Migration to Cisco Unified Communications Manager Release 10.5(1) Using Prime Collaboration Deployment

First Published: May 08, 2014

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

© 2015 Cisco Systems, Inc. All rights reserved.

CONTENTS

CHAPTER 1 **Preparing for Migration** 1

- Introduction 1
- About M1 Migration 1
- Migration Preparation Checklist 2
  - Licensing 2
  - Compatibility Verification 3
  - Virtualization Requirements 3
  - Software Downloads 4
  - Configuration and Login Information 4
  - Cluster Registration 5
  - Security Tokens 5
  - Test Plan 5
  - Cisco Unified Communications Manager Backup 5
- Pre-Migration Procedures 6

CHAPTER 2 **Upgrading, Migrating, and Configuring** 9

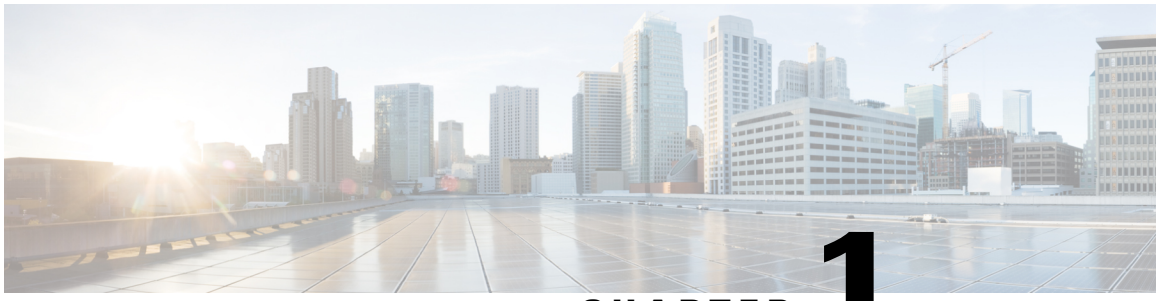
- Upgrade Process 9
- Upgrade Current Release to Release 6.1(5) or 7.1(5) 10
- Deploy Prime Collaboration Deployment on a Virtual Machine 11
- Configure Prime Collaboration Deployment to Migrate Current Unified Communications Manager Cluster to Release 10.5(1) 12
  - Add ESXi Host Server 13
  - Discover Existing Cluster 13
  - Define Migration Cluster 14
  - Add a Migration Task 15
- Migrate Cisco Unified Communications Manager to Release 10.5(1) 16

CHAPTER 3 **Rollback Procedure** 19

Rollback Procedure 19

CHAPTER 4 Links and References 21

Links and References 21



CHAPTER 1

Preparing for Migration

- Introduction, page 1
- About M1 Migration, page 1
- Migration Preparation Checklist, page 2
- Pre-Migration Procedures, page 6

Introduction

Cisco Prime Collaboration Deployment is a migration application for Unified Communications applications. Beginning with release 10.0(1) Cisco Unified Communications Manager supports only virtual machines and does not support physical servers. Prime Collaboration Deployment 10.5(1) allows customers to migrate their existing clusters deployed on physical servers to Cisco Unified Communications Manager Release 10.5(1) on virtual machines. When you have a pre-10.0(1) Cisco Unified Communications Manager cluster that is running on a physical machine and you use Prime Collaboration Deployment to migrate to Cisco Unified Communications Manager 10.5(1) running on virtual machines this process is referred to as M1 migration.

This document describes the migration procedures for Cisco Unified Communications Manager Release 10.5(1) from the following releases.

- Releases 6.1(5), 7.1(3), 7.1(5), 8.0(1–3), 8.5(1), 8.6(1–2), 9.0(1), 9.1(1–2)

About M1 Migration

Migration to Cisco Unified Communications Manager Release 10.5(1) using Prime Collaboration Deployment is supported only for the Cisco Unified Communications Manager versions listed in the Introduction section. Upgrading directly to Unified Communications Manager Release 10.5(1) from Releases 4.1(3), 4.2(3), 4.3(2), 5.1(2), 5.1(3), 6.0(1), 6.1(1), 6.1(2), 6.1(3), 7.0(1), 7.0(2), and 7.1(2) is not supported.

For these releases, you must upgrade to an intermediate release before you use the M1 migration procedure to Migrate to Unified Communications Manager Release 10.5(1). Perform the migration by performing the following tasks:

1 Upgrade to Unified Communications Manager Release 6.1(5) or 7.1(5) as an intermediate release.

2 Deploy Prime Collaboration Deployment on a virtual machine.

3 Prepare Prime Collaboration Deployment for Cisco Unified Communications Manager cluster migration to Release 10.5(1).

4 Migrate the current Unified Communications Manager to release 10.5(1) using Prime Collaboration Deployment.

The migration process in this document is applicable to Unified Communications Manager clusters with the following environment:

- One of the following Unified Communications Manager releases is installed: Releases 4.1(3)–4.3(2), Releases 5.1(2)-5.1(3), Releases 6.0(1)-7.1(5), or Releases 8.0(1)–9.1(2)
- Unified Communications Manager cluster is installed on Cisco Media Convergence Server (MCS) server.
- There are no changes required to the IP addresses or hostnames for your Unified Communications Manager upgrade. If you do need to change IP addresses or hostnames, additional steps are needed that are not covered in this document. For more information, refer to Changing the IP Address and Hostname for Cisco Unified Communications Manager.
- The migration to Unified Communications Manager Release 10.5(1) will be performed in your production network.

