, for changing the hardware configurations you must follow the workaround instructions mentioned at https://cdetsng.cisco.com/webui/#view=CSCvy86441.

In addition, the OVA templates align the file system on the virtual disk(s) in the virtual machine at 64-KB blocks, which results in improved storage input/output operations per second (IOPS).

For information on downloading the latest OVA files, see the "Installation and Upgrade Information" section in the applicable *Release Notes for Cisco Unity Connection* at http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html.

For information on deploying an OVA file while installing a new Unity Connection virtual server, see the "Installing Cisco Unity Connection" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection Release 12.x*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/install_upgrade/guide/b_12xcuciumg.html.

For information on deploying an OVA file while migrating from a physical server to a virtual server, see the "Migrating a Physical Server to Virtual Machine" section of the "Maintaining Cisco Unity Connection Server" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection, Release 12.x*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/install_upgrade/guide/b_12xcuciumg.html.

For information on deploying other Unified Communication applications on the same physical server with Unity Connection, see the Unified Communications Virtualization wiki at http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/uc_system/virtualization/virtualization-cisco-unity-connection.html.

Additional Platform Information

Replacing a Unity Connection Server as You Upgrade to Unity Connection 12.x

MCS servers are not supported for use with Unity Connection 12.x, and an attempt to install or upgrade to Unity Connection 12.x on these servers will fail. For more information on migrating a physical server to a virtual machine as you upgrade to Unity Connection 12.x, see the "Maintaining Cisco Unity Connection Server" chapter of the *Install, Upgrade, and Maintenance Guide for Cisco Unity Connection, Release 12.x*, at https://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/12x/install_upgrade/guide/b_12xcuciumg.html.

Supported UCS-E platforms with Cisco Unity Connection

For more information on supported UCS Blade Servers, refer to http://docwiki.cisco.com/wiki/Cisco_Unity_Connection_on_UCSE. More information can be found in the data sheets available at http://www.cisco.com/en/US/prod/collateral/modules/ps10598/data_sheet_c78-553913.html.

Platform Overlays for Unity Connection SRSV

For hardware specifications and support limits on each platform, see the Table 6: Specifications for Unity Connection SRSV.

The Table 7: Specifications for Supported Virtual Platform Overlays by Unity Connection SRSV table lists the virtualization specifications, the user limit, and the port limit when you install Unity Connection SRSV on a virtual machine.

Specification for Hardware Platforms and Cisco IOS Software Releases Supported by Unity Connection SRSV

This section lists the supported hardware platforms and the minimum Cisco IOS software release required to support the hardware platform Unity Connection SRSV.

Table 6: Specifications for Unity Connection SRSV

Cisco Platform	Unity Connection SRSV on SM-SRE-900-K9	Unity Connection SRSV on SM-SRE-910-K9	UCS E140D, E140DP, E160D, and E160 DP
Cisco 2911 Cisco 2921 Cisco 2951	15.2(4)M4	15.2(4)M4	15.2(4)T
Cisco 3925 Cisco 3945	15.4(1)T	15.4(1)T	15.2(4)T
Cisco 3925E Cisco 3945E	15.1(3)T	15.1(3)T	15.2(4)T
Cisco 4300	-	-	3.12S
Cisco 4400	-	-	3.13S and later

Note A different Cisco IOS software release may be required depending on the version of Cisco Unified Communications Manager Express or Cisco Unified Survivable Remote Site Telephony (SRST) being used. For more information refer to Cisco Unified Communications Manager Express documentation available at http://www.cisco.com/en/US/products/sw/voicesw/ps4625/index.html.

Specifications for Virtual Platform Overlays Supported by Unity Connection SRSV

This section lists the specifications for virtual platform overlays supported by Cisco \\Unity Connection SRSV.

Table 7: Specifications for Supported Virtual Platform Overlays by Unity Connection SRSV

	Virtual Platform Overlay
vCPU (Number of Virtual Processors) Cores and Speed per Core	1@a minimum of 1.8 GHz
vRAM (Amount of Virtual RAM)	4 GB
vDisk (Size of Virtual Hard Disks)	1x160GB
Total number of available voice ports	12
Total number of users with mailboxes	500
Approximate message storage, G-711 codec, minutes	72,944
Number of public distribution lists	500
Number of Call Handlers	500
Number of languages supported	2