



## **Installation Guide for Cisco Unity Connection**

Release 9.x  
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# CONTENTS

## **Preface**   vii

- Audience and Use   vii
- Documentation Conventions   vii
- Cisco Unity Connection Documentation   viii
- Obtaining Documentation and Submitting a Service Request   viii
- Cisco Product Security Overview   viii

---

## **CHAPTER 1**

### **Overview of Mandatory Tasks for Installing a Cisco Unity Connection 9.x System**   1-1

- Task List for Installing a Cisco Unity Connection 9.x System (Without a Connection Cluster)   1-1
  - Part 1: Installing and Configuring the Cisco Unity Connection Server   1-2
  - Part 2: Setting Up Administrator Workstations   1-4
  - Part 3: Setting Up the Phone System Integration   1-5
  - Part 4: Populating the System with User and Call Management Data   1-5
  - Part 5: Configuring the System for Features   1-7
  - Part 6: Setting Up Networking   1-9
  - Part 7: Setting Up User Workstations   1-9
  - Part 8: Backing Up Cisco Unity Connection Data   1-10
  - Part 9: Training   1-10
- Task List for Installing a Cisco Unity Connection 9.x System with a Connection Cluster Configured   1-11
  - Part 1: Installing and Configuring the Connection Publisher Server   1-12
  - Part 2: Setting Up Administrator Workstations   1-14
  - Part 3: Configuring the Cluster, and Installing and Configuring the Connection Subscriber Server   1-14
  - Part 4: Setting Up the Phone System Integration   1-15
  - Part 5: Populating the System with User and Call Management Data   1-15
  - Part 6: Configuring the System for Features   1-19
  - Part 7: Setting Up Networking   1-20
  - Part 8: Setting Up User Workstations   1-21
  - Part 9: Backing Up Cisco Unity Connection Data   1-21
  - Part 10: Training   1-21

---

## **CHAPTER 2**

### **Installing the Operating System and Cisco Unity Connection 9.x**   2-1

- Version 9.x Installation Scenarios   2-2

Install Software on a Cisco Unity Connection 9.x Server or on the Publisher Server in a Cisco Unity Connection 9.x Cluster	2-2
Install Software on the Subscriber Server (Cisco Unity Connection 9.x Cluster Only)	2-3
Apply a Patch When Installing a Connection 9.x Server or the Publisher Server in a Cisco Unity Connection 9.x Cluster	2-4
Apply a Patch When Installing the Subscriber Server (Cisco Unity Connection 9.x Cluster Only)	2-4
Add a Server to Create a Cisco Unity Connection 9.x Cluster	2-5
Parallel Installations of Publisher and Subscriber Servers in a Cisco Unity Connection 9.x Cluster	2-6
Version 9.x Pre-Installation Tasks	2-6
Important Considerations for Installing Version 9.x	2-7
Frequently Asked Questions About the Version 9.x Installation	2-8
How Much Time Does the Installation Require?	2-8
What User Names and Passwords Do I Need to Specify?	2-8
What Is a Strong Password?	2-10
Which Servers Does Cisco Support for this Installation?	2-10
May I Install Other Software on the Server?	2-10
Browser Requirements for Version 9.x	2-10
Installing a Memory Upgrade or Replacing Hard Disks (Selected 9.x Servers Only)	2-11
Changing the Boot Order of the Cisco Unity Connection 9.x Virtual Machine	2-13
Changing Reservations on Virtual Machines when Running with E7 Processors	2-14
Changing Reservations on Virtual Machines when Running with E5440 Processors	2-15
Verifying DNS Registration for the 9.x Installation	2-15
Gathering Information for an 9.x Installation	2-16
Using the Cisco Unified Communications Answer File Generator	2-21
Handling Network Errors During the 9.x Installation	2-22
Installing the New Operating System and 9.x Application	2-22
Navigating Within the Installation Wizard	2-23
Starting the Installation	2-23
Entering Preexisting Configuration Information	2-25
Applying a Patch	2-26
Performing the Basic Installation	2-29
Configuring the Connection Server or the Publisher Server in a Cisco Unity Connection Cluster	2-31
Configuring the Subscriber Server in a Cisco Unity Connection Cluster	2-32
Version 9.x Post-Installation Tasks	2-33
Changing the Default Application User Passwords	2-34
Activating Services	2-35
Examining Log Files	2-35
Migrating to Cisco Unity Connection on a Virtual Machine	2-35

**CHAPTER 3****Installing Additional Languages on the Cisco Unity Connection 9.x Server 3-1**

Downloading Connection 9.x Language Files 3-1

Installing Connection 9.x Language Files 3-2

Installing Connection 9.x Language Files from a Disc 3-3

Installing Connection 9.x Language Files from a Network Location or from a Remote Server 3-4





## Preface

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This preface contains the following sections:

- [Audience and Use, page 1](#)
- [Documentation Conventions, page 1](#)
- [Cisco Unity Connection Documentation, page 2](#)
- [Obtaining Documentation and Submitting a Service Request, page 2](#)
- [Cisco Product Security Overview, page 2](#)

## Audience and Use

The *Installation Guide for Cisco Unity Connection* is intended for installers of a Cisco Unity Connection system. If you are configuring access to Microsoft Exchange email messages, or configuring access to Exchange calendar and contact information, you need a working knowledge of Microsoft Exchange.

## Documentation Conventions

**Table 1** Conventions in the *Installation Guide for Cisco Unity Connection*

Convention	Description
<b>boldfaced text</b>	Boldfaced text is used for: <ul style="list-style-type: none"><li>• Key and button names. (Example: Select <b>OK</b>.)</li><li>• Information that you enter. (Example: Enter <b>Administrator</b> in the Username box.)</li></ul>
< > (angle brackets)	Angle brackets are used around parameters for which you supply a value. (Example: In your browser, go to https://<Cisco Unity Connection server IP address>/cuadmin.)
- (hyphen)	Hyphens separate keys that must be pressed simultaneously. (Example: Press <b>Ctrl-Alt-Delete</b> .)
> (right angle bracket)	A right angle bracket is used to separate selections that you make on menus. (Example: On the Windows Start menu, select <b>Settings &gt; Control Panel &gt; Phone and Modem Options</b> .)

The *Installation Guide for Cisco Unity Connection* also uses the following conventions:



**Note**

Means reader take note. Notes contain helpful suggestions or references to material not covered in the document.



**Caution**

Means reader be careful. In this situation, you might do something that could result in equipment damage or loss of data.



**Warning**

**Means *reader be warned*. In this situation, you might perform an action that could result in bodily injury.**

(For translations of safety warnings listed in this guide, see *Regulatory Compliance and Safety Information for Cisco Unity Connection* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/regulatory/compliance/ucwarns.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/regulatory/compliance/ucwarns.html).)

## Cisco Unity Connection Documentation

For descriptions and URLs of Cisco Unity Connection documentation on Cisco.com, see the *Documentation Guide for Cisco Unity Connection Release 9.x*. The document is shipped with Cisco Unity Connection and is available at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/roadmap/9xcucdg.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/roadmap/9xcucdg.html).

## Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

## Cisco Product Security Overview

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

Further information regarding U.S. export regulations may be found at [http://www.access.gpo.gov/bis/ear/ear\\_data.html](http://www.access.gpo.gov/bis/ear/ear_data.html).





# CHAPTER 1

## Overview of Mandatory Tasks for Installing a Cisco Unity Connection 9.x System

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### Revised November, 2014

This chapter contains two task lists. Use the applicable task list, depending on whether you are configuring a Cisco Unity Connection cluster or not:

- [Task List for Installing a Single Unity Connection Server, page 1-1](#)
- [Task List for Installing a Unity Connection Cluster, page 1-8](#)



#### Note

When you install Unity Connection 9.x in a standalone configuration, the ELM server also gets installed on the same system. Similarly, in a co-resident configuration, the ELM server gets installed with the Unity Connection 9.x and call manager on the same system. The username and password for the ELM server is same as the username and password of Cisco Unity Connection Administration. For more information on the ELM server, refer to ELM user guide at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/cucm/elmuserguide/9\\_0\\_1/CUCM\\_BK\\_E596FD72\\_00\\_enterprise-license-manager-user-90.html](http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/elmuserguide/9_0_1/CUCM_BK_E596FD72_00_enterprise-license-manager-user-90.html).

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#### Note

If you are installing Unity Connection 9.x as part of Cisco Unified Communications Manager Business Edition 6000, all content in the Unity Connection 9.x documentation set applies to Business Edition 6000 except the following:

- Content that references Unity Connection version 9.x only.
  - Content that references Cisco Unified Communications Manager Business Edition only. (The content applies only to Business Edition version 9.x and to Business Edition 5000 versions 9.x.)
- 

## Task List for Installing a Single Unity Connection Server

Following are the tasks that leads you through the complete installation of the single (standalone) Unity Connection server:

1. [Installing and Configuring the Unity Connection Server, page 1-2](#)
2. [Setting Up Administrator Workstations, page 1-4](#)
3. [Setting Up the Phone System Integration, page 1-4](#)

4. [Populating the System with User and Call Management Data, page 1-4](#)
5. [Configuring the System for Features, page 1-6](#)
6. [Setting Up Networking, page 1-6](#)
7. [Setting Up User Workstations, page 1-7](#)
8. [Backing Up Unity Connection Data, page 1-7](#)
9. [Training, page 1-8](#)

## Installing and Configuring the Unity Connection Server

Follow the given tasks for installing and configuring a standalone Unity Connection server:

1. Verify the system requirements for the Unity Connection system. See *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html)



### Caution

For selected servers and for selected Unity Connection 9.x configurations, a memory upgrade and/or replacement hard disks may be required. 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 9.x Supported Platforms List* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html).

2. (Optional) If you are installing Unity Connection on a virtual machine:
  - a. In the table of virtualization specifications, determine the VMware configuration you want to deploy on the Unity Connection server, based on the maximum number of ports and the maximum number of users. Then make note of the VMware OVA template that corresponds with that configuration. The document is available at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html).
  - b. Provision the physical host on which the Unity Connection virtual machine will be installed, according to the “Requirements for Installing a Unity Connection Virtual Machine” section in *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html#pgfId-360874](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html#pgfId-360874).
  - c. Download the VMware OVA template and deploy the template that creates a virtual machine and configures it. Create a virtual machine for the Unity Connection server, and configure the virtual machine hardware properties to match the settings in the “Requirements for Installing a Cisco Unity Connection Virtual Machine” section in *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html).



### Note

Information on downloading a VMware OVA template appears in the *Release Notes for Cisco Unity Connection, Release 9.0(1)*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/release/notes/901cucrn.html#wp1404013](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/release/notes/901cucrn.html#wp1404013).

- d. *If a memory upgrade and/or replacement hard disks are required:* Upgrade memory and replace hard disks, as applicable. See the [Installing a Memory Upgrade or Replacing Hard Disks \(Selected Servers Only\)](#), page 1-11 section.
- e. In the VMware vSphere Client, configure the virtual disks that are assigned to the Unity Connection virtual machine in independent-persistent mode. This provides the best storage performance.
- f. Be aware that when you mount an ISO file through the VM console, VMware does not eject the disc at the end of the install process.

**Tip**


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Always mount your DVD ISO file from the Edit Settings menu in VMware.

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- g. On the virtual machine, change the BIOS setting so the virtual machine boots first from the DVD virtual device, then from the virtual hard disk. See the [Changing the Boot Order of Unity Connection Virtual Machine](#), page 1-14 section.
3. Set up and configure the Unity Connection server. Begin with the [Installation Scenarios](#), page 1-2 section.
  4. *If you are using languages other than English-United States:*
    - a. Download the additional Unity Connection language files for the installation. See the [Downloading Unity Connection Language Files](#), page 1-1 section.
    - b. Install the additional Unity Connection language files. See the [Installing Unity Connection Language Files](#), page 1-2 section.
    - c. *If you installed Japanese and you want Cisco Unity Connection Administration to be localized:* Download and install the Cisco Unified Communications Manager Japanese locale. See the “Locale Installation” section in the “Software Upgrades” chapter of the applicable *Cisco Unified Communications Operating System Administration Guide* at [http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html).
    - d. *If you installed additional languages and you want the Cisco Personal Communications Assistant to be localized:* Download and install the corresponding Cisco Unified Communications Manager locales. See the “Locale Installation” section in the “Software Upgrades” chapter of the *Cisco Unified Communications Operating System Administration Guide* at [http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html)

**Note**


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If you are installing Japanese language for Unity Connection, then install, uc-locale-ja\_JP-9.1.0.1-xx.cop.sgn, the default Japanese cop file. However, if you are installing Japanese language for Unity Connection SRSV, then make sure to install, uc-locale-SRSV-ja\_JP-9.1.0.1-xx.cop.sgn, the SRSV specific Japanese cop file.

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5. *If you want to install Cisco Unity Connection Survivable Remote Site Voicemail (SRSV) server:* Run the CLI command **utils cuc activate CUSRSV** to convert standalone Unity Connection server to Unity Connection SRSV server.

**Note**


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The unrestricted version of Unity Connection SRSV works only with the unrestricted version of Unity Connection (central) server.