Migration Preparation Checklist

Before you begin, review the following information and ensure that you have met all of the requirements for the migration:

- Licensing, on page 2
- Compatibility Verification, on page 3
- Virtualization Requirements, on page 3
- Software Downloads, on page 4
- Configuration and Login Information, on page 4
- Cluster Registration, on page 5
- Security Tokens, on page 5
- Test Plan, on page 5
- Cisco Unified Communications Manager Backup, on page 5

Licensing

This Migration procedure requires licensing for Unified Communications Manager 10.5(1). The licenses required for this migration are:

- Unified Communications Manager Release 10.5(1)

Before you migrate to Unified Communications Manager Release 10.5(1) from earlier versions, install all previously purchased license files on Unified Communications Manager before beginning the migration. If you do not install all previously purchased license files, your unclaimed licenses will not be available to your upgraded Unified Communications Manager. You cannot be reinstall licenses after the upgrade.

To support high availability, Unified Communications Manager Release 10.5(1) clusters operate in a full-featured demo mode for 60 days without a license. After 60 days, Unified Communications Manager clusters continue to operate and route calls, but the functionality to add or remove devices and users is disabled until valid licenses are available on the associated Prime License Manager (PLM).

Refer to the license documentation posted at Migration Central for additional information:

https://communities.cisco.com/community/partner/collaboration/migration/blog/2013/04/15/license-migration

Refer to the following link to obtain the licenses:

License User Interface

Compatibility Verification

To determine if the versions of the devices and applications in use in your organization—such as endpoints, gateways, voicemail, presence, or other applications—are supported by this release of Unified Communications Manager, review the following information:

Cisco Unified Communications System Release Summary Matrix for IP Telephony

Cisco Unified Communications Manager Software Compatibility Matrix

Cisco recommends that you consider the compatibility of applications such as Cisco IM and Presence Service, Attendant Console, Cisco Contact Center Express (UCCX) and Cisco Emergency Responder (CER) for upgrades.

IM and Presence needs to be upgraded in the same maintenance windows as Cisco Unified Communications Manager. Please refer to the following documentation for additional information on compatibility.

Compatibility Information for IM and Presence Service on Cisco Unified Communications Manager

For third-party applications, review the application catalog at the following link to verify that this release of Unified Communications Manager supports the application. If your application is not listed in the catalog, confirm with your vendor that the application is compatible with this release of Unified Communications Manager.

Developer Network Marketplace Solutions Catalog

Cisco highly recommends that you review the list of open caveats for your intermediate and targeted Unified Communications Manager releases that may impact functionality or integration with other applications. You can find the list of open caveats in the Release Notes at the following location:

Cisco Unified Communications Manager Release Notes

Virtualization Requirements

You need to design your Unified Computing Servers (UCS) system for virtualization. Most deployments require high availability and thus need planning for the type and number of UCS servers. You also need to plan for storage, server connectivity, and ESXi version. You can find details regarding designing a virtualized environment at the following link:

Before you buy or deploy-Considerations for Design and Procurement

UCS servers do not support external Music On Hold sources; consider the impact on similar services when using the virtualized Unified Communications Manager cluster on UCS servers.

We also recommended that you review the documentation on virtualization support for Unified Communications Manager Release 8.0(2) and later in the following locations:

http://docwiki.cisco.com/wiki/Unified_Communications_in_a_Virtualized_Environment

http://docwiki.cisco.com/wiki/Unified_Communications_VMware_Requirements

Review the virtualization license requirements for deploying Prime Collaboration Deployment.

Virtualization software license requirements for PCD.

Software Downloads

To prepare for the upgrade, download all of the listed software below from the following location:

http://software.cisco.com/download/navigator.html?mdfid=268439621&flowid=37562

- Cisco Unified Communication Manager Release 10.5(1) bootable image
- Cisco Prime Collaboration Deployment Release 10.5(1) vApp
- Cisco Unified Communication Manager Release 6.1(5) upgrade image or Release 7.1(5) upgrade image, depending on the version that you are using as an intermediate release during the upgrade process
- Phone firmware for Unified Communications Manager Release 10.5(1)
- Cisco Unified Communication Manager Release 10.5(1) device package
- (Optional) Cisco Unified Communications Release 10.5(1) Locale Installer for your local language
- Virtual Server Template (OVA file) for Unified Communications Manager Release 10.5(1)
- Cisco Unified Communications Manager Recovery software for your current Unified Communications Manager release
- For Unified Communications Manager Release 4.1(3), 4.2(3), 4.3(1)

  Cisco Unified Communications Manager Data Migration Assistant (DMA) 6.1(4)

  Cisco CallManager Upgrade Assistant 4.3(13)

Download the software below from the following location:

http://tools.cisco.com/gct/Upgrade/jsp/index.jsp

- Bootable version of Unified Communications Manager Release 6.1(5) (Applicable only if you are running Unified Communications Manager Release 4.x).

