COLLABORATION TRANSITIONS

Messaging:

Transitioning from Distributed to Centralized Unified CM IM and Presence Service (IM&P)

CTG Technical Marketing Engineering Team
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Messaging: Transitioning to Centralized Unified CM IM&P Service

Scenario Introduction
Messaging: Transitioning to Centralized Unified CM IM&P

Scenario Introduction: Decision

This scenario applies specifically to transitioning from distributed to centralized Unified CM IM&P deployments.

Consider carefully before making this transition if your deployment includes:

» Persistent chat
» Compliance with a third-party compliance solution
» Federation
» Requirement to remain on a version earlier than 11.5(1)SU5
» Requirement for phone line status without relying on Jabber clients
Messaging: Transitioning to Centralized Unified CM IM&P

Scenario Introduction: Overview

Messaging and presence transition scenario covering move from **on-premises** distributed messaging to an **on-premises** centralized messaging deployment.

**Scenario Objective**

- Evaluate the transition **FROM** a traditional **on-premises** distributed Cisco Unified CM IM & P **TO** a centralized Cisco Unified CM IM & P deployment.

- Explore the **messaging and presence** solution transition focusing on the configuration and management **administrative experience**
Messaging: Transitioning to Centralized Unified CM IM&P

Scenario Introduction: Base Architecture

» Architecture based on the Enterprise On-Premises Preferred Architecture (version 12.x)¹

» Messaging deployment with on-premises Unified CM IM & Presence

» Jabber clients register to on-premises Unified CM clusters connecting directly or optionally through Expressway MRA

» Expressway-C/E pairs for MRA firewall traversal

¹ The Enterprise On-Premises Preferred Architecture (PA) accommodates multi-cluster deployments as required for scalability and geographic distribution
Messaging: Transitioning to Centralized Unified CM IM&P

Scenario Introduction: Scope

• Messaging and presence service resources (Unified CM IM&P) are moved from a distributed multi-cluster deployment to a single centralized cluster deployment.

• Only Unified CM IM & P is evaluated for this scenario.
  » This transition assumes that all Jabber clients are not only consuming on-premises IM and presence (Unified CM IM&P) services, but are also registered to on-premises call control (Unified CM).
  » There is no change in end-user functionality with this transition.

• Because this transition only applies to the back-end service node infrastructure which should be transparent to the end-user, no messaging or presence features and functions were evaluated.

• 80/20 Rule: We expect this scenario will be applicable to ~80% of customers, understanding that ~20% of customers may have additional considerations or requirements not covered. However, even in those cases, this transition map may still be used as a potential future transition path.
Collaboration Transitions

Messaging: Transitioning to Centralized Unified CM IM&P Service

Mapping the Transition
Messaging: Transitioning to Centralized Unified CM IM&P
Mapping the Transition: High-Level Transition Map

Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Expressway MRA1 is an optional feature.
Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Expressway MRA is an optional feature.
Messaging: Transitioning to Centralized Unified CM IM&P

Unified CM IM&P Distributed Messaging Deployment

Call Control: Unified CM

- Call control: Unified CM provides on-premises registration and call routing.

Messaging: Unified CM IM&P

- Multi-site / multi-cluster: Multiple clusters for required capacity and/or geographic distribution.

Expressway-C/E

- Firewall traversal: Expressway MRA provides secure remote connectivity for remote Jabber users.

Cluster 1

Cluster 2

Cluster n

Jabber Clients

- Jabber clients: Jabber consumes on-premises messaging / presence (and call control) services.

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1 Remote connectivity is an optional feature. VPN can also be used for remote connections.
Messaging: Transitioning to Centralized Unified CM IM&P

Unified CM IM&P Distributed Messaging Flow

Call Control: Unified CM

Messaging: Unified CM IM&P

Expressway-C/E\(^1\)

Cluster 1

Cluster 2

Cluster n

Jabber Clients

Call Control – SIP (registration, call routing)

Messaging – XMPP (messaging, presence)

\(^1\) Expressway MRA flow is optional.
Mapping the Transition: Step 1 – Centralized IM&P

Note: This map is a visual representation of the workload transition(s), highlighting the primary architectural changes during the deployment.

Expressway MRA is an optional feature.
Messaging: Transitioning to Centralized Unified CM IM&P

What Changes with Centralized Unified CM IM&P?

- **Messaging Resources:** Unified CM IM&P messaging resources are not needed on every premises and can be removed.\(^1\)

- **Future Upgrades:** Unified CM IM&P cluster nodes no longer have to be upgraded in lockstep with the Unified CM call control cluster nodes. The centralized Unified CM IM&P cluster may be upgraded (or not) independent of the version of Unified CM call control cluster nodes within the deployment.

- **Contact List Migration:** User Contact Lists are located on the new centralized Unified CM IM&P cluster and can be migrated from the distributed Unified CM IM&P clusters on a per user basis during the migration process.

- **Phone line Status:** Jabber clients share phone lines with desktop phones so they report desk phone usage by means of XMPP messaging to IM&P instead of through a SIP PUBLISH trunk between Unified CM and Unified CM IM&P

- **Jabber Clients Service Delivery:** Jabber receives messaging, presence, contact, and directory services from a different cluster than the cluster it receives calling services from. This transition should be seamless to the user.\(^2\)

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\(^1\) Which messaging (or calling resources) will no longer be needed will depend on the transition method you choose.

