Cisco and Microsoft Collaboration in Unified Communications

Cisco® and Microsoft have an established track record of collaborating on their respective products and technologies to provide customers with innovative business solutions. Today, the two companies are working together to help customers design unified communications solutions that closely align with their productivity, communications, and collaboration objectives.

The Cisco approach to unified communications is founded on the company's market leadership in secure IP networking and IP communications, and the Microsoft approach is based on its leadership in desktop applications and operating systems. Even though Cisco and Microsoft have distinct approaches to unified communications, these approaches are complementary, and although there are areas of product overlap, both companies are committed to working together to achieve the same goal: to make communications more efficient and effective for customers. To help achieve this goal, Cisco and Microsoft actively participate together in open-standards working groups, including the IETF, and their developers meet regularly on current integration efforts and to define future areas of integration.

"The interoperability of Live Communications Server and Office Communicator with Cisco's communication offerings will lead to more effective real-time collaboration capabilities for our mutual customers."
—Zig Serafin, general manager of the Unified Communications Group at Microsoft

"Cisco and Microsoft are committed to delivering seamless, interoperable unified communications solutions that utilize the flexibility and openness of SIP and allow joint customers to integrate with their existing infrastructure investments. Employees can now take advantage of new productivity applications—such as viewing phone presence state from any location at home or in the office—to streamline communications and save both time and money."
—Barry O'Sullivan, vice president and general manager of the IP Communications Business Unit at Cisco

Unified Communications

Unified communications is a comprehensive IP communications system that facilitates more effective, more secure, and more personal communications. It connects users in the way that is most suitable for them at a given time. It is flexible enough to allow users to transparently transition across and between applications as interactions warrant, independent of where they are or what device they are using. Main components include IP telephony, presence servers, integrated desktop clients, rich-media conferencing, voice and unified messaging, contact center applications, and mobility solutions. Table 1 lists Cisco and Microsoft unified communications products.

Table 1. Cisco and Microsoft Unified Communications Products

Unified Communications Components	Cisco	Microsoft
IP telephony	Cisco Unified CallManager Cisco Unified CallManager Express	–
Presence server	Cisco Unified Presence Server	Microsoft Live Communications Server
Integrated desktop client	Cisco Unified Personal Communicator	Microsoft Office Communicator
Rich-media conferencing	Cisco Unified MeetingPlace® Cisco Unified MeetingPlace Express	Microsoft Office Live Meeting
Voice and unified messaging	Cisco Unity® Cisco Unity Connection Cisco Unity Express	Microsoft Exchange Server 2007 (unified messaging only)
Contact center	Cisco Unified IP Contact Center (IPCC) Cisco Unified IP Contact Center Express	–
Mobility	Cisco Unified Mobility Manager Cisco Unified CallConnector Mobility	Microsoft Office Communicator Mobile
Groupware	–	Microsoft SharePoint Microsoft Groove
Secure network foundation	Cisco Integrated Services Routers Cisco Catalyst® Switches Cisco Self-Defending Network	–
E-mail and directory services	–	Microsoft Exchange Microsoft Active Directory

Current Integrations

Cisco Unified Communications with Microsoft Live Communications Server 2005 and Office Communicator 2005

The integration between Cisco Unified Communications and Microsoft Live Communications Server 2005 delivers enhanced functions to Microsoft Office Communicator 2005 users and allows organizations to benefit from features inherent in the Cisco Unified Communications system.