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**Caution**

All manually added database entries are lost after running the above CLI command.

**Warning**

After installing Unity Connection SRSV, you can not revert to Unity Connection.

## Setting Up Administrator Workstations

1. Configure the browser(s) on administrator workstations to access Unity Connection web applications. See the “Configuring the Browser on an Administrator Workstation in Cisco Unity Connection 9.x” chapter of the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag010.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag010.html).
2. Download and install the Real-Time Monitoring Tool software on administrator workstations. See the “Installing and Configuring Real-Time Monitoring Tool” chapter of the *Cisco Unified Real-Time Monitoring Tool Administration Guide* at [http://www.cisco.com/en/US/products/ps6509/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps6509/prod_maintenance_guides_list.html).

## Setting Up the Phone System Integration

Store all of the software that was shipped with Unity Connection together in a location that is safe and can be readily accessed. Set up the integration between Unity Connection and the phone system(s). See the applicable *Integration Guide for Cisco Unity Connection(s)* at [http://www.cisco.com/en/US/products/ps6509/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html).

## Populating the System with User and Call Management Data

The tasks listed in this section can be configured using Cisco Unity Connection Administration:

1. Obtain and install Unity Connection licenses. See the “Managing Licenses in Cisco Unity Connection 9.x” chapter of the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html).
2. Familiarize yourself with the following Unity Connection concepts:
  - Call management
  - Unity Connection conversation
  - Custom keypad mapping tool
  - Users and administrator accounts
  - Class of Services
  - Roles

See the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx.html).

3. Develop a system plan:
  - a. Identify business and nonbusiness hours, and holidays.
  - b. Map out a call management plan.
  - c. Review the default partition and search space, and determine whether new partitions and search spaces are needed.
  - d. Review the default restriction tables, and determine whether changes or new tables are needed.
  - e. Determine password and account lockout policies for phone and web-tool access, and the sign-in policy for web-tool access.
  - f. Determine the number and types of administrator accounts that you need, and the roles to assign to the accounts. Determine the features that you enable for users, and whether changes or new templates and classes of service are needed. See the “Preparing to Add User Accounts in Cisco Unity Connection 9.x” chapter of the *User Moves, Adds, and Changes Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmacax/9xcucmac020.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmacax/9xcucmac020.html).
  - g. Review the default mailbox size quotas, and determine whether changes are needed. Review the default message aging policy, and determine whether changes are needed.
  - h. Review the default system distribution lists, and determine whether changes or new distribution lists are needed.

For more information, see the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx.html).

4. Test the system configuration:
  - a. Add a Unity Connection user account to use as a test account. See the “Adding Cisco Unity Connection 9.x Accounts Individually” chapter of the *User Moves, Adds, and Changes Guide, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmacax/9xcucmac080.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmacax/9xcucmac080.html).
  - b. Use the phone to sign in to Unity Connection as the test user, record a name, and set a phone password. Hang up.
  - c. Call Unity Connection and sign in as the test user again to confirm that the password, greeting, and conversation version specified for the user are working properly. Confirm that the user inherited the correct class of service by testing any applicable features by phone.
  - d. Sign in to the Cisco Personal Communications Assistant (PCA) as the test user. If you gave the test user the required COS rights, confirm that you can browse from the Cisco PCA Home page to the applicable web tools.
  - e. Make corrections to the system configuration as necessary.
5. If you want to synchronize Unity Connection user data with user data in an LDAP directory, configure Unity Connection for integration with the LDAP directory. See the “Integrating Cisco Unity Connection 9.x with an LDAP Directory” chapter of the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at See the *System Administration Guide for*

*Cisco Unity Connection, Release 9.x*, available at

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag306.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag306.html).

6. Create administrator accounts. See the “Adding Cisco Unity Connection 9.x Accounts Individually” chapter of the *User Moves, Adds, and Changes Guide, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmacx/9xcucmac080.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmacx/9xcucmac080.html).
7. Create user accounts and add individual users to system distribution lists, as needed.
8. Implement and test the call management plan:
  - a. Create call handlers.
  - b. Specify directory handler settings.
  - c. Create interview handlers.
  - d. Set up call routing.

For more information, see the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx.html).

## Configuring the System for Features

Following are the guides that help you to configure the Unity Connection system for features:

- *System Administration Guide for Cisco Unity Connection* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx.html).
- *Unified Messaging Guide for Cisco Unity Connection Release 8.5 and Later* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/unified\\_messaging/guide/9xcucumgx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/unified_messaging/guide/9xcucumgx.html).
- *User Moves, Adds, and Changes Guide for Cisco Unity Connection* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmacx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmacx.html).

## Setting Up Networking

Set up networking, if applicable. See the “Overview of Networking Concepts in Cisco Unity Connection 9.x” chapter of the *Networking Guide for Cisco Unity Connection, Release 9.x*, available at

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/networking/guide/9xcucnetx/9xcucnet010.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/networking/guide/9xcucnetx/9xcucnet010.html).

## Setting Up User Workstations

To set up the user workstations, see the following chapters of *User Workstation Setup Guide for Cisco Unity Connection, Release 9.x*:

1. Set up access to the Cisco PCA. See the “Setting Up Access to the Cisco Personal Communications Assistant in Cisco Unity Connection 9.x” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws010.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws010.html).
2. Set up Media Master playback and recording devices. See the “Settings Up Playback and Recording Devices for the Media Master in Cisco Unity Connection 9.x” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws020.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws020.html).
3. Set up ViewMail for Outlook. See the applicable documentation:
  - For Cisco ViewMail for Microsoft Outlook 8.5 and later, see the applicable *Release Notes for Cisco ViewMail for Microsoft Outlook* at [http://www.cisco.com/en/US/products/ps6509/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html).
  - For Cisco Unity Connection ViewMail for Microsoft Outlook 8.0, see the “Setting Up ViewMail for Outlook in Cisco Unity Connection 9.x” section in the “Configuring an Email Account to Access Cisco Unity Connection 9.x Voice Messages” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws030.html#wp1098997](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws030.html#wp1098997).
4. Set up Cisco Unity Connection ViewMail for IBM Lotus Notes. See the applicable *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](http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html).
5. Set up the email client to view images in the HTML-based email notifications. See the “Configuring Unity Connection for HTML Based Message Notification” section of the “Configuring an Email Account to Access Cisco Unity Connection 9.x Voice Messages” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws030.html#wp1115648](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws030.html#wp1115648).
6. Set up the access to Mini Web Inbox. See the “Configuring Unity Connection for Mini Web Inbox” section of the “Configuring an Email Account to Access Cisco Unity Connection 9.x Voice Messages” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws030.html#wp1104077](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws030.html#wp1104077).
7. Set up IMAP email accounts to access Unity Connection voice messages. See the “Configuring an Email Account to Access Cisco Unity Connection 9.x Voice Messages” chapter, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwx/9xcucuws030.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwx/9xcucuws030.html).
8. Confirm that users are able to access and use the Unity Connection features that have been enabled for them.

## Backing Up Unity Connection Data

See the *Disaster Recovery System Administration Guide for Cisco Unity Connection, Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/drs\\_administration/guide/9xcucdrsa.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/drs_administration/guide/9xcucdrsa.html).




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**Note** Third-party backup applications are not supported.

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## Training

Train the users, operators, and support desk personnel to use the Unity Connection system. See the following links:

- The “User Orientation in Cisco Unity Connection 9.x” chapter of the *User Workstation Setup Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwsx/9xcucuws040.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwsx/9xcucuws040.html).
- The “Operator and Support Desk Orientation in Cisco Unity Connection 9.x” chapter of the *User Workstation Setup Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_setup/guide/9xcucuwsx/9xcucuws050.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_setup/guide/9xcucuwsx/9xcucuws050.html).

## Task List for Installing a Unity Connection Cluster

The information and settings that you enter on the publisher server are replicated to the subscriber server.

**Note**


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Unity Connection SRSV can not be installed on a cluster, therefore, a branch can only be made on a Unity Connection without a cluster.

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Following are the tasks that leads you through the complete installation of a Unity Connection cluster:

- [Installing and Configuring the Publisher Server, page 1-8](#)
- [Setting Up Administrator Workstations, page 1-10](#)
- [Configuring the Cluster, Installing, and Configuring the Subscriber Server, page 1-10](#)
- [Setting Up the Phone System Integration, page 1-11](#)
- [Populating the System with User and Call Management Data, page 1-11](#)
- [Configuring the System for Features, page 1-6](#)
- [Setting Up Networking, page 1-6](#)
- [Setting Up User Workstations, page 1-7](#)
- [Backing Up Unity Connection Data, page 1-7](#)
- [Training, page 1-8](#)

## Installing and Configuring the Publisher Server

1. Verify the system requirements for the Unity Connection 9.x system. See *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html).



**Caution**

For selected servers and for selected Unity Connection 9.x configurations, a memory upgrade and/or replacement hard disks may be required. 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 9.x Supported Platforms List* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcu cspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcu cspl.html).

2. (Optional) If you are installing the publisher or subscriber server on a virtual machine:
  - a. In the *Cisco Unity Connection 9.x Supported Platforms List*, in the table of virtualization specifications, determine which VMware configuration you want to deploy on the virtual machines, based on the maximum number of ports and the maximum number of users. Then make note of the VMware OVA template that corresponds with that configuration. The document is available at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcuc spl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcuc spl.html).

**Caution**

If you are installing both the publisher and subscriber servers on virtual machines, you must use the same VMware configuration for both servers.

- b. Download the VMware OVA template. See the “Installing Unity Connection for the First Time on a Virtual Machine” section in the applicable *Release Notes for Cisco Unity Connection* at [http://www.cisco.com/en/US/products/ps6509/prod\\_release\\_notes\\_list.html](http://www.cisco.com/en/US/products/ps6509/prod_release_notes_list.html).

You can also manually configure virtualization; if you prefer that option, you do not need the OVA template.

**Note**

Information on downloading a VMware OVA template appears in the *Release Notes for Cisco Unity Connection* for versions 9.x:

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/release/notes/901cucrn.html#wp1404013](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/release/notes/901cucrn.html#wp1404013).

- c. Provision the physical host on which the Unity Connection publisher virtual machine will be installed, according to the “Requirements for Installing a Cisco Unity Connection Virtual Machine” section in *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html).
      - d. Deploy the template to create a virtual machine for the publisher server and configure the virtual machine hardware properties to match the settings in the “Requirements for Installing a Cisco Unity Connection Virtual Machine” section in *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html).
      - e. See the [Installing a Memory Upgrade or Replacing Hard Disks \(Selected Servers Only\)](#), page 1-11 section.
      - f. In the VMware vSphere Client, configure the virtual disks that are assigned to the Unity Connection virtual machine in independent-persistent mode. This provides the best storage performance.



- b. Deploy the template to create a virtual machine for the subscriber server and configure the virtual machine hardware properties to match the settings in the “Requirements for Installing a Unity Connection Virtual Machine” section in *System Requirements for Cisco Unity Connection Release 9.x* at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsyrqs.html#pgfId-360874](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/requirements/9xcucsyrqs.html#pgfId-360874).
  - c. Upgrade memory and replace hard disks, as applicable. See the [Installing a Memory Upgrade or Replacing Hard Disks \(Selected Servers Only\)](#), page 1-11 section.
  - d. In the VMware vSphere Client, configure the virtual disks that are assigned to the Unity Connection virtual machine in independent-persistent mode. This provides the best storage performance.
  - e. On the virtual machine, change the BIOS setting so the virtual machine boots first from the DVD virtual device, then from the virtual hard disk. See the [Changing the Boot Order of Unity Connection Virtual Machine](#), page 1-14 section.
3. Set up and configure the subscriber server. Begin with the [Installation Scenarios](#), page 1-2 section.
4. *If you are using languages other than English-United States:* On the subscriber server, install the same Unity Connection language files that you installed on publisher server.
5. *If you installed Japanese and you want Cisco Unity Connection Administration to be localized:* On the subscriber server, install the Cisco Unified Communications Manager Japanese locale that you installed on publisher server.
6. *If you installed additional languages and you want the Cisco Personal Communications Assistant to be localized:* On the subscriber server, install the same Cisco Unified Communications Manager locales that you installed on publisher server.

**Note**

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From now on, the information and settings that you enter on the publisher server are replicated to the subscriber server.

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## Setting Up the Phone System Integration

On the publisher server, set up the integration between Unity Connection and the phone system(s). Store all of the software that was shipped with Unity Connection together in a location that is safe and can be readily accessed. Set up the integration between Unity Connection and the phone system(s). See the applicable *Integration Guide for Cisco Unity Connection(s)* at [http://www.cisco.com/en/US/products/ps6509/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/ps6509/products_installation_and_configuration_guides_list.html).

## Populating the System with User and Call Management Data

Follow the given steps to configure the Unity Connection server to handle calls:

1. Obtain and install Unity Connection licenses. Licenses must be installed on the publisher server and on the subscriber server. See the “Managing Licenses in Cisco Unity Connection 9.x” chapter of the *System Administration Guide, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html).