\(^2\) Provided the administrator backs up all user contact lists with BAT prior to the transition.
Messaging: Transitioning to Centralized Unified CM IM&P

Before – Unified CM IM&P Distributed Messaging

Call Control: Unified CM

Messaging: Unified CM IM&P

Expressway-C/E

Jabber Clients

Remote connectivity is an optional feature. VPN can also be used for remote connections.
Messaging: Transitioning to Centralized Unified CM IM&P

After – Unified CM IM&P Centralized Messaging

- **Multi-site / multi-cluster call control:** Multiple Unified CM clusters for required capacity and/or geographic distribution

- **On-premises messaging / presence:** Single centralized Unified CM IM&P cluster.

- **Firewall traversal:** Expressway MRA provides secure remote connectivity for remote Jabber users

- **Jabber clients:** Jabber continues to consume on-premises messaging / presence (and call control) services.

1 Remote connectivity is an optional feature. VPN can also be used for remote connections.
Messaging: Transitioning to Centralized Unified CM IM&P

After – Unified CM IM&P Centralized Messaging Flow

Call Control: Unified CM
Cluster n
Cluster 2
Cluster 1

Messaging: Unified CM IM&P
CENTRALIZED CLUSTER

Expressway-C/E

Jabber Clients

Call Control – SIP (registration, call routing)

Messaging – XMPP (messaging, presence)

1 Expressway MRA flow is optional.
Messaging: Transitioning to Centralized Unified CM IM&P

Centralized IM&P Reduces Cost and Simplifies Management

• Centralized Unified CM IM&P deployments reduce cost because Unified CM IM&P servers do not need to be installed at every site that requires messaging and presence services.

• The Centralized Unified CM IM&P cluster acts as a central provider of IM&P services to Jabber clients, regardless of their location.
  » Jabber clients (and other endpoints) continue to consume voice services from their local Unified CM call control clusters leveraging existing investments in enterprise voice infrastructure.
  » Jabber clients retrieve an updated service profile from their designated Unified CM call control cluster and are pointed to the new centralized Unified CM IM&P cluster for message and presence services.

• All presence information is propagated from clients directly via XMPP removing the requirement for a SIP PUBLISH trunk from Unified CM to Unified CM IM&P.
Messaging: Transitioning to Centralized Unified CM IM&P

Why Move to Centralized Unified CM IM&P?

There are many other compelling reasons for transitioning from distributed on-premises to centralized Unified CM IM&P:

• **Deployment flexibility** for multi-cluster environments
  » **Version independence** between Unified CM IM&P and Unified CM telephony clusters.
  » **1:many cluster ratios** allowing a single IM&P cluster for multiple telephony clusters.

• **Eliminates Unified CM IM&P inter-clustering** mitigating issues caused by inter-site high-latency, low-bandwidth links.

• **No change** to user messaging and presence experience (Jabber clients continue to consume the Unified CM IM&P services)

• **No change** to Jabber client administration and control
What is Different When Moving to Centralized IM&P?

The following tables highlight key technical considerations to be aware of when transitioning from an on-premises distributed messaging deployment to an on-premises centralized messaging deployment.

The considerations include:

» Persistent Chat
» Compliance with Third-Party Compliance Solution
» Presence Propagation
» Federation
» Version Requirements
<table>
<thead>
<tr>
<th>Category</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistent Chat</td>
<td>• External databases for Persistent Chat and Managed File Transfer cannot be moved between Unified CM IM&amp;P servers.</td>
</tr>
<tr>
<td></td>
<td>• Mitigate this caveat by leaving an existing Unified CM IM&amp;P cluster with external databases in place and intercluster it with the new centralized Unified CM IM&amp;P cluster.</td>
</tr>
<tr>
<td>Third-Party Compliance Solutions</td>
<td>• Consider moving third-party compliance servers to the central site to reduce network dependencies and facilitate physical access for maintenance purposes.</td>
</tr>
<tr>
<td></td>
<td>• Compliance profiles will need modification if an Unified CM IM&amp;P server used in a compliance profile is to be decommissioned.</td>
</tr>
<tr>
<td>Presence Propagation</td>
<td>• The centralized Unified CM IM&amp;P deployment does not leverage a SIP PUBLISH trunk between Unified CM and Unified CM IM&amp;P because Jabber uses XMPP to notify Unified CM IM&amp;P when a user’s desk phone’s line is in use. This means that the Jabber client must be running at all times.</td>
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Considerations for federation and version requirements include:

<table>
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<tr>
<th>Category</th>
<th>Considerations</th>
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</table>
| Federation             | • Both the existing Unified CM IM&P-side and the remote destination of a federation trust will need to be removed then configured between the new centralized Unified CM IM&P cluster and the remote destination.  
                          | • Mitigate this by leaving an existing Unified CM IM&P cluster with federation in place and intercluster it with the new centralized Unified CM IM&P cluster.                                                   |
| Version Requirements   | • If you have a requirement to remain on a version earlier than 11.5(1)SU5 you must carefully review issues that are not addressed in the version you need. This cluster could be left in place and can communicate with the centralized Unified CM IM&P cluster using intercluster peering  
                          | • All other clusters without version dependencies can move to the latest version and do intercluster peering or can be deprecated with all messaging and presence services provided by the centralized Unified CM IM&P cluster. This is an advantage of the centralized deployment model. |
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References
Messaging: Transitioning to Centralized Unified CM IM&P

References

Unified CM IM&P Centralized Configuration

- Configure Centralized Deployment chapter, IM&P Config and Admin Guide:

Unified CM Product Documentation

- Unified CM Product Documentation:

Cisco Jabber

- Cisco Jabber Documents and Downloads:

Messaging Transition Deployment Guide

- Messaging: Transitioning to Centralized IM and Presence Service Deployment Guide: