Microsoft® Lync™ Server

Getting Started with Microsoft Lync Server 2010

Microsoft Lync Server 2010

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Getting Started

The Microsoft Lync Server 2010 communications software offers many features to enhance collaboration and communication in your organization. Many of these features are new compared to what was available in previous versions. The topics in this section give a brief overview of Lync Server 2010 capabilities, and describe the new features for both Lync Server 2010 and its clients.

In This Section

- [Introduction to Lync Server 2010](#)
- [New Server Features](#)
- [New Client Features](#)

Introduction to Lync Server 2010

Microsoft Lync Server 2010 communications software and its client software, such as Microsoft Lync 2010, enable your users to connect in new ways and to stay connected, regardless of their physical location. Lync 2010 and Lync Server 2010 bring together the different ways that people communicate in a single client interface, are deployed as a unified platform, and are administered through a single management infrastructure.

This table and the following sections illustrate the major feature sets, or *workloads*, that Lync 2010 provides for your users.

Workload	Description
IM and presence	Instant messaging (IM) and presence help your users find and communicate with one another efficiently and effectively.
	IM provides an instant messaging platform with conversation history, and supports public IM connectivity with users of public IM networks such as MSN/Windows Live, Yahoo!, and AOL.
	Presence establishes and displays a user's personal availability and willingness to communicate through the use of common states such as Available or Busy. This rich presence information enables other users to immediately make effective communication choices.

Workload	Description
Conferencing	Lync Server includes support for IM conferencing, audio conferencing, web conferencing, video conferencing, and application sharing, for both scheduled and impromptu meetings. All these meeting types are supported with a single client. Lync Server also supports dial-in conferencing so that users of public switched telephone network (PSTN) phones can participate in the audio portion of conferences. Conferences can seamlessly change and grow in real time. For example, a single conference can start as just instant messages between a few users, and escalate to an audio conference with desktop sharing and a larger audience instantly, easily, and without interrupting the conversation flow.
Enterprise Voice	*Enterprise Voice* is the Voice over Internet Protocol (VoIP) offering in Lync Server 2010. It delivers a voice option to enhance or replace traditional private branch exchange (PBX) systems. In addition to the complete telephony capabilities of an IP PBX, Enterprise Voice is integrated with rich presence, IM, collaboration, and meetings. Features such as call answer, hold, resume, transfer, forward and divert are supported directly, while personalized speed dialing keys are replaced by Contacts lists, and automatic intercom is replaced with IM. Enterprise Voice supports high availability through call admission control (CAC), branch office survivability, and extended options for data resiliency.

Workload	Description
Support for remote users	You can provide full Lync Server functionality for users who are currently outside your organization's firewalls by deploying servers called *Edge Servers* to provide a connection for these remote users. These remote users can connect to conferences by using a personal computer with Lync 2010 installed, the phone, or a web interface.
	Deploying Edge Servers also enables you to *federate* with partner or vendor organizations. A federated relationship enables your users to put federated users on their Contacts lists, exchange presence information and instant messages with these users, and invite them to audio calls, video calls, and conferences.
Integration with other products	Lync Server integrates with several other products to provide additional benefits to your users and administrators.
	Meeting tools are integrated into Outlook 2010 to enable organizers to schedule a meeting or start an impromptu conference with a single click and make it just as easy for attendees to join.
	Presence information is integrated into Outlook 2010 and SharePoint 2010.
	Exchange Unified Messaging (UM) provides several integration features. Users can see if they have new voice mail within Lync 2010. They can click a play button in the Outlook message to hear the audio voice mail, or view a transcription of the voice mail in the notification message.

