



Integration Overview

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Partitioned Intradomain Federation

More and more enterprises are choosing Cisco Unified Presence as their IM and Availability platform. These enterprises already have Microsoft Lync, Microsoft Office Communications Server (OCS) or Microsoft Live Communications Server (LCS) deployed and want to move their users from Microsoft Lync or Microsoft Office Communicator to a Cisco Unified Presence supported client. During the transition, it is important that these users who migrate to a Cisco Unified Presence supported client can continue to share availability information and instant messages with those users who are still using Microsoft Lync or Microsoft Office Communicator. For more information about supported Cisco Unified Presence clients, see [Software Requirements, page 2-3](#).



Note

- Partitioned Intradomain Federation between Cisco Unified Presence and Microsoft Lync is available only from Release 8.6(4)SU2.
- For Partitioned Intradomain Federation with Microsoft Lync, you must configure TLS; TCP is not supported. See [Configure Microsoft Lync for Partitioned Intradomain Federation](#) for more information.

Partitioned Intradomain Federation enables Cisco Unified Presence client users and Microsoft Lync or Microsoft Office Communicator users within the same enterprise domain to exchange availability and IM.

This integration supports users within an enterprise domain who either are configured on Cisco Unified Presence and use a Cisco Unified Presence supported client as their desktop client, or are enabled on Lync, OCS, or LCS and use Microsoft Lync or Microsoft Office Communicator as their desktop client.

**Note**

This integration does not support users with *both* a Cisco Unified Presence supported client and Microsoft Lync or Microsoft Office Communicator.

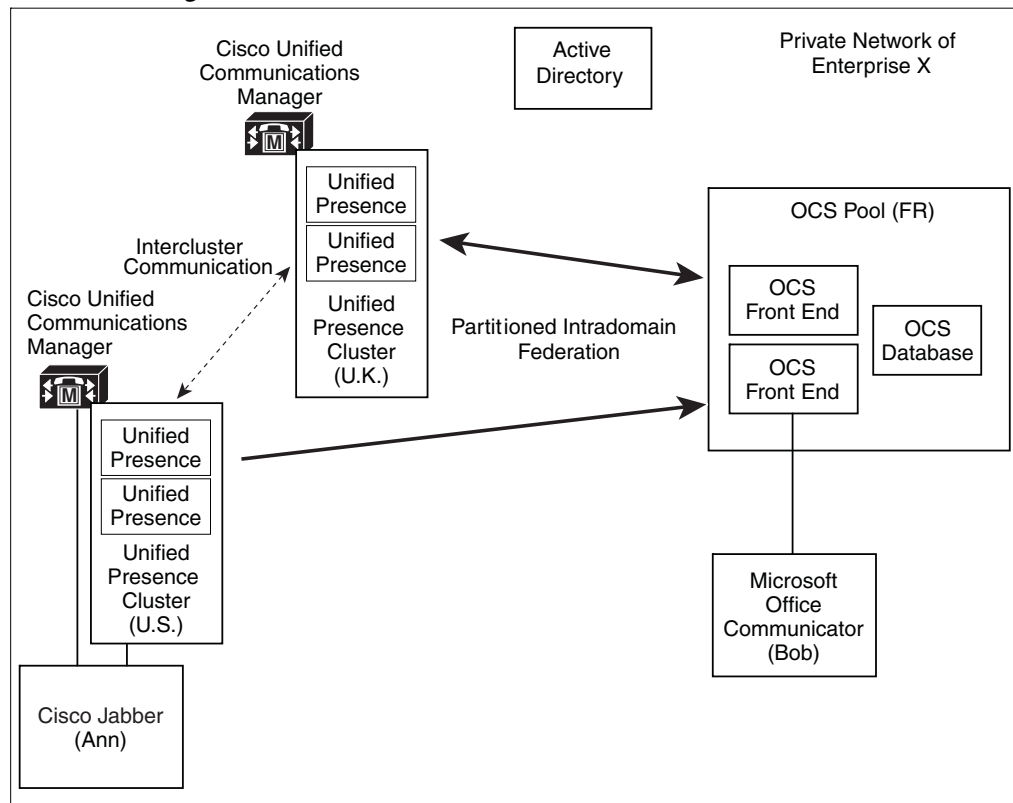
Cisco Unified Presence Release 8.6 uses the standard Session Initiation Protocol (SIP RFC 3261) to provide Partitioned Intradomain Federation support for the following Lync/OCS/LCS platforms:

- Microsoft Lync Server 2010, Standard Edition and Enterprise Edition
- Microsoft Office Communications Server 2007 R2, Standard Edition and Enterprise Edition
- Microsoft Live Communications Server 2005, Standard Edition and Enterprise Edition

Figure 1-1 shows a high-level sample deployment of Cisco Unified Presence and Lync/OCS/LCS within the same domain. This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.

For Partitioned Intradomain Federation, you must configure the identical domain on the Cisco Unified Presence nodes and Microsoft Lync/OCS/LCS servers.

Figure 1-1 Integration Overview



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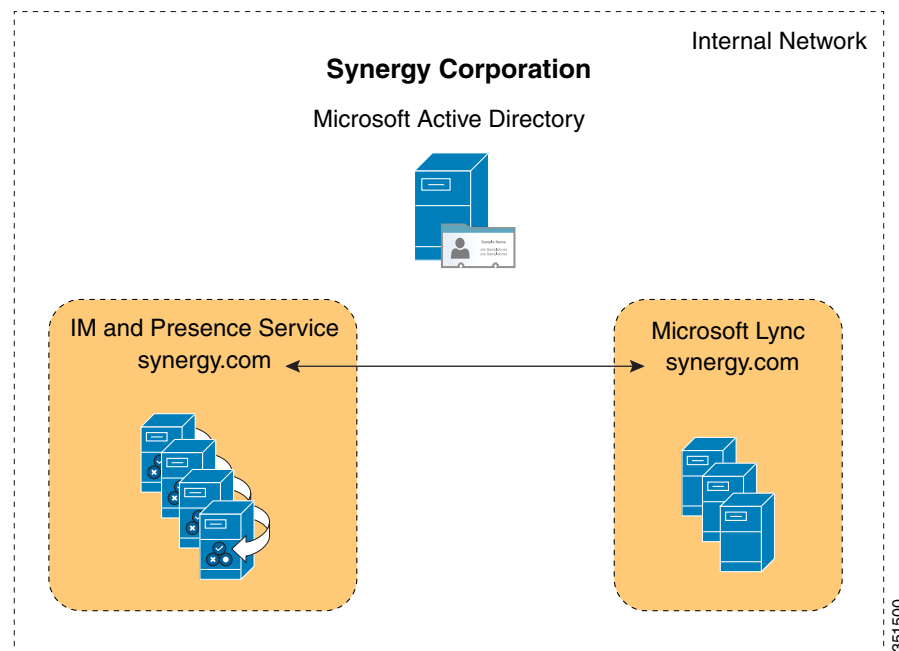
**Note**

The term Lync/OCS/LCS is used in this document to refer to all supported Lync, OCS, and LCS platform types. If any detail is specific to one platform type, that Lync, OCS, or LCS platform is specifically identified.

Single domain example

In this example, users within the domain called synergy.com on both the Cisco Unified Presence node and the Microsoft Lync server are able to exchange Availability and IM using intradomain federation because that domain is configured on both systems. The common active directory enables contact searches and display name resolution for all users on both systems.

Figure 1-2 *Single domain intradomain federation example*

**Note**

Domains must be identical. For example, user1@abc.synergy.com cannot share IM and Availability with any of the federated users configured for Intradomain Federation on synergy.com. Add user1 to the synergy.com domain to enable user1 to participate in Intradomain Federation in this example.

Partitioned Intradomain Federation configuration

You configure the following key components to enable Partitioned Intradomain Federation between Cisco Unified Presence and your Microsoft Lync, Microsoft Office Communications Server (OCS), or Microsoft Live Communications Server (LCS) server:

1. Cisco Unified Presence server
2. Lync/OCS/LCS server

3. User migration


Tip

See the detailed configuration workflows for the start-to-finish steps needed to enable Partitioned Intradomain Federation and for links to the procedures that are performed at each step of the process.

Cisco recommends that you back up the Lync/OCS/LCS user contact list information before proceeding to configure Partitioned Intradomain Federation between Cisco Unified Presence and your Lync/OCS/LCS server.

[Table 1-1](#) lists the high-level Partitioned Intradomain Federation configuration tasks for the Cisco Unified Presence server

Table 1-1 *Partitioned Intradomain Federation high-level configuration tasks for the Cisco Unified Presence server*

Task	O-Optional M=Mandatory
Enable Partitioned Intradomain Federation	M
Set up static routes to the Lync/OCS/LCS server	M
Set up ACLs	M
Set up TLS for the Lync server (required if you are using a Lync server)	M
Set up TLS for OCS and LCS servers	O
Deactivate non-essential services on the dedicated routing server (if applicable)	M

[Table 1-2](#) lists the high-level Partitioned Intradomain Federation configuration tasks for the Lync server.

Table 1-2 *Partitioned Intradomain Federation high-level configuration tasks for the Lync server*

Task	O-Optional M=Mandatory
Set up static routes to the Cisco Unified Presence server	M
Set up host authorization	M
Publish the topology	M
Set up TLS	M

Table 1-3 lists the high-level Partitioned Intradomain Federation configuration tasks for the OCS and LCS servers.

Table 1-3 *Partitioned Intradomain Federation high-level configuration tasks for the OCS and LCS server*

Task	O-Optional M=Mandatory
Enable SIP port	M
Set up static routes to the Cisco Unified Presence server	M
Set up host authorization	M
Set up TLS	O

Table 1-4 lists the tasks to migrate users for Partitioned Intradomain Federation.

Table 1-4 *Partitioned Intradomain Federation user migration tasks*

Task	O-Optional M=Mandatory
Download tools	M
Disable Lync subscriber notification popups	M
Set unlimited contact list sizes and watcher sizes	M
Enable auto authorization of subscriber requests	M
Verify Lync/OCS/LCS SIP URI format for migrating users	M
Rename Contact IDs in Cisco Unified Presence contact lists	M
Provision Lync/OCS/LCS users on Cisco Unified Communications Manager	M
Back up user Lync/OCS/LCSS contact list information	M
Export contact lists for users	M
Disable users on Lync/OCS/LCS	M
Verify that user accounts are disabled	M
Delete user data from database for migrating users	M
Note Depending on your Microsoft server deployment, you may have to perform this procedure on multiple databases.	
Import contact lists for migrating users in to Cisco Unified Presence	M
Reset maximum contact list and watcher size	M
Re-enable Lync subscriber notification popups	M

Related Topics

- [Back Up User Lync/OCS/LCS Contact List Information, page 9-8](#)
- [Configuration Workflow for Partitioned Intradomain Federation with Lync, page 4-1](#)
- [Configuration Workflow for Partitioned Intradomain Federation with LCS, page 4-2](#)
- [Configuration Workflow for Partitioned Intradomain Federation with OCS, page 4-3](#)

- [Configuration Workflow for User Migration from Lync/OCS/LCS to Cisco Unified Presence](#), page 4-4
- [Disable New Subscriber Notification Popups on Microsoft Lync](#), page 9-3
- [Restore Microsoft Lync Popup Behavior](#), page 9-4

Availability

This section describes the following functionality:

- [Availability Subscriptions and Policy](#), page 1-6
- [Availability Mapping States](#), page 1-7

Availability Subscriptions and Policy

This section describes the following call flows:

- [Microsoft Lync or Microsoft Office Communicator User Subscribes for Availability of a Cisco Unified Presence Client User](#), page 1-6
- [Cisco Unified Presence Client User Subscribes for Availability of a Microsoft Lync or Microsoft Office Communicator User](#), page 1-7

Microsoft Lync or Microsoft Office Communicator User Subscribes for Availability of a Cisco Unified Presence Client User

When a Microsoft Lync or Microsoft Office Communicator user wants to view availability of a Cisco Unified Presence client user, a SIP SUBSCRIBE request is routed from Lync/OCS/LCS to Cisco Unified Presence. Cisco Unified Presence accepts the incoming subscription and places it in a pending state. Privacy policy is then applied to this incoming subscription request.



Note

Privacy policy applied to subscriptions from Microsoft Lync or Microsoft Office Communicator users in a Partitioned Intradomain Federation deployment is identical to the privacy policy that is applied to subscriptions from Cisco Unified Presence client users.

