Planning for User Migration

Maintenance of User Identity During Migration

During migration from Skype for Business/Lync/OCS to IM and Presence Service, Microsoft Lync and Microsoft Office Communicator users should maintain the same identity, which is their Uniform Resource Identity (URI). Maintaining the same identity during migration has the following benefits:

- It allows for the user's availability state to be continually monitored by existing followers because the user's identity does not change.

- It also allows for much simpler migration of a user's contact lists because the contact lists can be directly imported from the Microsoft server to IM and Presence Service.

IM and Presence Service URIs are composed by joining the Cisco Unified Communications Manager user ID with the IM and Presence Service domain as follows:

<userid>@<domain>

If users are manually added through the Cisco Unified Communications Manager user interface or through the Cisco Unified Communications Manager Bulk Administration Tool (BAT), you must ensure that the user ID that you specified when you created the user matches the user portion of the user's Microsoft server URI. For example, if the Microsoft user's URI is bobjones@foo.com, you should create the CUCM user with a user ID of bobjones.

If Cisco Unified Communications Manager is configured to synchronize users from Active Directory, you must ensure that the Active Directory field that is used to map to the Cisco Unified Communications Manager user ID matches the user portion of the Microsoft server URI. Note the following:

- Cisco Unified Communications Manager maps to userID from a limited number of Active Directory fields, the most common of which is sAMAccountName.

- If Cisco Unified Communications Manager maps userID to sAMAccountName, the Microsoft server URI for the migrating users must also match the format <sAMAccountName>@<domain>.

- If the sAMAccountName of Bob Jones is bjones, the Microsoft server URI must be bjones@cisco.com.

- If any Microsoft server URIs do not match the format <sAMAccountName>@<domain>, you can modify the URIs for each batch of Microsoft server users before you migrate that batch to IM and Presence Service.

Tasks Before Migration

If the Skype for Business/Lync/OCS SIP URI does not match the IM and Presence Service URI format of <userid>@<domain>, you can change the Microsoft server URI for migrating users in a phased manner. In previous releases, you had to change the URI for all migrating users before you began the migration process. With this release, you can change the URI for each batch of users just before you migrate that batch.

If you decide to change the Microsoft server SIP URIs just before you migrate each batch, then, before you migrate each batch of Microsoft server users, you must also update the contact lists on IM and Presence Service to ensure that they contain the latest SIP URI (contact IDs) for the Microsoft server users that are about to be migrated. Consider the following example.
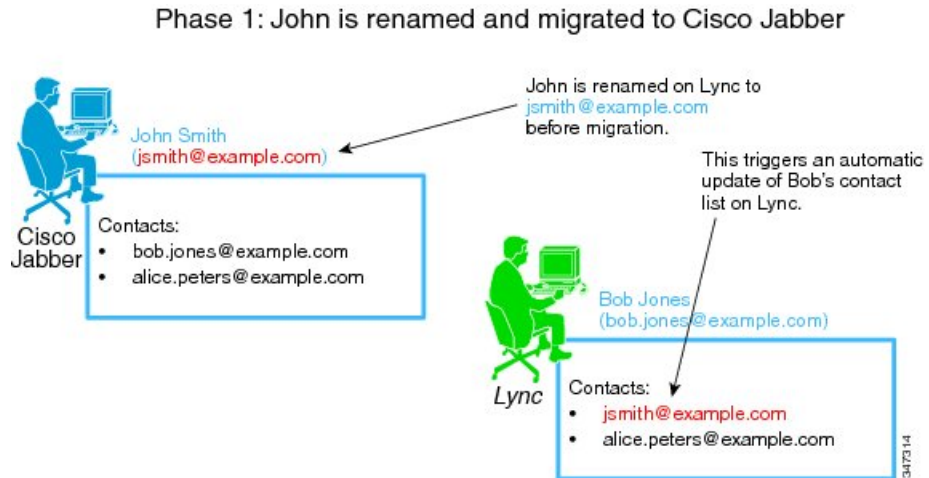
Migration Example

John Smith and Bob Jones are Lync users and are both listed in each other's contact list. Their Lync URIs are john.smith@example.com and bob.jones@example.com. John is being migrated to IM and Presence Service during Phase 1 of the migration and Bob is being migrated during Phase 2.

