



System Requirements for Cisco Unity Connection Release 7.x

Revised May 29, 2009

This document lists requirements for a Cisco Unity Connection version 7.x system. It contains the following sections:

- [Hardware Requirements, page 2](#)
- [Software Requirements, page 3](#)
- [Requirements for the Phone System Integration, page 5](#)
- [Requirements for Using Voice-Recognition Features, page 6](#)
- [Requirements for Accessing the Connection Web Tools Through the Cisco PCA, page 6](#)
- [Requirements for Accessing Voice Messages by Using Cisco Unity Connection ViewMail for IBM Lotus Notes, page 6](#)
- [Requirements for Accessing Voice Messages by Using Cisco Unity Connection ViewMail for Microsoft Outlook, page 7](#)
- [Requirements for Accessing Connection Voice Messages by Using an IMAP Email Client, page 7](#)
- [Requirements for Accessing Connection Voice Messages by Using Cisco Unified Personal Communicator, page 8](#)
- [Requirements for Accessing Connection Voice Messages by Using Cisco Unified Mobile Communicator, page 8](#)
- [Requirements for Accessing Connection Voice Messages by Using Cisco Unified Messaging with IBM Lotus Sametime, page 8](#)
- [Requirements for Accessing Connection Voice Messages by Using Visual Voicemail, page 9](#)
- [Requirements for Accessing Connection Voice Messages by Using RSS Readers, page 9](#)
- [Requirements for Accessing Email Messages in an External Message Store, page 10](#)
- [Requirements for Accessing Calendar Information for Meetings, page 10](#)
- [Requirements for Accessing Exchange Contact Information, page 10](#)
- [Requirements for Cisco Unity Connection Phone View, page 11](#)
- [Requirements for a Cisco Fax Server Integration, page 11](#)



Americas Headquarters:
Cisco Systems, Inc., 170 West Tasman Drive, San Jose, CA 95134-1706 USA

- Requirements for an LDAP Directory Integration, page 11
- Requirements for a Cisco Unity Connection 7.x Cluster, page 12
- Requirements for Digital Networking, page 14
- Requirements for VPIM Networking, page 15
- Requirements for Migrating from Cisco Unity Connection 1.x to Version 7.x, page 15
- Requirements for Migrating from Cisco Unity 4.x or Later to Cisco Unity Connection Version 7.x, page 16
- Directory Object Limits for Cisco Unity Connection 7.x, page 17
- Available Languages for Cisco Unity Connection 7.x Components, page 18
- Numeric and Alphabetic Codes for Supported Languages in Cisco Unity Connection 7.x, page 20

Hardware Requirements

Revised September 17, 2008

- A server that meets Cisco Unity Connection specifications. See the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.



Caution

If you try to install version 7.x on an unsupported platform, Cisco Unity Connection will not be displayed as an option in the Product Deployment Selection window of the installation program. See the server-specific table in the “Cisco Unity Connection Supported Servers” section of the *Cisco Unity Connection Supported Platforms List* to verify platform specifications, particularly regarding memory and processor speed.

- If you are upgrading an existing Connection or Cisco Unity server to Connection 7.x, you may still need to add memory for the installation to complete successfully and for Connection to function properly. All MCS-7815 and MCS-7825 servers require at least 2 GB of memory, and all MCS-7835 and MCS-7845 servers require at least 4 GB of memory. For some configurations, the MCS-7815 and MCS-7825 servers require at least 4 GB of memory. For more information, see the “Requirements for Digital Networking” section on page 14.
- If you are configuring a Connection cluster and you are using an MCS-7835 server, you may need to replace the hard disks in the server. See the server-specific table in the “Cisco Unity Connection Supported Servers” section of the *Cisco Unity Connection Supported Platforms List*. (A Connection cluster cannot be configured if the hard disks have less than 80 GB capacity.)

Supported Optional Hardware

The following optional hardware is supported for use with Cisco Unity Connection 7.x:

- HP StorageWorks DAT 72 USB Tape Drive, for backup
- HP StorageWorks Ultrium 448 Tape Drive, for backup

Software Requirements

This section contains the following information:

- [Software Requirements—Cisco Unity Connection Server, page 3](#)
- [Software Requirements—Administrator Workstations, page 3](#)
- [Software Requirements—User Workstations, page 4](#)

Software Requirements—Cisco Unity Connection Server

Cisco Unity Connection software and any required third-party software are installed by Cisco Unity Connection Setup.

Software Requirements—Administrator Workstations

Revised May 29, 2009

- To access web applications on the Cisco Unity Connection server, the operating system and web browser must be compatible with the version of Connection that you are installing. [Table 1](#) lists supported operating-system and browser combinations.