Configuration and Login Information

Document your current configuration and login information for your current Unified Communications Manager nodes in case any issues are encountered during the upgrade procedure. Review the Unified Communications Manager Real-Time Monitoring Tool (RTMT) and syslogs and address any errors before obtaining the following information:

- IP addresses, hostnames, gateways, domain names, DNS servers, NTP servers, and SMTP information

- Administrator, cluster security, and Certificate Trust List (CTL) security token passwords
- Server versions and time zones
- All services running on each server and associated activation status
- Call Detail Record server configuration and any additional information
- LDAP information and access details
- SNMP information

Determine the registration counts by using RTMT or the Unified Communications Manager device count summary. For each Unified Communications Manager node, record the number for each device type that is displayed. For example, the number of each type of registered IP phone and gateway, and each FXS, FXO, T1CAS, PRI, MOH, MTP, CFB, or XCODE device resource.

Cluster Registration

This document assumes that the Unified Communications Manager cluster will have a Unified Communications Manager publisher and a Unified Communications Manager TFTP node that will not have any registrations of IP phones or devices. All registrations will be to the primary Unified Communications Manager subscribers in the cluster. The backup Unified Communications Manager subscribers will be used for full registration redundancy. In a two-node cluster deployment, the publisher node can also be the TFTP server and the backup subscriber.

Security Tokens

If your cluster is a mixed-mode cluster, locate your existing security certificate tokens and record the token information.

To verify if you are running a secure cluster, use the steps in the Cisco Unified Communications Manager Security Guide for your current release.

Test Plan

Create a post-upgrade test plan that you execute before you upgrade and directly upgrading. For example, this plan can be a set of tests that cover different use cases. Run the same tests before and after the upgrade. This provides a way to verify expected Unified Communications Manager operational functionality, before, and after, the upgrade.

Cisco Unified Communications Manager Backup

We strongly recommend that you perform a Disaster Recovery System (DRS) backup of your entire cluster before each upgrade. Upgrading without a current backup can result in lost data, lost node configuration, or disruption to services if there are complications during the upgrade process. Please refer to the Disaster Recovery System Administration Guide on Cisco.com for additional information DRS backup procedure.

Pre-Migration Procedures

- To shorten the upgrade time, delete or purge Call Detail Records (CDRs) or log files that you no longer need.
- Refer to the recommended practices for successful migration using Prime Collaboration Migration. Best practices outline the requirement for TFTP directory size and WAN bandwidth requirement when Cisco Unified Communications Manager nodes are deployed across WAN.

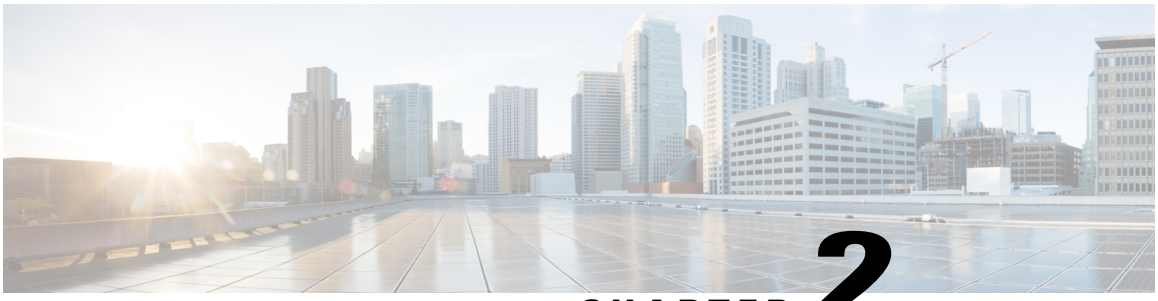
  For more information, see TFTP directory size requirements and Best Practice for PCD.
- If you are a partner, Cisco recommends that you contact the PDI help desk during the upgrade planning phase. The PDI team can review the upgrade plan, provide necessary support, and file a proactive TAC case on your behalf. To contact the PDI team, see http://www.cisco.com/go/pdihelpdesk. If you choose to contact TAC directly, you must provide the following information for a proactive TAC case:
  - Complete output from the Unified Communications Manager upgrade readiness application (web or iPad version)
  - Information about contact persons and the maintenance window
  - The upgrade plan

    For more information, see http://tools.cisco.com/ServiceRequestTool/create/launch.do.
- Extend the database replication timeout value so that subscriber servers have sufficient time to request replication. For more information, see the *Pre-Upgrade Tasks* section in the Upgrade Guide for Cisco Unified Communications Manager, Release 9.1(1).
- Ensure that the device name for the Cisco Unified Mobile Communicator device contains a maximum of 15 characters. For more information, see the Command Line Interface Guide for Cisco Unified Communications Solutions.
- Apply phone firmware that corresponds to your release of Unified Communications Manager. You can apply new firmware files to the endpoints in a controlled manner prior to the upgrade to minimize phone downtime after an upgrade. Afterwards, restart the TFTP service on the Unified Communications Manager servers, and restart the IP Phones in a controlled order to minimize downtime.