2. Familiarize yourself with the following Unity Connection concepts:
  - Call management
  - Unity Connection conversation
  - Custom keypad mapping tool
  - Users and administrator accounts
  - Class of Services
  - Roles
3. Develop a system plan:
  - a. Identify business and nonbusiness hours, and holidays.
  - b. Map out a call management plan.
  - c. Review the default partition and search space, and determine whether new partitions and search spaces are needed.
  - d. Review the default restriction tables, and determine whether changes or new tables are needed.
  - e. Determine password and account lockout policies for phone and web-tool access, and the sign-in policy for web-tool access.
  - f. Determine the number and types of administrator accounts that you need, and the roles to assign to the accounts. Determine the features that you enable for users, and whether changes or new templates and classes of service are needed. See the “Preparing to Add User Accounts in Cisco Unity Connection 9.x” chapter of the *User Moves, Adds, and Changes Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmac/9xcucmac020.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmac/9xcucmac020.html).
  - g. Review the default mailbox size quotas, and determine whether changes are needed. Review the default message aging policy, and determine whether changes are needed.
  - h. Review the default system distribution lists, and determine whether changes or new distribution lists are needed.

For more information, see the *System Administration Guide for Cisco Unity Connection, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/administration/guide/9xcucsagx.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx.html).

4. Test the system configuration:
  - a. On the publisher server, add a Unity Connection user account to use as a test account. See the “Adding Cisco Unity Connection 9.x Accounts Individually” chapter of the *User Moves, Adds, and Changes Guide, Release 9.x*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/user\\_mac/guide/9xcucmac/9xcucmac080.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/user_mac/guide/9xcucmac/9xcucmac080.html).
  - b. Use the phone to sign in to Unity Connection as the test user, record a name, and set a phone password. Hang up.
  - c. Call Unity Connection and sign in as the test user again to confirm that the password, greeting, and conversation version specified for the user are working properly. Confirm that the user inherited the correct class of service by testing any applicable features by phone.
  - d. Sign in to the Cisco Personal Communications Assistant (PCA) as the test user. If you gave the test user the required COS rights, confirm that you can browse from the Cisco PCA Home page to the applicable web tools.

- e. On the subscriber server, confirm that the test user and recorded name have been replicated.
  - f. In Cisco Unity Connection Serviceability on the Cluster Management page, change the status of the subscriber server to **Primary**. See the “Manually Changing Server Status” section in the “Administering a Cisco Unity Connection 9.x Cluster” chapter of the *Cluster Configuration and Administration Guide for Cisco Unity Connection, Release 9.x*, available at [www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/cluster\\_administration/guide/9xcu/ccag010.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcu/ccag010.html).
  - g. Call Unity Connection and sign in as the test user again to confirm that the call connects correctly to the subscriber server when it has **Primary** status. Confirm that the password, greeting, and conversation version specified for the user are working properly. Confirm that the user inherited the correct class of service by testing any applicable features by phone.
  - h. Sign in to the Cisco PCA as the test user. Confirm that you can browse from the Cisco PCA Home page to the applicable web tools.
  - i. Make corrections to the system configuration as necessary.
  - j. In Cisco Unity Connection Serviceability on the Cluster Management page, activate the publisher server.
  - k. Change the status of the publisher server to **Primary**.
-





# CHAPTER 1

## Installing the Operating System and Cisco Unity Connection 9.x

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This chapter contains the following sections for installing Cisco Unity Connection:

- [Installation Scenarios, page 1-2](#)
  - [Install Software on a Unity Connection Server or Publisher Server in a Unity Connection Cluster, page 1-2](#)
  - [Install Software on Subscriber Server \(Unity Connection Cluster Only\), page 1-3](#)
  - [Apply a Patch When Installing a Unity Connection Server or Publisher Server in a Unity Connection Cluster, page 1-3](#)
  - [Apply a Patch When Installing Subscriber Server \(Unity Connection Cluster Only\), page 1-4](#)
  - [Add a Server to Create a Unity Connection Cluster, page 1-4](#)
  - [Parallel Installations of Publisher and Subscriber Servers in a Unity Connection Cluster, page 1-6](#)
- [Pre-Installation Tasks, page 1-6](#)
- [Important Considerations for Installation, page 1-7](#)
- [Frequently Asked Questions About the Installation, page 1-8](#)
  - [Time Required for Installation, page 1-8](#)
  - [Usernames and Passwords You Need to Specify, page 1-8](#)
  - [Strong Password, page 1-10](#)
  - [Servers Cisco Supports for Installation, page 1-10](#)
  - [Installing Other Software on the Server, page 1-10](#)
- [Browser Requirements, page 1-10](#)
- [Installing a Memory Upgrade or Replacing Hard Disks \(Selected Servers Only\), page 1-11](#)
- [Changing the Boot Order of Unity Connection Virtual Machine, page 1-14](#)
- [Changing Reservations on Virtual Machines Running with E7 Processors, page 1-14](#)
- [Changing Reservations on Virtual Machines Running with E5440 Processors, page 1-15](#)
- [Verifying DNS Registration for Installation, page 1-15](#)
- [Gathering Information for Installation, page 1-16](#)
- [Using the Cisco Unified Communications Answer File Generator, page 1-21](#)

- [Handling Network Errors During Installation, page 1-22](#)
- [Installing the New Operating System and Application, page 1-22](#)
  - [Navigating Within the Installation Wizard, page 1-22](#)
  - [Starting the Installation, page 1-23](#)
  - [Entering Preexisting Configuration Information, page 1-25](#)
  - [Applying a Patch, page 1-25](#)
  - [Performing the Basic Installation, page 1-29](#)
  - [Configuring a Single Server or Publisher Server in a Unity Connection Cluster, page 1-30](#)
  - [Configuring the Subscriber Server in a Unity Connection Cluster, page 1-32](#)
- [Post-Installation Tasks, page 1-33](#)
  - [Changing the Default Application User Passwords, page 1-34](#)
  - [Activating Services, page 1-34](#)
  - [Examining Log Files, page 1-34](#)
- [Migrating to Unity Connection on a Virtual Machine, page 1-35](#)

## Installation Scenarios

You can use this document to perform the following different installation scenarios:

- Install software on the server. For a Unity Connection cluster, install software on the first (publisher) server.
- For a Unity Connection cluster, install software on the second (subscriber) server.
- Apply a patch while installing software on the server. For a Unity Connection cluster, install a patch during installation of the first (publisher) server.
- For a Unity Connection cluster, apply a patch while installing software on the second (subscriber) server.
- Add a server to create a Unity Connection cluster.

The following sections provide an overview of the high-level tasks that you must perform for each of these installation scenarios. Each high-level task also includes a link to another section of the document, which you can follow for detailed information about the task.



### Note

For information about replacing a server or cluster, see the “Replacing Cisco Unity Connection 9.x Servers or Hard Disks” chapter of the *Upgrade Guide for Cisco Unity Connection* at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/upgrade/guide/9xcucrux/9xcuug040.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrux/9xcuug040.html).

## Install Software on a Unity Connection Server or Publisher Server in a Unity Connection Cluster

To install software on a Unity Connection server or on the first (publisher) server when you are configuring a Unity Connection cluster, follow the steps in [Table 1-1](#).



**Table 1-1** *Installing Software on a Connection Server or on the Publisher Server*

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1-6 on page 1-6</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software from the DVD to your server.	See the “Starting the Installation” section on <a href="#">page 1-23</a> .
<b>Step 3</b>	Follow the procedure for performing a basic installation.	See the “Performing the Basic Installation” section on <a href="#">page 1-29</a> .
<b>Step 4</b>	When the First Node Configuration window displays, choose <b>Yes</b> to configure the new server as the only Unity Connection server or as the publisher server in a cluster.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on <a href="#">page 1-29</a> .
<b>Step 5</b>	Follow the procedure to configure the server.	See “Configuring a Single Server or Publisher Server in a Unity Connection Cluster” section on <a href="#">page 1-30</a>
<b>Step 6</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 1-8 on page 1-33</a> .

## Install Software on Subscriber Server (Unity Connection Cluster Only)

When you are configuring a Unity Connection cluster, to install software on the second (subscriber) server in the cluster, follow the steps in [Table 1-2](#).

**Table 1-2** *Installing Software on the Subscriber Server*

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1-6</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software from the DVD to your server.	See “Starting the Installation” section on <a href="#">page 1-23</a> .
<b>Step 3</b>	Follow the procedure for performing a basic installation.	See “Performing the Basic Installation” section on <a href="#">page 1-29</a> .
<b>Step 4</b>	When the First Node Configuration displays, choose <b>No</b> to configure the new server as the subscriber server in a Connection cluster.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on <a href="#">page 1-29</a> .
<b>Step 5</b>	Follow the procedure to configure a subscriber server in the cluster.	See the “Configuring the Subscriber Server in a Unity Connection Cluster” section on <a href="#">page 1-32</a> .
<b>Step 6</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 1-8</a> .

## Apply a Patch When Installing a Unity Connection Server or Publisher Server in a Unity Connection Cluster

You can upgrade to a later release by downloading and applying a patch during installation. To apply a patch during installation of a Unity Connection server or the first (publisher) server in a Connection cluster, follow the steps in [Table 1-3](#).

**Table 1-3** Applying a Patch During Installation of a Connection Server or the Publisher Server

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1-6</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software from the DVD to your server.	See “Starting the Installation” section on page 1-23.
<b>Step 3</b>	Follow the procedure to apply a software patch.	See “Applying a Patch” section on page 1-25.
<b>Step 4</b>	Follow the procedure for performing a basic installation.	See “Performing the Basic Installation” section on page 1-29.
<b>Step 5</b>	When the First Node Configuration window displays, choose <b>Yes</b> to configure the new server as the only Connection server or as the publisher server in a Connection cluster.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on page 1-29.
<b>Step 6</b>	Follow the procedure to configure the publisher server in the cluster.	See the “Configuring a Single Server or Publisher Server in a Unity Connection Cluster” section on page 1-30.
<b>Step 7</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 1-8</a> .

## Apply a Patch When Installing Subscriber Server (Unity Connection Cluster Only)

You can upgrade to a later release by downloading and applying a patch during installation. To apply a patch during installation of the second (subscriber) server in a Unity Connection cluster, follow the steps in [Table 1-4](#).

**Table 1-4** Applying a Patch During Installation of the Subscriber Server

	Task	For More Information
<b>Step 1</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1-6</a> .
<b>Step 2</b>	Follow the procedure to begin installing the software from the DVD to your server.	See “Starting the Installation” section on page 1-23.
<b>Step 3</b>	Follow the procedure to apply a software patch.	See “Applying a Patch” section on page 1-25.
<b>Step 4</b>	Follow the procedure for performing a basic installation.	See “Performing the Basic Installation” section on page 1-29.
<b>Step 5</b>	When the First Node Configuration displays, choose <b>No</b> to configure the new server as the subscriber server in a Connection cluster.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on page 1-29.
<b>Step 6</b>	Follow the procedure to configure a subscriber server in the cluster.	See the “Configuring the Subscriber Server in a Unity Connection Cluster” section on page 1-32.
<b>Step 7</b>	Perform all post-installation tasks that apply to your site.	For a list of post-installation tasks, see <a href="#">Table 1-8</a> .

## Add a Server to Create a Unity Connection Cluster

To add a server to create a Unity Connection cluster, follow the steps in [Table 1-5](#).

**Table 1-5 Adding a Server to Create a Unity Connection Cluster**

	Task	For More Information
<b>Step 1</b>	Before you make any changes to your Connection system, be sure that you have a current backup file.	For more information, refer to the <i>Disaster Recovery System Administration Guide</i> .
<b>Step 2</b>	Perform all pre-installation tasks that apply to your site.	For a list of pre-installation tasks, see <a href="#">Table 1-6</a> .
<b>Step 3</b>	Obtain a Cisco Unity Connection cluster license to support adding a subscriber server.	For more information, see the “Managing Licenses in Cisco Unity Connection 9.x” chapter of the <i>System Administration Guide for System Administration Guide for Cisco Unity Connection, Release 9.x</i> , at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html</a> .
<b>Step 4</b>	Before you install the subscriber server, ensure that you have configured the Connection cluster on the publisher server.	For more information, see the “Configuring a Cisco Unity Connection 9.x Cluster” chapter of the <i>Cluster Configuration and Administration Guide for Cisco Unity Connection</i> at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcuccagx/9xcuccag005.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcuccagx/9xcuccag005.html</a> .
<b>Step 5</b>	Record the configuration settings for each server that you plan to install.	To record your configuration settings, see <a href="#">Table 1-6 on page 1-16</a> .
<b>Step 6</b>	You must install the same software version on the publisher and subscriber servers. If you do not have the correct version on DVD, you need to either download updated software from Cisco.com or follow the procedure for applying a patch during the installation procedure.	
<b>Step 7</b>	Follow the procedure to begin installing the software from the DVD to your server.	See “Starting the Installation” section on page 1-23.
<b>Step 8</b>	If you need to upgrade the version of Cisco Unity Connection that you have on DVD, continue with the procedure for applying a software patch.	See the “Applying a Patch” section on page 1-25.
<b>Step 9</b>	Follow the procedure for performing the basic installation.	See “Performing the Basic Installation” section on page 1-29.
<b>Step 10</b>	When the First Node Configuration displays, choose <b>No</b> to configure the new server as a subscriber server.	See <a href="#">Step 10</a> in the “Performing the Basic Installation” section on page 1-29.
<b>Step 11</b>	Follow the procedure for configuring a subscriber server.	See the “Configuring the Subscriber Server in a Unity Connection Cluster” section on page 1-32.
<b>Step 12</b>	Perform all post-installation tasks that apply to your site.	See <a href="#">Table 1-8 on page 1-33</a> .

