Planning for Integration

Supported Partitioned Intradomain Federation Integrations

For partitioned intradomain federation with Microsoft Lync or Skype for Business, you must configure TLS; TCP is not supported. For more information, see Microsoft Lync Configuration for Partitioned Intradomain Federation or Skype for Business Configuration for Partitioned Intradomain Federation.

This chapter describes the configuration steps for enabling partitioned intradomain federation between IM and Presence Service and Microsoft Skype for Business/Lync/OCS. The following Microsoft server platforms are supported:

- Microsoft Skype for Business Server, 2015, Standard Edition and Enterprise Edition

- Microsoft Lync Server 2013, Standard Edition and Enterprise Edition

- Microsoft Lync Server 2010, Standard Edition and Enterprise Edition

- Microsoft Office Communications Server 2007 Release 2, Standard Edition and Enterprise Edition

IM and Presence Service does not support an ASA in partitioned intradomain federation.

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

We recommended that you use the Federation Wizard to configure Partitioned Intradomain Federation. This Federation Wizard allows you to automatically configure partitioned intradomain federation with Microsoft Lync or Skype for Business, by creating the Static Routes, Access Control Lists and TLS peers that are required for Partitioned Intradomain Federation and provides the Windows server PowerShell CLI commands required to configure modifications on the Microsoft server.

To launch the Federation wizard from the Cisco Unified CM IM and Presence Administration, click **Cisco Unified CM IM and Presence Service Administation** > **Presence** > **Federation Wizard**.

However you can still manually configure this feature.

Related Topics

Presence Web Service API Support

The Presence Web Service is an open interface that allows client applications to share user presence information with IM and Presence Service. Third party developers use this interface to build client applications that can send and retrieve updates about the presence state of a user. Note the following restriction about Presence Web Service API support:

- For partitioned intradomain federation, you cannot use the Presence Web Service API to obtain presence information from non-Cisco clients.

For more information about the Presence Web Service, see the *IM and Presence Service Developer Guide* at https://developer.cisco.com/site/collaboration/call-control/unified-presence/documentation/index.gsp.

Limitations for Microsoft Lync Integrations

There are two scenarios where adding partitioned intradomain federation breaks existing Microsoft Lync integrations:

- **You already have intradomain federation configured for video with Cisco VCS or Cisco Expressway and want to add partitioned intradomain federation with IM and Presence Service:** Microsoft Lync is integrated with Cisco VCS or Cisco Expressway and you have a static route configured on Lync to route video and voice traffic for the local Lync presence domain to Cisco VCS or Cisco Expressway. If you modify the static route to point to IM and Presence Service (a requirement for partitioned intradomain federation) you will break the existing video integration because the traffic that is intended for Cisco VCS or Cisco Expressway would instead be routed to IM and Presence Service. You cannot have both video integration and partitioned intradomain federation to IM and Presence Service.

- **You already have integration with Microsoft Exchange Unified Messaging and want to add partitioned intradomain federation with IM and Presence Service:** You have a Microsoft Lync server configured for Unified Messaging to Microsoft Exchange (either on-premises, or to the cloud (Office365). If you add a static route from Lync for the local Lync presence domain to point to IM and Presence Service (a requirement for partitioned intradomain federation), Unified Messaging integration between Lync and Microsoft Exchange for the domain will be terminated because all Unified Messaging SIP traffic for that domain will be routed to IM and Presence Service. You cannot have both integration to Microsoft Exchange Unified Messaging and partitioned intradomain federation to IM and Presence Service.

Note Neither Microsoft Exchange Unified Messaging nor Cisco VCS (or Cisco Expressway) integrations are supported with partitioned intradomain federation if you are sharing the same domain between Microsoft Lync and IM and Presence Service.

Hardware Requirements

The following Cisco hardware is required:

- IM and Presence Service node. For IM and Presence Service hardware support, refer to the IM and Presence Service compatibility matrix.

- Cisco Unified Communications Manager node. For Cisco Unified Communications Manager hardware support, refer to the compatibility information for Cisco Unified Communications Manager document available on Cisco.com.

Note　In Release 10.0(1) and later, Cisco supports only virtualized deployments of Cisco Unified Communications Manager (Unified Communications Manager) and IM and Presence Service on Cisco Unified Computing System servers, or on a Cisco-approved third-party server configuration. In Release 10.0(1) and later, Cisco does not support deployments of Cisco Unified Communications Manager or IM and Presence Service on Cisco Media Convergence Server servers.