  Phones download their new firmware after an upgrade. If you apply firmware to phones in groups ahead of the upgrade, you can eliminate the load on the TFTP server by preventing phones from upgrading their firmware following completion of the upgrade. The phone cannot be used for calls when its firmware is being upgraded. A maintenance window outside your Unified Communications Manager upgrade window is recommended for phone firmware upgrade

  The Cisco Unified Communications System Release Summary Matrix for IP Telephony summarizes the phone firmware version recommended with all Cisco Unified Communications Manager releases.
- For Unified Communications Manager Release 4.1(3), 4.2(3), 4.3(2):
  - Install and run Cisco Unified Communications Manager upgrade utility 4.3(10) and later. For more information on upgrade utility, refer to: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/upgrade/assistant/up4310tl.html. Before running the DMA tool, rectify any errors detected by the upgrade utility.

- Install and run DMA on the Cisco Unified Communications Manager Publisher. For more information on DMA, please refer to: http://www.cisco.com/en/US/docs/voice_ip_comm/cucm/dma/6_1_3/dmaug613.html.



CHAPTER 2

Upgrading, Migrating, and Configuring

- Upgrade Process, page 9
- Upgrade Current Release to Release 6.1(5) or 7.1(5), page 10
- Deploy Prime Collaboration Deployment on a Virtual Machine, page 11
- Configure Prime Collaboration Deployment to Migrate Current Unified Communications Manager Cluster to Release 10.5(1), page 12
- Migrate Cisco Unified Communications Manager to Release 10.5(1), page 16

Upgrade Process

You cannot upgrade directly to Unified Communications Manager Release 10.5(1) from Releases 4.1(3), 4.2(3), 4.3(2), 5.1(2), 5.1(3), 6.0(1), 6.1(1), 6.1(2), 6.1.(3), 7.0(1), 7.0(2), and 7.1(2) . For these releases, upgrade to the release listed in the table below and then perform the migration.

Current Release	Upgrade to...
4.1(3), 4.2(3), 4.3(2)	7.1(5) using DMA
5.1(3), 6.1(3), 6.1(4)	6.1(5)
5.1(2), 6.1(1), 6.1(2)	Upgrade to 6.1(3), then 6.1(5) (This is a multiple upgrade).
6.0(1)	Upgrade to 6.1(2), then 6.1(3), then 6.1(5) (This is a multiple upgrade).
7.0(1)	Upgrade to 7.0(2), then 7.1(5) (This is a multiple upgrade).
7.0(2), 7.1(2)	7.1(5)

Complete the migration in the following stages:

1. Upgrade to Unified Communications Manager Release 6.1(5) or 7.1(5) as an intermediate release.
2. Deploy Prime Collaboration Deployment on a virtual machine.
3. Prepare Prime Collaboration Deployment for Cisco Unified Communications Manager cluster migration to Release 10.5(1).
4. Migrate to the current Unified Communications Manager release using Prime Collaboration Deployment.

Upgrading from Releases 6.1(5), 7.1(3), 7.1(5), 8.0(1-3), 8.5(1), 8.6(1-2), 9.0(1), 9.1(1-2)

1. If you currently have Releases 6.1(5), 7.1(3), 7.1(5), 8.0(1–3), 8.5(1), 8.6(1–2), 9.0(1), 9.1(1–2) installed, you do not need to upgrade to an intermediate release. Complete the migration in the following stages:
   a. Deploy Prime Collaboration Deployment on a virtual machine.
   b. Prepare Prime Collaboration Deployment for Cisco Unified Communications Manager cluster migration to Release 10.5(1).
   c. Migrate to the current Unified Communications Manager release using Prime Collaboration Deployment.

Upgrade Current Release to Release 6.1(5) or 7.1(5)

Use the following procedure to upgrade to Unified Communications Manager Releases 6.1(5) or 7.1(5) from any of the following releases:

- Release 5.1(3)
- Release 6.1(2), 6.1(3) and 6.1(4)
- Release 7.0(2) and 7.1(2)

Procedure

Step 1 Stop all configuration tasks. Do not perform any configuration tasks during the upgrade.

Step 2 Disable extension mobility for the cluster.

Step 3 Perform a DRS backup of your current cluster.

Step 4 Upgrade the publisher node to Unified Communications Manager from the current release to the target release and choose No for automatic reboot.

Step 5 Upgrade the dedicated TFTP node, followed by the backup subscriber nodes and the primary subscriber nodes in the cluster. During these upgrades, choose No for automatic reboot.

Step 6 Switch the publisher node to the upgraded partition.

Step 7 Install the phone firmware that corresponds to the Unified Communications Manager Release 10.(1) in the publisher. If your publisher node is also the TFTP server, restart the TFTP service.

Step 8 Verify that the database replication for the cluster completed without errors. Use the Cisco Unified Reporting or Cisco Real Time Monitoring Tool (RTMT); for more information, see the Upgrade Tasks section of the *Upgrade Guide for Cisco Unified Communications Manager, Release 9.1(1)*.

Step 9 Configure the phones and devices in the cluster to use the backup subscriber nodes for registration by changing the order in the Unified Communications Manager group.