Table 1 *Supported Operating Systems and Browsers on Administrator Workstations for Cisco Unity Connection 7.x*

Operating System on Administrator Workstation	Browser on Administrator Workstation
Microsoft Windows Vista	<ul style="list-style-type: none"> • Microsoft Internet Explorer 8.0 (Connection 7.1 only) • Microsoft Internet Explorer 7.0
<ul style="list-style-type: none"> • Microsoft Windows Server 2003 • Microsoft Windows XP 	<ul style="list-style-type: none"> • Microsoft Internet Explorer 8.0 (Connection 7.1 only) • Microsoft Internet Explorer 7.0 and 6.0 (plus SP1) • Mozilla Firefox 3.0 and 2.0
Mac OS X 10.4 and later	Mozilla Firefox 3.0 and 2.0
Red Hat Enterprise Linux	Mozilla Firefox 3.0 and 2.0

- [Table 2](#) lists software required for correct browser configuration.

Table 2 **Software Required for Correct Browser Configuration on Administrator Workstations for Cisco Unity Connection 7.x**

Browser	Required Software
Firefox	The following software, depending on the operating system: <ul style="list-style-type: none"> • With Mac OS X: <ul style="list-style-type: none"> – Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later. – Java Embedding Plugin for Mac OS X version 0.9.5 or later.¹ • With Linux: <ul style="list-style-type: none"> – ALSA driver version 1.0.9 or later – Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later. • With Windows, Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later.
Internet Explorer	Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later.

1. The Java Embedding Plug-in for Mac OS X is bundled with Firefox versions 1.5.0.1 and later.

Software Requirements—User Workstations

- The operating system and Internet browser(s) on user workstations must be compatible with the version of Connection that you are installing, to allow users to access the Connection web tools through the Cisco Personal Communications Assistant. See the *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.
- If you are using Cisco Unity Connection ViewMail for Microsoft Outlook, the ViewMail version must be compatible with the version of Connection that you are installing. See the *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations*.
- If you are using Cisco Unity Connection ViewMail for IBM Lotus Notes, the ViewMail version must be compatible with the version of Connection that you are installing. See the *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations*.
- If you are using an IMAP email application to access Connection voice messages, the email application must be compatible with the version of Connection that you are installing. See the *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations*.
- **Table 3** lists software required for correct browser configuration, depending on the browser(s) installed on the user workstation.

Table 3 **Software Required for Correct Browser Configuration on User Workstations for Cisco Unity Connection 7.x**

Browser	Required Software
Firefox	The following software, depending on the operating system: <ul style="list-style-type: none"> • With Mac OS X: <ul style="list-style-type: none"> – Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later. – Java Embedding Plug-in for Mac OS X version 0.9.5 or later.¹ • With Linux: <ul style="list-style-type: none"> – ALSA driver version 1.0.9 or later – Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later. • With Windows, Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later.
Internet Explorer	Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later.
Safari	Java 2 Platform, Standard Edition (J2SE) Runtime Environment 6 (1.6.x) or later.

1. The Java Embedding Plug-in for Mac OS X is bundled with Firefox versions 1.5.0.1 and later.

Requirements for the Phone System Integration

Cisco Unity Connection can be integrated with Cisco Unified Communications Manager and Cisco Unified Communications Manager Express.

In addition, Cisco Unified CM integrations with Connection support the use at remote sites of Cisco Unified CM Express in Survivable Remote Site Telephony (SRST) mode or of SRST installed on Cisco IOS platforms.

For supported versions of Cisco Unified CM and Cisco Unified CM Express, see the applicable document, depending on the integration type:

- *SCCP Compatibility Matrix: Cisco Unity Connection, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucsccpmtx.html.
- *SIP Trunk Compatibility Matrix: Cisco Unity Connection, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucsiptrunkmx.html.

Connection can also be integrated with other supported phone systems and with multiple phone systems simultaneously. For information on other supported phone systems, see the applicable Cisco Unity Connection integration guides at http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html.

Requirements for Using Voice-Recognition Features

- Users must have Advanced Voice Mail User licenses.
- Users must be assigned to a class of service enabled for using voice recognition.
- Phone systems must be configured to send calls to Connection in any of the supported audio codecs except G729a. The G.729a audio codec is not supported with the voice-recognition features.

Requirements for Accessing the Connection Web Tools Through the Cisco PCA

Revised May 29, 2009

Cisco Unity Assistant web tool

- Users must be assigned to a class of service enabled for using the Cisco Unity Assistant.
- A supported operating system and web browser(s) on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

Cisco Unity Inbox web tool

- Users must have Inbox User licenses.
- Users must be assigned to a class of service enabled for using the Cisco Unity Inbox and RSS feeds.
- A supported operating system and web browser(s) on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

Cisco Unity Personal Call Transfer Rules web tool

- Cisco Unity Connection must be integrated with a supported version of the Cisco Unified Communications Manager phone system. Cisco Unified Communications Manager Express is not supported.
- Users must be assigned to a class of service enabled for using the Personal Call Transfer Rules web tool.
- A supported operating system and web browser(s) on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

Requirements for Accessing Voice Messages by Using Cisco Unity Connection ViewMail for IBM Lotus Notes

Added May 29, 2009

- Users must be assigned to a class of service that is enabled for accessing voice messages by using an IMAP client.