Workload	Description
Simple deployment	To help you plan and deploy your servers and clients, Lync Server provides the Microsoft Lync Server 2010, Planning Tool and the Topology Builder.
	Lync Server 2010, Planning Tool is a wizard that interactively asks you a series of questions about your organization, the Lync Server features you want to enable, and your capacity planning needs. Then, it creates a recommended deployment topology based on your answers, and produces several forms of output to aid your planning and installation.
	Topology Builder is an installation component of Lync Server 2010. You use Topology Builder to create, adjust and publish your planned topology. It also validates your topology before you begin server installations. When you install Lync Server on individual servers, the installation program deploys the server as directed in the topology.

Workload	Description
Simple management	After you deploy Lync Server, it offers the following powerful and streamlined management tools: • Active Directory for its user information, which eliminates the need for separate user and policy databases. • Microsoft Lync Server 2010 Control Panel, a new web-based graphical user interface for administrators. With this web-based UI, Lync Server administrators can manage their systems from anywhere on the corporate network, without needing specialized management software installed on their computers. • Lync Server Management Shell command-line management tool, which is based on the Windows PowerShell command-line interface. It provides a rich command set for administration of all aspects of the product, and enables Lync Server administrators to automate repetitive tasks using a familiar tool.

While the IM and presence features are automatically installed in every Lync Server deployment, you can choose whether to deploy conferencing, Enterprise Voice, and remote user access, to tailor your deployment to your organization's needs.

In This Section

- IM and Presence
- Conferencing
- Enterprise Voice
- Scalability

IM and Presence

IM and presence are automatically installed in any Microsoft Lync Server 2010 deployment.

Presence information enables users to approach colleagues at the right time with the right form of communication, to lead to a more productive work environment. A user's presence is a collection of information that includes availability, willingness to communicate, additional notes (such as location and status), and how the user can be contacted. Presence is enhanced in Lync Server 2010 with pictures, location information, and a rich set of presence states that includes "Off Work," "Do Not Disturb," and "Be Right Back," in addition to basic states such as "Available."

"Busy," and "In a Conference." Administrators can also define customized, organization-specific presence states.

Contact management and user access options enable users to control what information others can see. Users can set different levels of contacts, each of which can view different levels of presence information.

By simply looking at a Contacts list, users can find everything they need to know at a glance. Simple colored icons indicate other users' presence status, and picture and location are also shown.

With the integration between Lync Server and other products such as Outlook and SharePoint, whenever a contact's name appears, such as in an email message or on a team website, the status and contact information is also displayed.

With the instant messaging in Lync Server, users can quickly message each other with timely information. If you prefer, your users can also communicate with users of public IM networks such as MSN/Windows Live, Yahoo!, and AOL. Note that a separate license might be required for public IM connectivity with Windows Live, AOL, and Yahoo!

Conversation history enables users to keep track of old IM conversations, and retrieve information that may have been communicated by IM months ago.

If your organization must follow compliance regulations, you can deploy a message archiving feature to archive the content of IM messages for all users in your organization, or for only certain users you specify.

Conferencing

With unified conferencing in Lync Server 2010, users can collaborate, share information, and coordinate their efforts in real time. All your users can use the full breadth of spontaneous-collaboration, scheduled meetings, and meeting tools. Voice and video conferencing capabilities can be used from any location with an Internet connection, and users away from a computer can participate in audio conferences by dialing in with a PSTN phone.

Meeting tools integrated into Outlook 2010 enable organizers to schedule a meeting or start an impromptu conference with a single click, and also make it just as easy for attendees to join. A web client extends rich conference features to participants who do not have the desktop Lync 2010 client.

Audio Conferencing

Lync Server provides a user experience that is familiar to users of traditional audio bridge services including PSTN dial-in services with touch-tone call control commands. At the same time, it incorporates powerful scheduling, joining, and management features available only with an integrated unified communications platform.

With a single click, users can schedule a meeting from Outlook. Details, such as meeting time, location, and attendees, follow the familiar Outlook template. Additionally, conference call-specific information, such as dial-in number, meeting IDs, and personal identification number (PIN) reminders, are automatically populated.