## Parallel Installations of Publisher and Subscriber Servers in a Unity Connection Cluster

When you install a Unity Connection cluster, you can begin the installation of the publisher and subscriber servers at the same time. When the installation program prompts you to designate the first server (the publisher server) as the first node, stop installing on the subscriber server until the installation completes on the publisher server. Then configure the Unity Connection cluster on the publisher server. You can then resume the installation on the subscriber server. For optimal performance, you should choose the **Skip** option rather than the **Proceed** option in the installation program.

## Pre-Installation Tasks

Table 1-6 contains a list of pre-installation tasks that you need to perform to ensure that you can successfully install Unity Connection.

**Table 1-6** Pre-Installation Tasks


	Task	Important Notes
<b>Step 1</b>	Read this entire document to familiarize yourself with the installation procedure.	
<b>Step 2</b>	Verify the integrity of any new server hardware (such as hard drives and memory) by running any manufacturer-provided utilities.	
<b>Step 3</b>	Ensure that your servers are listed as supported hardware and sized appropriately to support the load of the cluster.	For information about the capacity of server models, see the <i>Cisco Unity Connection 9.x Supported Platforms List</i> at <a href="http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html">http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html</a> .  Make sure to account for any growth that has occurred since initial system configuration.
<b>Step 4</b>	For a Connection cluster, if you are getting the system time from an NTP server, verify that the publisher server can synchronize with the NTP server before you install the subscriber server.  To verify the NTP status of the publisher server, log into the Command Line Interface on the publisher server and enter the following command:  <b>utils ntp status</b>	For more information, see the <i>Command Line Interface Reference Guide for Cisco Unified Communications Solutions</i> .   <b>Caution</b> If the publisher server fails to synchronize with an NTP server, installation of a subscriber server can also fail.
<b>Step 5</b>	For a Connection cluster, do not run Network Address Translation (NAT) or Port Address Translation (PAT) between the publisher and subscriber servers.	

Table 1-6 Pre-Installation Tasks (continued)

	Task	Important Notes
<b>Step 6</b>	Record the network interface card (NIC) speed and duplex settings of the switch port to which you will connect the new server.  You should configure the same NIC settings on the server and on the switch port. For GigE (1000/FULL), you should set NIC and switch port settings to Auto/Auto; do not set hard values.	Enable PortFast on all switch ports that are connected to Cisco servers. With Portfast enabled, the switch immediately brings a port from the blocking state into the forwarding state by eliminating the forwarding delay [the amount of time that a port waits before changing from its Spanning-Tree Protocol (STP) learning and listening states to the forwarding state].
<b>Step 7</b>	If you use DNS, verify that all servers on which you plan to install Cisco Unity Connection are properly registered in DNS.	For more information, see the “ <a href="#">Verifying DNS Registration for Installation</a> ” section on page 1-15.
<b>Step 8</b>	Obtain a Cisco Unity Connection license file.	For more information, see the “Managing Licenses in Cisco Unity Connection 9.x” chapter of the <i>System Administration Guide, Release 9.x</i> , available at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/administration/guide/9xcucsagx/9xcucsag310.html</a> .
<b>Step 9</b>	Record the configurations settings for each server that you plan to install.	To record your configuration settings, see <a href="#">Table 1-6</a> .
<b>Step 10</b>	Configure a Connection cluster on the publisher server before you install the second (subscriber) server.	For more information, see the “Configuring a Cisco Unity Connection 9.x Cluster” chapter of the <i>Cluster Configuration and Administration Guide for Cisco Unity Connection, Release 9.x</i> , available at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcuccagx/9xcuccag005.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcuccagx/9xcuccag005.html</a> .

## Important Considerations for Installation

Before you proceed with the installation, consider the following requirements and recommendations:

- Be aware that when you install on an existing server, the hard drive gets formatted, and all existing data on the drive gets overwritten.
- Ensure that you connect each Unity Connection server to an uninterruptible power supply (UPS) to provide backup power and protect your system. Failure to do so may result in damage to physical media and require a new installation.
- For a Unity Connection cluster:
  - Install the Unity Connection software on the publisher server first and then on the subscriber server.
  - When you enter the Security password on the publisher server, write it down and save it. You must enter the same password on the subscriber server.
  - After both servers in the cluster have been installed, confirm that the subscriber server can connect to the publisher server.

- Install the software during off-peak hours or a maintenance window to avoid impact from interruptions.
- Both servers in the cluster must run the same release of Unity Connection. The only exception is during a cluster software upgrade, during which a temporary mismatch is allowed.
- Configure the server by using static IP addressing to ensure that the server obtains a fixed IP address.
- Do not attempt to perform any configuration tasks during the installation.
- Do not install any Cisco-verified applications until you complete the installation.
- Be aware that directory names and filenames that you enter while you are running the installation program are case-sensitive.
- Disk mirroring on server model 7825 I3 with 160 GB SATA disk drives takes approximately 3 hours.
- Disk mirroring on server model 7828 I3 with 250 GB SATA disk drives takes approximately 4 hours.
- Carefully read the information that follows before you proceed with the installation.
- When you insert or remove a USB drive, you might see error messages on the console similar to “sdb: assuming drive cache: write through.” You can safely ignore these messages.

## Frequently Asked Questions About the Installation

The following section contains information about commonly asked questions and responses. Review this section carefully before you begin the installation.

### Time Required for Installation

The entire installation process, excluding pre- and post-installation tasks, takes 45 to 90 minutes, depending on your server type.

### Username and Passwords You Need to Specify

Revised May 7, 2013



#### Note

The system checks your passwords for strength. For guidelines on creating a strong password, see the [“Strong Password” section on page 1-10](#).

During the installation, you must specify the following user names and passwords:

- Administrator Account user name and password
- Application User name and password
- Security password

### Administrator Account User Name and Password

You use the Administrator Account user name and password to log in to the following areas:

- Cisco Unified Communications Operating System Administration

- Disaster Recovery System
- Command Line Interface

To specify the Administrator Account user name and password, follow these guidelines:

- Administrator Account username—The Administrator Account user name must start with an alphabetic character and can contain alphanumeric characters, hyphens and underscores.
- Administrator Account password—The Administrator Account password must be at least six characters long and can contain alphanumeric characters, hyphens, and underscores.

You can change the Administrator Account password or add a new Administrator account by using the command line interface. For more information, see the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions, Release 9.1(1)*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/cucm/cli\\_ref/9\\_1\\_1/CUCM\\_BK\\_C6AE17AA\\_00\\_cucm-cli-reference-guide-91/CUCM\\_BK\\_C6AE17AA\\_00\\_cucm-cli-reference-guide-91\\_chapter\\_00.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/cli_ref/9_1_1/CUCM_BK_C6AE17AA_00_cucm-cli-reference-guide-91/CUCM_BK_C6AE17AA_00_cucm-cli-reference-guide-91_chapter_00.html).

## Application User Name and Password

You use the Application User name and password to access applications that are installed on the system, including the following areas:

- Cisco Unity Connection Administration
- Cisco Unified Serviceability
- Cisco Unified Real-Time Monitoring Tool

To specify the Application User name and password, follow these guidelines:

- Application User name—The Application User name must start with an alphabetic character and can contain alphanumeric characters, hyphens and underscores.
- Application User password—The Application User password must be at least six characters long and can contain alphanumeric characters, hyphens, and underscores.

You can change the Application User name and password by using the command line interface. For more information, see the *Command Line Interface Reference Guide for Cisco Unified Communications Solutions, Release 9.1(1)*, available at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/cucm/cli\\_ref/9\\_1\\_1/CUCM\\_BK\\_C6AE17AA\\_00\\_cucm-cli-reference-guide-91/CUCM\\_BK\\_C6AE17AA\\_00\\_cucm-cli-reference-guide-91\\_chapter\\_00.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/cucm/cli_ref/9_1_1/CUCM_BK_C6AE17AA_00_cucm-cli-reference-guide-91/CUCM_BK_C6AE17AA_00_cucm-cli-reference-guide-91_chapter_00.html).



### Note

- Make sure you do not use the following application usernames as this will generate an error:
  - CCMSysUser
  - WDSysUser
  - CCMQRTSysUser
  - IPMASysUser
  - WDSecureSysUser
  - CCMQRTSecureSysUser
  - IPMASecureSysUser
  - TabSyncSysUser

- CUCService

## Security Password

When clustering is configured, the system uses this password to authorize communications between the publisher and subscriber servers; you must ensure that this password is identical on both servers.

The Security password must be at least six characters long and can contain alphanumeric characters, hyphens, and underscores.

## Strong Password

The installation wizard checks to ensure that you enter a strong password. To create a strong password, follow these recommendations:

- Mix uppercase and lowercase letters.
- Mix letters and numbers.
- Include hyphens and underscores.
- Remember that longer passwords are stronger and more secure than shorter ones.

Avoid the following types of passwords:

- Do not use recognizable words, such as proper names and dictionary words, even when combined with numbers.
- Do not invert recognizable words.
- Do not use word or number patterns, like aaabbb, qwerty, zyxwvuts, 123321, and so on.
- Do not use recognizable words from other languages.
- Do not use personal information of any kind, including birthdays, postal codes, names of children or pets, and so on.

## Servers Cisco Supports for Installation

For information about supported servers, see the *Cisco Unity Connection 9.x Supported Platforms List* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html).

## Installing Other Software on the Server

You must do all software installations and upgrades by using Cisco Unified Communications Operating System Administration. The system can upload and process only software that Cisco approved. You cannot install or use unapproved third-party or Windows-based software applications.

## Browser Requirements

You can access Cisco Unified Serviceability, Cisco Unified Communications Operating System Administration, and Disaster Recovery System by using the following browsers:



- Microsoft Internet Explorer version 6.x or version 7.x
- Netscape Navigator version 7.1 or later

For current browser requirements for accessing Cisco Unity Connection Administration and Cisco Unity Connection Serviceability, see the “Software Requirements—Administrator Workstations” section of *System Requirements for Cisco Unity Connection Release 9.x* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/requirements/9xcucsysreqs.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/requirements/9xcucsysreqs.html).

## Installing a Memory Upgrade or Replacing Hard Disks (Selected Servers Only)

**Note**

If you are installing a server that does not require a memory upgrade or a hard-disk replacement, skip this section.

If you are upgrading an existing Unity Connection system to version 9.x and you want to retain user data and voice messages, see the applicable chapter of the *Reconfiguration and Upgrade Guide for Cisco Unity Connection Release 9.x* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/upgrade/guide/9xcucrugx.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx.html).

Some servers that are qualified for use with Unity Connection require:

- A memory upgrade to run Connection 7.x in any configuration.
- A memory upgrade to support a specified number of Unity Connection users when both voice recognition and Digital Networking are configured.
- A hard-disk replacement to support a Unity Connection cluster.

See the applicable server-specific table in the *Cisco Unity Connection 9.x Supported Platforms List* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html).

**Warning**

**Before working on a system that has an on/off switch, turn OFF the power and unplug the power cord.** Statement 1

**Warning**

**Before opening the chassis, disconnect the telephone-network cables to avoid contact with telephone-network voltages.** Statement 2

**Warning**

**This equipment is to be installed and maintained by service personnel only as defined by AS/NZS 3260 Clause 1.2.14.3 Service Personnel.** Statement 88

**Warning**

**During this procedure, wear grounding wrist straps to avoid ESD damage to the card. Do not directly touch the backplane with your hand or any metal tool, or you could shock yourself.** Statement 94

**Warning**

**The safety cover is an integral part of the product. Do not operate the unit without the safety cover installed. Operating the unit without the cover in place will invalidate the safety approvals and pose a risk of fire and electrical hazards.** Statement 117

**Warning**

**Do not work on the system or connect or disconnect cables during periods of lightning activity.** Statement 1001

**Warning**

**Read the installation instructions before connecting the system to the power source.** Statement 1004

**Warning**

**To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:**

- **This unit should be mounted at the bottom of the rack if it is the only unit in the rack.**
- **When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.**
- **If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack.** Statement 1006

**Warning**

**There is the danger of explosion if the battery is replaced incorrectly. Replace the battery only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.** Statement 1015

**Warning**

**This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.** Statement 1017

**Warning**

**To avoid electric shock, do not connect safety extra-low voltage (SELV) circuits to telephone-network voltage (TNV) circuits. LAN ports contain SELV circuits, and WAN ports contain TNV circuits. Some LAN and WAN ports both use RJ-45 connectors. Use caution when connecting cables.** Statement 1021

**Warning**

**To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.** Statement 1023

**Warning**

**This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.** Statement 1024

**Warning**

**Blank faceplates and cover panels serve three important functions: they prevent exposure to hazardous voltages and currents inside the chassis; they contain electromagnetic interference (EMI) that might disrupt other equipment; and they direct the flow of cooling air through the chassis. Do not operate the system unless all cards, faceplates, front covers, and rear covers are in place.**

Statement 1029

**Warning**

**Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Statement 1030

**Warning**

**Ultimate disposal of this product should be handled according to all national laws and regulations.**

Statement 1040

(For translations of the preceding safety warnings, see *Regulatory Compliance and Safety Information for Cisco Unity Connection* at

[http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/regulatory/compliance/ucwarns.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/regulatory/compliance/ucwarns.html).)