Cisco Unified Presence checks whether auto-authorization is enabled or whether the Cisco Unified Presence client user has previously blocked or allowed availability subscriptions from the Microsoft Lync or Microsoft Office Communicator user. If either case is true, Cisco Unified Presence auto-handles policy decisions for the subscription request. Otherwise, the Cisco Unified Presence client user receives an alert regarding the new subscription.

If the subscription is denied, polite blocking is implemented. This means that the availability status of the user appears as Offline to the Microsoft Lync or Microsoft Office Communicator user. If the subscription is authorized, Cisco Unified Presence sends availability updates to the Microsoft Lync or Microsoft Office Communicator user and the Cisco Unified Presence client user also has the option to add the Microsoft Lync or Microsoft Office Communicator user to their contact list.

Cisco Unified Presence Client User Subscribes for Availability of a Microsoft Lync or Microsoft Office Communicator User

When a Cisco Unified Presence client user wants to view availability of a Microsoft Lync or Microsoft Office Communicator user, a SIP SUBSCRIBE request is routed from Cisco Unified Presence to Lync/OCS/LCS. Lync/OCS/LCS accepts the incoming subscription. Policy is then applied to this incoming subscription request.

If the Microsoft Lync or Microsoft Office Communicator user has previously accepted a subscription from this user, the subscription is auto-accepted, and availability is returned to the Cisco Unified Presence client user in line with the policy level that is applied by the Microsoft Lync or Microsoft Office Communicator user. If not, the Microsoft Lync or Microsoft Office Communicator user receives an alert regarding the new subscription. The Microsoft Lync or Microsoft Office Communicator user can then accept or block the Cisco Unified Presence client user.



Note

Microsoft Lync and Microsoft Office Communicator perform a refresh subscribe approximately every 1 hour and 45 minutes. Therefore, if a Cisco Unified Presence server restarts, the maximum duration a Microsoft Lync or Microsoft Office Communicator user is without the availability status of Cisco Unified Presence contacts is approximately 2 hours. If Lync/OCS/LCS restarts, the maximum duration a Cisco Unified Presence client is without availability status of Microsoft Lync or Microsoft Office Communicator contacts is approximately 2 hours.

Availability Mapping States

Table 1-5 shows the availability mapping states from Microsoft Lync or Microsoft Office Communicator to the following Cisco Unified Presence supported clients:

- Cisco Jabber for Windows
- Cisco Jabber for Mac
- Cisco Jabber for iPad
- Cisco Jabber IM for Mobile (iPhone, Android, BlackBerry)
- Cisco Unified Personal Communicator Release 8.x
- Third-party XMPP Clients

Table 1-5 **Availability Mapping States from Microsoft Lync or Microsoft Office Communicator**

Microsoft Lync or Microsoft Office Communicator Setting	Cisco Jabber ¹ Setting	Cisco Unified Personal Communicator 8.x Setting	Third-Party XMPP Clients Setting
Available	Available	Available	Available
Away	Away	Away	Away
Be Right Back	Away	Away	Away
Busy	Busy	Busy	Busy
Do Not Disturb	Busy	Busy	Busy

Table 1-5 Availability Mapping States from Microsoft Lync or Microsoft Office Communicator

Microsoft Lync or Microsoft Office Communicator Setting	Cisco Jabber ¹ Setting	Cisco Unified Personal Communicator 8.x Setting	Third-Party XMPP Clients Setting
Appear Offline	Offline	Offline	Offline
Offline	Offline	Offline	Offline

1. Applies to all supported Cisco Jabber clients.

Table 1-6 shows the availability mapping states from all supported Cisco Jabber clients to Microsoft Lync or Microsoft Office Communicator.

Table 1-6 Availability Mapping States from Cisco Jabber to Microsoft Lync or Microsoft Office Communicator

Cisco Jabber ¹ Setting	Microsoft Lync or Microsoft Office Communicator Setting
Available	Available
Away	Away
Do Not Disturb	Busy
Out of Office	Offline
Offline	Offline

1. Applies to all supported Cisco Jabber clients.

Table 1-7 shows the availability mapping states from Cisco Unified Personal Communicator Release 8.x to Microsoft Lync or Microsoft Office Communicator.

Table 1-7 Availability Mapping States from Cisco Unified Personal Communicator Release 8.x to Microsoft Lync or Microsoft Office Communicator

Cisco Unified Personal Communicator Release 8.x Setting	Microsoft Lync or Microsoft Office Communicator Setting
Available	Available
Busy	Busy
On the Phone	Busy
Meeting	Busy
Away	Away
Do Not Disturb	Busy
Offline	Offline
Offline—On the Phone	Offline
Offline—Meeting	Offline
Offline—Out of Office	Offline

Table 1-8 shows the availability mapping states from third-party XMPP clients to Microsoft Lync or Microsoft Office Communicator.

Table 1-8 *Availability Mapping States from Third-Party XMPP Clients to Microsoft Lync or Microsoft Office Communicator*

Third-Party XMPP Setting	Microsoft Lync or Microsoft Office Communicator Setting
Available	Available
Away	Away
Extended Away	Away
Do Not Disturb	Busy
Offline	Offline

Instant Messaging

Partitioned Intradomain Federation supports point-to-point IM between Cisco Unified Presence client users and Microsoft Lync or Microsoft Office Communicator users. This includes support for the following IM features:

- Plain text IM format
- Typing indication
- Basic emoticons

SIP Session Mode IM is used to transfer messages and typing indications between Cisco Unified Presence and Lync/OCS/LCS.

When a Cisco Unified Presence client user sends an IM to a Microsoft Lync or Microsoft Office Communicator user, if no existing IM session is established between these two users Cisco Unified Presence sends a SIP INVITE message to Lync/OCS/LCS to establish a new session. This session is used for any subsequent SIP MESSAGE or SIP INFO (typing indication) traffic from either of these two users.



Note

Cisco Unified Presence client users and third-party XMPP client users can begin an IM conversation with a Microsoft Lync or Microsoft Office Communicator user even if they do not have availability.

When a Microsoft Lync or Microsoft Office Communicator user sends an IM to a Cisco Unified Presence client user, if no existing IM session is established between these two users, Microsoft Lync or Microsoft Office Communicator sends a SIP INVITE message to Cisco Unified Presence. This session is used for any subsequent SIP MESSAGE or SIP INFO (typing indication) traffic from either of these two users.



