Migrate Users to Centralized Deployment

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Centralized Deployment User Migration Overview

This chapter contains procedures for migrating existing IM and Presence Service users from a standard decentralized IM and Presence deployment (IM and Presence Service on Cisco Unified Communications Manager) to a centralized deployment. With the centralized deployment, the IM and Presence deployment and the telephony deployment are in separate clusters.

Prerequisite Tasks for Central Cluster Migration

If you are setting up a new IM and Presence central cluster whereby all the users are migrating from existing decentralized clusters, complete the following prerequisite steps to set up the cluster for migration.

Note If you are adding new users whom are not a part of the migration, you can follow the instructions in Configure Centralized Deployment to set up the central cluster with your new users. Migrate existing users to the central cluster only after you are confident that your configuration works.

Table 1: Pre-Migration Tasks

	Pre-Migration Tasks
Step 1	Connect your new central cluster to the migrating cluster. **1.** Log in to database publisher node on the IM and Presence Service centralized cluster. **2.** From Cisco Unified CM IM and Presence Administration, choose **System** > **Centralized Deployment**. **3.** Click **Find** and do either of the following: • Select an existing cluster and click **Edit Selected**. • Click **Add New** to add the migrating cluster. **4.** Complete the following fields for each migrating cluster: • **Peer Address**—The FQDN, hostname, IPv4 address, or IPv6 address of the publisher node on the remote telephony • **AXL Username**—The login username for the AXL account on the remote telephony cluster. • **AXL Password**—The password for the AXL account on the remote cluster. **5.** Click **Save**.
Step 2	If the new central cluster will be part of an IM and Presence intercluster network, configure intercluster peering between the central cluster and any IM and Presence peer clusters that are not a part of the migration. The following guidelines apply: • You do not need to configure intercluster peering between the central cluster and the migrating clusters. However, if a migrating cluster has an intercluster peer connection configured with any number of non-migrating clusters at the time of the migration, it's mandatory that those intercluster peer connections are configured in the central cluster prior to the migration or the migration will not work. • After configuring intercluster peering, make sure to verify the intercluster peering status to ensure that the configuration works properly For details, see Configure Intercluster Peers.

Migration to Central Cluster Task Flow

Complete these tasks to migrate existing users from a decentralized cluster (IM and Presence Service on Cisco Unified Communications Manager) to a centralized IM and Presence cluster. In this task flow:

- **IM and Presence Central Cluster** refers to the cluster to which you are migating users. Following the migration, this cluster handles IM and Presence only.
- **Migrating Cluster** refers to the cluster from which IM and Presence users are being migrated. Following the migration, this cluster handles telephony only.

Before You Begin

If your IM and Presence central cluster is a newly installed cluster, and does not yet have users, complete the Prerequisite Tasks for Central Cluster Migration, on page 1 before you migrate users.

Table 2: Migration to Central Cluster Task Flow

	IM and Presence Central Cluster	Migrating Cluster	Purpose
Step 1		Export Contact Lists from Migrating Cluster, on page 4	Export user contact lists in the migrating cluster to a csv file.
Step 2		Disable High Availability in Migrating Cluster, on page 5	Disable High Availability for all Presence Redundancy Groups (subclusters) in the migrating cluster.
Step 3		Configure UC Service for IM and Presence, on page 6	In the migrating cluster, configure IM and Presence UC services that point to the IM and Presence central cluster.
Step 4		Create Service Profile for IM and Presence, on page 6	In the migrating cluster, create a service profile that uses the IM and Presence UC services that you set up.
Step 5		Disable Presence Users in Telephony Cluster, on page 7	Use Bulk Administration in the migrating cluster to disable IM and Presence for users.
Step 6		Enable OAuth Authentication for Central Cluster, on page 8	Optional. In the migrating cluster, enable OAuth Refresh Logins. This will enable the feature for the central cluster as well.
Step 7	Disable High Availability in Central Cluster, on page 9		Disable High Availability in all Presence Redundancy Groups (subcluster) of the IM and Presence central cluster.
Step 8	Delete Peer Relationship for Central and Migrating Clusters, on page 9		If intercluster peering exists between the central cluster and migrating cluster, delete the peer connection on both clusters.
Step 9	Stop the Cisco Intercluster Sync Agent, on page 10		Stop the Cisco Intercluster Sync Agent in the IM and Presence central cluster.

	IM and Presence Central Cluster	Migrating Cluster	Purpose
Step 10	Enable IM and Presence via Feature Group Template, on page 10		In the cenral cluster, configure a Feature Group Template that enables the IM and Presence Service.
Step 11	Complete LDAP Sync on Central Cluster, on page 11		Add the feature group template to an LDAP directory sync. Use the sync to add users from the migrating cluster.
Step 12	Import Contact Lists into Central Cluster, on page 12		Use Bulk Administration and the csv export file that you created earlier to import contact lists into the central cluster.
Step 13	Start Cisco Intercluster Sync Agent, on page 13		Start the Cisco Intercluster Sync Agent in the central cluster.
Step 14	Enable High Availability in Central Cluster, on page 14		In the central cluster, enable High Availability in all Presence Redundancy Groups.
Step 15	Delete Remaining Peers for Migrating Cluster, on page 14		Delete remaining intercluster peer connections between migrating cluster (now a telephony cluster) and other peer clusters.

Export Contact Lists from Migrating Cluster

Use this procedure only if you are migrating from a Decentralized IM and Presence Deployment to a Centralized Deployment. In the migrating cluster, export your users' contact lists to a csv file that you will later be able to import into the central cluster. You can export two types of contact lists:

- Contact Lists—This list consists of IM and Presence contacts. Contacts whom do not have an IM address will not be exported with this list (you must export a non-presence contact list).
- Non-presence Contact Lists—This list consists of contacts whom do not have an IM address.

Procedure

Step 1 Log in to Cisco Unified CM IM and Presence Administration in the old clsuter (the telephony cluster).

Step 2 Choose one of the following options, depending on which type of contact list you want to export:

- For Contact List exports, choose **Bulk Administration** > **Contact List** > **Export Contact List**
- for Non-presence Contact List exports, choose **Bulk Administration** > **Non-presence Contact List** > **Export Non-presence Contact List** and skip the next step.

Step 3 Contact Lists only. Select the users for whom you will export contact lists:

a) Under **Export Contact List Options**, choose the category of users for whom you will export contact lists. The default option is **All users in the cluster**.

b) Click **Find** to bring up the list of users and then click **Next**.

Step 4 Enter a **File Name**.

Step 5 Under **Job Information**, configure when you want to run this job:

- **Run Immediately**—Check this button to export contact lists right away.
- **Run Later**—Check this button if you want to schedule a time for the job to run.

Step 6 Click **Submit**.

Note
If you chose **Run Immediately**, your export file gets generated right away. If you chose **Run Later**, you must use the Job Scheduler at (**Bulk Administration** > **Job Scheduler**) to schedule a time for this job to run.

Step 7 After the export file is generated, download the csv file:

a) Choose **Bulk Administration** > **Upload/Download Files**.

b) Click **Find**.

c) Select the export file that you want to download and click **Download Selected**.

d) Save the file to a safe location.

Step 8 Repeat this procedure if you want to create another csv export file. For example, if you create an export file for Contact Lists, you may want to create another file for Non-presence Contact Lists.

What to do next

Disable High Availability in Migrating Cluster, on page 5

Disable High Availability in Migrating Cluster

For migrations to a Centralized Deployment, disable High Availability in each Presence Redundancy Group (subcluster) on the migrating telephony cluster.

Note The **Presence Redundancy Group Details** page shows all the active JSM sessions, even when the high availability is disabled in the cluster.

Procedure

Step 1 Log in to the Cisco Unified Communications Manager publisher node on the old cluster.

Step 2 From Cisco Unified CM Administration, choose **System** > **Presence Redundancy Groups**.

Step 3 Click **Find** and select a subcluster.

Step 4 Uncheck the **Enable High Availability** check box.

Step 5 Click **Save**.

Step 6 Repeat this procedure for each subcluster.

Note
After completing this procedure for all subclusters, wait at least 2 minutes before completing any additional configurations on this cluster.

What to do next

Configure UC Service for IM and Presence, on page 6

Configure UC Service for IM and Presence

Use this procedure in your remote telephony clusters to configure a UC service that points to the IM and Presence Service central cluster. Users in the telephony cluster will get IM and Presence services from the IM and Presence central cluster.

Procedure

Step 1 Log in to the Cisco Unified CM Administration interface on your telephony cluster.

Step 2 Choose **User Management** > **User Settings** > **UC Service**.

Step 3 Do either of the following:

a) Click **Find** and select an existing service to edit.
b) Click **Add New** to create a new UC service.

Step 4 From the **UC Service Type** drop-down list box, select **IM and Presence** and click **Next**.

Step 5 From the **Product type** drop-down list box, select **IM and Presence Service**.

Step 6 Enter a unique **Name** for the cluster. This does not have to be a hostname.

Step 7 From **HostName/IP Address**, enter the hostname, IPv4 address, or IPv6 address of the IM and Presence central cluster database publisher node.

Step 8 Click **Save**.

Step 9 Recommended. Repeat this procedure to create a second IM and Presence service where the **HostName/IP Address** field points to a subscriber node in the central cluster.

What to do next

Create Service Profile for IM and Presence, on page 6

Create Service Profile for IM and Presence

Use this procedure in your remote telephony clusters to create a service profile that points to the IM and Presence central cluster. Users in the telephony cluster will use this service profile to get IM and Presence services from the central cluster.

Procedure

Step 1 From Cisco Unified CM Administration, choose **User Management** > **User Settings** > **Service Profile**.

Step 2 Do one of the following:

a) Click **Find** and select an existing service profile to edit.
b) Click **Add New** to create a new service profile.

Step 3 In the **IM and Presence Profile** section, configure IM and Presence services that you configured in the previous task:

a) From the **Primary** drop-down, select the database publisher node service.
b) From the **Secondary** drop-down, select the subscriber node service.

Step 4 Click **Save**.

What to do next

Disable Presence Users in Telephony Cluster, on page 7

Disable Presence Users in Telephony Cluster

If you've already completed an LDAP sync in your telephony deployment, use the Bulk Administration Tool to edit user settings in the Telephony cluster for IM and Presence users. This configuration will point Presence users to the Central Cluster for the IM and Presence Service.

Note This procedure assumes that you have already completed an LDAP sync in your telephony cluster. However, if you haven't yet completed the initial LDAP sync, you can add the Central Deployment settings for Presence users into your initial sync. In this case, do the following in your telephony cluster:

- Configure a Feature Group Template that includes the **Service Profile** that you just set up. Make sure that have the **Home Cluster** option selected and the **Enable User for Unified CM IM and Presence** option unselected.
- In **LDAP Directory Configuration**, add the **Feature Group Template** to your LDAP Directory sync.
- Complete the initial sync.

For additional details on configuring Feature Group Templates and LDAP Directory, see the "Configure End Users" part of the *System Configuration Guide for Cisco Unified Communications Manager*.

Procedure

Step 1 From Cisco Unified CM Administration, choose **Query** > **Bulk Administration** > **Users** > **Update Users** > **Query**.

Step 2 From the Filter, select **Has Home Cluster Enabled** and click **Find**. The window displays all of the end users for whom this is their Home Cluster.

Step 3 Click **Next**.
In the **Update Users Configuration** window, the check boxes on the far left indicate whether you want to edit this setting with this query. If you don't check the left check box, the query will not update that field. The field on the right indicates the new setting for this field. If two check boxes appear, you must check the check box on the left to update the field, and in the right check box, enter the new setting.

Step 4 Under **Service Settings**, check the far left check box for each of the following fields to indicate that you want to update these fields, and then edit the adjacent setting as follows:

- **Home Cluster**—Check the right check box to enable the telephony cluster as the home cluster.
- **Enable User for Unified CM IM and Presence**—Leave the right check box unchecked. This setting disables the telephony cluster as the provider of IM and Presence.
- **UC Service Profile**—From the drop-down, select the service profile that you configured in the previous task. This setting points users to the IM and Presence central cluster, which will be the provider of the IM and Presence Service.