For more information about the deployment of Cisco Unified Communications Manager or IM and Presence Service in a virtualized environment, see: http://docwiki.cisco.com/wiki/Unified_Communications_in_a_Virtualized_Environment.

Related Topics

Compatibility Information for IM and Presence Service and Cisco Unified Communications Manager Software Requirements, on page 3

Software Requirements

The following sections outline the software required for partitioned intradomain federation.

Server Software

The following server software is required for partitioned intradomain federation:

Cisco Software

- IM and Presence Service

- Cisco Unified Communications Manager

Microsoft Software

- Depending on the deployment, one of:

  - Microsoft Skype for Business Server, 2015, Standard Edition and Enterprise Edition

  - Microsoft Lync Server 2013, Standard Edition or Enterprise Edition

  - Microsoft Lync Server 2010, Standard Edition or Enterprise Edition

- Microsoft Office Communications Server 2007 Release 2, Standard or Enterprise Edition

- Depending on the deployment, one of:

  - Lync Administrative Tools (optional install item available during installation of Lync)

  - OCS Administrative Tools (optional install item available during installation of OCS)

- Microsoft Active Directory

Other Software

Each of the user migration tools that Cisco provides requires that at least version 2.0 of the .NET Framework is installed on the server where you are running the tool. While attempting to run any of the user migration tools you may receive the following error: "Application failed to initialize properly". The reason for this error is that you are attempting to run the user migration tools without the .NET 2.0 or newer Framework installed.

The .NET 2.0 Framework comes installed as standard on Windows Server 2003 R2 or newer.

Client Software

The client software required for partitioned intradomain federation deployment between the IM and Presence Service and Skype for Business/Lync/OCS depends on your deployment. You can have any combination of IM and Presence Service supported clients in a partitioned intradomain federation deployment.

IM and Presence Service Supported Clients

The following IM and Presence Service clients are supported in a partitioned intradomain federation deployment between IM and Presence Service and Skype for Business/Lync/OCS:

Cisco Software

- Cisco Unified Personal Communicator Release 8.5

- Cisco Jabber for Mac

- Cisco Jabber for Windows

- Cisco Jabber IM for Mobile (iPhone, Android, Blackberry)

- Cisco Jabber for iPad

- Cisco Jabber for Cius

Note　For version compatibility for all Cisco Jabber clients, see the appropriate Cisco Jabber client documentation.

If the Directory URI IM address scheme is used in your deployment, your client software must support Directory URI.

Third-Party Software

Third-party XMPP clients

Microsoft Server Supported Clients

Depending on the deployment, the following clients are supported:

- Skype for Business 2015

- Microsoft Lync 2013

- Microsoft Lync 2010

- Microsoft Office Communicator 2007 Release 2

- Microsoft Office Communicator 2005

- Communicator Web Access 2007 Release 2

- Communicator Web Access 2005

Related Topic

Hardware Requirements, on page 3

Integration Preparation

It is essential that you plan carefully for the configuration of partitioned intradomain federation between IM and Presence Service and Skype for Business/Lync/OCS. Read the items in this section before you begin any configuration for this integration.

Presence Domains

Partitioned Intradomain Federation, by its nature, supports integration between IM and Presence Service and the Microsoft server within a common presence domain that is configured on both systems. Both IM and Presence Service and the Microsoft server support the configuration of multiple presence domains. However, any Microsoft Lync or Microsoft Office Communicator users that are not configured for a matching IM and Presence Service domain cannot participate in partitioned Intradomain federation communications.

For example, in the following figure, users who are configured in the synergy.online.com domain cannot share IM availability or emails withIM and Presence Service users who are configured in synergy.com and synergy.co.uk domains because the synergy.online.com domain is not configured on IM and Presence Service. You must add the synergy.online.com domain to IM and Presence Service before those users can share availability with the other users in intradomain federation.