Note

Due to the proprietary nature of Lync/OCS/LCS group chat functionality, Partitioned Intradomain Federation does not support group chat between Cisco Unified Presence client users and Microsoft Lync or Microsoft Office Communicator users.

Request Routing

This section describes request routing for Cisco Unified Presence to Lync/OCS/LCS and for Lync/OCS/LCS to Cisco Unified Presence.

- [Cisco Unified Presence to Lync/OCS/LCS Request Routing, page 1-10](#)
- [Lync/OCS/LCS to Cisco Unified Presence Request Routing, page 1-12](#)

Cisco Unified Presence to Lync/OCS/LCS Request Routing

To enable basic connectivity from Cisco Unified Presence to Lync/OCS/LCS, you must configure SIP static routes on Cisco Unified Presence for the Cisco Unified Presence domain. These static routes point to an IP address of a Lync/OCS/LCS server or front-end load balancer (Enterprise Edition Lync/OCS/LCS only) and allow Cisco Unified Presence to route same-domain requests to Lync/OCS/LCS when the recipient is not a Cisco Unified Presence user. Transport Layer Security (TLS) encryption can be enabled on these static routes. To support basic connectivity from Cisco Unified Presence to Lync/OCS/LCS, you must also configure entries in the Incoming Access Control List (ACL) to ensure that Lync/OCS/LCS servers can access the Cisco Unified Presence server without authentication.

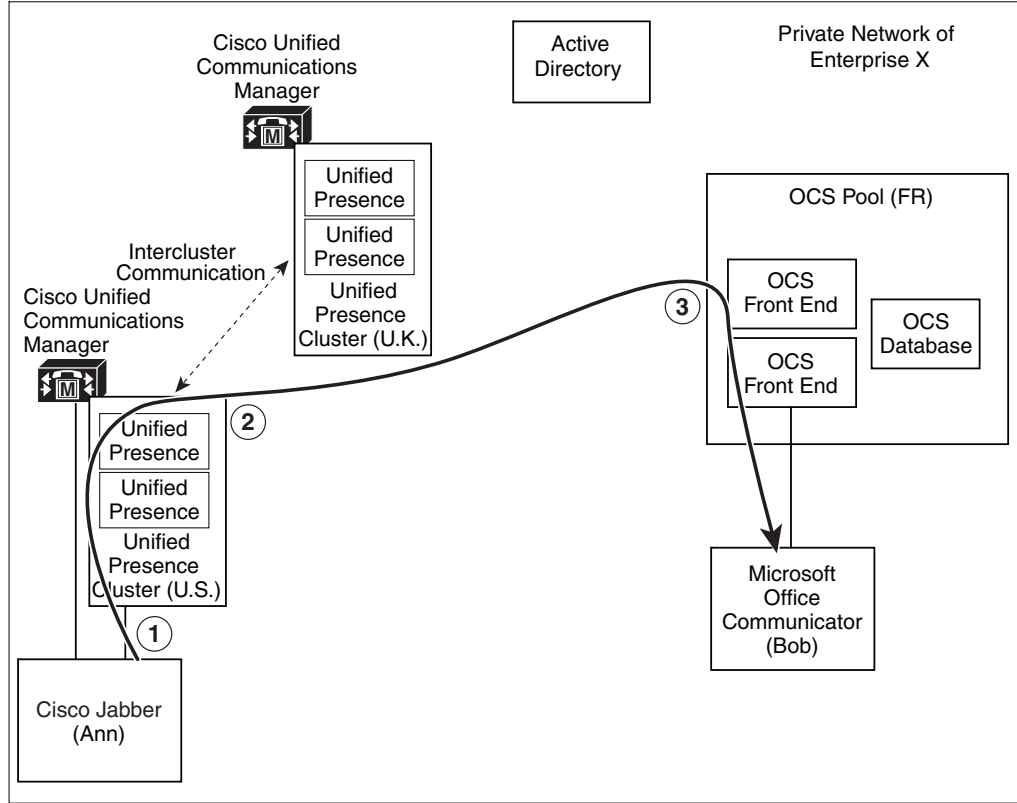
Overlaying this basic connectivity, Partitioned Intradomain Federation provides two modes of request routing from Cisco Unified Presence to Lync/OCS/LCS: Basic Routing and Advanced Routing.

Basic routing mode for Partitioned Intradomain Federation

Basic Routing is the default routing mode for Partitioned Intradomain Federation. When Basic Routing is enabled, Cisco Unified Presence routes a request to Lync/OCS/LCS if the request recipient is within the Cisco Unified Presence domain but is not a licensed Cisco Unified Presence user.

Figure 1-3 shows the sequence of the routing request from Cisco Unified Presence to Lync/OCS/LCS when Basic Routing is configured. This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.

Figure 1-3 Cisco Unified Presence to Lync/OCS/LCS Request Routing



1	Ann, a Cisco Jabber user, sends a request to Bob, who is a Microsoft Office Communicator user.
2	Because Bob is within the local domain but is not a licensed Cisco Unified Presence client user, Cisco Unified Presence translates the request and routes it to OCS.
3	The OCS server forwards the request to Bob's Microsoft Office Communicator client.



Note

- For recipients who are not provisioned on either Cisco Unified Presence or Lync/OCS/LCS, any such request that is forwarded to Lync/OCS/LCS is in turn returned by Lync/OCS/LCS to Cisco Unified Presence.
- Cisco Unified Presence has built-in loop detection to reject any requests that loop back from Lync/OCS/LCS in this manner

Advanced routing mode for Partitioned Intradomain Federation

Advanced Routing ensures less traffic between Cisco Unified Presence and Lync/OCS/LCS in deployments in which there are a large number of unprovisioned or unknown contacts in the Cisco Unified Presence database. However, Advanced Routing does add an additional storage overhead on each Cisco Unified Presence cluster because each cluster must store all Microsoft Lync or Microsoft Office Communicator users so that the Advance Routing logic can be applied.

Configure Advanced Routing for Partitioned Intradomain Federation only when you have a single-cluster Cisco Unified Presence deployment and Cisco Unified Communications Manager synchronizes its users from the same Active Directory that Lync/OCS/LCS uses. When more than one Cisco Unified Presence cluster is deployed, you must use the default basic routing method.

For Advanced Routing, the list of users that are synchronized from Active Directory must include all Microsoft Lync or Microsoft Office Communicator users.

When Advanced Routing is enabled, Cisco Unified Presence routes the request to Lync/OCS/LCS if both of the following conditions are met:

- The request recipient is within the Cisco Unified Presence domain but is not a licensed Cisco Unified Presence user
- and**
- The request recipient has a valid Microsoft Lync or Microsoft Office Communicator SIP address stored in the Cisco Unified Presence database

Lync/OCS/LCS to Cisco Unified Presence Request Routing

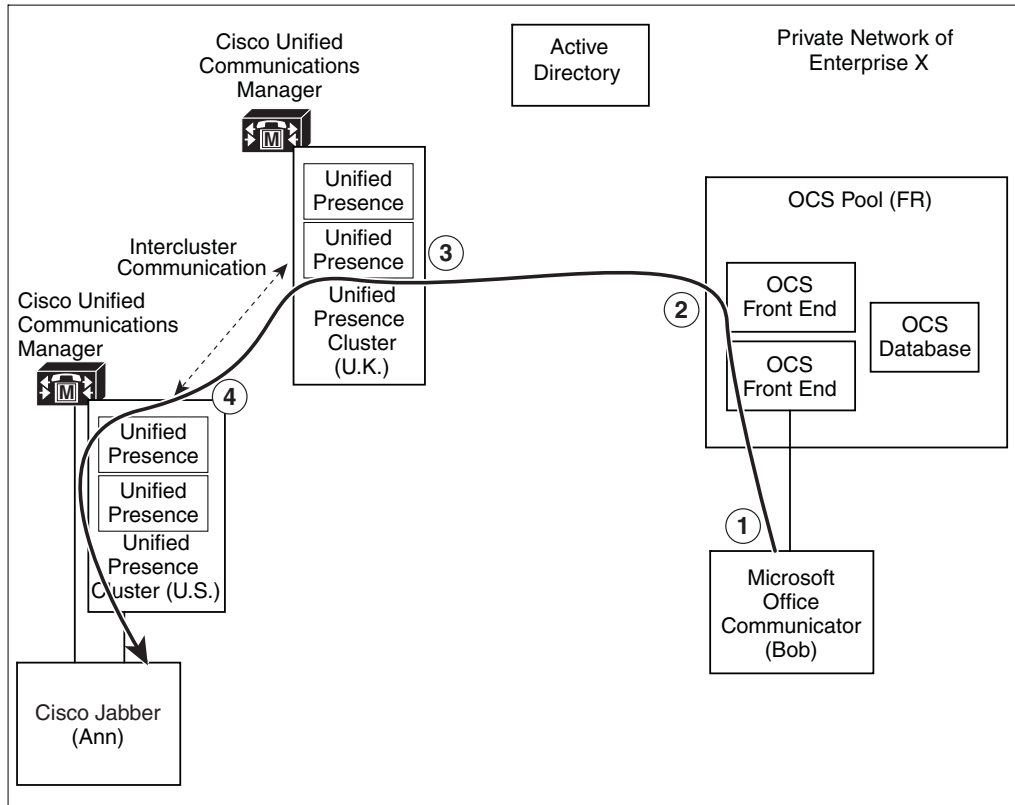
To enable basic connectivity from Lync/OCS/LCS to Cisco Unified Presence, you must configure SIP static routes on Lync/OCS/LCS for the Cisco Unified Presence domain. These static routes point to the IP address and port of a Cisco Unified Presence server, which is designated as the routing Cisco Unified Presence server. They allow Lync/OCS/LCS to route same-domain requests to Cisco Unified Presence when the recipient is not a Lync/OCS/LCS user. TLS encryption can be enabled on these static routes.

To ensure that Lync/OCS/LCS is not prompted for authorization to accept SIP Requests from Cisco Unified Presence, you must also configure Host Authorization entries on Lync/OCS/LCS for each Cisco Unified Presence server.

As mentioned, overlaying the static route configuration, Lync/OCS/LCS has just a single routing mode in a Partitioned Intradomain Federation deployment. Lync/OCS/LCS routes requests to Cisco Unified Presence if the request recipient is within one of the Lync/OCS/LCS managed presence domains but is not a Microsoft Lync or Microsoft Office Communicator user.

Figure 1-4 shows the sequence of the routing request from Lync/OCS/LCS to Cisco Unified Presence. This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.

Figure 1-4 Lync/OCS/LCS to Cisco Unified Presence Request Routing



1	Bob, a Microsoft Office Communicator user, sends a request to Ann, who is a Cisco Jabber user.	3	Cisco Unified Presence accepts the request and forwards it to Ann’s home Cisco Unified Presence server.
2	Because Ann is within the local domain but is not a Microsoft Office Communicator user, OCS routes the request to Cisco Unified Presence.	4	Cisco Unified Presence translates the request and forwards it to Ann’s Cisco Jabber client.

 **Note**

For recipients who are not provisioned on either Cisco Unified Presence or Lync/OCS/LCS, any such requests that are forwarded by Lync/OCS/LCS to Cisco Unified Presence are rejected by Cisco Unified Presence.

Intercluster and Multinode Deployments

In an intercluster and multinode cluster Cisco Unified Presence deployment, when establishing an Availability subscription or IM conversation, Lync/OCS/LCS servers route all SIP messages to a Cisco Unified Presence server that is designated for routing purposes. If the Cisco Unified Presence routing server does not host the recipient user, it routes the message to the appropriate Cisco Unified Presence server within the deployment. The system routes all responses that are associated with this request back through the routing Cisco Unified Presence server.

Any Cisco Unified Presence server, when establishing an Availability subscription or IM conversation, can send a SIP message directly to a Lync/OCS/LCS server. When Lync/OCS/LCS replies to these messages, the replies are sent directly back to the Cisco Unified Presence server that began the message.

Interdomain Federation

Cisco Unified Presence supports Interdomain Federation. This feature is also available when Cisco Unified Presence is configured for Partitioned Intradomain Federation. However, any Interdomain Federation that is configured on Cisco Unified Presence is available only to Cisco Unified Presence client users.