Figure 1: Before Migration
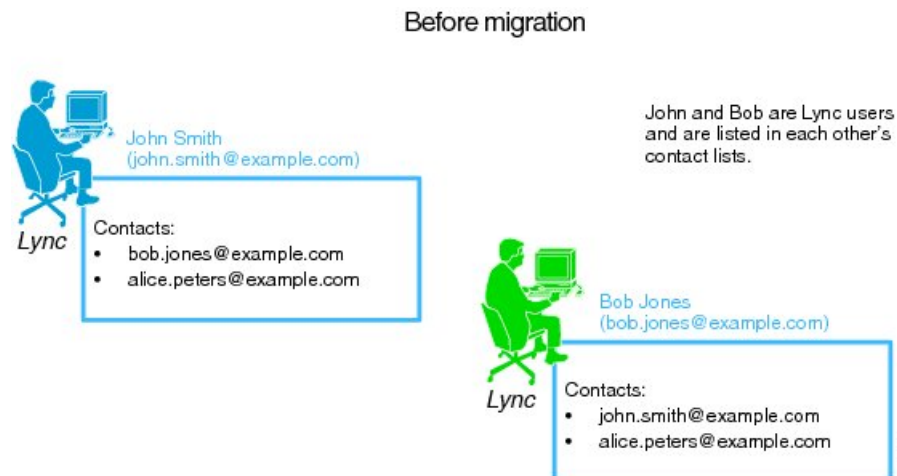
Phase 1 of user migration begins and John's Lync URI is changed to jsmith@example.com. John is then migrated to IM and Presence Service. Availability and IM between John and Bob is maintained.

Figure 2: Phase 1 of User Migration

Phase 1: John is renamed and migrated to Cisco Jabber

Phase 2 of user migration begins and Bob's Lync URI is changed to bjones@example.com. John's contact list on IM and Presence Service is updated with the new contact IDs for all of the users that are being migrated in Phase 2. Bob is then migrated to IM and Presence Service. Availability and IM between John and Bob is maintained.

Figure 3: Phase 2 of User Migration

Phase 2: Bob is renamed and migrated to Cisco Jabber
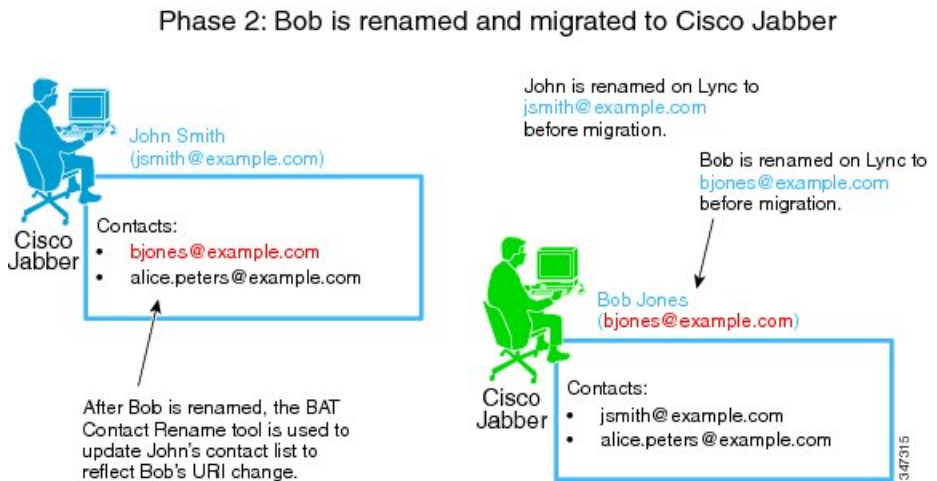
Microsoft Server SIP URI Change

If any Skype for Business/Lync/OCS URIs do not match the IM and Presence Service Service URI format, you must change those Microsoft server URIs before you begin the migration process. For more information about how to change the Microsoft server URIs see related topics on verifying the Microsoft server SIP URI format for migrating users.