Figure 1: Partitioned Intradomain Federation with Multiple Domains
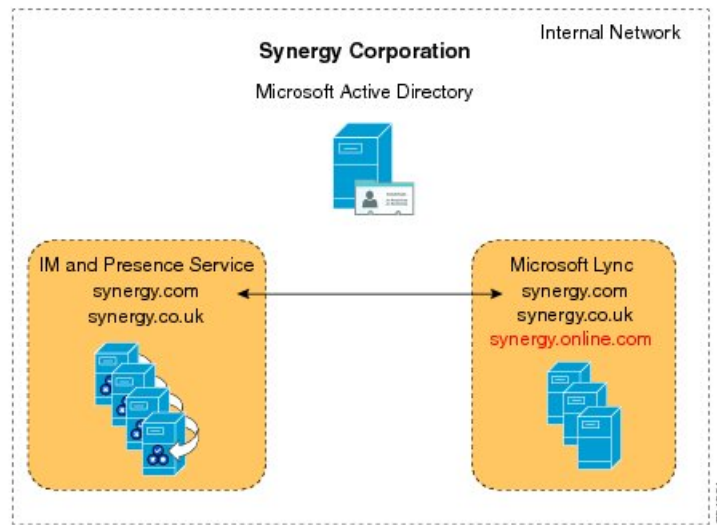
User Migration

If users are being migrated from Skype for Business/Lync/OCS to the IM and Presence Service as part of this integration, consider the information below.

If users are being migrated from Lync/OCS to IM and Presence Service as part of this integration, please be aware that IM and Presence Service maintains the Microsoft server identities of users when the Directory URI IM address scheme is configured, which can in turn be mapped to the Lync SIP URI.

Note To use the Directory URI IM address scheme, all clients on the IM and Presence Service cluster must support Directory URI.

For more information about planning for user migration, see topics related to planning for user migration.

DNS Configuration

Domain Name System (DNS) "A" records must be published within the enterprise for all IM and Presence Service nodes and Skype for Business/Lync/OCS servers.

Microsoft servers must be able to resolve Fully Qualified Domain Names (FQDN) and IP addresses for all IM and Presence Service nodes.

Likewise, IM and Presence Service nodes must be able to resolve FQDNs and IP addresses for all Microsoft server and pool FQDNs.

Certificate Authority Server

If TLS encryption is enabled as part of this partitioned intradomain federation integration, an external or internal Certificate Authority (CA) may be used to sign security certificates on IM and Presence Service and

Skype for Business/Lync/OCS. Cisco recommends that you use the same CA to sign the Microsoft server and the IM and Presence Service certificates. If not, the root certificates for each CA must be uploaded onto the Microsoft server and the IM and Presence Service nodes.

High Availability

You need to consider how you are going to configure availability in your partitioned intradomain federation deployment.

If you wish to make your IM and Presence Service partitioned intradomain federation capability highly available, you can deploy a load balancer in front of your designated (routing) IM and Presence Service nodes.

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Note   To deploy load balancing (for example, round robin), a hardware load balancer needs to be installed. The static route in IM and Presence Service points to the load balancer.

Related Topic

High Availability for Intradomain Federation

Prerequisite Configuration for IM and Presence Service

You must complete the following tasks on the IM and Presence Service before you begin to configure partitioned intradomain federation.

1. Install and configure IM and Presence Service.

2. Perform the following checks to ensure that your IM and Presence Service system is operating properly:

    • Run the IM and Presence Service System Configuration Troubleshooter.

    • Check that you can add local contacts to the Jabber client of IM and Presence Service.

    • Check that your clients are receiving availability states from the IM and Presence Service node.

Additional Configuration for Routing IM and Presence Service Node

In multi-server deployments, an IM and Presence Service node must be dedicated as the Routing IM and Presence Service node. This means that it is a front-end server that accepts all new inbound SIP requests from the Skype for Business/Lync/OCS and routes them onwards to the IM and Presence Service node on which the request recipient is homed.

Cisco recommends that you do not assign any users to the Routing IM and Presence Service node; as this ensures that the Routing IM and Presence Service node has the capacity to handle the volume of SIP traffic from the Microsoft server.

Because no users are assigned to the Routing IM and Presence Service node, you can deactivate many of the feature services to free up resources on the Routing IM and Presence Service node. Deactivate the following feature services on the Routing IM and Presence Service node:

- Cisco Presence Engine
- Cisco XCP Text Conference Manager
- Cisco XCP Web Connection Manager
- Cisco XCP Connection Manager
- Cisco XCP SIP Federation Connection Manager
- Cisco XCP XMPP Federation Connection Manager
- Cisco XCP Message Archiver
- Cisco XCP Directory Service
- Cisco XCP Authentication Service

Related Topic

Configure the Routing Node

Plan Services Restarts during Off-Peak Periods

During the integration process, you need to restart the Skype for Business/Lync/OCS server front-end services. Plan to perform the services restart during off-peak periods, such as during a maintenance window, to minimize the impact to users. For more information, see the partitioned intradomain federation configuration workflows and topics related to restarting services for your server type.