If the Lync/OCS/LCS deployment is already configured for SIP Interdomain Federation through an Access Edge/Access Proxy server, Microsoft Lync or Microsoft Office Communicator users can continue to use this federation capability. It is also possible to configure Cisco Unified Presence and Lync/OCS/LCS so that Cisco Unified Presence client users can take advantage of such existing federation capability.

**Note**

You cannot configure both Cisco Unified Presence and Lync/OCS/LCS to federate directly with the same remote domain.

See the *Integration Guide for Configuring Cisco Unified Presence for Interdomain Federation* for more information about Cisco Unified Presence Interdomain Federation.

Related Topics

- [Interdomain Federation and Intradomain Federation deployment integration, page 10-1](#)
- *Integration Guide for Configuring Cisco Unified Presence for Interdomain Federation:* http://www.cisco.com/en/US/products/ps6837/products_installation_and_configuration_guides_list.html

High Availability for Intradomain Federation

Partitioned Intradomain Federation supports high availability for request routing between Cisco Unified Presence and Lync/OCS/LCS.

- [High Availability for Cisco Unified Presence to Lync/OCS/LCS Request Routing, page 1-14](#)
- [High Availability for Lync/OCS/LCS to Cisco Unified Presence Request Routing, page 1-16](#)

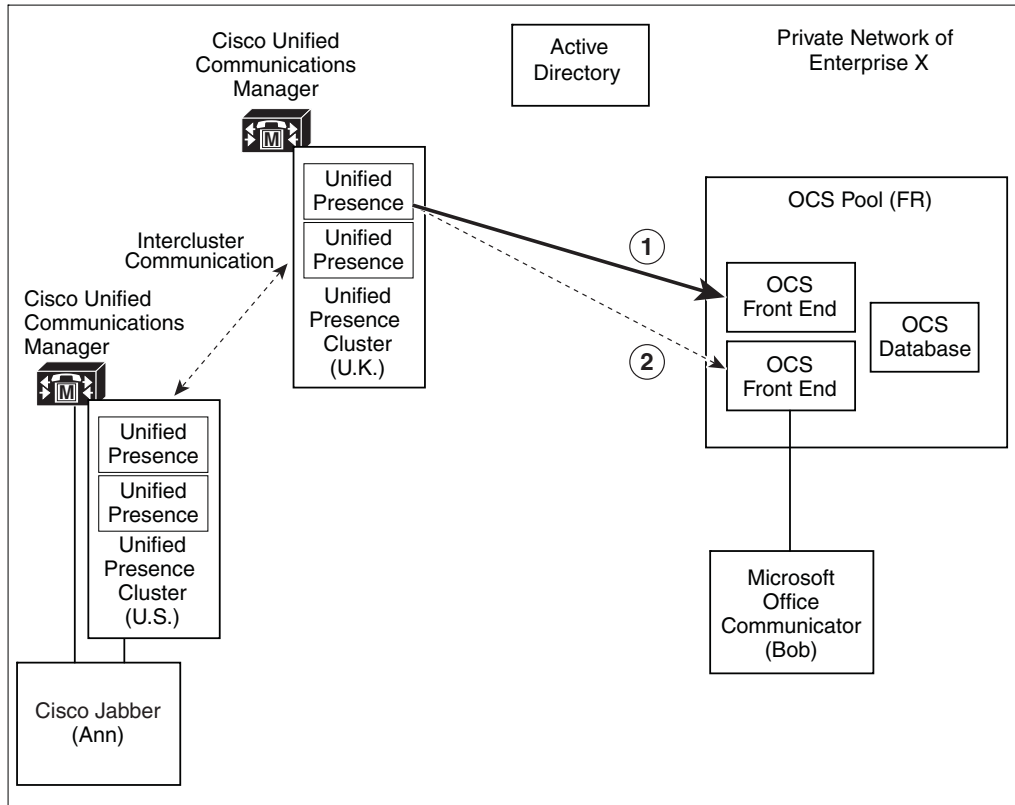
High Availability for Cisco Unified Presence to Lync/OCS/LCS Request Routing

As mentioned earlier, SIP static routes must be configured on Cisco Unified Presence to enable basic Intradomain Federation connectivity between Cisco Unified Presence and Lync/OCS/LCS.

To provide high availability for integration with Lync/OCS/LCS, you can configure multiple SIP static routes for each address pattern on Cisco Unified Presence.

You can assign priority values to these static routes as required to define primary and backup static routes. Highest Priority routes are attempted first. If those routes are not available, the request is re-sent using the backup route as shown in [Figure 1-5](#). This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.

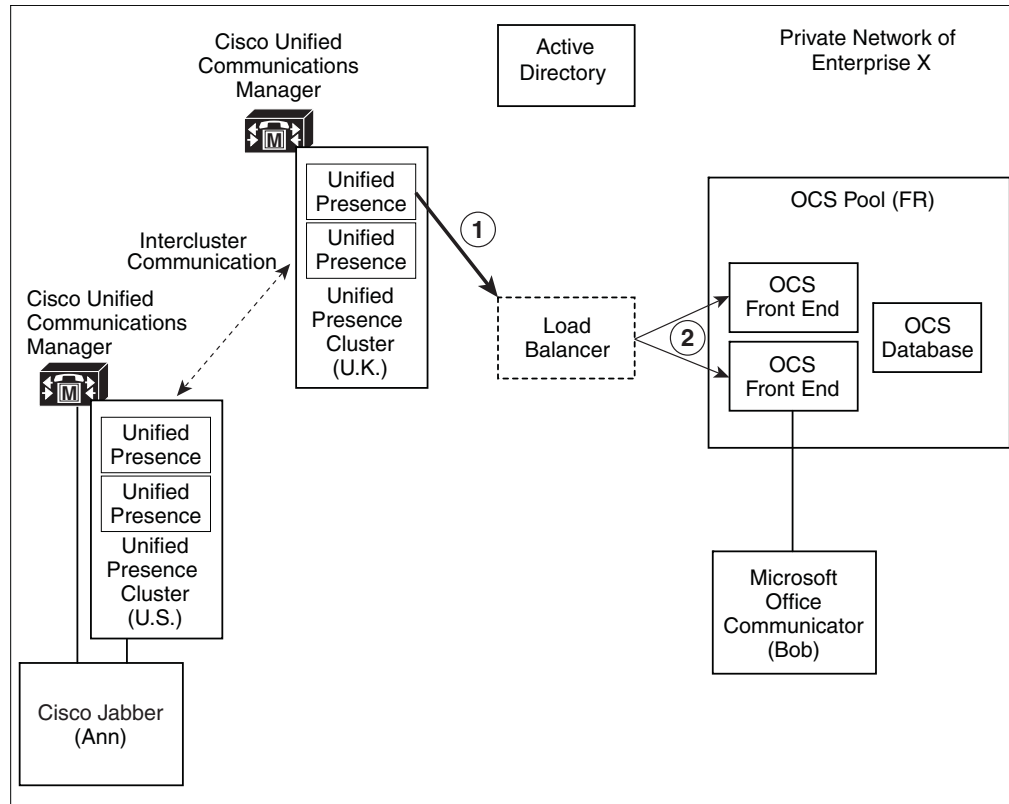
Figure 1-5 High Availability for Cisco Unified Presence to Lync/OCS/LCS Request Routing