Enhanced Microsoft Office Communicator Features with Cisco Unified Communications

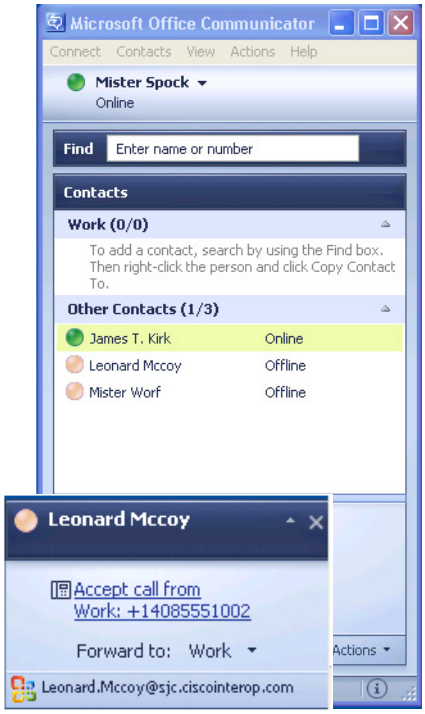
- The click-to-call option allows users to initiate a phone call from one Cisco Unified IP Phone to another directly from Microsoft Office Communicator. Therefore, when an instant messaging session needs to escalate into a voice conversation, a user can simply click the phone icon and then click Call. This action rings both Cisco Unified IP Phones. This feature can be initiated from an instant messaging chat session in progress or directly from the contact list.

- The presence status of Cisco Unified IP Phones, such as “in a call” or “idle,” is visible within Microsoft Office Communicator. A user can see whether the person that he or she is trying to reach is on a Cisco Unified IP Phone, helping the user determine the most appropriate form of contact.
- Microsoft Office Communicator users can benefit from the enterprise-class conferencing capabilities of Cisco Unified CallManager.
- Redirection of calls to mobile phones is available, including the capability to use Microsoft Office Communicator to accept incoming calls on a Cisco Unified IP Phone.
- When a call is placed to a Cisco Unified IP Phone, a message will pop-up on the user’s computer and provides the option to click to answer or click to divert.
- Phone feature controls from Microsoft Office Communicator include hang-up, hold, and transfer.

The example in Figure 1 shows how to control incoming calls to a Cisco Unified IP Phone with Microsoft Office Communicator 2005.

Figure 1. Incoming call phone controls

1. Mr. Spock receives an incoming call from Leonard McCoy on his Cisco Unified IP Phone. An incoming call notification pop-up message appears within Microsoft Office Communicator on Mr. Spock’s computer.
2. Mr. Spock can accept the call by clicking the message, or he can divert the message to another number by selecting Forward To and choosing the number to receive the call.



The examples in Figures 2 and 3 show the phone presence status of Cisco Unified IP Phones within Microsoft Office Communicator 2005.

Figure 2. Phone Status “In a call”

1. Mr. Spock needs to speak to James T. Kirk, but Kirk’s phone presence status indicates that he is “In a call.” If he wants, in the meantime, Mr. Spock can send James T. Kirk an instant message letting him know that he needs to speak to him.

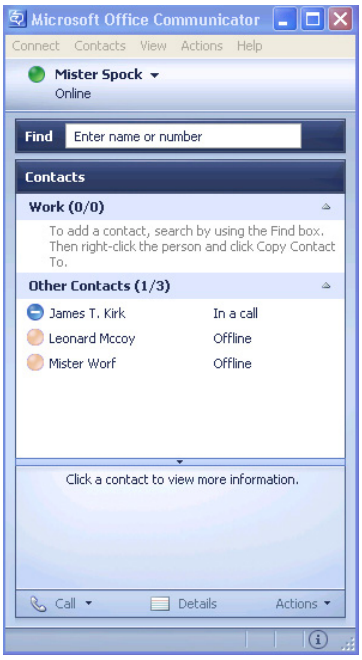
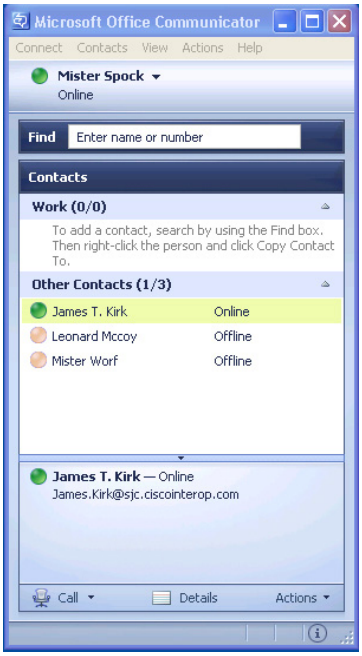


