



Configuration of IM and Presence Service with Microsoft OCS

- [Integration Requirements, page 1](#)
- [Integration Overview, page 2](#)
- [License Requirements, page 4](#)
- [Service Restart, page 4](#)
- [More Information, page 4](#)

Integration Requirements

This document describes the configuration steps for integrating the IM and Presence Service with Microsoft Office Communications Server or Microsoft Live Communications Server for Microsoft Office Communicator (MOC) call control.



Note

This document describes the procedure for integrating IM and Presence Service with Microsoft Office Communications Server (OCS).

Software Requirements

- Latest release of IM and Presence Service Server
- Latest release of Cisco Unified Communications Manager Server
- Microsoft Office Communications (OCS) 2007 R2 Server, Standard or Enterprise
- Microsoft Office Communicator (MOC)
- Microsoft Windows Server
- Cisco CSS 11500 Content Services Switch

For this integration it is assumed that you have the following installed and configured:

- An IM and Presence Service node that is set up and configured as described in *Configuration and Administration of IM and Presence Service on Cisco Unified Communications Manager*.
- The IM and Presence Service node must be correctly deployed with a Cisco Unified Communications Manager server as described in *Configuration and Administration of IM and Presence Service on Cisco Unified Communications Manager*.
- A Microsoft server that is set up and configured as per the requirements defined in the Microsoft documentation.

**Caution**

You must disable High-Availability on the IM and Presence Service presence redundancy group prior to integrating the server with Microsoft OCS. For more information, see *Configuration and Administration of IM and Presence Service on Cisco Unified Communications Manager*.

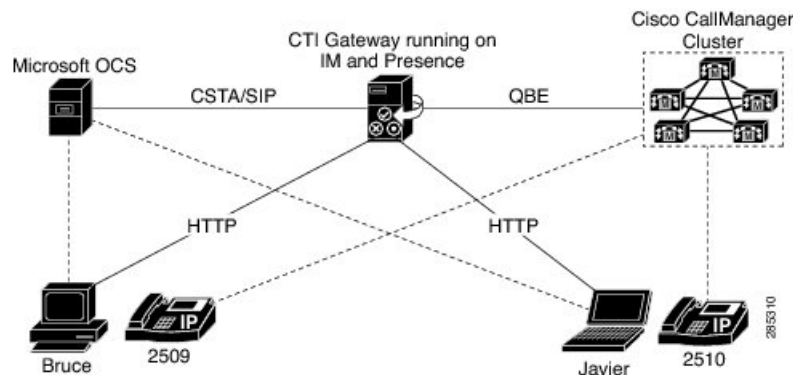
Integration Overview

How this Integration Works

The IM and Presence Service allows enterprise users to control their Cisco Unified IP Phone through Microsoft Office Communicator, a third party desktop IM application. The Microsoft Office Communicator client for this integration must run on Microsoft Office Communications Server (OCS) 2007 R2.

Microsoft Office Communicator sends session-initiating requests to the CTI Gateway on IM and Presence Service to control Cisco Unified IP Phones registered in Cisco Unified Communications Manager, as illustrated in the following figure. The CTI Gateway forwards the requests to the CTI Manager on Cisco Unified Communications Manager. The Cisco Unified Communications Manager returns the events to the Microsoft Office Communicator application using the same path in the opposite direction.

Figure 1: Integration Overview



IM and Presence Service supports CTI connections with up to eight Cisco Unified Communications Manager nodes; you can configure up to eight CTI connection addresses on IM and Presence Service.

Microsoft Office Communicator sends session initiating requests to IM and Presence Service. These requests are routed in a round-robin sequence to the CTI connection addresses configured on IM and Presence Service.

For example, the first request is routed to first CTI node, second request to next CTI node and so on. Priority is assigned to CTI connection addresses in the order in which they are configured. If a dual node IM and Presence Service cluster is deployed, you must use a load balancer. In this scenario, the load balancer sends the session initiating requests in a round-robin sequence from Microsoft Office Communicator clients to the IM and Presence Service publisher and subscriber nodes. There is a maximum of two nodes in an IM and Presence Service cluster when it is configured to support Microsoft Office Communicator Remote Control Client.

In a dual node IM and Presence Service cluster, a load balancer can be used to round-robin the session initiating requests sent from Microsoft Office Communicator clients to the publisher and subscriber IM and Presence Service nodes.

When the CTI Gateway on IM and Presence Service starts, it connects to all CTI connection addresses in the configured list, and monitors these connections by sending periodic heartbeat messages. When a Microsoft Office Communicator user signs in, Microsoft OCS sends a SIP INVITE request with a CSTA body to the CTI Gateway to monitor the Cisco Unified IP Phone for the user. The CTI Gateway creates a session for that Microsoft Office Communicator user, and uses the load balancing mechanism to send session initiating requests from that user to any of the CTI connection addresses.

Once the CSTA application session is established, Microsoft Office Communicator and CTI Gateway exchange a sequence of SIP INFO messages for activities such as monitoring devices, making calls, transferring calls, or changing the status of controlling devices. This message exchange is sent over the same CTI connection address with which the initial session was established.

If connection to any of the CTI Managers fails, outbound call requests from Microsoft Office Communicator are returned until the connection comes back into service. If a Cisco Unified Communications Manager node is down, the CTI Gateway will make periodic attempts to re-establish a connection to it. When the Cisco Unified Communications Manager node comes back in service, the CTI Gateway will reconnect to it and monitor the connection. In this case, when Microsoft OCS sends an (in-session) SIP INFO request, the CTI Gateway will have a different CTI Manager connection ID because of a new connection. Microsoft Office Communicator sends a new SIP INVITE message, but the Microsoft Office Communicator user is not required to sign in again.

Related Topics

[Line Appearances, on page 3](#)

[Redundancy Setup for this Integration](#)

Line Appearances

When a user selects a phone to use with the remote call control feature, on IM and Presence Service the user is selecting a *line appearance* to control through Microsoft Office Communicator. A line appearance is the association of a line with a device. On Cisco Unified Communications Manager, the administrator can associate a device with multiple lines, and a line with multiple devices. Typically it is the role of the Cisco Unified Communications Manager administrator to configure line appearances by specifying the lines and devices that are associated with each other.

Related Topics

[User and Device Configuration on Cisco Unified Communications Manager](#)

License Requirements

You must assign IM and Presence Service to each Microsoft Lync Remote Call Control (RCC) user. IM and Presence Service capabilities are included within both User Connect Licensing (UCL) and Cisco Unified Workspace Licensing (CUWL). See the *Cisco Unified Communications Manager Enterprise License Manager User Guide* for more information.

You can assign IM and Presence Service to a user in the **End User Configuration** window in Cisco Unified Communications Manager. See the *Cisco Unified Communications Manager Administration Guide* for more information.

Service Restart

After you configure the IM and Presence Service node to allow Remote Call Control through a Microsoft server, you will need to restart the Cisco UP SIP Proxy service on the node. For instructions to restart services for an IM and Presence Service node, see the *Cisco Unified Serviceability Administration Guide*.

More Information

IM and Presence Service

For additional IM and Presence Service documentation, refer to the following URL:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html

Cisco Unified Communications Manager

For Cisco Unified Communications Manager documentation, refer to the following URL:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/tsd_products_support_series_home.html

Microsoft Active Directory

For information about Microsoft Windows Server Active Directory, refer to the following URL

<http://technet2.microsoft.com/windowsserver/en/technologies/featured/ad/default.mspx>