- | | | | |
|----------|--|----------|---|
| 1 | When routing to Lync/OCS/LCS, Cisco Unified Presence finds the highest-priority static route and attempts to send the request to the next hop address that is configured for that route. | 2 | If that next hop is not available, Cisco Unified Presence falls back to the next highest-priority static route and attempts to send the request to the associated next hop address. |
|----------|--|----------|---|

In the case of Enterprise Edition Lync/OCS/LCS, you can deploy a front-end load balancer. In such cases, you can configure SIP static routes on Cisco Unified Presence to point to the IP address of the Lync/OCS/LCS front-end load balancer. The front-end load balancer provides high availability within its associated Lync/OCS/LCS pool as shown in Figure 1-6. This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.

Figure 1-6 High Availability with Load Balancer for Cisco Unified Presence to Lync/OCS/LCS Request Routing



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1	When routing to Lync/OCS/LCS, Cisco Unified Presence finds a static route that points to the OCS front-end load balancer.	2	The Lync/OCS/LCS front-end load balancer then routes onward to one of the active front-end servers within the pool.
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Cisco Unified Presence has been tested with the Cisco Application Control Engine (ACE) as the Lync/OCS/LCS front-end load balancer. Other load balancers can be used in place of ACE; see the following URL for a list of approved load balancers: <http://technet.microsoft.com/en-us/office/ocs/cc843611>. However, it is your responsibility to ensure that those load balancers are deployed and managed correctly.

**Note**

Cisco does not support the configuration of static routes to point to load balancers other than ACE.

In deployments in which ACE is not the configured front-end load balancer, Cisco recommends that you configure static routes to bypass the front-end load balancer.

High Availability for Lync/OCS/LCS to Cisco Unified Presence Request Routing

SIP static routes must be configured on Lync/OCS/LCS to enable basic Intradomain Federation connectivity between Lync/OCS/LCS and Cisco Unified Presence.

However, Lync/OCS/LCS supports configuration of only a single SIP static route for each domain, which means that the static route can point to just a single Cisco Unified Presence server.

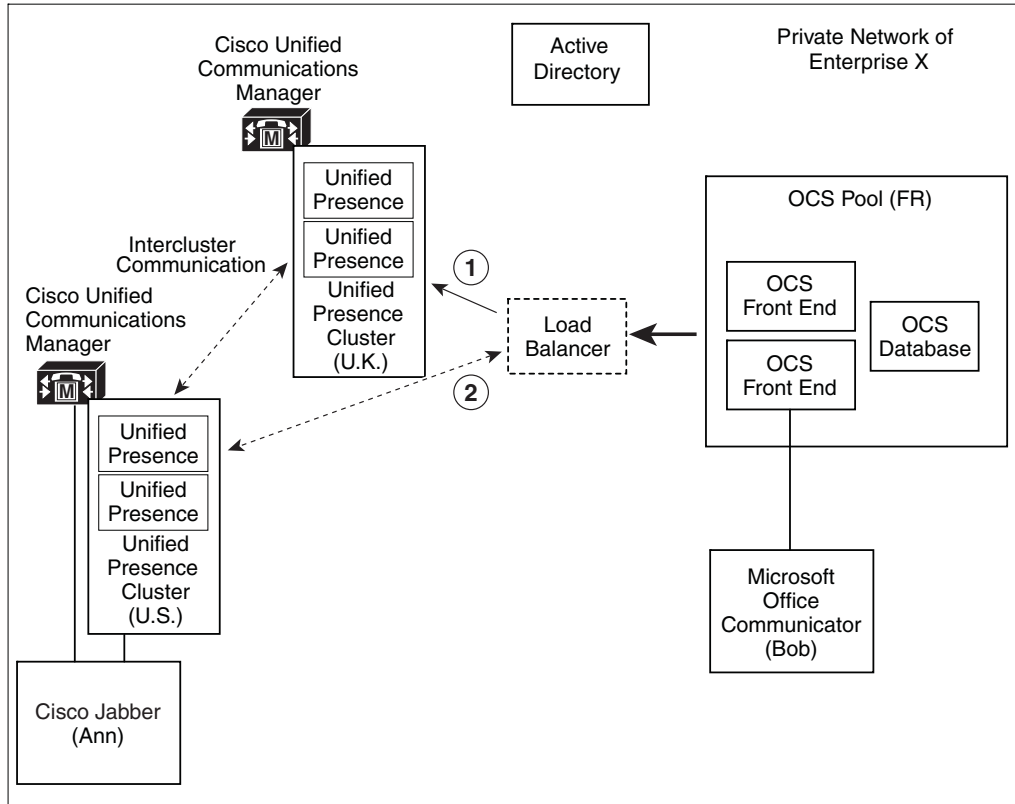
Therefore, to achieve high availability when Cisco Unified Presence is integrated with Lync/OCS/LCS, you must incorporate a load balancer between the Cisco Unified Presence server and Lync/OCS/LCS server as shown in Figure 1-7. This figure shows an example of an OCS deployment, but it also applies to Lync and LCS.



Note

The Cisco CSS11506 Content Services Switch is the only load balancer that Cisco Unified Presence supports.