- Users must have email accounts in Notes configured to access Connection voice messages.
- A ViewMail for Notes version supported for use with the Notes version and operating system on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

For software installation requirements, and other installation and upgrade information, see *Release Notes for Cisco Unity Connection ViewMail for IBM Lotus Notes* at http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html.

Requirements for Accessing Voice Messages by Using Cisco Unity Connection ViewMail for Microsoft Outlook

- Users must have IMAP User licenses.
- Users must be assigned to a class of service that is enabled for accessing voice messages by using an IMAP client.
- Users must have email accounts in Outlook configured to access Connection voice messages.
- A ViewMail for Outlook version supported for use with the Outlook version and operating system on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

For software installation requirements, and other installation and upgrade information, see *Release Notes for Cisco Unity Connection ViewMail for Microsoft Outlook* at http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html.

Requirements for Accessing Connection Voice Messages by Using an IMAP Email Client

- Users must have IMAP User licenses.
- Users must be assigned to a class of service that is enabled for accessing voice messages by using an IMAP client.
- A supported IMAP email client on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.
- Sound card, speakers, and media player on user workstations.

Requirements for Accessing Connection Voice Messages by Using Cisco Unified Personal Communicator

- Users must be assigned to a class of service that is enabled for accessing voice messages by using a unified client.
- A supported version of Cisco Unified Personal Communicator on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.

Cisco Unified Personal Communicator version 7.0 supports secure messaging with Cisco Unity Connection 7.x.

**Note**

Cisco Unified Personal Communicator does not support IMAP Idle. As a result, each active instance of Cisco Unified Personal Communicator that is accessing Connection voice messages counts as four simultaneous connections. For information on the maximum number of connections supported on specific Connection servers, see the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

Requirements for Accessing Connection Voice Messages by Using Cisco Unified Mobile Communicator

- Users must have IMAP User licenses.
- Users must be assigned to a class of service that is enabled for accessing voice messages by using an IMAP client.

For a list of the mobile phones that Cisco Unified Mobile Communicator supports, see the applicable release notes at http://cisco.com/en/US/products/ps7270/prod_release_notes_list.html.

**Note**

Cisco Unified Mobile Communicator does not support IMAP Idle. As a result, each active instance of Cisco Unified Mobile Communicator that is accessing Connection voice messages counts as four simultaneous connections. For information on the maximum number of connections supported on specific Connection servers, see the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

Requirements for Accessing Connection Voice Messages by Using Cisco Unified Messaging with IBM Lotus Sametime

Revised May 29, 2009

- Users must have IMAP User licenses.
- Users must be assigned to a class of service that is enabled for accessing voice messages by using an IMAP client.

- A Cisco Unified Messaging with Lotus Sametime version supported for use with the operating system on user workstations. See *Compatibility Matrix: Cisco Unity Connection and the Software on User Workstations* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucclientmtx.html.
- One of the following client applications:
 - IBM Lotus Sametime version 7.5.1 CF1 or later.
 - IBM Lotus Notes version 8.0.1 or later (including integrated Sametime features).
- Sound card, speakers, and media player.

Cisco Unified Messaging with Lotus Sametime 7.x supports secure messaging with Cisco Unity Connection 7.x.

For software installation requirements, and other installation and upgrade information, see the applicable *Release Notes for Cisco Unified Messaging with IBM Lotus Sametime* at http://www.cisco.com/en/US/products/ps9830/prod_release_notes_list.html.



Note

Cisco Unified Messaging with Lotus Sametime 7.x supports IMAP Idle.

However, Cisco Unified Messaging with Lotus Sametime version 1.2(3) does not support IMAP Idle. As a result, each active instance of Cisco Unified Messaging with Lotus Sametime that is accessing Connection voice messages counts as four simultaneous connections. For information on the maximum number of connections supported on specific Connection servers, see the *Cisco Unity Connection Supported Platforms List* at

http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

Requirements for Accessing Connection Voice Messages by Using Visual Voicemail

Added May 29, 2009

- A supported Cisco Unified IP Phone model. (See the “Cisco Unified IP Phone Requirements” section under “System Requirements” in the *Release Notes for Visual Voicemail*.)

For server and phone firmware requirements, and other information about using Visual Voicemail, see the applicable *Release Notes for Visual Voicemail* at

http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html.