Step 10 Switch all of the primary subscriber nodes to the upgraded partition.

Step 11 Verify that the primary subscriber nodes are upgraded and that the database replication completed with no errors.

Step 12 Configure the phones and devices in the cluster to use the primary subscriber nodes for registration by changing the order in the Unified Communications Manager group. Reset the devices using the device pool in an ordered manner, or restart the Unified Communications Manager service on the backup subscriber nodes to allow devices to register with the primary subscriber nodes.

Step 13 Perform a Disaster Recovery System (DRS) backup up of your entire cluster now that it is upgraded.

Step 14 Deploy Prime Collaboration on a virtual machine. For more information, see Deploy Prime Collaboration Deployment on a Virtual Machine, on page 11.

Deploy Prime Collaboration Deployment on a Virtual Machine

Cisco Prime Collaboration Deployment requires a separate virtual machine and is not supported on physical servers. Prime Collaboration Deployment can be deployed using vApp. vApp bundles OVA template and installation ISO into a single file.

Virtualization Software License Types

Cisco Prime Collaboration Deployment is not compatible with all license types of VMware vSphere ESXi, because some of these licenses do not enable required VMware APIs. Be aware of the following ESXi licensing requirements for Cisco Prime Collaboration Deployment and virtual machines that are required for Unified CM Release 10.5(1), since it has impact to the migration functionality. Cisco Unified Communications Manager Business Edition 6000 customers are impacted due to the below license requirement.

The following licenses are compatible with Cisco Prime Collaboration Deployment:

- Cisco UC Virtualization Foundation (appears as Foundation Edition in vSphere Client)
- VMware vSphere Standard Edition, Enterprise Edition, or Enterprise Plus Edition
- Evaluation mode license

1. Deploy Prime Collaboration Deployment using vApp.
2. Refer to the following documentation for detailed instructions on installation: Installation of Cisco Prime Collaboration Deployment.
3. Configure Prime Collaboration. For more information, see Configure Prime Collaboration Deployment to Migrate Current Unified Communications Manager Cluster to Release 10.5(1), on page 12.

Configure Prime Collaboration Deployment to Migrate Current Unified Communications Manager Cluster to Release 10.5(1)

A migration task is used to simultaneously upgrade and migrate an existing Cisco Unified Communications Manager cluster to new Release 10.5(1) running virtual machines.

Procedure

Step 1 Deploy the virtual hardware infrastructure for the new cluster and install ESXi.

Step 2 SFTP the recommended OVA and bootable .iso images for the Unified Communications Manager Release 10.5(1), to the Prime Collaboration Deployment server under /fresh_install directory. Use **adminsftp** and the password of the Platform (OS) admin to connect to the Prime Collaboration Deployment server using SFTP.

Step 3 Deploy the Cisco-recommended OVA for Unified Communications Manager Release 10.5(1) to create the blank VMs for the destination cluster node installation.

a) Create the appropriate number of target virtual machines on your ESXi hosts (one new virtual machine for each Cisco Unified Communications Manager server in the existing cluster) by using the Cisco OVA(s) that you downloaded in Step 2.

b) Configure the network settings on new VMs.

Step 4 Add the ESXi Hosts that contain your virtual machines to the Cisco Prime Collaboration Deployment inventory. You will need to provide the hostname or IP address of the ESXi host, and the root credentials. For details, follow the Add ESXi Host Server, on page 13 procedure.

Step 5 Ensure that you have performed a cluster discovery for the existing Cisco Unified Communications Manager cluster (source cluster) so that it appears in the Cluster Inventory. For details, follow the procedure Discover Existing Cluster, on page 13.

Step 6 Create the migration cluster (**Inventory > Clusters**) to define the mapping between MCS source nodes and target virtual machines. For details, follow the procedure Define Migration Cluster, on page 14.

Note When the migration cluster is created, the user indicates whether all destination nodes will keep the same hostname/IP address, or if some of these addresses will be changing. Though Prime Collaboration Deployment supports IP address and hostname change during migration, the procedure in this document assumes that there are no IP Address and hostname changes during migration.

Note Using the source node settings for all destination nodes option is referred to as "simple migration" in migration.

Step 7 (Optional) Navigate to **Administration** > **Email Notification** and set up email notifications.

When email notification is set up, the Prime Collaboration Deployment server emails error conditions that may occur during the migration task.

Step 8 Create the Migration Task in Prime Collaboration Deployment. For details, follow the procedure Add a Migration Task, on page 15.

Add ESXi Host Server

Procedure

Step 1 Select **Inventory** > **ESXi Hosts** from the Prime Collaboration Deployment menu.

Step 2 Click the **Add ESXi Host** button at the top of the ESXi Host page. The Add Host Server dialog box appears.

Step 3 Enter the following information:

- IP Address or Hostname
- Root login
- Root password

Step 4 Click **OK**.
The ESXi Host is successfully added.

Discover Existing Cluster

The Discover Cluster feature allows Cisco Prime Collaboration Deployment to contact servers that are already running Unified Communications Manager, and add that cluster information into the Cisco Prime Collaboration Deployment inventory.

Procedure

Step 1 Select **Inventory** > **Clusters** from the Prime Collaboration Deployment menu.