Figure 1-7 High Availability for Lync/OCS/LCS to Cisco Unified Presence Request Routing



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|----------|--|----------|--|
| 1 | The load balancer works in Active/Backup mode. It routes requests to the primary Cisco Unified Presence server while that server is running and uses heartbeat signaling to check if the Cisco Unified Presence server is alive. | 2 | If the Cisco Unified Presence server fails, the load balancer ensures that all subsequent requests are routed to the backup Cisco Unified Presence server. |
|----------|--|----------|--|

Contact Search

Partitioned Intradomain Federation allows for full search capabilities on both Cisco Unified Presence supported clients and Microsoft Lync or Microsoft Office Communicator.

Active Directory (AD) searches by Cisco Unified Presence supported clients return users regardless of where they are provisioned. Microsoft Lync or Microsoft Office Communicator Address Book searches continue to return all Microsoft client users and also any Cisco Unified Presence client users who have migrated to Cisco Unified Presence.

Contact Card information is available on both clients for all contacts.

**Note**

If a Cisco Unified Presence client user was never provisioned on Lync/OCS/LCS, you must perform an Active Directory update to the msRTCSIP-PrimaryUserAddress field for such users to ensure that the user is available to Microsoft Lync or Microsoft Office Communicator searches.

User Migration

One of the primary advantages of a Partitioned Intradomain Federation deployment is that it allows a seamless transition from Lync/OCS/LCS to Cisco Unified Presence within an enterprise. Partitioned Intradomain Federation offers the following benefits:

- Cisco Unified Presence client users and Microsoft Lync or Microsoft Office Communicator users share the same presence domain.
- Users can exchange Availability and Instant Messaging within that shared domain.
- Users can search for and add contacts regardless of where the user or contact is provisioned.

To further aid the migration process for administrators, a number of tools are available with this feature.

User Migration Flow

At a high level, the administrative flow for user migration is as follows:

4. Verify the SIP URI format for migrating Lync/OCS/LCS users.
5. (From Release 8.6(5) only) Rename contact IDs in contact lists for the migrated users.
6. License and assign migrating Lync/OCS/LCS users to Cisco Unified Presence.
7. Back up Lync/OCS/LCS data for migrating Lync/OCS/LCS users.
8. Export Lync/OCS/LCS contact lists for each of the migrating Lync/OCS/LCS users.
9. Disable Lync/OCS/LCS user accounts for migrating Lync/OCS/LCS users.
10. Delete Lync/OCS/LCS user data for migrating Lync/OCS/LCS users.
11. Import Lync/OCS/LCS contact lists into the Cisco Unified Presence database for the migrated users.
12. Deploy Cisco Unified Presence supported client on migrated users' desktops.

See [Configuration Workflow for User Migration from Lync/OCS/LCS to Cisco Unified Presence](#), page 4-4 for more information.

User Migration Tools

Cisco Unified Presence provides tools for the following user migration steps:

- Export Lync/OCS/LCS contact lists for each of the migrating Lync/OCS/LCS users.
- Disable Lync/OCS/LCS user accounts for migrating Lync/OCS/LCS users.
- Delete Lync/OCS/LCS user data for migrating Lync/OCS/LCS users.
- Import Lync/OCS/LCS contact lists into the Cisco Unified Presence database for the migrated users.
- Rename the contact IDs of migrated users in the Cisco Unified Presence database.

**Note**

- These user migration tools require that you install at least Version 1.1 of the .NET Framework on the server from which you run the user migration tools.
- The Export, Disable, and Delete tools are provided in a zip file on Cisco.com. The Bulk Contact List Import tool and the Bulk Contact List Rename tool are accessible through the Cisco Unified Presence Administration GUI.

Export Lync/OCS/LCS Contact Lists for Each of the Migrating Lync/OCS/LCS Users

This Cisco Unified Presence tool allows for bulk export of contact lists from Lync/OCS/LCS. The exported contact lists are written to a comma-separated values (CSV) file that is acceptable to the Cisco Unified Presence Contact List Import Bulk Administration Tool. The combination of these tools allows for end-to-end administrative bulk contact list migration.

Disable Lync/OCS/LCS User Accounts for Migrating Lync/OCS/LCS Users

Cisco Unified Presence contains a tool to disable the Lync/OCS/LCS user accounts in bulk. This tool disables Lync/OCS/LCS accounts by connecting to Active Directory and modifying the user's Lync/OCS/LCS-specific attributes as required.

Delete Lync/OCS/LCS User Data for Migrating Lync/OCS/LCS Users

Lync/OCS/LCS users must be deleted from Lync/OCS/LCS to allow Partitioned Intradomain Federation routing from Lync/OCS/LCS to Cisco Unified Presence. However, when users are deleted from Lync/OCS/LCS, they are removed from the contact list of any Microsoft Lync or Microsoft Office Communicator users also. This Cisco Unified Presence tool deletes Lync/OCS/LCS user data in bulk, while ensuring that the users are not removed from the contact list of Microsoft Lync or Microsoft Office Communicator users.

Import Lync/OCS/LCS Contact Lists into Cisco Unified Presence Database for the Migrated Users

The existing Cisco Unified Presence Bulk Administration Tool has been extended to support bulk contact list import. Cisco Unified Presence Bulk Administration Tool takes a CSV file as input for this bulk import. When used in conjunction with the Lync/OCS/LCS Export Contact List tool, it allows for contact list migration from Lync/OCS/LCS to Cisco Unified Presence.

Rename the Contact IDs of Migrated Users in the Cisco Unified Presence Database

The Cisco Unified Presence Bulk Administration Tool has been extended in Release 8.6(5) to support migrations where the SIP URI formats on Cisco Unified Presence and Lync/OCS/LCS differ. In Cisco Unified Presence Release 8.6(4) and earlier, you must change the SIP URI of all the migrating Lync/OCS/LCS users to match the Cisco Unified Presence SIP URI format *before* you migrate the first batch of users. From Cisco Unified Presence Release 8.6(5), you can change the SIP URI of migrating

users just before you migrate each batch of users from Lync/OCS/LCS to Cisco Unified Presence. Cisco Unified Presence Bulk Administration Tool takes a CSV file with the list of migrated users as input and updates the contact lists for all users that have the migrated users as contacts.

**Note**

Running the user migration tools has no effect on the capabilities of other Lync/OCS/LCS users who are signed in to Microsoft Lync or Microsoft Office Communicator. However, Cisco recommends that you run the user migration tools during a scheduled maintenance window to reduce the load on the Lync/OCS/LCS and Active Directory system.