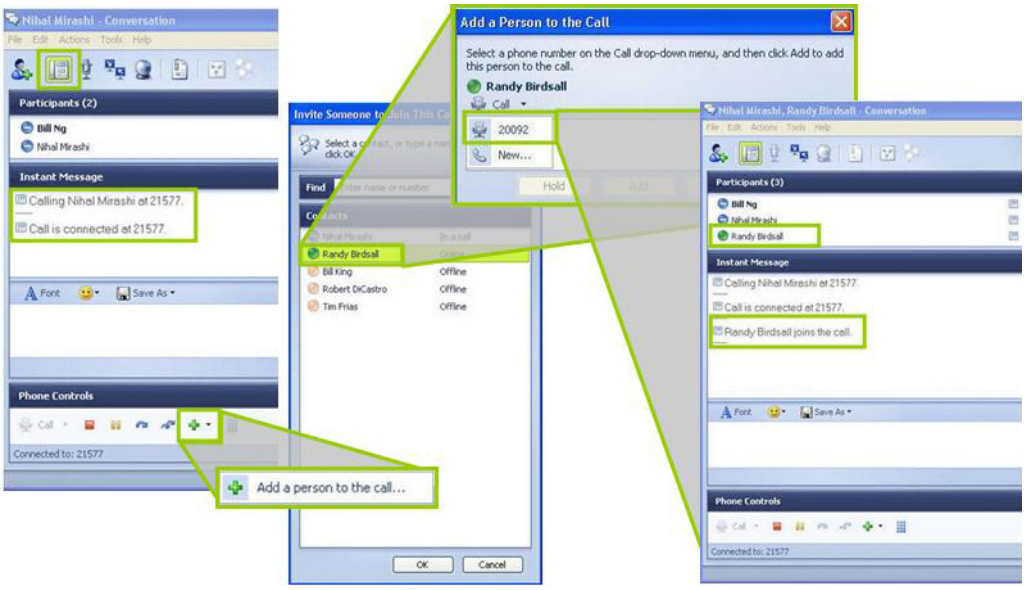
Figure 3. Phone Status ‘Online”

2. After James T. Kirk hangs up his phone, the phone presence status changes from “In a call” to “Online.” Mr. Spock can now place his call to Kirk.



The example in Figure 4 shows how to initiate a three-way conference call using Microsoft Office Communicator 2005 with Cisco Unified CallManager phone control and conferencing capabilities.

Figure 4. Click to Call and Click to Conference with Cisco Unified Communications



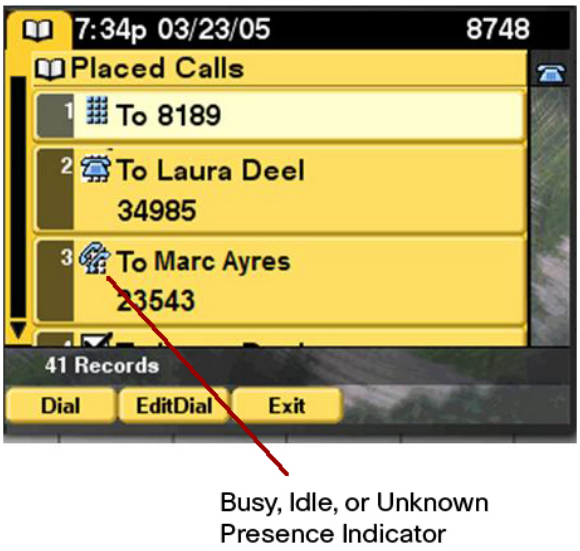
1. Bill initiates a call with Nihal.
2. Nihal answers and the two are connected.
3. Bill places Nihal on hold to add another colleague to the call.
4. Bill clicks the plus (+) sign, which opens his buddy list, which displays the phone status—whether or not the buddy is currently on a call or not.
5. Bill selects Randy to add to the call and chooses the phone number from the call drop-down menu
6. Bill clicks the Add button. Bill, Nihal, and Randy are now on a three-way conference call.