Requirements for Accessing Connection Voice Messages by Using RSS Readers

Revised May 29, 2009

- Users must have Inbox User licenses.
- Users must be assigned to a class of service enabled for using the Cisco Unity Inbox and RSS feeds.
- Sound card, speakers, and media player on user workstations.

Requirements for Accessing Email Messages in an External Message Store

- Users must have Advanced Voice Mail User licenses.
- Cisco Unity Connection integrated with a supported version of Microsoft Exchange Server:
 - Exchange Server 2007 (All editions are supported.)
 - Exchange Server 2003 with Service Pack 1 or later (All editions are supported.)
- Exchange server(s) in a supported Windows domain configuration. [Table 4](#) lists the supported configurations.

Table 4 Supported Exchange and Windows Domain Configurations

Exchange Configuration	Supported Windows Domain Configurations
One server running Exchange Server 2007	<ul style="list-style-type: none"> • Exchange server is a Windows Server 2003 domain controller/global catalog server. • Exchange server is a Windows Server 2003 member server.
One server running Exchange Server 2003	<ul style="list-style-type: none"> • Exchange server is a Windows Server 2003 domain controller/global catalog server. • Exchange server is a Windows Server 2003 member server.

- The Cisco Unity Connection server and the Exchange server(s) must be located in the same local-area network.

Requirements for Accessing Calendar Information for Meetings

Cisco Unity Connection integrated with a supported application for calendar information:

- Cisco Unified MeetingPlace 7.0
- Cisco Unified MeetingPlace Express 2.0
- Microsoft Exchange Server 2007 (All editions are supported.)
- Microsoft Exchange Server 2003 with Service Pack 1 or later (All editions are supported.)

Requirements for Accessing Exchange Contact Information

Exchange contacts can be imported into Cisco Unity Connection, allowing users to place outgoing calls by using voice commands and to create personal call transfer rules based on the contact information.

Cisco Unity Connection integrated with a supported version of Microsoft Exchange Server is required:

- Exchange Server 2007 (All editions are supported.)
- Exchange Server 2003 with Service Pack 1 or later (All editions are supported.)

Requirements for Cisco Unity Connection Phone View

- Cisco Unity Connection integrated with a supported version of the Cisco Unified Communications Manager phone system. For supported versions, see the applicable document, depending on the integration type:
 - *SCCP Compatibility Matrix: Cisco Unity Connection, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucsccpmx.html.
 - *SIP Trunk Compatibility Matrix: Cisco Unity Connection, Cisco Unified Communications Manager, and Cisco Unified Communications Manager Express* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/compatibility/matrix/cucsiptrunkmtx.html.
- A supported Cisco Unified IP Phone model, with the supported Cisco Unified Communications Manager version firmware installed. The following IP Phone models are supported: 7941G, 7941G-GE, 7961G, 7961G-GE, 7970G, and 7971G-GE.

When Phone View communicates with a Cisco Unified IP Phone, it sends localized data based on the phone locale. If an IP Phone is set for an unsupported locale, the data is presented in U.S. English.

Requirements for a Cisco Fax Server Integration

- Cisco Fax Server version 9.0 or later is required.

Requirements for an LDAP Directory Integration

Revised May 29, 2009

- Cisco Unity Connection integrated with a supported LDAP directory. [Table 5](#) lists supported directories and the Connection version(s) with which they are supported.

The last column in the table indicates whether an LDAP directory supports specifying additional LDAP directory servers to act as backup in case the LDAP directory servers that Connection accesses for synchronization and for authentication become unavailable.

Table 5 LDAP Directories Supported for Synchronization and Authentication

Supported LDAP Directory	Supported Connection Version	Supports Redundant Directory Servers
Microsoft Active Directory 2008	Connection 7.x	Yes
Microsoft Active Directory 2003	Connection 7.x	Yes
Microsoft Active Directory 2000	Connection 7.x	Yes
Netscape Directory Server 4.x and later	Connection 7.1	No
Sun iPlanet Directory Server 5.1 and later	Connection 7.1	No
Sun ONE Directory Server 5.2 and later	Connection 7.1	No

- When you are using Active Directory, you can integrate a single Connection server with more than one user search base, but all user search bases must be in the same Active Directory forest. To integrate Connection with more than one forest, you must install one digitally networked Connection server per forest.
- When you are using a Netscape, or Sun iPlanet or ONE directory server, you can integrate a single Connection server with more than one user search base, but all user search bases must be in the same tree. To integrate Connection with more than one tree, you must install one digitally networked Connection server per tree.