### To Install a Memory Upgrade or Replace Hard Disks (Selected Servers Only)

**Step 1** Remove the cover.

**Step 2** If you are not installing a memory upgrade, skip to [Step 3](#).

Install the memory modules in the applicable slots or locations, depending on the server model. See the applicable *Cisco Unity Connection Supported Platforms List*.

**Caution**

If you install new memory modules in the wrong slots, the server and operating system may not recognize that the modules have been installed, and Unity Connection performance may suffer.

**Step 3** If you are not replacing hard disks, skip to [Step 4](#).

**Caution**

You must remove existing hard disks and install exactly as many hard disks as you remove, or Unity Connection installation will fail.

Replace the hard disks:

- a. Make note of the current locations of the hard disks in the server, including which hard disk is in which hard disk slot. If the replacement fails and you want to revert to the current configuration, you must put the existing hard disks back into their current locations.
- b. Remove the drive trays from the server.
- c. Remove the old hard disks from the drive trays.
- d. Insert the new hard disks into the drive trays.
- e. Reinstall the drive trays in the locations that you made note of in Step a.

**Step 4** Reattach the cover.

# Changing the Boot Order of Unity Connection Virtual Machine

**Added April 16, 2010**

Do the following procedure to change the BIOS setting so the virtual machine boots first from the DVD virtual device, then from the virtual hard disk.

## To Change the Boot Order of the Cisco Unity Connection 9.x Virtual Machine

- 
- Step 1** In VMware vSphere Client, power off the virtual machine on which you deployed the OVA template.
  - Step 2** In the left pane of vSphere Client, right-click the name of the virtual machine, and select **Edit Settings**.
  - Step 3** In the **Virtual Machine Properties** dialog box, select the **Options** tab.
  - Step 4** In the **Settings** column, under Advanced, select **Boot Options**.
  - Step 5** Under Force BIOS Setup, check the **The Next Time the Virtual Machine Boots, Force Entry into the BIOS Setup Screen** check box.
  - Step 6** Click **OK** to close the **Virtual Machine Properties** dialog box and power on the virtual machine.  
The virtual machine will boot into the BIOS menu.
  - Step 7** Navigate to the Boot menu and change the boot device order so the CD-ROM device is listed first and the Hard Drive device is listed second.
  - Step 8** Save the change and exit BIOS setup.
- 

# Changing Reservations on Virtual Machines Running with E7 Processors

**Added May 30, 2013**

With 8.6(2) and later releases, the CPU reservations are now included in OVA's. The reservation numbers for CPU are based on the Xeon 7500 processor. If the customer chooses to run on the E7 processor, the CPU reservation numbers are higher than available cycles on 1 virtual CPU.

Based on the lab tests, we know that the 2.4 GHz E7 processor has the same performance as a 2.53GHz Xeon 7500 processor. Therefore, it is fine to change the reservation numbers on the virtual machine manually when running them on the E7 processors for 5000, 10,000, or 20,000 deployment options.

For more on the reservations for the E7 processor, see the docwiki available at [http://docwiki.cisco.com/wiki/OVA\\_Template\\_Details\\_for\\_Unity\\_Connection\\_Release\\_8.6.2](http://docwiki.cisco.com/wiki/OVA_Template_Details_for_Unity_Connection_Release_8.6.2).

## To Change the Reservation Value of the Cisco Unity Connection 8.6(2) or Later Virtual Machine

- 
- Step 1** In VMware vSphere Client, select the host on which virtual machine is created.
  - Step 2** Click the **Summary** tab, under **CPU chores**, note the available CPU cycles for 1 virtual CPU in GHz.
  - Step 3** Power off the virtual machine on which you deployed the OVA template
  - Step 4** In the left pane of vSphere Client, right-click the name of the virtual machine, and select Edit Settings.
  - Step 5** In the **Virtual Machine Properties** dialog box, select the Resources tab.
  - Step 6** In the **Settings** column, select CPU.

- Step 7** Under **Resource Allocation**, enter the new reservation value in the Reservation textbox. The new reservation value will be calculated as number of CPUs multiply by the 1 virtual CPU cycles in GHz (from step 2).
- Step 8** Click **OK** to close the **Virtual Machine Properties** dialog box and power on the virtual machine.
- 

## Changing Reservations on Virtual Machines Running with E5440 Processors

With 8.6(2) and later releases, the CPU reservations are now included in OVA's. The reservation numbers for CPU are based on the Xeon 7500 processor. If the customer chooses to run on the E5440 processor, the CPU reservation numbers are higher than available cycles on 1 virtual CPU.

Based on the lab tests, we see that the 2.4 GHz reservation on E5540 processor has the same performance as a 2.53GHz Xeon 7500 processor. Therefore, it is fine to change the reservation numbers on the virtual machine manually when running them on the E5440 processors for 5000, 10,000, or 20,000 deployment options.

For more on the reservations for the E5440 processor, see the docwiki available at [http://docwiki.cisco.com/wiki/OVA\\_Template\\_Details\\_for\\_Unity\\_Connection\\_Release\\_8.6.2](http://docwiki.cisco.com/wiki/OVA_Template_Details_for_Unity_Connection_Release_8.6.2).

### To Change the Reservation Value of the Cisco Unity Connection 8.6(2) or Later Virtual Machine

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- Step 1** In VMware vSphere Client, select the host on which virtual machine is created.
- Step 2** Power off the virtual machine on which you deployed the OVA template.
- Step 3** In the left pane of vSphere Client, right-click the name of the virtual machine, and select Edit Settings.
- Step 4** In the **Virtual Machine Properties** dialog box, select the Resources tab.
- Step 5** In the **Settings** column, select CPU.
- Step 6** Under **Resource Allocation**, enter the new reservation value in the **Reservation** textbox. The new reservation value will be calculated as number of CPUsX2.4GHz.
- Step 7** Click **OK** to close the **Virtual Machine Properties** dialog box and power on the virtual machine.
- 

## Verifying DNS Registration for Installation

### To Verify All Server to be Added are Registered in DNS

---

- Step 1** Open a command prompt.
- Step 2** To ping each server by its DNS name, enter **ping** *DNS\_name*.
- Step 3** To look up each server by IP address, enter **nslookup** *IP\_address*.
-

# Gathering Information for Installation

Revised July 15, 2010

Use [Table 1-6](#) to record the information about your server. Gather this information for a Unity Connection server that is not in a cluster, or for each Unity Connection server that you are installing in a cluster. You may not need to obtain all the information; gather only the information that is pertinent to your system and network configuration. You should make copies of this table and record your entries for each server in a separate table.



## Note

Because some of the fields are optional, they may not apply to your configuration. For example, if you choose not to set up an SMTP host during installation, the parameter still displays, but you do not need to enter a value.



## Caution

You cannot change some of the fields after installation without reinstalling the software, so be sure to enter the values that you want.

The last column in the table shows whether you can change a field after installation, and if you can, it provides the appropriate Command Line Interface (CLI) command.



## Caution

If you are installing Unity Connection on a virtual machine, changing some of the values listed in [Table 1-6](#) after installation requires you to obtain updated licenses.

## Server Configuration Data

Parameter	Description	Can Entry Be Changed After Installation?
<b>Administrator ID</b> Your entry:	This field specifies the administrator account user ID that you use for secure shell access to the CLI, for logging into Cisco Unified Communications Operating System Administration and for logging into the Disaster Recovery System.	No, you cannot change the entry after installation.  <b>Note</b> After installation, you can create additional administrator accounts, but you cannot change the original administrator account user ID.
<b>Administrator Password</b> Your entry:	This field specifies the password for the Administrator account, which you use for secure shell access to the CLI, for logging into Cisco Unified Communications Operating System Administration and for logging into the Disaster Recovery System.  Ensure the password is at least six characters long; it can contain alphanumeric characters, hyphens, and underscore.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set password user admin</b>
<b>Application User Name</b> Your entry:	You use the Application User name as the default user name for applications that are installed on the system, for example, Cisco Unity Connection Administration and Cisco Unity Connection Serviceability.	Yes, you can change the entry after installation by using Cisco Unity Connection Administration.

**Server Configuration Data (continued)**

<b>Parameter</b>	<b>Description</b>	<b>Can Entry Be Changed After Installation?</b>
<b>Application User Password</b> Your entry:	You use the Application User password as the default password for applications that are installed on the system, for example, Cisco Unity Connection Administration and Cisco Unity Connection Serviceability.	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; utils cuc reset password</b>
<b>Country</b> Your entry:	From the list, choose the appropriate country for your installation.	No, you cannot change the entry after installation.
<b>DHCP</b> Your entry:	If you want to use DHCP to automatically configure the network settings on your server, choose <b>Yes</b> .  If you choose <b>Yes</b> , you do not get prompted for DNS or static configuration settings.  If you choose <b>No</b> , you must enter a hostname, IP Address, IP Mask, and Gateway.	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; set network dhcp</b>
<b>DNS Enable</b> Your entry:	A DNS server resolves a hostname into an IP address or an IP address into a hostname. If you do not have a DNS server, enter <b>No</b> .  If you have a DNS server, Cisco recommends that you enter <b>Yes</b> to enable DNS.  <b>Note</b> When DNS is not enabled, you should only enter IP addresses (not host names) for all network devices.	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; set network dns</b>
<b>DNS Primary</b> Your entry:	Enter the IP address of the DNS server that you want to specify as the primary DNS server. Enter the IP address in dotted decimal format as ddd.ddd.ddd.ddd.  Consider this field mandatory if DNS is set to <b>yes</b> (DNS enabled).	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; set network dns</b>
<b>DNS Secondary (optional)</b> Your entry:	Enter the IP address of the DNS server that you want to specify as the optional secondary DNS server.	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; set network dns</b>
<b>Domain</b> Your entry:	This field represents the name of the domain in which this machine is located.  Consider this field mandatory if DNS is set to <b>yes</b> .	Yes, you can change the entry after installation by using the following CLI command: <b>CLI &gt; set network domain</b>

## Server Configuration Data (continued)


Parameter	Description	Can Entry Be Changed After Installation?
<b>Gateway Address</b> Your entry:	Enter the IP address of the network gateway.  If you do not have a gateway, you must still set this field to 255.255.255.255. Not having a gateway may limit you to only being able to communicate with devices on your subnet.  If DHCP is set to <b>No</b> , consider this field mandatory.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set network gateway</b>
<b>Hostname</b> Your entry:	Enter a host name that is unique to your server.  The host name can comprise up to 64 characters and can contain alphanumeric characters and hyphens. The first character cannot be a hyphen.  If DHCP is set to <b>No</b> , consider this field mandatory.	Yes, you can change the entry after installation.  For information, see the “Renaming Cisco Unity Connection 9.x Servers” chapter of the <i>Reconfiguration and Upgrade Guide for Cisco Unity Connection, Release 9.x</i> , available at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug060.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug060.html</a> .
<b>IP Address</b> Your entry:	Enter the IP address of your server.  If DHCP is set to <b>No</b> , consider this field mandatory.	Yes, you can change the entry after installation.  For information, see the “Changing the IP Addresses of Cisco Unity Connection 9.x Servers” chapter of the <i>Reconfiguration and Upgrade Guide for Cisco Unity Connection, Release 9.x</i> , available at <a href="http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug050.html">http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug050.html</a> .
<b>IP Mask</b> Your entry:	Enter the IP subnet mask of this machine.  If DHCP is set to <b>No</b> , consider this field mandatory.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set network ip eth0</b>
<b>Location</b> Your entry:	Enter the location of the server.  The system uses this information to generate certificate signing requests (CSRs), which are used to obtain third-party certificates.  You can enter any location that is meaningful within your organization. Examples include the state or the city where the server is located.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set web-security</b>