Cisco Unified Communications Features

- Presence-aware speed dialing, call logs, and directory on Cisco Unified IP Phones (Figures 5 and 6)

Figure 5. Presence-Aware Speed Dialing

Figure 6. Presence-Aware Call Logs and Directory



- Management and administration functions; use of shared lines
- Corporate dial plans
- Message-waiting indicator on desktop phones
- Call detail records
- Quality-of-service (QoS) features including call admission control.

Cisco Solution Components

- Cisco Unified CallManager 5.0 or higher—Cisco Unified CallManager is the secure media-processing component of the Cisco Unified Communications solution. Cisco Unified CallManager extends enterprise telephony features and capabilities to network devices such as IP phones, soft phones, integrated desktop clients, and communications-capable applications.
- Cisco Unified Presence Server 1.0 or higher—Cisco Unified Presence Server aggregates and delivers user presence information (busy, idle, away, and available) as well as user capabilities (voice, video, instant messaging, and Web collaboration) to IP phones, integrated desktop clients, instant messaging applications, and communications-capable applications.
- Cisco Unified IP Phones—Cisco Unified IP Phones provide industry-leading business functions and converged communications features. Supported Cisco Unified IP Phones include Cisco Unified IP Phones 7905G, 7906G, 7911G, 7912G, 7920, 7940G, 7941G, 7941G-GE, 7960G, 7961G, 7961G-GE, 7970G, and 7971G in Skinny Client Control Protocol (SCCP) mode, and Cisco Unified IP Phones 7906G, 7911G, 7941G, 7941G-GE, 7961G, 7961G-GE, 7970G, and 7971G in Session Initiation Protocol (SIP) mode.

Microsoft Solution Components

- Microsoft Live Communications Server 2005—This product is an instant messaging and presence server.
- Microsoft Office Communicator 1.0 / 2005—Microsoft Office Communicator 2005 is an integrated communications client for Microsoft Live Communications Server 2005 that supports instant messaging, computer-to-computer voice calls, and basic video conferencing.
- Additional elements include Microsoft Server 2003, Microsoft Server 2003 Active Directory, Microsoft Server 2003 Domain Name Service (DNS), and Microsoft SQL Server 2000, if using Microsoft Live Communications Server 2005 Enterprise Edition.

Future Integrated Solutions

The integrations described below are currently in development and further highlight the commitment of Cisco and Microsoft to work together.

Cisco Unified CallManager with Microsoft Exchange Server 2007

Cisco Unified CallManager is currently the only call processing solution that has open-standards-based SIP integration with Microsoft Exchange 2007. This integration simplifies installation and reduces the overall solution cost by eliminating the need for third-party gateways and software. To integrate with older telephony systems or IP private branch exchanges (IP PBXs), Microsoft Exchange 2007 requires a third-party gateway that can receive and correctly forward incoming calls to the unified messaging server, and third-party software from Geomant for the message-waiting indicator (capability to light the message lamp on your phone) and for Short Message Service (SMS) notification.