Note
For Expressway Mobile and Remote Access configuration, see *Mobile and Remote Access via Cisco Expressway Deployment Guide* at https://www.cisco.com/c/en/us/support/unified-communications/expressway-series/products-installation-and-configuration-guides-list.html.

Step 5 Complete any remaining fields that you want. For help with the fields and their settings, see the online help.

Step 6 Under **Job Information**, select **Run Immediately**.

Step 7 Click **Submit**.

What to do next

Enable OAuth Authentication for Central Cluster, on page 8

Enable OAuth Authentication for Central Cluster

Use this procedure to enable OAuth authentication in the telephony cluster. This also enables OAuth authentication in the IM and Presence central cluster.

Procedure

Step 1 Log in to Cisco Unified CM Administration on the telephony cluster.

Step 2 Choose **System** > **Enterprise Parameters**

Step 3 Under **SSO And OAuth Configuration**, set the **OAuth with Refresh Login Flow** enterprise parameter to **Enabled**.

Step 4 If you edited the parameter setting, click **Save**.

Disable High Availability in Central Cluster

Make sure that High Availability is disabled in each Presence Redundancy Group (subcluster) of the IM and Presence central cluster. You must do this before you begin applying configurations or migrating users.

Note The **Presence Redundancy Group Details** page shows all the active JSM sessions, even when the high availability is disabled in the cluster.

Procedure

Step 1 Log in to Cisco Unified CM Administration instance for the central cluster.
Step 2 Choose **System** > **Presence Redundancy Groups**.
Step 3 Click **Find** and select an existing subcluster.
Step 4 Uncheck the **Enable High Availability** check box.
Step 5 Click **Save**.
Step 6 Repeat this step for each subcluster.

What to do next

Stop the Cisco Intercluster Sync Agent, on page 10

Delete Peer Relationship for Central and Migrating Clusters

If intercluster peering exists between the IM and Presence central cluster and the migrating cluster, delete that peer relationship.

Procedure

Step 1 Log in to the IM and Presence Service central cluster's database publisher node.
Step 2 From Cisco Unified CM IM and Presence Administration, choose **Presence** > **Inter-Clustering**.
Step 3 Click **Find** and select the migrating cluster.
Step 4 Click **Delete**.
Step 5 Restart the **Cisco XCP Router**:
a) Log in to Unified IM and Presence Serviceability and choose **Tools** > **Control Center - Network Services**.
b) From the **Server** list, choose the database publisher node and click **Go**.
c) Under **IM and Presence Services**, select **Cisco XCP Router** and click **Restart**.
Step 6 Repeat these steps on the migrating cluster.

Stop the Cisco Intercluster Sync Agent

Before you configure the IM and Presence central cluster, make sure that the **Cisco Intercluster Sync Agent** service is stopped on the central cluster.

Procedure

Step 1 From Cisco Unified IM and Presence Serviceability, choose **Tools** > **Control Center - Network Services**.

Step 2 From the **Server** drop-down, select the central cluster database publisher node, and click **Go**.

Step 3 Confirm the status of the **Cisco Intercluster Sync Agent** service. If the service is running or activated, select the adjacent radio button and click **Stop**.

What to do next

Enable IM and Presence via Feature Group Template, on page 10

Enable IM and Presence via Feature Group Template

Use this procedure to configure a feature group template with IM and Presence settings for the central cluster. You can add the feature group template to an LDAP Directory configuration to configure IM and Presence for synced users.

Note You can apply a feature group template only to an LDAP directory configuration where the initial sync has not yet occurred. Once you've synced your LDAP configuration from the central cluster, you cannot apply edits to the LDAP configuration in Cisco Unified Communications Manager. If you have already synced your directory, you will need to use Bulk Administration to configure IM and Presence for users. For details, see Enable Users for IM and Presence via Bulk Admin.