Step 2 Click the **Discover Cluster** button at the top of the Clusters page.
The Discover Cluster wizard is displayed.

Step 3 Enter the following information:

- Cluster nickname
- Publisher hostname or IP address

Note For a cluster that has both Unified Communications Manager and IM and Presence Service nodes, enter the Unified Communications Manager publisher. Although Prime Collaboration Deployment supports migration of IM and Presence Service nodes, this document covers only Cisco Unified Communications Manager.

- OS Admin username
- OS Admin password

Step 4 Click **Next**.
Prime Collaboration Deployment begins to discover the cluster. Cluster discovery can take more than 5 minutes. Large clusters can take even more time for discovery. During discovery, each node in the cluster is contacted, and information about the node is recorded. A COP file (ciscocm.ucmap_platformconfig.cop) installs automatically on the active partition of all nodes in the cluster, to help retrieve the cluster data.

Under Step 2 of the wizard, Cisco Prime Collaboration Deployment generates a list of cluster nodes from the publisher's server inventory. This process may take several minutes to complete. After the list has been generated, a message indicates, "Cluster Discovery Process is complete."

Step 5 Click **Next**.

Step 6 (Optional) Click the **Assign Functions** button to assign functions to each cluster node.
The Assign Functions dialog box appears.

Step 7 From the Assign Functions dialog box, select the node that you want to modify by clicking **Previous** or **Next**.

Note The hostname field indicates which node you have selected. For each node, you can assign a function or multiple functions, and add notes for the function assignment in the Notes field. Assigning functions allows you to define the functions of each node, but this does not affect the services that will be activated. That information can, however, be used to determine the default sequencing of tasks.

Step 8 Once you have assigned all the functions that you want to assign, click **OK**.

Step 9 Click **Finish**.
The cluster has been successfully discovered.

Define Migration Cluster

Before you can create a migration task, you must create a migration cluster. By defining the migration cluster, you create the mapping from the current Cisco Unified Communications Manager cluster nodes that were discovered (see Discover a cluster) and the new VMs that will be used to host the migrated cluster.

Procedure

Step 1 Select **Inventory** > **Clusters** from the Prime Collaboration Deployment menu. You will see the clusters that have been discovered (or defined) so far.

Step 2 Click **Define Migration Destination Cluster** to start the Define Migration Destination Cluster wizard.

Step 3 Complete step 1 of the Configure Destination Cluster wizard:

a) Select the source cluster from the drop-down list.
b) Enter a name in the Destination Cluster Name field.
c) Select the appropriate Destination Network Settings option

Note To keep your network options, select the **Use the source node network settings for all destination nodes** radio button.

Step 4 Click **Next**.

Step 5 Click the **Assign Destination Cluster Nodes** button to open the Configure Destination Cluster window.

Step 6 Configure the destination cluster by selecting a destination VM for each source node. The source node hostname listed is at the top of the page.

a) Click the radio button next to a VM to choose a VM for this node.
b) Click the **Next Node** button to go to the next node in the cluster. If there is more than one node in the cluster, you will need to repeat these steps for each node in the source cluster.

Step 7 When all nodes have been assigned a destination VM, click **DONE** to close the Configure Destination Cluster window. Prime Collaboration Deployment displays the source nodes in the cluster, listed next to the destination VM to be used for this node, and the IP address.

Step 8 If the information is accurate, click **Next** to move to Step 3 of the wizard.

Step 9 In the Configure NTP/SMTP settings window, enter the Network Time Protocol (NTP) server settings to be applied to the migration nodes when the migration task runs, and the SMTP server settings.

Step 10 Click **Next**.
Step 4 of the Define Migration Destination wizard, Configure DNS Settings, opens. You have the option of configuring DNS for the migration cluster nodes.

Step 11 To change the DNS setting for a node, select the node(s) from the table and click the **Assign DNS Settings** button. Enter the primary and secondary DNS and the domain, then click **OK** to apply the changes.

Step 12 Click **Finish** to close the wizard and save your changes.
The new cluster definition is added in the Cluster Inventory with a cluster type of "Migration."

Add a Migration Task

Procedure

Step 1 Select **Task** > **Migrate** from the main menu.

Step 2 Click **Add Migration Task**. The Add Migration Task wizard displays.

Step 3 From the Source UC Cluster drop-down list box, select the destination cluster or migration map. Migration maps are associated with the source cluster that you have selected.

Step 4 Click **Next**.

Step 5 In the Choose Migration Files section, browse and select the Cisco Unified Communications Manager ISO file to install on the destination cluster.
The Choose a Migration File window opens.

Step 6 Select the ISO file from the list and click **OK**.

Step 7 Click **Next**.

Step 8 In the Set Start Time section, choose one of the following options and click **Next**:

- Schedule a start time
- Start the task immediately

- Start the task manually at some point in the future. Select this option to start the task manually for this migration.

Step 9 In the Specify Migration Procedures section, set the sequence for the migration task. Following is the recommended sequence:

a) Migrate Publisher node. Add Pause.
b) If dedicated TFTP nodes are deployed in your environment, migrate dedicated TFTP nodes.
c) Migrate all backup subscriber nodes. Add pause.
d) Migrate all primary subscriber nodes.