Cisco Solution Components

- Cisco Unified CallManager 5.0 or higher

Microsoft Solution Components

- Microsoft Exchange Server 2007

Cisco Unity with Microsoft Exchange Server 2000, 2003, and 2007

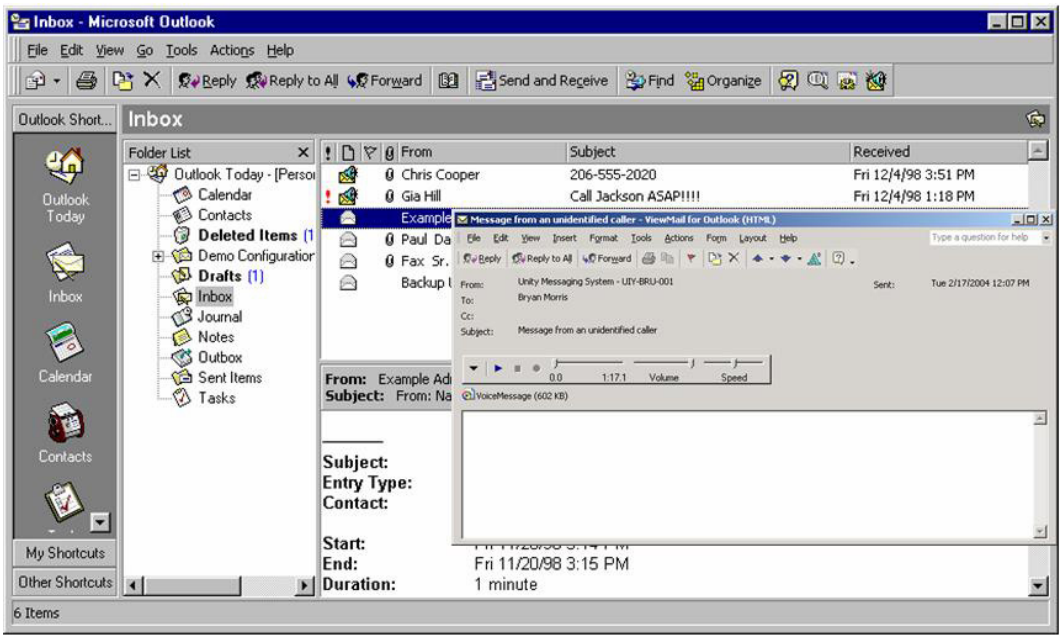
The Cisco Unity solution provides voice, integrated, and unified messaging options that transparently integrate with Microsoft Exchange. Exchange 2000 and 2003 are supported today. Support for Exchange 2007 will be available with or shortly after the general availability.

Support for mixed deployments of voice, integrated, and unified messaging and for different versions of Microsoft Exchange Server provides a cost-effective migration path to unified messaging.* Unified messaging users will benefit from the simplicity of having e-mail, voice messages, and faxes in their Microsoft Outlook inbox and from the advanced options of the Cisco Unity solution, including the following:

- Alternative device recognition—The Cisco Unity solution automatically recognizes alternate devices, such as mobile phones, when accessing the system, streamlining access.
- Secure messaging*—Voice messages are encrypted and can be retrieved only through authorized clients connected to the network; authorized clients also have the capability to configure the message expiration date.
- Message monitor*—Users can listen to and pick up calls while a message is being recorded.
- Cisco Unity ViewMail for Microsoft Outlook—Users can play, compose, and respond to messages from within Outlook; users also have the capability to play back messages on their Cisco Unified IP Phones or mobile phone (Figure 7).
- Cisco Unity PhoneView*—Use the display of a Cisco Unified IP Phone to view, sort, search, and play back voice messages.