*Server Configuration Data (continued)*

Parameter	Description	Can Entry Be Changed After Installation?
<b>MTU Size</b> Your entry:	<p>The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network.</p> <p>Enter the MTU size in bytes for your network.</p> <p>The MTU size that you configure must not exceed the lowest MTU size that is configured on any link in your network.</p> <p>Default: 1500 bytes</p> <p>The MTU setting must be the same on both servers in a cluster.</p>	<p>Yes, you can change the entry after installation by using the following CLI command:</p> <p><b>CLI &gt; set network mtu</b></p>
<b>NIC Duplex</b> Your entry:	<p>Choose the duplex mode for the network interface card (NIC), either Full or Half.</p> <p><b>Note</b> This parameter only displays when you choose not to use Automatic Negotiation.</p>	<p>Yes, you can change the entry after installation by using the following CLI command:</p> <p><b>CLI &gt; set network nic</b></p>
<b>NIC Speed</b> Your entry:	<p>Choose the speed for the NIC, either 10 megabits per second or 100 megabits per second.</p> <p><b>Note</b> This parameter only displays when you choose not to use Automatic Negotiation.</p>	<p>Yes, you can change the entry after installation by using the following CLI command:</p> <p><b>CLI &gt; set network nic</b></p>
<b>NTP Server</b> Your entry:	<p>Enter the hostname or IP address of one or more network time protocol (NTP) servers with which you want to synchronize.</p> <p>You can enter up to five NTP servers.</p> <p><b>Note</b> To avoid potential compatibility, accuracy, and network jitter problems, the external NTP servers that you specify for the primary node should be NTP v4 (version 4). If you are using IPv6 addressing, external NTP servers must be NTP v4.</p>	<p>Yes, you can change the entry after installation by using the Cisco Unified Communications Operating System:</p> <p><b>Settings &gt; NTP Servers</b></p>

## Server Configuration Data (continued)

Parameter	Description	Can Entry Be Changed After Installation?
<b>Organization</b> Your entry:	Enter the name of your organization.  <b>Tip</b> You can use this field to enter multiple organizational units. To enter more than one organizational unit name, separate the entries with a comma. For entries that already contain a comma, enter a backslash before the comma that is included as part of the entry.  <b>Note</b> The value you enter gets used to generate a Certificate Signing Request (CSR).	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set web-security</b>
<b>Security Password</b> Your entry:	Servers in the cluster use the security password to communicate with one another.  The password must contain at least six alphanumeric characters. It can contain hyphens and underscores, but it must start with an alphanumeric character.  <b>Note</b> Save this password. For a Connection cluster, you will be asked to enter the same security password for both the publisher and subscriber servers.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set password user security</b>   <b>Caution</b> When a Connection cluster is configured, to avoid losing communications between the publisher and subscriber servers, you must change the Security password on both servers and reboot both servers. For more information, see the description of this command in the <i>Command Line Interface Reference Guide for Cisco Unified Communications Solutions</i> .
<b>SMTP Location</b> Your entry:	Enter the hostname or IP address for the SMTP server that is used for outbound e-mail.  The hostname can contain alphanumeric characters, hyphens, or periods, but it must start with an alphanumeric character.  <b>Note</b> You must fill in this field if you plan to use electronic notification.	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set smtp</b>
<b>State</b> Your entry:	Enter the state where the server is located.  <b>Note</b> The value you enter gets used to generate a Certificate Signing Request (CSR).	Yes, you can change the entry after installation by using the following CLI command:  CLI > <b>set web-security</b>

**Server Configuration Data (continued)**

Parameter	Description	Can Entry Be Changed After Installation?
<b>Time Zone</b> Your entry:	This field specifies the local time zone and offset from Greenwich Mean Time (GMT).  Choose the time zone that most closely matches the location of your machine.   <b>Caution</b> In a cluster, the subscriber server must be configured to use the same time zone as the publisher server.	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set timezone</b>
<b>Unit</b> Your entry:	Enter your unit.  <b>Note</b> The value you enter gets used to generate a Certificate Signing Request (CSR).	Yes, you can change the entry after installation by using the following CLI command:  <b>CLI &gt; set web-security</b>

## Using the Cisco Unified Communications Answer File Generator

Cisco Unified Communications Answer File Generator, a web application, generates answer files for unattended installations of Cisco Unity Connection. Individual answer files get copied to the root directory of a USB key or a floppy diskette and are used in addition to the Cisco Unity Connection DVD during the installation process.

The web application supports the following features:

- Allows simultaneous generation and saving of answer files for unattended installs on the publisher server and all subscriber servers.
- Provides syntactical validation of data entries.
- Provides online help and documentation.

The following usage requirements apply:

- The web application supports only fresh installs and does not support upgrades.
- If DHCP client is being used on the publisher server, and subscriber server answer files are also being generated, you must specify the publisher server IP address.

You can access the Cisco Unified Communications Answer File Generator at the following URL:

[http://www.cisco.com/web/cuc\\_afg/index.html](http://www.cisco.com/web/cuc_afg/index.html)

The Cisco Unified Communications Answer File Generator supports Internet Explorer version 6.0 or higher and Mozilla version 1.5 or higher.

**Note**

Cisco requires that you use USB keys that are compatible with Linux 2.4. Cisco recommends that you use USB keys that are preformatted to be compatible with Linux 2.4 for the configuration file. These keys will have a W95 FAT32 format.

## Handling Network Errors During Installation

During the installation process, the installation program verifies that the server can successfully connect to the network by using the network configuration that you enter. If it cannot connect, a message displays, and you get prompted to select one of the following options:

- **RETRY** —The installation program tries to validate networking again. If validation fails again, the error dialog box displays again.
- **REVIEW (Check Install)**—This option allows you to review and modify the networking configuration. When detected, the installation program returns to the network configuration windows.

Networking gets validated after you complete each networking window, so the message might display multiple times.

- **HALT**— The installation halts. You can copy the installation log files to a USB disk to aid troubleshooting of your network configuration.



**Note** When Cisco Unity Connection is installed on a virtual machine, USB drives are not supported.

- **IGNORE** —The installation continues. The networking error gets logged. In some cases, the installation program validates networking multiple times, so this error dialog box might display multiple times. If you choose to ignore network errors, the installation may fail.

## Installing the New Operating System and Application

This section describes how to install the operating system and the Unity Connection application. You install the operating system and application by running one installation program.

- [Navigating Within the Installation Wizard, page 1-22](#)
- [Starting the Installation, page 1-23](#)
- [Entering Preexisting Configuration Information, page 1-25](#)
- [Applying a Patch, page 1-25](#)
- [Performing the Basic Installation, page 1-29](#)
- [Configuring a Single Server or Publisher Server in a Unity Connection Cluster, page 1-30](#)
- [Configuring the Subscriber Server in a Unity Connection Cluster, page 1-32](#)

## Navigating Within the Installation Wizard

For instructions on how to navigate within the installation wizard, see [Table 1-7](#).

**Table 1-7** *Installation Wizard Navigation*

To Do This	Press This
Move to the next field	<b>Tab</b>
Move to the previous field	<b>Alt-Tab</b>
Choose an option	Space bar or <b>Enter</b>

**Table 1-7** *Installation Wizard Navigation*

To Do This	Press This
Scroll up or down in a list	Up or down arrow
Go to the previous window	Space bar or <b>Enter</b> to choose <b>Back</b> (when available)
Get help information on a window	Space bar or <b>Enter</b> to choose <b>Help</b> (when available)

## Starting the Installation

To start the installation, follow this procedure.



### Note

If you have a new server with the Unity Connection software preinstalled, you do not need to reinstall Connection unless you want to reimagine the server with a later product release. You can go directly to the [“Entering Preexisting Configuration Information” procedure on page 1-25](#).

### Procedure

- 
- Step 1** If you have a USB key with configuration information that the Answer File Generator generated, insert it now.
- Step 2** Insert the installation DVD into the tray and restart the server, so it boots from the DVD. After the server completes the boot sequence, the DVD Found window displays.
- Step 3** To perform the media check, choose **Yes** or, to skip the media check, choose **No**.  
The media check checks the integrity of the DVD. If your DVD passed the media check previously, you might choose to skip the media check.
- Step 4** If you choose **Yes** to perform the media check, the Media Check Result window displays. Perform these tasks:
- If the **Media Check Result** displays **Pass**, choose **OK** to continue the installation.
  - If the media fails the **Media Check**, either download another copy from Cisco.com or obtain another DVD directly from Cisco.
- Step 5** The system installer performs the following hardware checks to ensure that your system is correctly configured. If the installer makes any changes to your hardware configuration settings, you will get prompted to restart your system. Leave the DVD in the drive during the reboot:
- First, the installation process checks for the correct drivers, and you may see the following warning:  

```
No hard drives have been found. You probably need to manually choose device drivers for install to succeed. Would you like to select drivers now?
```

To continue the installation, choose **Yes**.
  - The installation next checks to see whether you have a supported hardware platform. If your server does not meet the exact hardware requirements, the installation process fails with a critical error. If you think this is not correct, capture the error and report it Cisco support.
  - The installation process next verifies RAID configuration and BIOS settings.




---

**Note** If this step repeats, choose **Yes** again.

---

- If the installation program must install a BIOS update, a notification appears telling you that the system must reboot. Press any key to continue with the installation.

After the hardware checks complete, the **Product Deployment Selection** window displays.

**Step 6** In the Product Deployment Selection window, select the product to install; then, choose **OK**. You can choose from the following options:

- Cisco Unified Communications Manager
- Cisco Unity Connection
- Cisco Unified Communications Manager Business Edition (includes Cisco Unified Communications Manager and Unity Connection)
- Cisco Enterprise License Manager




---

**Note** The window indicates which products are supported and not supported by your hardware. If only one product is supported, you do not choose which product to install.

---




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**Note** If one or more products are not supported on your server, that information also appears. If Unity Connection is listed as not supported on your server, confirm that the server meets Connection 9.x specifications. See the applicable table for your server model in the “Cisco Unity Connection Supported Servers” section of the *Cisco Unity Connection 9.x Supported Platforms List* at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucs.pl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucs.pl.html). (If a memory upgrade is required, see the “Installing a Memory Upgrade or Replacing Hard Disks (Selected Servers Only)” section on page 1-11 before you start the installation again.)

---

**Step 7** If software is currently installed on the server, the **Overwrite Hard Drive** window opens and displays the current software version on your hard drive and the version on the DVD. Choose **Yes** to continue with the installation or **No** to cancel.




---

**Caution** If you choose **Yes** on the **Overwrite Hard Drive** window, all existing data on your hard drive gets overwritten and destroyed.

---

The Platform Installation Wizard window displays.

**Step 8** Choose the applicable option:

- If Cisco Unity Connection software is already installed on the server, click **Skip**, and continue with the “[Entering Preexisting Configuration Information](#)” section on page 1-25.
- If you want to perform a standard installation, click **Proceed**, and continue with this procedure.
- If you want to perform an unattended installation, click **Skip**, and continue with the “[Entering Preexisting Configuration Information](#)” section on page 1-25. For an unattended installation, you provide preexisting configuration information on a USB key or floppy disk.
- If you want to install the software now and configure it later, click **Skip**, and continue with the “[Entering Preexisting Configuration Information](#)” section on page 1-25. This installation method may take more time than other methods.

- Step 9** Choose the type of installation to perform by doing the following steps.
- In the Apply Additional Release window, choose one of the options:
- To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue with the [“Applying a Patch” section on page 1-25](#).
  - To skip this step, choose **No**.
  - To return to the previous window, choose **Back**.
- Step 10** In the Basic Install window, choose **Continue** to install the software version on the DVD or configure the preinstalled software. Continue with the [“Performing the Basic Installation” section on page 1-29](#).
- 

## Entering Preexisting Configuration Information

Start here if you have a server that has the product preinstalled or if you chose **Skip** in the Platform Installation Wizard window.

### Procedure

- Step 1** After the system restarts, the Preexisting Installation Configuration window displays.
- Step 2** If you have preexisting configuration information that the Answer File Generator created, that is stored on a floppy disc or a USB key, insert the disc or the USB key now and choose **Continue**. The installation wizard will read the configuration information during the installation process.



**Note** If a popup window states that the system detected new hardware, press any key and then choose **Install** from the next window.

---

The Platform Installation Wizard window displays.

- Step 3** To continue with the Platform Installation Wizard, choose **Proceed**.
- Step 4** Choose the type of installation to perform by doing the following steps.
- In the Apply Additional Release window, choose one of the options:
- To upgrade to a later Service Release of the software during installation, choose **Yes**. Continue with the [“Applying a Patch” section on page 1-25](#).
  - To skip this step, choose **No**.
  - To return to the previous window, choose **Back**.
- Step 5** In the Basic Install window, choose **Continue**. Continue with the [“Performing the Basic Installation” section on page 1-29](#).
- 

## Applying a Patch

If you choose **Yes** in the Apply a Patch window, the installation wizard installs the software version on the DVD first and then restarts the system. You must obtain the appropriate upgrade file from Cisco.com before you can upgrade during installation.

**Note**

You can upgrade to any supported higher release, so long as you have a full patch, not an ES or an SR, in which case you can only upgrade to a later service release within the same maintenance release.

You can access the upgrade file during the installation process from either a local disk (DVD) or from a remote FTP or SFTP server.

