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Previous Topic

- Configuring Cisco Unified Presence Release 7.x with Microsoft OCS for Remote Call Control

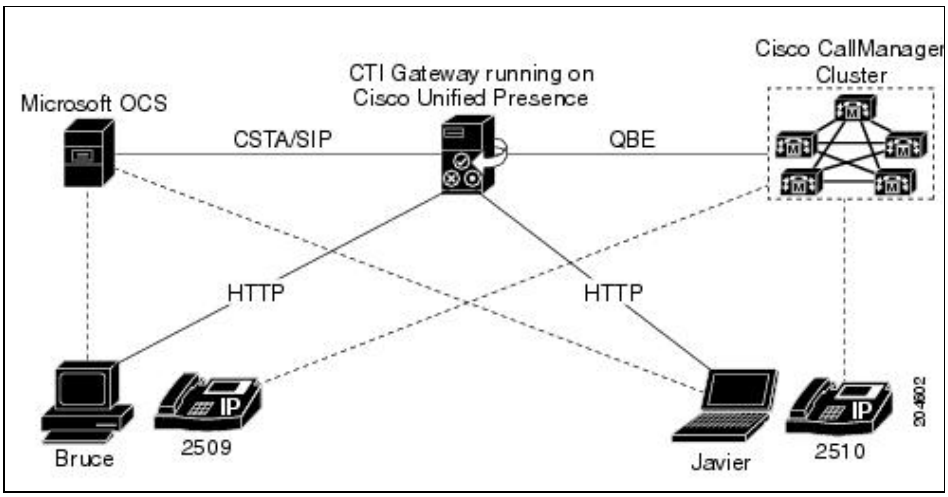
- How this Integration Works
- Line Appearances

How this Integration Works

Cisco Unified Presence 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 can run on either Microsoft Live Communications Server (LCS) 2005 or Microsoft Office Communications Server (OCS) 2007.

Microsoft Office Communicator sends session-initiating requests to the CTI Gateway on Cisco Unified Presence to control Cisco Unified IP Phones registered in Cisco Unified Communications Manager, as illustrated in the figure below. 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: Integration Overview



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

Microsoft Office Communicator sends session initiating requests to Cisco Unified Presence. These requests are routed to the CTI connection addresses configured on Cisco Unified Presence. The requests are distributed to the CTI connection addresses in a round-robin sequence, 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. In a dual node Cisco Unified Presence 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 Cisco Unified Presence nodes.

When the CTI Gateway on Cisco Unified Presence 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.

Figure: Integration Overview

Related Topics

- Setting Up Redundancy for this Integration

Line Appearances

When a user selects a phone to use with the remote call control feature, on Cisco Unified Presence 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 for Remote Call Control