* New with Cisco Unity 5.0

Figure 7. Microsoft Outlook and Cisco Unity ViewMail for Outlook



Cisco Solution Components

- Cisco Unity 4.0 or higher

Microsoft Solution Components

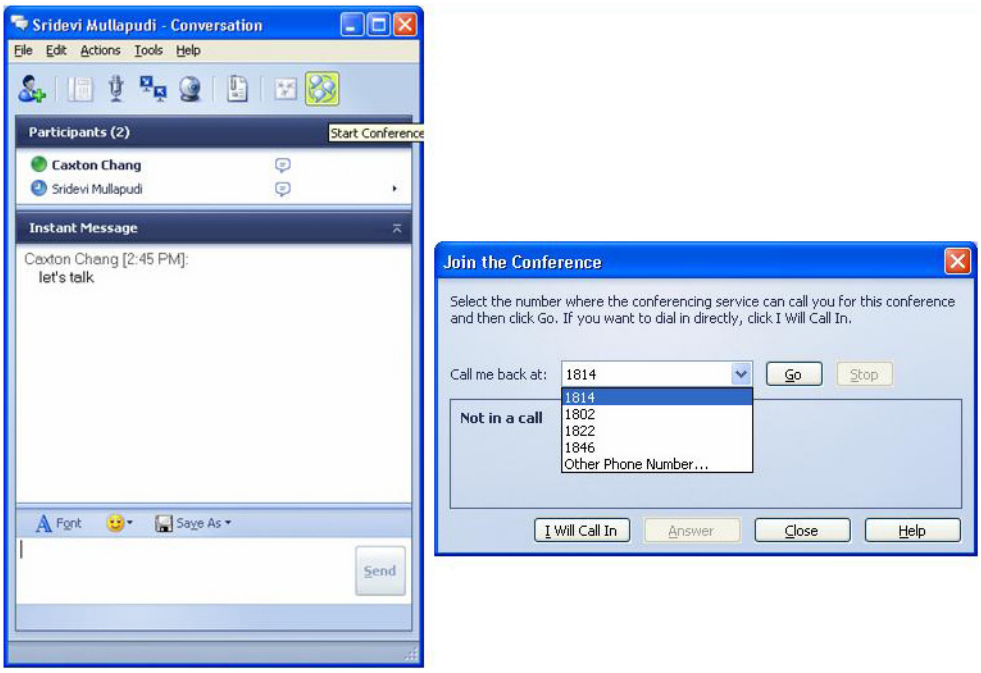
- Microsoft Exchange Server 2000, 2003, or 2007
- Microsoft Outlook 2000, 2002 (XP), or 2003

Cisco Unified MeetingPlace with Microsoft Live Communications Server 2005 and Office Communicator 2005

The integration of the rich-media conferencing capabilities of the Cisco Unified MeetingPlace solution and the presence and text messaging capabilities of Microsoft Live Communications Server and Office Communicator allows users to establish Cisco Unified MeetingPlace audio, video, and Web conferences directly from the Microsoft Office Communicator client and quickly escalate instant messaging sessions to audio conferences.

The conferencing features of the Cisco Unified MeetingPlace solution are simple point-and-click options that are accessible from Microsoft Office Communicator. Figure 8 shows a Microsoft Office Communicator user escalating an instant message chat session into a Cisco Unified MeetingPlace conference session by clicking the Conference button on the toolbar. The invitees see a dialog box where they can click the Go button to have the Cisco Unified MeetingPlace application dial the user's phone and connect them to the audio conference.

Figure 8. Initiating a Cisco MeetingPlace Conference Using Microsoft Office Communicator



Cisco Solution Components

- Cisco Unified MeetingPlace 6
- Cisco Unified MeetingPlace Conference user interface

Microsoft Solution Components

- Microsoft Live Communications Server 2005 (Standard or Enterprise)
- Microsoft Office Communicator 1.0 / 2005
- Microsoft Exchange Server 2000 or 2003
- Microsoft Outlook 2000, 2002 (XP), or 2003

Interdomain Federation

Today's Cisco Unified Communications integration with Microsoft Live Communications Server and Office Communicator 2005 are the first steps toward creating a truly integrated and federated solution for joint Cisco and Microsoft customers. Federation of instant messaging and rich presence creates an environment that fosters transparent communication across a wide variety of devices, applications, and media types within the entire user work environment. Interdomain federation between the Cisco Unified Presence Server and Microsoft Office Communications Server is currently in development.

Summary

Cisco and Microsoft are strategic alliance partners and have a strong track record of collaboration on their respective products and technologies. Both companies are actively working on product integrations across a number of product areas to provide organizations with maximum flexibility in deploying unified communications. Some of these integrations are available today, and more will be available soon. Cisco and Microsoft will build on open standards such as SIP to allow joint customers to integrate with their existing infrastructure investments and deliver new productivity applications that will streamline communications.

For more information about Cisco Unified Communications, visit http://www.cisco.com/go/unifiedcommunications.

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