Requirements for a Cisco Unity Connection 7.x Cluster

See the applicable section:

- [Connection Cluster Requirements When the Servers Are Installed in the Same Building or Site, page 12](#)
- [Connection Cluster Requirements When the Servers Are in Separate Buildings or Sites, page 13](#)

Connection Cluster Requirements When the Servers Are Installed in the Same Building or Site

- Both servers must meet specifications according to the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html and must belong to the same platform overlay.
- Both Connection servers must be collocated.
- Both Connection servers must be located in the same local-area network.
- Both Connection servers must have a minimum 100 Mbps connection to the network.
- The maximum round-trip latency must be no more than 10 ms. A fixed network latency of 5 ms or less is a best practice.
- The network must use the following load-balancing techniques for connections to the Connection servers:
 - The Connection servers are assigned a common DNS name with the Connection publisher server first.
 - All user client and administrator sessions connect to the Connection publisher server. If the Connection publisher server stops functioning, the user client and administrator sessions must connect to the Connection subscriber server.
 - Phone systems must attempt to route incoming calls to the Connection subscriber server. If no voice messaging ports are available to answer calls on the Connection subscriber server, the phone systems must route calls to the Connection publisher server.
- The Connection servers must not be separated by a firewall.
- Both Connection servers must have the same software and engineering-special versions installed.
- Both Connection servers must have the same enabled features and configurations.
- Both Connection servers must connect to the same phone system(s).

- If the Connection servers contain dual NICs, the two NICs on each Connection server must be configured for fault tolerance using a single IP address, or one of the NICs must be disabled. Configuring the two NICs with distinct IP addresses for network load balancing is not supported.
- For selected servers supported for earlier versions of Connection, a memory upgrade. To determine whether your server requires a memory upgrade, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- For selected servers supported for earlier versions of Connection, replacement hard disks. To determine whether your server requires hard-disk replacement, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

**Note**

The Connection cluster feature is not supported for use with Cisco Unified Communications Manager Business Edition.

Connection Cluster Requirements When the Servers Are in Separate Buildings or Sites

Revised May 29, 2009

- Both servers must meet specifications according to the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html and must belong to the same platform overlay.
- Depending on the number of voice messaging ports on each Connection server, the path of connectivity must have the following guaranteed bandwidth with no steady-state congestion:
 - For 48 voice messaging ports on each server—50 Mbps
 - For 96 voice messaging ports on each server—100 Mbps
 - For 144 voice messaging ports on each server—150 Mbps
- The maximum round-trip latency must be no more than 20 ms.
- The network must use the following load-balancing techniques for connections to the Connection servers:
 - The Connection servers are assigned a common DNS name with the Connection publisher server first.
 - All user client and administrator sessions connect to the Connection publisher server. If the Connection publisher server stops functioning, the user client and administrator sessions must connect to the Connection subscriber server.
 - Phone systems must attempt to route incoming calls to the Connection subscriber server. If no voice messaging ports are available to answer calls on the Connection subscriber server, the phone systems must route calls to the Connection publisher server.
- The Connection servers must not be separated by a firewall. (Connection 7.0 only)
- The TCP and UDP ports of the firewall must be open as listed in *Cisco Unity Connection 7.0 Network Ports Reference* at http://www.cisco.com/en/US/products/ps6509/tsd_products_support_maintain_and_operate_technotes_list.html.
- Both Connection servers must have the same software and engineering-special versions installed.

- Both Connection servers must have the same enabled features and configurations.
- Both Connection servers must connect to the same phone system(s).
- If the Connection servers contain dual NICs, the two NICs on each Connection server must be configured for fault tolerance using a single IP address, or one of the NICs must be disabled. Configuring the two NICs with distinct IP addresses for network load balancing is not supported.
- For selected servers supported for earlier versions of Connection, a memory upgrade. To determine whether your server requires a memory upgrade, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- For selected servers supported for earlier versions of Connection, replacement hard disks. To determine whether your server requires hard-disk replacement, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

**Note**

The Connection cluster feature is not supported for use with Cisco Unified Communications Manager Business Edition.

Requirements for Digital Networking

Revised May 29, 2009

Digital Networking can provide directory synchronization, call transfers, and message networking among Cisco Unity Connection servers. Servers that are joined to the network are referred to as Connection locations. (When a Connection cluster is configured, the cluster counts as one location in the digital network.)

Digital Networking has the following requirements:

- Each server joined to the digital network must meet all applicable requirements listed in this document.
- Each server joined to the digital network must be able to access the other servers on the digital network directly through TCP/IP port 25 (SMTP), or SMTP messages must be routed among the servers through an SMTP smart host.
- When Digital Networking and voice recognition are configured, and when you are using one or more Cisco MCS-7815 or MCS-7825 servers, an additional 2 GB of memory (for a total of 4 GB) is required in the servers when the sum of contacts, users, distribution lists, locations, personal contacts, and personal distribution lists exceeds 2,000. (These are the first six items on the Tools > Grammar Statistics page in Cisco Unity Connection Administration.) For more information on Cisco MCS-7815 and MCS-7825 servers and the specifications on the memory that must be added, see the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- The virtual directory created by the networked Connection servers must not exceed the maximum total numbers of objects listed in Table 7 in the “Directory Object Limits for Cisco Unity Connection 7.x” section on page 17.