Procedure

Step 1 Log into the Cisco Unified CM Administration interface of the IM and Presence centralized cluster. This server should have no telephony configured.

Step 2 Choose **User Management** > **User Phone/Add** > **Feature Group Template**.

Step 3 Do one of the following:

- Click **Find** and select an existing template
- Click **Add New** to create a new template

Step 4 Check both of the following check boxes:

- **Home Cluster**
- **Enable User for Unified CM IM and Presence**

Step 5 Complete the remaining fields in the **Feature Group Template Configuration** window. For help with the fields and their settings, refer to the online help.

Step 6 Click **Save**.

What to do next

To propagate the setting to users, you must add the Feature Group Template to an LDAP directory configuration where the initial sync has not yet occurred, and then complete the initial sync.

Complete LDAP Sync on Central Cluster, on page 11

Complete LDAP Sync on Central Cluster

Use this procedure on your remote Cisco Unified Communications Manager telephony clusters to use an LDAP sync to deploy your centralized IM and Presence settings to your Cisco Unified Communications Manager deployment.

Note For more details on how to set up an LDAP Directory sync, see the "Configure End Users" part of the *System Configuration Guide for Cisco Unified Communications Manager*.

Procedure

Step 1 From Cisco Unified CM Administration, choose the **System** > **LDAP** > **LDAP Directory**.

Step 2 Do either of the following:

- Click **Find** and select an existing LDAP Directory sync.
- Click **Add New** to create a new LDAP Directory sync.

Step 3 From the **Feature Group Template** drop-down list box, select the feature group template that you created in the previous task. IM and Presence must be disabled on this template.

Step 4 Complete the remaining fields in the **LDAP Directory** window. For help with the fields and their settings, refer to the online help.

Step 5 Click **Save**.

Step 6 Click **Perform Full Sync**.
Cisco Unified Communications Manager synchronizes its database with the LDAP directory and assigns the updated IM and Presence settings.

What to do next

Import Contact Lists into Central Cluster, on page 12

Enable Users for IM and Presence via Bulk Admin

If you have already synced users into the central cluster, and those users were not enabled for the IM and Presence Service, use Bulk Administration's Update Users feature to enable those users for the IM and Presence Service.

Note You can also use Bulk Administration's Import Users or Insert Users feature to import new users via a csv file. For procedures, see the *Bulk Administration Guide for Cisco Unified Communications Manager*. Make sure that the imported users have the below options selected:

- Home Cluster
- Enable User for Unified CM IM and Presence

Procedure

Step 1 From Cisco Unified CM Administration, choose **Bulk Administration** > **Users** > **Update Users** > **Query**.

Step 2 From the **Filter**, select **Has Home Cluster Enabled** and click **Find**. The window displays all of the end users for whom this is their Home Cluster

Step 3 Click **Next**.
In the **Update Users Configuration** window, the check boxes on the far left indicate whether you want to edit this setting with this query. If you don't check the left check box, the query will not update that field. The field on the right indicates the new setting for this field. If two check boxes appear, you must check the check box on the left to update the field, and in the right check box, enter the new setting.

Step 4 Under **Service Settings**, check the left check box for each of the following fields to indicate that you want to update these fields, and then edit the adjacent field setting as follows:

- **Home Cluster**—Check the right check box to enable this cluster as the home cluster.
- **Enable User for Unified CM IM and Presence**—Check the right check box. This setting enables the central cluster as the provider of IM and Presence Service for these users.

Step 5 Complete any remaining fields that you want to update. For help with the fields and their settings, see the online help:

Step 6 Under **Job Information**, select **Run Immediately**.

Step 7 Click **Submit**.

Import Contact Lists into Central Cluster

If you have migrated users to the IM and Presence Central Cluster, you can use this procedure to import your users' contact lists into the IM and Presence central cluster. You can import either of the following types of contact lists:

- Contact lists—This list contains IM and Presence contacts.
- Non-presence contact lists—This list contains contacts whom do not have an IM address.

Before you begin

You require the contact list csv file(s) that you exported from the old cluster (the telephony cluster).