Related Topics

Verify Microsoft Server SIP URI Format for Migrating Users

Contact Rename for IM and Presence Service Users

The IM and Presence Service Bulk Administration Tool allows you to rename the contact IDs in the contact lists of IM and Presence Service users in a phased manner. This means that you can update the IM and Presence Service contact lists each time that Skype for Business/Lync/OCS URIs are changed.

Note   If you need to update the IM and Presence Service contact lists, you must perform the update before the Microsoft server users (with the changed URIs) are enabled for IM and Presence Service on Cisco Unified Communications Manager.

See related topics for renaming contacts IDs for more information.

Related Topics

Rename Contact IDs in IM and Presence Service Contact Lists

Detailed User Migration Plan

The partitioned intradomain federation integration between the IM and Presence Service and Skype for Business/Lync/OCS is designed to provide basic communication between users during a phased migration from a Microsoft server to IM and Presence Service.

However, partitioned intradomain federation integration introduces a performance overhead. Because of this, IM and Presence Service can support a maximum of 130,000 SIP intradomain federation contacts per server. To ensure that this federated contact threshold is not exceeded on any IM and Presence Service node during migration of users from the Microsoft server to IM and Presence Service, a detailed user migration plan may be required.

You can use the following calculation to get an estimate of the maximum number of IM and Presence Service users that can be supported without breaking the above federated contact threshold:

Max Supported Users = 130,000 / Average Contact List Size.

Based on this calculation, the following table gives an indication of the maximum number of IM and Presence Service users that can be supported without breaking the 130,000 federated contact threshold.

Table 1: Maximum Number of Supported IM and Presence Service Users

Average Contact List Size	Maximum Supported Users (without high availability)	Maximum Supported Users (with high availability[1])
200	650	325
150	866	433
100	1300	650
75	1733	866
50	2600	1300
25	5000	2500

[1] This assumes a 2-node subcluster running in active/active mode.

You require a detailed user migration plan if the number of users to be provisioned on any IM and Presence Service node within your deployment exceeds the relevant limit above. Contact your Cisco Support representative to begin the process of defining a detailed migration plan.

Notes

1. The values for the maximum number of supported users in the table above are based on worst-case figures; that is, in the case where all contacts are federated.

   With proper migration planning, the full complement of users can be deployed on an IM and Presence Service node in a phased manner, without breaking the 130,000 federated contact threshold.

2. When high availability is enabled, each IM and Presence Service node must be able to handle the load associated with all users within the IM and Presence Service 2-node subcluster because, in the event of a node failure, the second node in the cluster services all users on its own. Therefore, the limit per node must be halved.

3. If you are unsure about the average contact list size within your Microsoft server deployment, assume it to be worst-case (200 contacts) when you are deciding whether a migration plan is required.

4. The values for the maximum number of supported users in the table above assume the Cisco supported virtual platform based on the IM and Presence Service OVA template for 5000 users. The equivalent numbers for the 1000 user OVA are detailed below.

1000 User OVA

IM and Presence Service can support up to 18,000 SIP intradomain federation contacts per node with the 1000 user OVA. The following table gives an indication of the maximum number of IM and Presence Service users that can be supported without breaking the 18,000 federated contact threshold.

Table 2: Maximum Number of Supported IM and Presence Service Users with 1000 User OVA

Average Contact List Size	Maximum Supported Users (without high availability)	Maximum Supported Users (with high availability[2])
200	90	45
150	120	60
100	180	90
75	240	120
50	360	180
25	720	360
18	1000	500

[2] This assumes a 2-node subcluster running in active/active mode.

5000 User OVA

IM and Presence Service can support up to 90,000 SIP intradomain federation contacts per node with the 5000 user OVA. The following table gives an indication of the maximum number of IM and Presence Service users that can be supported without breaking the 90,000 federated contact threshold.

Table 3: Maximum Number of Supported IM and Presence Service Users with 5000 User OVA

Average Contact List Size	Maximum Supported Users (without high availability)	Maximum Supported Users (with high availability[3])
200	450	225
150	600	300
100	900	450
75	1200	600
50	1800	900
25	3600	1800
18	5000	2500

[3] This assumes a 2-node subcluster running in active/active mode.