When you create a migration task, Prime Collaboration Deployment presents the default sequence, which has one server in each install step. You can use the editing tools to place more than one server in a step. For best results, do not include more than six servers in any one step.

- Pencil icon—Opens the Edit Step window.
- Page icon—Adds a new step after the current step.
- X—Deletes the current step.
- Up arrow—Moves the step up to be executed earlier.
- Down arrow—Moves the step down to be executed later.

Note In the Edit Step window you can add nodes to be migrated from the list of available nodes:

- The step to which each node is assigned displays next to the node. If a node is not assigned to any step, the node shows as unassigned.
- The Pause task after step completes option pauses the task after completion of this step. If you choose this option, you must start the next step manually to continue the task.

Step 10 Click **Next**.

Step 11 Review your selections. In the Review section, you also have the option to add notes to your new migration task.

Step 12 Click **Finish** to add the new migration task. The task appears in the table on the Migrate screen.

Step 13 Perform a DRS backup of your Unified Communications Manager cluster.

Step 14 Proceed to Migrate Cisco Unified Communications Manager to Release 10.5(1), on page 16.

Migrate Cisco Unified Communications Manager to Release 10.5(1)

The configuration that has been completed so far as part of section 8 is non-service disruptive and was to get Prime Collaboration Deployment configured to support the migration of Unified Communications Manager Cluster to Release 10.5(1). Use the following procedure to migrate your current Unified Communications Manager Release to Release 10.5(1) using Prime Collaboration Deployment.

Procedure

Step 1 Stop all configuration tasks on your Cisco Unified Communications Manager cluster. Do not perform any configuration tasks during upgrade.

Step 2 Disable extension mobility for the cluster.

Step 3 Log in to Prime Collaboration Deployment and click on **Monitoring** to view the task status.
The task will be listed in the task list, but will be waiting for manual start.

Step 4 To view the details that each step of the migration task will perform, click on the black triangle next to the task step.

Note In the manual start case, there will be a Validation button associated with the task. Best practice is to use the Validation button to check on the task prior to it running. If there are any problems with the task (such as .iso file missing, or VMs not in off state), the validation alerts the user, so that any issues can be fixed prior to the task starting.

If all tests pass successfully, the system displays "All Validation Tests Passed".

Step 5 Click the **Start** button that is associated with this manual task.
The first Unified Communications Manager publisher is migrated. Prime Collaboration Deployment shuts down the current Unified Communications Manager publisher automatically.

The migration task pauses once the publisher is successfully migrated to Unified Communications Manager 10.5(1).

Step 6 Log in to the publisher that is running Unified Communications Manager 10.5(1) and verify that all services that were enabled on the pre-10.5(1) are still running.

Step 7 Click **Resume** to continue the migration.
The migration task migrates your dedicated TFTP node, and all backup subscriber nodes, to Unified Communications Manager 10.5(1). Prime Collaboration Deployment shuts down corresponding nodes that are running on MCS servers.

The migration task pauses once the dedicated TFTP node and backup subscriber nodes are migrated.

Step 8 Verify that the database replication between Publisher and TFTP node, backup subscriber nodes is setup and completed without errors.

Note Database replication times vary depending on the size of the database. The primary subscriber nodes database synchronization will not have completed since they are yet to be migrated to Unified Communications Manager 10.5(1). Use Cisco Unified Reporting or Cisco Real Time Monitoring Tool. For more information, see the Standard Upgrade Tasks section of the *Upgrade Guide for Cisco Unified Communications Manager*.

Step 9 Configure the phones and devices in the cluster to use the backup subscribers nodes for registration by changing the order in the Unified Communications Manager group, or by using device pools.

Step 10 Click **Resume** to continue the migration.
The migration task migrates all the primary subscriber nodes to 10.5(1). Prime Collabarion Deployment shuts down corresponding nodes that are running on MCS servers.

At this point, all the IP Phones and devices register with the backup subscriber nodes on Release 10.5(1), as the primary subscriber nodes that are running on MCS hardware are shut down.

Step 11 Once all primary subscriber nodes are successfully migrated to UCM 10.5(1), Verify that the database replication between Publisher and all nodes is set up and in good state.

Step 12 Configure the phones and devices in the cluster to use the primary subscriber nodes for registration by changing the order in the Unified Communications Manager group. You can reset the devices using the device pool in

an ordered manner, or restart the Unified Communications Manager service on the backup subscriber nodes to allow devices to register with the primary subscriber nodes.

Step 13 Install Unified CM Release 10.5(1) dial plans and locales as recommended in the Post-upgrade tasks section of the *Upgrade Guide for Cisco Unified Communications Manager*. For details, see the *Prime Collaboration Deployment Administration Guide*.

Step 14 If you changed any database replication timeout values as per the general pre-upgrade procedures section, restore the timeout to the default value. Enable extension mobility that was turned off at the start of the upgrade.

Step 15 Verify that the virtualized Unified CM cluster services and device registration is operating. At this point, the entire virtual Unified CM cluster is on Release 10.5(1).