For information on using Digital Networking in Cisco Unity Connection, see the “Using Digital Networking” chapter of the *System Administration Guide for Cisco Unity Connection Release 7.x* at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/administration/guide/7xcucsagx.html.

**Note**

The Digital Networking feature is not supported for use with Cisco Unified Communications Manager Business Edition.

Requirements for VPIM Networking

Cisco Unity Connection 7.x supports Voice Profile for Internet Mail (VPIM) version 2, which allows the exchange of voice and text messages with other messaging systems.

VPIM Networking can be used to provide message networking between Connection 7.x and the following messaging systems:

- Cisco Unity Connection 7.x and 2.x.
- Cisco Unity Connection in Cisco Unified Communications Manager Business Edition 7.x and 6.x.
- Cisco Unity 4.0(x) and later.
- Cisco Unity Express 3.2(1) and later.
- Cisco Unified Messaging Gateway 1.0(2) and later.
- Third-party voice messaging systems that support the VPIM version 2 protocol, as defined in Internet RFC 3801.

For information on using VPIM in Cisco Unity Connection, see the “Using VPIM Networking” chapter of the *System Administration Guide for Cisco Unity Connection Release 7.x* at

http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/administration/guide/7xcucsagx.html.

Requirements for Migrating from Cisco Unity Connection 1.x to Version 7.x

During the migration, only user data and, optionally, voice messages are preserved. System-level configuration data (for example, templates and classes of service) must be manually configured.

**Caution**

Requirements for Cisco Unity Connection 7.x are different from requirements for Connection 1.x. The system must meet Connection 7.x requirements to receive support from Cisco TAC.

A migration from Connection version 1.x to 7.x has the following requirements:

- All applicable requirements listed in this document.
- If you use the Migrate Users and/or Migrate Messages utilities to import user data and voice messages into Connection, a server running a secure shell (SSH) server application. The utilities use SSH to access the exported user data and messages. (Migration testing was done with OpenSSH for Windows.)

However, we recommend that you use the Cisco Objected Backup and Restore Application Suite (COBRAS) to migrate from Connection 1.x to 7.x. For more information, see the COBRAS download page on the Cisco Unity Tools website at http://www.ciscounitytools.com/App_COBRAS.htm.

- For selected servers supported for earlier versions of Connection, a memory upgrade. To determine whether your server requires a memory upgrade, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- Confirm that the platform meets Cisco Unity Connection 7.x specifications, particularly regarding memory and processor speed. See the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

**Caution**

If you try to install version 7.x on an unsupported platform, Cisco Unity Connection will not be displayed as an option in the Product Deployment Selection window of the installation program.

Requirements for Migrating from Cisco Unity 4.x or Later to Cisco Unity Connection Version 7.x

**Caution**

Requirements for Cisco Unity Connection are different from requirements for Cisco Unity. The system must meet Connection 7.x requirements to receive support from Cisco TAC.

A migration from Cisco Unity version 4.x or later to Connection 7.x has the following requirements:

- All applicable requirements listed in this document.
- A Cisco Unity system at version 4.x or later. Upgrades from other versions are not supported. (If your Cisco Unity system is at an earlier version, you must upgrade to version 4.0(1) or later before exporting data. We recommend that you upgrade to Cisco Unity 4.0(5) or later because the Cisco Objected Backup and Restore Application Suite (COBRAS) migration tool requires version 4.0(5) or later.)
- If you use the Migrate Users and/or Migrate Messages utilities to import user data and voice messages into Connection, a server running a secure shell (SSH) server application. The utilities use SSH to access the exported user data and messages. (Migration testing was done with OpenSSH for Windows.)

However, we recommend that you use COBRAS to migrate from Cisco Unity 4.0(5) or later to Connection 7.x. For more information, see the COBRAS download page on the Cisco Unity Tools website at http://www.ciscounitytools.com/App_COBRAS.htm.

- For selected servers supported for earlier versions of Cisco Unity and Cisco Unity Connection, and for selected Connection 7.x configurations, a memory upgrade and/or replacement hard disks. To determine whether your server requires a memory upgrade and/or replacement hard disks, see the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.
- Confirm that the platform meets Cisco Unity Connection 7.x specifications, particularly regarding memory and processor speed. See the applicable server-specific table in the *Cisco Unity Connection Supported Platforms List* at http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

**Caution**

If you try to install version 7.x on an unsupported platform, Cisco Unity Connection will not be displayed as an option in the Product Deployment Selection window of the installation program.