Duration Guidelines for User Migration Tools

Cisco provides a number of tools to allow bulk migration of users from Skype for Business/Lync/OCS to IM and Presence Service. To allow you to plan your migration, it is important to be aware of the time required for each tool to run when you are migrating a large number of users. This section describes the expected run time for each of those tools.

Note   If you have a mixed deployment of both Lync and OCS servers, you must run the tools on the Lync users and then run the tools again on the OCS users.

Export Contact List Tool

The Export Contact List tool (ExportContacts.exe) can export contacts from Skype for Business/Lync/OCS at an average rate of 800 contacts per second (or 48,000 contacts per minute). You can use the following equation as a guide to estimate the expected run time for this tool for a set of Microsoft server users.

Time to export contacts (mins) = Number of Microsoft server users x Average Contact List Size / 48000.

The following table shows the expected run time for a number of sample cases.

Table 4: Sample Expected Run Times for the Export Contact List Tool

Number of Microsoft Server Users	Average Contact List Size	Time to Export Contacts
2000	100	5 minutes
5000	75	8 minutes
15000	60	19 minutes

Disable Account Tool

The Disable Account tool (DisableAccount.exe) can disable Skype for Business/Lync/OCS accounts at an average rate of 13 accounts per second (or 800 accounts per minute). You can use the following equation as a guide to estimate the expected run time for this tool for a set of Microsoft server users.

Time to disable accounts (mins) = Number of Microsoft server users / 800

The following table shows the expected run time for a number of sample cases.

Table 5: Sample Expected Run Times for the Disable Account Tool

Number of Microsoft server users	Time to disable accounts
2000	3 minutes
5000	7 minutes
15000	20 minutes

Delete Account Tool

The Delete Account tool (DeleteAccount.exe) can delete Skype for Business/Lync/OCS accounts at an average rate of 13 accounts per second (or 800 accounts per minute). You can use the following equation as a guide to estimate the expected run time for this tool for a set of Microsoft server users.

Time to delete accounts (mins) = Number of Microsoft server users / 800.

The following table shows the expected run time for a number of sample cases.

Table 6: Sample Expected Run Times for the Delete Account Tool

Number of Microsoft Server Users	Time to Delete Accounts
2000	3 minutes
5000	7 minutes
15000	20 minutes

Bulk Administration Tool Contact List Import

The IM and Presence Service Bulk Administration Tool (BAT) can import contacts at varying rates, depending on the IM and Presence Service platform. The following table shows the expected import rate for a selection of IM and Presence Service platforms.

Table 7: Import Rate for the IM and Presence Service BAT on Virtual Machines

OVA Template	Import Rate
2000 user OVA	6/sec
5000 user OVA	12/sec
15000 user OVA	22/sec

The following table shows the expected run time for a number of sample cases

Table 8: Sample Expected Run Times for the BAT Contact List Import Utility

Number of Users	Average Contact List Size	Import Time (Rate = 22/sec[4])
2000	100	2hours, 32 minutes
5000	75	4 hours, 45 minutes
15000	60	11 hours, 22 minutes

[4] These estimates apply to the highest specification machines which support a contact import rate of 22/sec.

Notes

1. The calculations for the Export Contact List tool, Disable Account tool, and Delete Account tool are based on the Skype for Business/Lync/OCS and Active Directory (AD) running on hardware with at least 2Ghz CPU processing power, and 2GB of RAM.

2. Running these user migration tools has no affect on the capabilities of other Microsoft server users who are signed into Microsoft Lync or Microsoft Office Communicator.

3. Cisco recommends that you perform user migration during a scheduled maintenance window to reduce the load on the Microsoft server and AD system.

Bulk Administration Tool Contact Rename

The Bulk Administration Tool Contact Rename utility duration rates are influenced by two primary factors:

• The number of users in the cluster with renamed contact IDs in their contact list

• The average number of renamed contact IDs for each such user

These factors vary for each deployment. For large-scale operations (over 1000 contact IDs renamed), it may take a number of hours for the job to complete. To estimate the likely job completion rate, view the job progress indicators to see the rate at which impacted users are being updated.