**Procedure**

- 
- Step 1** The Install Upgrade Retrieval Mechanism Configuration window displays.
- Step 2** Choose the upgrade retrieval mechanism to use to retrieve the upgrade file:
- **SFTP**—Retrieves the upgrade file from a remote server by using the Secure File Transfer Protocol (SFTP). Skip to the [“Upgrading from a Remote Server” section on page 1-27](#).
  - **FTP**—Retrieves the upgrade file from a remote server by using File Transfer Protocol (FTP). Skip to the [“Upgrading from a Remote Server” section on page 1-27](#).
  - **LOCAL**—Retrieves the upgrade file from a local DVD. Continue with the [“Upgrading from a Local Disk” section on page 1-26](#).
- 

## Upgrading from a Local Disk

Before you can upgrade from a local disk, you must download the appropriate patch file from Cisco.com and use it to create an upgrade DVD. You must create an ISO image on the DVD from the upgrade file. Just copying the ISO file to a DVD will not work.

**Procedure**

- 
- Step 1** When the Local Patch Configuration window displays, enter the patch directory and patch name, if required, and choose **OK**.  
The Install Upgrade Patch Selection Validation window displays.
- Step 2** The window displays the patch file that is available on the DVD. To update the system with this patch, choose **Continue**.
- Step 3** Choose the upgrade patch to install. The system installs the patch, then restarts the system with the upgraded software version running.  
After the system restarts, the Preexisting Configuration Information window displays.
- Step 4** To continue the installation, choose **Proceed**.  
The Platform Installation Wizard window displays.
- Step 5** To continue the installation, choose **Proceed** or choose **Cancel** to stop the installation.  
If you choose **Proceed**, the Apply Patch window displays. Continue with [Step 6](#).  
If you choose **Cancel**, the system halts, and you can safely power down the server.
- Step 6** When the Apply Patch window displays, choose **No**.
- Step 7** The Windows Upgrade window displays.



- Step 8** Choose **No** and continue with the “Performing the Basic Installation” section on page 1-29.
- 

## Upgrading from a Remote Server

Before you can upgrade from a remote server, you must download the appropriate patch file from Cisco.com to an FTP or SFTP server that the server can access.

Cisco allows you to use any SFTP server product but recommends SFTP products that have been certified with Cisco through the Cisco Technology Developer Partner program (CTDP). CTDP partners, such as GlobalSCAPE, certify their products with specified version of Cisco Unified Communications Manager. For information on which vendors have certified their products with your version of Cisco Unified Communications Manager, refer to <http://www.cisco.com/pcgi-bin/ctdp/Search.pl>. For information on using GlobalSCAPE with supported Cisco Unified Communications versions, refer to <http://www.globalscape.com/gsftps/cisco.aspx>. Cisco uses the following servers for internal testing. You may use one of the servers, but you must contact the vendor for support:

- Open SSH (for Unix systems. Refer to <http://sshwindows.sourceforge.net/>)
- Cygwin (<http://www.cygwin.com/>)
- Titan (<http://www.titanftp.com/>)



### Note

For issues with third-party products that have not been certified through the CTDP process, contact the third-party vendor for support.

---

If you chose to upgrade through an FTP or SFTP connection to a remote server, you must first configure network settings so that the server can connect to the network.

### Procedure

---

- Step 1** The Auto Negotiation Configuration window displays.
- Step 2** The installation process allows you to automatically set the speed and duplex settings of the Ethernet network interface card (NIC) by using automatic negotiation. You can change this setting after installation.



**Note** To use this option, your hub or Ethernet switch must support automatic negotiation.

---

- To enable automatic negotiation, choose **Yes**.  
The MTU Configuration window displays. Continue with [Step 4](#).
  - To disable automatic negotiation, choose **No**. The NIC Speed and Duplex Configuration window displays. Continue with [Step 3](#).
- Step 3** If you chose to disable automatic negotiation, manually choose the appropriate NIC speed and duplex settings now and choose **OK** to continue.  
The MTU Configuration window displays.
- Step 4** In the MTU Configuration window, you can change the MTU size from the operating system default.  
The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network. If you are unsure of the MTU setting for your network, use the default value.

**Caution**


---

If you configure the MTU size incorrectly, your network performance can be affected.

---

- To accept the default value (1500 bytes), choose **No**.
- To change the MTU size from the operating system default, choose **Yes**, enter the new MTU size, and choose **OK**.

The DHCP Configuration window displays.

**Step 5** For network configuration, you can choose to either set up static network IP addresses for the server and gateway or to use Dynamic Host Configuration Protocol (DHCP). Static IP addresses are recommended. If you use DHCP, use static DHCP.

- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes**. The installation process attempts to verify network connectivity. Skip to [Step 8](#).
- If you want to configure static IP addresses for the server, choose **No**. The Static Network Configuration window displays.

**Step 6** If you chose not to use DHCP, enter your static network configuration values and choose **OK**. See [Table 1-6](#) for field descriptions.

The DNS Client Configuration window displays.

**Step 7** To enable DNS, choose **Yes**, enter your DNS client information, and choose **OK**. See [Table 1-6](#) for field descriptions.

After the system configures the network and checks for connectivity, the Remote Patch Configuration window displays.

**Step 8** Enter the location and login information for the remote file server. The system connects to the remote server and retrieves a list of available upgrade patches.

If the upgrade file is located on a Linux or Unix server, you must enter a forward slash at the beginning of the directory path. For example, if the upgrade file is in the patches directory, you must enter `/patches`

If the upgrade file is located on a Windows server, remember that you are connecting to an FTP or SFTP server, so use the appropriate syntax, including:

- Begin the path with a forward slash (/) and use forward slashes throughout the path.
- The path must start from the FTP or SFTP root directory on the server, so you cannot enter a Windows absolute path, which starts with a drive letter (for example, C:).

The Install Upgrade Patch Selection window displays.

**Step 9** Choose the upgrade patch to install. The system downloads, unpacks, and installs the patch and then restarts the system with the upgraded software version running.

After the system restarts, the Preexisting Configuration Information window displays.

**Step 10** To continue the installation, choose **Proceed**.

The Platform Installation Wizard window displays.

**Step 11** To continue the installation, choose **Proceed** or choose **Cancel** to stop the installation.

If you choose **Proceed**, the Apply Patch window displays. Continue with [Step 12](#).

If you choose **Cancel**, the system halts, and you can safely power down the server.

**Step 12** When the Apply Patch window displays, choose **No**.

**Step 13** The Windows Upgrade window displays.

**Step 14** Choose **No** and continue with the “Performing the Basic Installation” section on page 1-29.

---

## Performing the Basic Installation

### Procedure

---

**Step 1** When the Timezone Configuration displays, choose the appropriate time zone for the server and then choose **OK**.



**Caution** In a cluster, the subscriber server must be configured to use the same time zone as the publisher server.

---

The Auto Negotiation Configuration window displays.

**Step 2** The installation process allows you to automatically set the speed and duplex settings of the Ethernet network interface card (NIC) by using automatic negotiation. You can change this setting after installation.

- To enable automatic negotiation, choose **Yes** and continue with [Step 5](#).

The MTU Configuration window displays.



**Note** To use this option, your hub or Ethernet switch must support automatic negotiation.

---

- To disable automatic negotiation, choose **No** and continue with [Step 3](#).

The NIC Speed and Duplex Configuration window displays.

**Step 3** If you chose to disable automatic negotiation, manually choose the appropriate NIC speed and duplex settings now and choose **OK** to continue.

The MTU Configuration window displays.

**Step 4** In the MTU Configuration window, you can change the MTU size from the operating system default.

The maximum transmission unit (MTU) represents the largest packet, in bytes, that this host will transmit on the network. If you are unsure of the MTU setting for your network, use the default value, which is 1500 bytes.



**Caution** If you configure the MTU size incorrectly, your network performance can be affected.

---

- To accept the default value (1500 bytes), choose **No**.
- To change the MTU size from the operating system default, choose **Yes**, enter the new MTU size, and choose **OK**.

The DHCP Configuration window displays.

**Step 5** For network configuration, you can choose to either set up a static network IP address for the server or to use Dynamic Host Configuration Protocol (DHCP). Static IP addresses are recommended. If you use DHCP, use static DHCP

- If you have a DHCP server that is configured in your network and want to use DHCP, choose **Yes**. The network restarts, and the Administrator Login Configuration window displays. Skip to [Step 8](#).
- If you want to configure a static IP address for the server, choose **No**. The Static Network Configuration window displays.

**Step 6** If you chose not to use DHCP, enter your static network configuration values and choose **OK**. See [Table 1-6](#) for field descriptions.

The DNS Client Configuration window displays.

**Step 7** To enable DNS, choose **Yes**, enter your DNS client information, and choose **OK**. See [Table 1-6](#) for field descriptions.

The network restarts by using the new configuration information, and the Administrator Login Configuration window displays.

**Step 8** Enter your Administrator login and password from [Table 1-6](#).




---

**Note** The Administrator login must start with an alphabetic character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. You will need the Administrator login to log in to Cisco Unified Communications Operating System Administration, the command line interface, and the Disaster Recovery System.

---

The Certificate Information window displays.

**Step 9** Enter your certificate signing request information and choose **OK**.

The First Node Configuration window displays.

**Step 10** You can configure this server as the first (publisher) server in a Connection cluster, as the second (subscriber) server in a cluster, or as a server without a Connection cluster.

- To configure this server as the publisher server or as a server without a Connection cluster, choose **Yes** and continue with the [“Configuring a Single Server or Publisher Server in a Unity Connection Cluster”](#) section on page 1-30.
  - To configure this server as the subscriber server, choose **No** and continue with the [“Configuring the Subscriber Server in a Unity Connection Cluster”](#) section on page 1-32.
- 

## Configuring a Single Server or Publisher Server in a Unity Connection Cluster

After you finish the basic installation, follow this procedure to configure the server as the publisher server in a Unity Connection cluster or as a server without a Unity Connection cluster.

### Procedure

---

**Step 1** The Network Time Protocol Client Configuration window displays.

Cisco recommends that you use an external NTP server to ensure accurate system time on the publisher server. Ensure the external NTP server is stratum 9 or higher (meaning stratum 1-9). The subscriber server will get its time from the publisher server.



---

**Note** When you are installing Unity Connection on a virtual machine, you must specify an external NTP server.

---

- Step 2** Choose whether you want to configure an external NTP server or manually configure the system time.
- To set up an external NTP server, choose **Yes** and enter the IP address, NTP server name, or NTP server pool name for at least one NTP server. You can configure up to five NTP servers, and Cisco recommends that you use at least three. Choose **Proceed** to continue with the installation.
- The system contacts an NTP server and automatically sets the time on the hardware clock.



---

**Note** If the Test button displays, you can choose **Test** to check whether the NTP servers are accessible.

---

- To manually configure the system time, choose **No** and enter the appropriate date and time to set the hardware clock. Choose **OK** to continue with the installation.

The Database Access Security Configuration window displays.

- Step 3** Enter the Security password from [Table 1-6](#).



---

**Note** The Security password must start with an alphanumeric character, be at least six characters long, and can contain alphanumeric characters, hyphens, and underscores. The system uses this password to authorize communications between the publisher and subscriber servers; you must ensure this password is identical on the two servers.

---

The SMTP Host Configuration window displays.

- Step 4** If you want to configure an SMTP server, choose **Yes** and enter the SMTP server name.



---

**Note** You must configure an SMTP server to use certain platform features; however, you can also configure an SMTP server later by using the platform GUI or the command line interface.

---

- Step 5** Choose **OK**. The Application User Configuration window displays.
- Step 6** Enter the Application User name and password from [Table 1-6](#) and confirm the password by entering it again.
- Step 7** Choose **OK**. The Platform Configuration Confirmation window displays.
- Step 8** To continue with the installation, choose **OK**; or to modify the platform configuration, choose **Back**.  
The system installs and configures the software. The DVD drive ejects, and the server reboots. Do not reinsert the DVD.
- Step 9** When the installation process completes, you get prompted to log in by using the Administrator account and password.
- Step 10** Complete the post-installation tasks that are listed in the [“Post-Installation Tasks”](#) section on page 1-33.
-

## Configuring the Subscriber Server in a Unity Connection Cluster

To configure the subscriber server in the cluster, follow these steps.



### Caution

You must configure the subscriber server on the publisher server using Cisco Unity Connection Administration before you install the subscriber server. See the “Configuring a Cisco Unity Connection 9.x Cluster” chapter of the *Cluster Configuration and Administration Guide for Cisco Unity Connection* at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/cluster\\_administration/guide/9xcuccagx/9xcuccag005.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/cluster_administration/guide/9xcuccagx/9xcuccag005.html).

### Procedure

#### Step 1

If you configured Network Time Protocol on the publisher server, ensure that it is synchronized with an NTP server before you install the subscriber server. From the Command Line Interface on the publisher server, enter **utils ntp status**. Ensure that the output indicates that the server is synchronized with an NTP server.



#### Note

If the publisher server is not synchronized with an NTP server, installation of the subscriber server will fail.



#### Note

When you are installing Cisco Unity Connection on a virtual machine, you must specify an external NTP server.

#### Step 2

On the First Node Configuration window, read the Warning and make sure you have correctly configured the publisher server. To continue with the installation of the subscriber server, click **OK**.

The Network Connectivity Test Configuration window displays.

#### Step 3

During installation of a subscriber server, the system checks to ensure that the subscriber server can connect to the publisher server.