To help ensure that only the authorized people participate in a call, Lync Server provides multiple levels of authentication for participants. Users who join by using Lync 2010 are already

authenticated by the Active Directory Domain Services and do not need to enter a PIN, pass code, or meeting ID.

Non-PC users have several methods of joining a Lync Server 2010-based conference call. A PSTN user can dial an access number, access the meeting bridge, and then enter the meeting ID. For more secure meetings, the user can also be required to enter his or her PIN to authenticate against Active Directory. Lync Server 2010 also supports Lync Phone Edition devices, which are stand-alone IP phone devices provided by Microsoft partners.

Video Conferencing

Lync 2010 simplifies the video conferencing user experience by incorporating video into the unified client so that scheduling a meeting with video or escalating to video spontaneously is seamless and easy

Lync Server makes it easy to add video to a standard phone call in just one click. When there are multiple participants in a video call or a conference, the active speaker is displayed in the video window.

High-definition video (resolution 1270 x 720; aspect ratio 16:9) and VGA video (resolution 640 x 480; aspect ratio 4:3) are supported for peer-to-peer calls between users running Lync 2010 on high-end computers. The resolution viewed by each participant in a single conversation may differ, depending on the video capabilities of each user's respective hardware.

IT administrators can set policies to restrict or disable high-definition or VGA video on clients, depending on computer capability, network bandwidth, and the presence of a camera able to deliver the required resolution. These policies are enforced through in-band provisioning.

Application and Document Sharing

Lync Server 2010 integraties traditional application and document sharing into the streamlined Lync 2010 client. Combined with audio or video conferencing, the result is a highly immersive and collaborative session that is simple to facilitate.

Desktop sharing enables presenters to broadcast any visuals, applications, webpages, documents, software, or part of their desktops to remote participants in real time, right from Lync 2010. Audience members can follow along with mouse movements and keyboard input. Presenters can choose to share the entire screen or only a portion. By sharing their desktops, presenters are able to engage with their audiences in interactive product or software demos from any location.

Application sharing enables presenters to share control of software on their desktops without losing sight of participant feedback or text questions. Presenters can also delegate control of the application to meeting participants.

Enterprise Voice

With Enterprise Voice, Microsoft Lync Server 2010 delivers a stand-alone Voice over Internet Protocol (VoIP) offering to enhance or replace traditional PBX systems. Enterprise Voice users can call colleagues on your organization's VoIP network or PBX, and they can call traditional phone numbers outside your organization. The Enterprise Voice solution includes common calling features such as answer, forward, transfer, hold, divert, release and park, along with Enhanced

9-1-1 calling. (Enhanced 9-1-1 is available only in the United States.) Enterprise Voice also supports a broad range of current and older IP and USB devices.

Placing and Receiving Calls

Users with Microsoft Lync 2010 clients can place calls by typing a name or phone number on their keyboard, or using a dial pad displayed on their screen. Users can also initiate calls directly from their Contacts list. You can also deploy Lync Phone Edition devices, which are stand-alone IP phone devices provided by Microsoft partners.

Users can have multiple phone devices registered with Lync Server 2010, and can switch between them easily.

Users are alerted to incoming calls on all their devices simultaneously, with customizable ringtones on IP phone devices and a notification similar to an instant message on their PC.

Users can also set a single telephone number that connects to their desk phone, PC and mobile phone, so they can be reached no matter where they are.

Basic Call Features

While on a call, a user can answer additional incoming calls or initiate outgoing calls, and the existing active call is automatically put on hold. Calls can be transferred from one user to another, either directly or after the first user speaks privately with the second user. Users can also transfer calls to another device; for example, they could transfer an active call to their mobile phone as they walk out the door of their office.

Richer Communications

When talking to another user with Lync 2010, users can easily add text, video, or desktop sharing to the call. The Do-Not-Disturb feature is integrated with the presence settings in Lync 2010.