Note that voice cards are not supported for integrations with circuit-switched phone systems.

Directory Object Limits for Cisco Unity Connection 7.x

Added May 29, 2009

This section contains two tables that list directory object limits.

Table 6 lists the maximum numbers of certain objects that can be created on a Connection server. For these objects, the limits apply regardless of the platform overlay in use by the server.

If you are creating a Cisco Unity Connection digital network, the limits in **Table 6** apply to each Connection server in the network.

Table 7 applies to the virtual directory created by the networked Connection servers. When Connection servers are networked together, replication between locations creates the virtual directory consisting of the users, contacts, system distribution lists, partitions, search spaces, and VPIM locations that are homed on each location, along with data about the locations themselves.

Limits for other objects that depend on the platform overlay are listed in the *Cisco Unity Connection Supported Platforms List* at

http://www.cisco.com/en/US/products/ps6509/products_data_sheets_list.html.

Table 6 Directory Object Limits for a Connection 7.x Server

Directory Object	Connection Version 7.1 Limit	Connection Version 7.0 Limit
Classes of service	100	100
Call handlers	2,500	2,500
Call routing rules	100	100
Search spaces	200	50
Partitions	200	50

The limits in **Table 7** apply to the entire digital network, regardless of whether the network comprises only two locations or the maximum number of supported locations. (For example, in Connection version 7.1, if the individual server platforms support the limits, you can have 5 locations with 10,000 Connection users each, or 10 locations with 5,000 Connection users each.)

**Caution**

When version 7.1 and 7.0 servers are networked together, the limits for version 7.0 apply to the entire digital network.

Table 7 **Directory Object Limits for a Connection 7.x Digital Network**

Directory Object	Connection Version 7.1 Limit	Connection Version 7.0 Limit
Connection locations	10	5
VPIM locations	10	10
Total number of Connection users and contacts of all types	50,000	50,000
Connection users (counts toward total number of all users and contacts)	50,000	50,000
System contacts not associated with a VPIM location (counts toward total number of all users and contacts)	50,000	50,000
System contacts associated with a VPIM location (counts toward total number of all users and contacts)	15,000	15,000
Personal contacts (counts toward total number of all users and contacts)	50,000	50,000
System distribution lists	5,000	5,000
Users per distribution list	10,000	10,000
Nested lists within a distribution list	20	20
Search spaces	200	50
Partitions	200	50

Available Languages for Cisco Unity Connection 7.x Components

Revised May 29, 2009

A Cisco Unity Connection system supports up to five languages.

This section lists the languages in which Connection components are available.

Cisco Personal Communications Assistant (PCA)

Arabic-Saudi Arabia, Chinese-PRC, Chinese-Taiwan, Czech (Connection 7.1 only), Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian (Connection 7.1 only), Italian, Japanese, Korean, Polish (Connection 7.1 only), Portuguese-Brazil, Portuguese-Europe (Connection 7.1 only), Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish (Connection 7.1 only)

Cisco Personal Communications Assistant (PCA) Help

Arabic-Saudi Arabia, Chinese-PRC, Chinese-Taiwan, Czech (Connection 7.1 only), Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian (Connection 7.1 only), Italian, Japanese, Korean, Polish (Connection 7.1 only), Portuguese-Brazil, Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish (Connection 7.1 only)

Cisco Unity Connection Administration

English-United States, Japanese

Cisco Unity Connection Administration Help

English-United States

Cisco Unity Connection ViewMail for IBM Lotus Notes (Supported with Connection 7.1 only)

Arabic-Saudi Arabia, Chinese-PRC, Chinese-Taiwan, Czech, Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese-Brazil, Portuguese-Europe, Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish

Cisco Unity Connection ViewMail for IBM Lotus Notes Help (Supported with Connection 7.1 only)

Arabic-Saudi Arabia, Chinese-PRC, Chinese-Taiwan, Czech, Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese-Brazil, Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish

Cisco Unity Connection ViewMail for Microsoft Outlook

Arabic-Saudi Arabia (ViewMail 7.1 only), Chinese-PRC, Chinese-Taiwan, Czech (ViewMail 7.1 only), Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian (ViewMail 7.1 only), Italian, Japanese, Korean, Polish (ViewMail 7.1 only), Portuguese-Brazil, Portuguese-Europe (ViewMail 7.1 only), Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish (ViewMail 7.1 only)

Cisco Unity Connection ViewMail for Microsoft Outlook Help

Arabic-Saudi Arabia (ViewMail 7.1 only), Chinese-PRC, Chinese-Taiwan, Czech (ViewMail 7.1 only), Danish, Dutch-Netherlands, English-United States, French-Canada, French-France, German, Hungarian (ViewMail 7.1 only), Italian, Japanese, Korean, Polish (ViewMail 7.1 only), Portuguese-Brazil, Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish (ViewMail 7.1 only)