- To pause the installation after the system successfully verifies network connectivity, choose **Yes**.
- To continue the installation with a pause, choose **No**.

The First Node Access Configuration window displays.

#### Step 4

Enter the connectivity information for the publisher server and choose **OK**.

The system checks for network connectivity.

If you chose to pause the system after the system successfully verifies network connectivity, the Successful Connection to First Node window displays. Choose **Continue**.



#### Note

If the network connectivity test fails, the system always stops and allows you to go back and reenter the parameter information.

The SMTP Host Configuration window displays.

#### Step 5

If you want to configure an SMTP server, choose **Yes** and enter the SMTP server name.



**Note** To use certain operating system features, you must configure an SMTP server; however, you can also configure an SMTP server later by using the operating system GUI or the command line interface.

The Platform Configuration Confirmation window displays.

- Step 6** To start installing the software, choose **OK**, or, if you want to change the configuration, choose **Back**.
- Step 7** When the installation process completes, you get prompted to log in by using the Administrator account and password.
- Step 8** Complete the post-installation tasks that are listed in the “[Post-Installation Tasks](#)” section on page 1-33.

## Post-Installation Tasks

### Revised June 27, 2013

After installing Unity Connection on your server, you must perform some post-installation tasks before you can begin using it. For a list of tasks, see [Table 1-8](#).




**Note** To access web applications, you must use a web browser from a computer that has network access to the Unity Connection server.

**Table 1-8** *Post-Installation Tasks*

Post-Installation Tasks	Important Notes
Log in as the Cisco Unity Connection Application User and change the Application User passwords.	See the “ <a href="#">Changing the Default Application User Passwords</a> ” section on page 1-34.
Install Cisco Unified Real-Time Monitoring Tool.	You can use Cisco Unified Real-Time Monitoring Tool to monitor system health, and view and collect logs.  For installation instructions and more information about Cisco Unified Real-Time Monitoring Tool, see the <i>Cisco Unified Real-Time Monitoring Tool Administration Guide</i> .
Activate Cisco Unity Connection feature services that you want to run.  Before you activate feature services, you must perform required preactivation tasks. For service activation requirements, refer to the <i>Cisco Unified Serviceability Administration Guide</i> .	Refer to <i>Cisco Unified Serviceability Administration Guide</i> .
Configure the backup settings.  Remember to back up your Cisco Unity Connection data daily.	Refer to <i>Disaster Recovery System Administration Guide</i> .

**Table 1-8** *Post-Installation Tasks (continued)*

Post-Installation Tasks	Important Notes
If applicable, configure any network management systems in use at your site.	Refer to the <i>Cisco Unified Serviceability Administration Guide</i> .
While installing Unity Connection on a virtual machine with 1v CPU and upto 4 GB RAM, make sure to install the <i>ciscocm.cuc_license_patch.sgn</i> COP file.	For more information on the specific Unity Connection version for which you need to install the COP file, see the Readme file available at the Download Software page.  To download the cop file and go to the Voice and Unified Communications Downloads page at <a href="http://www.cisco.com/cisco/software/navigator.html?mdfid=280082558">http://www.cisco.com/cisco/software/navigator.html?mdfid=280082558</a> .
	 <p><b>Note</b> To access the software download page, you must be signed in to Cisco.com as a registered user.</p>

## Changing the Default Application User Passwords

The installation sets all Application User passwords to the same Application User password that you entered during installation. Cisco recommends that you log in to Cisco Unity Connection Administration and change these passwords. See *Cisco Unity Connection System Administration Guide* for the procedure for changing a password.

## Activating Services

Even though all services are installed on the server, you may need to use Cisco Unified Serviceability to manually activate services that you want to run. For service recommendations and more information, see the *Cisco Unified Serviceability Administration Guide*.

## Examining Log Files

If you encounter problems with the installation, you may be able to examine the install log files by entering the following commands in Command Line Interface.

To obtain a list of install log files from the command line, enter

```
CLI>file list install *
```

To view the log file from the command line, enter

```
CLI>file view install log_file
```

where *log\_file* is the log file name.

You can also view logs by using the Cisco Unified Real-Time Monitoring Tool. For more information on using and installing the Cisco Unified Real-Time Monitoring Tool, refer to the *Cisco Unified Real-Time Monitoring Tool Administration Guide*.



You can get more information about installation events by viewing or downloading the System History log. Refer to the “Working with Trace and Log Central” chapter in the *Cisco Unified Real-Time Monitoring Tool Administration Guide*.

## Migrating to Unity Connection on a Virtual Machine

For information on migrating to Unity Connection on a virtual machine, see the “Replacing Cisco Unity Connection 9.x Servers or Hard Disks” chapter of the *Upgrade Guide for Cisco Unity Connection* at [http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug040.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug040.html).

---





# CHAPTER 1

## Installing Additional Languages on the Cisco Unity Connection 9.x Server

---

This chapter covers the information on downloading and installing additional languages while installing a new Unity Connection server.



### Note

To add languages to an existing Unity Connection server, see the “Adding or Removing Cisco Unity Connection 9.x Languages” chapter of the *Upgrade Guide for Cisco Unity Connection, Release 10.x*, available at

[http://www.cisco.com/c/en/us/td/docs/voice\\_ip\\_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug027.html](http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/9x/upgrade/guide/9xcucrugx/9xcucrug027.html).

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See the following sections:

- [Downloading Unity Connection Language Files, page 1-1](#)
- [Installing Unity Connection Language Files, page 1-2](#)

## Downloading Unity Connection Language Files

### To Download Unity Connection Language Files

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- Step 1** Download the Unity Connection languages that you want to install and do the following steps:
- a. Sign in as a registered user on the following Cisco.com link:  
<https://software.cisco.com/download/navigator.html?mdfid=280082558&i=rm>.
  - b. Expand **Unified Communications Applications > Voicemail and Unified Messaging > Cisco Unity Connection**, and select the applicable Unity Connection version.
  - c. On the Select a Software Type page, select **Cisco Unity Connection Locale Installer**.
  - d. On the Select a Release page, select the applicable Unity Connection version. The download links for the languages appear on the right side of the page.
  - e. Select the name of a file to download. On the Download Image page, note down the MD5 value and follow the on screen prompts to complete the download.



### Note

To access the software download page, you must be signed in to Cisco.com as a registered user.

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- Step 2** Follow the on-screen prompts to complete the download.
- Step 3** For each downloaded file, use a checksum generator to confirm that the MD5 checksum matches the checksum that is listed on Cisco.com. If the values do not match, the downloaded file is damaged.



**Caution** Do not attempt to use a damaged file to install software or the results will be unpredictable. If the MD5 values do not match, download the file again until the value for the downloaded file matches the value listed on Cisco.com.

- Step 4** Either copy the downloaded files to an FTP or SFTP server, or burn the files to CDs or DVDs. If you burn discs of the files, note the following considerations:
- Use the Joliet file system, which accommodates filenames up to 64 characters long.
  - If the disc-burning application that you are using includes an option to verify the contents of the burned disc, select that option. This causes the application to compare the contents of the burned disc with the source files.
  - Label the discs “Cisco Unity Connection <version> Languages.”
- Step 5** Delete the downloaded files to free disk space.

## Installing Unity Connection Language Files

Unity Connection languages (also known as locales) provide country-specific system prompts, graphical user interfaces, and text-to-speech functionality. You can install language files either by using a CD or DVD in the Unity Connection server, or by accessing the files from a remote source. See the applicable section:

- [Installing Unity Connection Language Files from a Disc, page 1-2](#)
- [Installing Unity Connection Language Files from a Network Location or from a Remote Server, page 1-3](#)



**Note** Languages are not licensed, and Unity Connection 9.x does not enforce a limit on the number of languages you can install and use. However, the more languages you install, the less hard-disk space is available for storing voice messages. In the *Cisco Unity Connection 9.x Supported Platforms List* guide, available at [http://www.cisco.com/en/US/docs/voice\\_ip\\_comm/connection/9x/supported\\_platforms/9xcucspl.html](http://www.cisco.com/en/US/docs/voice_ip_comm/connection/9x/supported_platforms/9xcucspl.html), information on the number of minutes of storage available on each server assumes that you have installed no more than five languages.

## Installing Unity Connection Language Files from a Disc

### To Install Unity Connection Language Files from a Disc

- Step 1** Stop the Connection Conversation Manager and Connection Mixer services:
- a. In Cisco Unity Connection Serviceability, expand **Tools** menu, select **Service Management**.
  - b. Under **Critical Services**, in the **Connection Conversation Manager** row, select **Stop**.

- c. Wait for the service to stop.
  - d. Also under **Critical Services**, in the **Connection Mixer** row, select **Stop**.
  - e. Wait for the service to stop.
- Step 2** Insert the Languages disc in the disc drive.
- Step 3** In Cisco Unified Operating System Administration, expand **Software Upgrades** menu, select **Install/Upgrade**. The Software Installation/Upgrade window displays.
- Step 4** In the **Source** list, select **DVD/CD**.
- Step 5** In the **Directory** field, enter the path to the folder that contains the language file on the CD or DVD. If the language file is in the root folder or if you created an ISO image DVD, enter a slash (/) in the Directory field.
- Step 6** To continue the language installation process, select **Next**.
- Step 7** Select the language that you want to install, and select **Next**.
- Step 8** Monitor the progress of the download.
- Step 9** *If you want to install another language:* Select **Install Another**, and repeat the steps for installation.  
*If you are finished installing languages:* Restart services:
- a. In Cisco Unity Connection Serviceability, expand **Tools** menu, select **Service Management**.
  - b. Under **Critical Services**, in the **Connection Conversation Manager** row, select **Start**.
  - c. Wait for the service to start.
  - d. Also under **Critical Services**, in the **Connection Mixer** row, select **Start**.
  - e. Wait for the service to start.
  - f. *If you installed Japanese:* Run the CLI command **utils service restart Cisco Tomcat** to restart the Tomcat service.

**Note**

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Make sure that the multilingual .cop files are installed on the exact specific CUC build that they were created for. Applying incorrect .cop files for your specific version results in an unexpected behavior of the user conversations.

---

## Installing Unity Connection Language Files from a Network Location or from a Remote Server

During this procedure, do not use the web browser controls (for example, Refresh/Reload) while accessing Cisco Unified Operating System Administration. Instead, use the navigation controls provided in the administration interface.

### To Install Unity Connection Language Files from a Network Location or from a Remote Server

---

- Step 1** Stop the **Connection Conversation Manager** and **Connection Mixer** services:
- a. In Cisco Unity Connection Serviceability, expand **Tools** menu, select **Service Management**.
  - b. Under **Critical Services**, in the **Connection Conversation Manager** row, select **Stop**.

- c. Wait for the service to stop.
- d. Also under **Critical Services**, in the **Connection Mixer** row, select **Stop**.
- e. Wait for the service to stop.

**Step 2** In Cisco Unified Operating System Administration, expand **Software Upgrades** menu, select **Install/Upgrade**. The Software Installation/Upgrade window appears.

**Step 3** In the **Source** list, select **Remote Filesystem**.

**Step 4** In the **Directory** field, enter the path to the folder that contains the language file on the remote system.

If the language file is located on a Linux or Unix server, you must enter a forward slash at the beginning of the folder path. (For example, if the language file is in the languages folder, you must enter **/languages**.)

If the language file is located on a Windows server, remember that you are connecting to an FTP or SFTP server, so use the appropriate syntax:

- Begin the path with a forward slash (/) and use forward slashes throughout the path.
- The path must start from the FTP or SFTP root folder on the server, so you cannot enter a Windows absolute path, which starts with a drive letter (for example, C:).

**Step 5** In the **Server** field, enter the server name or IP address.

**Step 6** In the **Username** field, enter your username on the remote server.

**Step 7** In the **User Password** field, enter your password on the remote server.

**Step 8** In the **Transfer Protocol** list, select the applicable option.

**Step 9** Select **Next**.

**Step 10** Select the language that you want to install, and select **Next**.

**Step 11** Monitor the progress of the download.

If you lose your connection with the server or close your browser during the installation process, you may see the following message when you try to access the **Software Upgrades** menu again:

Warning: Another session is installing software, click **Assume Control** to take over the installation.

If you are sure you want to take over the session, select **Assume Control**.

If Assume Control does not display, you can also monitor the language installation with the Real-Time Monitoring Tool.

**Step 12** *If you want to install another language:* Select **Install Another**, and repeat the steps for installation.

*If you are finished installing languages:* Restart services:

- a. In Cisco Unity Connection Serviceability, expand **Tools** menu, select **Service Management**.
- b. Under **Critical Services**, in the **Connection Conversation Manager** row, select **Start**.
- c. Wait for the service to start.
- d. Also under **Critical Services**, in the **Connection Mixer** row, select **Start**.
- e. Wait for the service to start.
- f. *If you installed Japanese:* Run the CLI command **utils service restart Cisco Tomcat** to restart the Tomcat service.

**Note**

---

Make sure that the multilingual .cop files are installed on the exact specific CUC build that they were created for. Applying incorrect .cop files for your specific version results in an unexpected behavior of the user conversations.

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