With Unified Messaging, Lync 2010 and Lync Server 2010 integrate with Microsoft Exchange Server 2010 and Microsoft Outlook 2010. Users can see if they have new voice mail both in their Lync 2010 window and in email. While in email they can click to play the voice mail audio in an email message, or view a transcript of the voice mail message.

Advanced Calling Features

Enterprise Voice includes several advanced calling features as well, such as delegation, team calling, and Response Groups.

Delegation enables users to delegate call handling to one or more assistants. The delegate can perform multiple calling tasks on behalf of the user, including screening calls, placing calls, and initiating conferences.

Team calling enables a user to have incoming calls simultaneously ring the phones of teammates, for functions such as group call pickup and department calling.

Response Groups can be set up for queuing and intelligently routing calls to designated agents. Common uses include IT helpdesks, human resources hotlines, and other internal contact centers.

Enterprise Voice Administration

Lync Server 2010 uses standards and published interfaces to interoperate with existing infrastructure. It supports both gateway and SIP options (such as SIP trunking) for

interconnection to IP PBX systems and the PSTN networks, so that you can migrate users to Enterprise Voice over time, while minimizing disruption. Lync Server supports traditional codecs such as G.711, G.722, and G.723.1 for interoperability with traditional VoIP solutions.

With call admission control (CAC), administrators can set limits on the amount of Lync Server voice and video traffic carried on constrained network links, and specify the action to be taken if a new call would exceed the limit. The actions could include routing by an alternate path, or refusing the call.

Lync Server 2010 works with third-party Survivable Branch Appliances to provide local calling services and connection to PSTN at branch offices, in case of WAN failure at the central site.

Scalability

Microsoft Lync Server 2010 is offered in two editions, Enterprise Edition and Standard Edition. The different editions are intended primarily for different sizes of organizations. As shown in the following table, both editions support all functionality in all workloads, except for high availability.

Feature	Supported in Enterprise Edition?	Supported in Standard Edition?
IM and presence	Yes	Yes
Conferencing	Yes	Yes
A/V Conferencing	Yes	Yes
Dial-in Conferencing	Yes	Yes
Enterprise Voice	Yes	Yes
Virtualization	Yes	Yes
High Availability and Failover	Yes	No

Each Enterprise Edition Front End Server can support 10,000 users, and these servers can be grouped into pools which support 80,000 users. In a pool, if one Front End Server goes down, the connections and sessions are transferred seamlessly to the other servers in the pool, providing automatic failover. Each site on your network can have multiple Front End pools, to support even more than 80,000 users per site.

Each Standard Edition server can support 5,000 users. You could deploy multiple Standard Edition servers if you need to support more users, but the failover and high availability functionality of this edition is limited.

New Server Features

Microsoft Lync Server 2010 communications software introduces many new features, along with significant enhancements to existing functionality. This section provides a high-level introduction to these new features and enhancements. For details, you can download the Microsoft Lync

Server 2010 Resource Kit Chapter "Microsoft Lync Server 2010 New Features Overview" at http://go.microsoft.com/fwlink/?LinkId=210545.

Discussions of new features in Lync Server 2010 are grouped among the topics in this section.

In This Section

- Summary of Changes
- New Management and Administration Tools
- Topology Changes
- Operating System and Processor Support
- New Presence Features
- New Conferencing Features
- New Features for External User Access
- New Enterprise Voice Features
- New Address Book Features
- New Monitoring Server Features
- New Archiving Server Features
- New Group Chat Server Features
- New Mobility Feature

Summary of Changes

This table briefly summarizes the major changes to existing functionality, topology, and terminology between Microsoft Lync Server 2010 and the previous version, Microsoft Office Communications Server 2007 R2. For details about these changes and a list of new features introduced in Lync Server 2010, see the following sections of this document.

Feature	Microsoft Lync Server 2010
Operating system support	Only the 64-bit editions of Windows Server 2008 R2 and Windows Server 2008 SP2 are supported. Windows Server 2003 is not supported.
User and deployment configuration settings	Many configuration settings that were previously kept in Active Directory Domain Services (AD DS) or Windows Management Instrumentation (WMI) are now stored in the Central Management store. Some user settings, such as the user's phone number, are still stored in AD DS.