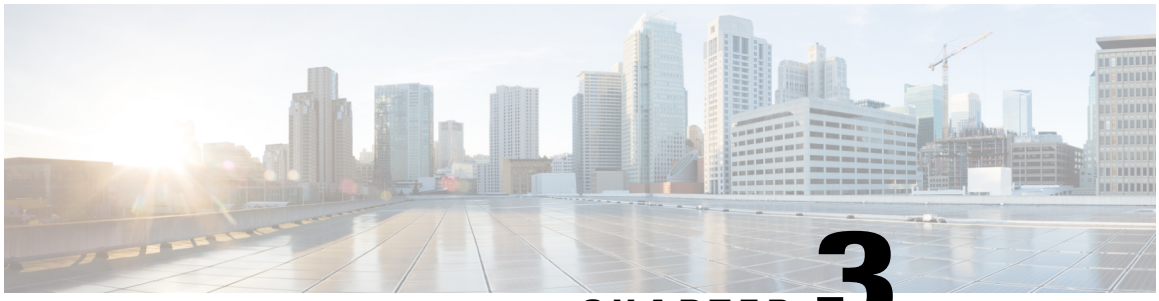
Step 16 Migrate your current Unified CM licenses to the Unified CM Release 10.5(1) license.

Note You have 60 days to complete this licensing step. For details, see https://tools.cisco.com/SWIFT/LicensingUI/Home.

Step 17 Run your post-upgrade test plan.

On the successful completion of the post-upgrade test plan, your migration to Cisco Unified Communications Manager 10.5(1) is complete.

Step 18 Perform a DRS backup of the cluster.



CHAPTER 3

Rollback Procedure

- Rollback Procedure, page 19

Rollback Procedure

If you encounter an issue during your upgrade and need to rollback to the pre-upgrade version, see *Upgrade Guide for Cisco Unified Communications Manager*.

Because the migration was done using Prime Collaboration Deployment, the original Cisco Unified Communications Manager cluster is still available on the MCS servers, but in a shutdown state. Rolling back to previous version involves shutting down Cisco Unified Communications Manager 10.5(1) nodes running on virtual machines and bringing-up the Pre-10.5(1) Cisco Unified Communications Manager nodes on MCS servers. This process needs to be done in an ordered sequence to avoid extended downtime for the end users. Review the below information regarding rolling back to Cisco Unified Communications Manager releases prior to 8.0(x)

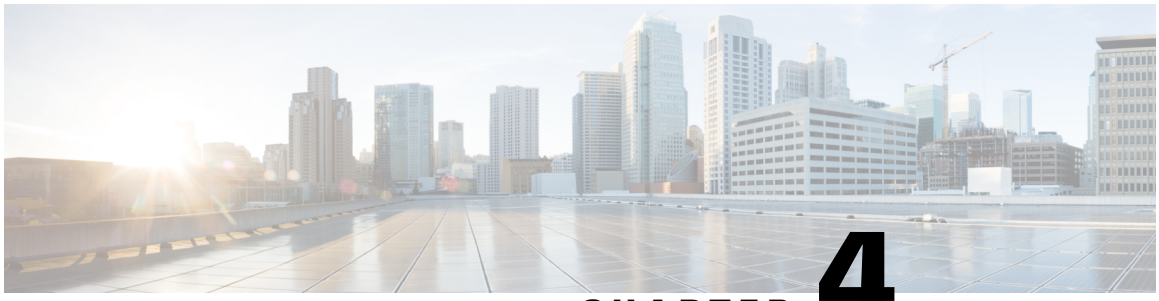
If you are reverting your cluster to a release prior to 8.0(x), review the following documents, which explain important security-related changes:

Migrating IP Phones Between Clusters with Cisco Unified Communications Manager 8 and ITL Files

Rolling Back the Cluster to a Pre-8.0 Release

When the rollback is completed, execute your test plan again to make sure that all services and features are functioning as expected.

Rollback Procedure



CHAPTER 4

Links and References

- Links and References, page 21

Links and References

For additional information, refer to the following documents:

Installation, Upgrade and Migration

Cisco Prime Collaboration Deployment Administration Guide

Installing Cisco Unified Communications Manager

Install and Upgrade Guides for Cisco Unified Communications Manager

Upgrade Guide for Cisco Unified Communications Manager

Cisco Unified Communications Manager on virtualized servers

Compatibility

UC Virtualization Supported Hardware

Compatibility Information Cisco Unified Communications Manager 10.x

Network Design and Deployment

Cisco Collaboration Systems 10.x Solution Reference Network Designs (SRND)

Best practices for Cisco Prime Collaboration Deployment, see Cisco Prime Collaboration Deployment Administration Guide

Licensing

Release Notes for Cisco Prime License Manager

Cisco Software Licensing Portal Changes Quick Reference Guide

Release Information

Cisco Unified Communications Manager Release Notes

Release Notes for phone firmware. The Cisco Unified Communications System Release Summary Matrix for IP Telephony summarizes the phone firmware version recommended with all Cisco Unified Communications Manager releases.

Documentation Guide for Cisco Unified Communications Manager

Troubleshooting

Database Replication Error in Cisco Unified Communication Manager