System prompts

Arabic-Saudi Arabia, Chinese-PRC, Chinese-Taiwan, Czech (Connection 7.1 only), Danish, Dutch-Netherlands, English-Australia, English-United Kingdom, English-United States, English TTY/TDD-United States, French-Canada, French-France, German, Hungarian (Connection 7.1 only), Italian, Japanese, Korean, Polish (Connection 7.1 only), Portuguese-Brazil, Portuguese-Europe (Connection 7.1 only), Russian, Spanish-Latin America, Spanish-Spain, Swedish, Turkish (Connection 7.1 only)

Text-to-speech engine

Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Netherlands, English-Australia, English-United States, English-United Kingdom, French-Canada, French-France, German, Italian, Japanese, Korean, Polish (Connection 7.1 only), Portuguese-Brazil, Portuguese-Europe (Connection 7.1 only), Russian, Spanish-Latin America, Spanish-Spain, Swedish

Voice-recognition engine

English-United States

Product documentation for administrators/installers

English-United States, Japanese

Product documentation for end users

Chinese-PRC, Chinese-Taiwan, Danish, Dutch-Netherlands, English-United States, French-France, German, Italian, Japanese, Korean, Portuguese-Brazil, Russian, Spanish-Latin America, Spanish-Spain, Swedish

Translated versions of the five Cisco Unity Connection user guides are available at http://www.cisco.com/en/US/products/ps6509/tsd_products_support_translated_end_user_guides_list.html.

Numeric and Alphabetic Codes for Supported Languages in Cisco Unity Connection 7.x

Revised May 29, 2009

Use the numeric codes in the following table when you are using the Bulk Administration Tool and a CSV file to create or update users. Enter the applicable four- or five-digit numeric code in the Language column for each user. For more information, see the “Using the Cisco Unity Connection Bulk Administration Tool” appendix in the *User Moves, Adds, and Changes Guide for Cisco Unity Connection Release 7.x* at

http://www.cisco.com/en/US/docs/voice_ip_comm/connection/7x/user_mac/guide/7xcucmacx.html.

Use the alphabetic codes to interpret language-related log entries and error codes.

Table 8 Codes for Languages Supported in Cisco Unity Connection

Language	Numeric Code	Alphabetic Code
Arabic-Saudi Arabia	1025	ARA
Chinese-PRC	2052	CHS
Chinese-Taiwan	1028	CHT
Czech	1029	CSY
Danish	1030	DAN
Dutch-Netherlands	1043	NLD
English-Australia	3081	ENA
English-United Kingdom	2057	ENG
English-United States	1033	ENU
English TTY/TDD-United States	33801	ENX
French-Canada	3084	FRC
French-France	1036	FRA
German-Germany	1031	DEU
Hungarian	1038	HUN
Italian-Italy	1040	ITA
Japanese	1041	JPN
Korean	1042	KOR
Polish	1045	PLK
Portuguese-Brazil	1046	PTB
Portuguese-Europe	2070	PTG
Russian	1049	RUS
Spanish-Latin America	9226	ESO
Spanish-Spain	1034	ESP
Swedish	1053	SVE
Turkish	1055	TRK

CCDE, CCSI, CCENT, Cisco Eos, Cisco HealthPresence, the Cisco logo, Cisco Lumin, Cisco Nexus, Cisco Nurse Connect, Cisco Stackpower, Cisco StadiumVision, Cisco TelePresence, Cisco WebEx, DCE, and Welcome to the Human Network are trademarks; Changing the Way We Work, Live, Play, and Learn and Cisco Store are service marks; and Access Registrar, Aironet, AsyncOS, Bringing the Meeting To You, Catalyst, CCDA, CCDP, CCIE, CCIP, CCNA, CCNP, CCSP, CCVP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, Collaboration Without Limitation, EtherFast, EtherSwitch, Event Center, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQuick Study, IronPort, the IronPort logo, LightStream, Linksys, MediaTone, MeetingPlace, MeetingPlace Chime Sound, MGX, Networkers, Networking Academy, Network Registrar, PCNow, PIX, PowerPanels, ProConnect, ScriptShare, SenderBase, SMARTnet, Spectrum Expert, StackWise, The Fastest Way to Increase Your Internet Quotient, TransPath, WebEx, and the WebEx logo are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0903R)

Any Internet Protocol (IP) addresses and phone numbers used in this document are not intended to be actual addresses and phone numbers. Any examples, command display output, network topology diagrams, and other figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses or phone numbers in illustrative content is unintentional and coincidental.

© 2009 Cisco Systems, Inc. All rights reserved.