Procedure

Step 1 Log in to Cisco Unified CM IM and Presence Administration on the IM and Presence central cluster.

Step 2 Upload the csv file that you exported from the telephony cluster:

a) Choose **Bulk Administration** > **Upload/Download Files**.
b) Click **Add New**.
c) Click **Choose File** and select the csv file that you want to import.
d) From the **Select the Target** drop-down select either of the following: **Contact Lists** or **Non-presence Contact Lists** depending on which type of contact list you are importing.
e) From the **Select Transaction Type**, select the import job.
f) Click **Save**.

Step 3 Import the csv information into the central cluster:

a) From Cisco Unified CM IM and Presence Administration, do either of the following:
   - For Contact List imports, choose **Bulk Administration** > **Contact Lists** > **Update Contact Lists**.
   - For Non-presence Contact List imports, choose **Bulk Administration** > **Non-presence Contact Lists** > **Import Non-presence Contact Lists**.

b) From the **File Name** drop-down, select the csv file that you uploaded.
c) Under **Job Information**, select either **Run Immediately** or **Run Later** depending on when you want the job to run.
d) Click **Submit**. If you chose **Run Immediately**, the contact lists get imported right away

Note
. If you chose **Run Later**, you must go to **Bulk Administration** > **Job Scheduler** where you can select the job and schedule a time for it to run.

Step 4 Repeat this procedure if you have a second csv file to import.

What to do next

Start Cisco Intercluster Sync Agent, on page 13

Start Cisco Intercluster Sync Agent

After your configuration or migration is complete, start the **Cisco Intercluster Sync Agent** in the IM and Presence central cluster. This service is required if you are using intercluster peering.

Procedure

Step 1 From Cisco Unified IM and Presence Serviceability, choose **Tools** > **Control Center - Network Services**.

Step 2 From the **Server** drop-down, select the IM and Presence database publisher node and click **Go**.

Step 3 Under **IM and Presence Services**, select the **Cisco Intercluster Sync Agent** and click **Start**.

What to do next

Enable High Availability in Central Cluster, on page 14

Enable High Availability in Central Cluster

After your configuration or user migration is complete, enable High Availability in the Presence Redundancy Groups (subclusters) for the IM and Presence central cluster.

Procedure

Step 1 Log in to the Cisco Unified CM Administration instance on the IM and Presence central cluster.

Step 2 Choose **System** > **Presence Redundancy Groups**.

Step 3 Click **Find** and select an existing subcluster.

Step 4 Check the **Enable High Availability** check box.

Step 5 Click **Save**.

Step 6 Repeat this procedure for each subcluster in the IM and Presence central cluster.

Delete Remaining Peers for Migrating Cluster

Delete intercluster peer relationships between the migrating cluster (now a telephony cluster) and any remaining IM and Presence Service peer clusters.

Note Removing intercluster connections can be postponed to a later date depending on the Cisco XCP Router restart availability across the entire mesh. As long as there are existing intercluster connections between telephony cluster and any number of peer clusters, currently running Cisco XCP Router services should be kept in **Running** state on the telephony cluster.

Procedure

Step 1 Log in to the migrating cluster's IM and Presence database publisher node.

Step 2 From Cisco Unified CM IM and Presence Administration, choose **Presence** > **Inter-Clustering**.

Step 3 Click **Find** and select the peer cluster.

Step 4 Click **Delete**.

Step 5 Restart the **Cisco XCP Router**:

a) Log in to Unified IM and Presence Serviceability and choose **Tools** > **Control Center - Network Services**.

b) From the **Server** list, choose the database publisher node and click **Go**.
c) Under **IM and Presence Services**, select **Cisco XCP Router** and click **Restart**.

Step 6 Repeat these steps on the IM and Presence Service peer cluster.

Note
If the migrating cluster has intercluster peer connections to multiple clusters, you must repeat this procedure for each peer cluster that remains in the intercluster network. This means that, on the migrating cluster, there will be as many cycles of **Cisco XCP Router** restarts as there are peer cluster connections that are being broken.