Feature	Microsoft Lync Server 2010
Topology validation and centralization, and server deployment	The Central Management store also stores and manages information about your Lync Server deployment and topology. Before you install any Lync Server role on a server, that server must be added to the topology in the Central Management store. The Central Management Server stores the Central Management store and validates your topology before you deploy any servers.
Command line interface	The Lync Server Management Shell is a new method of administration and management. Lync Server Management Shell is a powerful management interface, built on the Windows PowerShell command line interface, which includes a comprehensive set of cmdlets that are specific to Lync Server 2010. This replaces and greatly expands on LCSCmd.exe.
Graphical administration tools	The new graphical administration tools, called Lync Server Control Panel, are web-based tools so that you can manage your systems from anywhere on the corporate network, without having management software installed. These tools replace the Microsoft Management Console (MMC) snap-ins used in previous versions.
New web-based client	The Microsoft Lync Web App is the new browser-based version of Lync 2010, enabling users who do not have a Lync Server account or do not have the Lync 2010 client installed to participate in meetings. The server software supporting Lync Web App is automatically installed as part of the Front End Server, and needs no other installation steps. This client and server replace the Communicator Web Access feature.

Feature	Microsoft Lync Server 2010
Director server role	The Director is now a true server role. When you configure a server as a Director you cannot home users on it. You can still configure a single Director or a Director pool. The Director is not designated as either a Standard Edition or Enterprise Edition server.
A/V Conferencing Server	For scalability and performance, you can separate A/V Conferencing functionality into its own server role, A/V Conferencing Server. You can configure a single A/V Conferencing Server or a pool. You may still collocate A/V Conferencing Server with the Front End Server as well.
Mediation Server collocation	The Mediation Server can now be collocated with the Front End Server.
Mobility feature	The new mobility feature supports Lync 2010 functionality on a variety of mobile devices. For example, you can use a mobile device to look at presence, send instant messages, or join a conference. The mobility feature is introduced in cumulative update for Lync Server 2010: November 2011.

New Management and Administration Tools

Microsoft Lync Server 2010 introduces several new features that enhance and simplify manageability.

In This Section

- New Topology Builder Tool
- New Central Management Store
- New Lync Server Management Shell
- New Role-Based Access Control Feature
- New Web-Based Management Tools
- New DNS Load Balancing Feature
- Server Connection Refusal

New Topology Builder Tool

Topology Builder is a wizard-driven user interface that you use to create and edit your Microsoft Lync Server 2010 topology. With Topology Builder, your topology is validated before you commit it

or begin installing Microsoft Lync Server 2010 on any servers, and the setup process itself on each server is greatly simplified.

You use Topology Builder to create your topology and add Microsoft Lync Server 2010 components to it. You can also specify details such as fully qualified domain names (FQDNs). Topology Builder displays your topology in a tree view.

After you are satisfied with the topology, Topology Builder will validate it. If the topology passes validation, you can create installation images for each server in your deployment. This procedure ensures that each server is installed and configured correctly for your deployment.

Topology Builder interacts with the Central Management store, which stores your topology.

See Also

[New Central Management Store](#)

New Central Management Store

With Microsoft Lync Server 2010, configuration data about servers and services is moved to the Central Management store. The Central Management store provides a more robust, schematized storage of the data needed to define, set up, maintain, administer, describe, and operate a Lync Server 2010 deployment. It also validates the data to ensure configuration consistency.

All changes to this configuration data happen at the Central Management store, eliminating "out-of-sync" issues. Read-only copies of the data are replicated to all servers in the topology, including Edge Servers and Survivable Branch Appliances.

The Active Directory Domain Services (AD DS) are still used to store basic Lync Server user information, such as the user's SIP URI and phone number. User policy information is stored in the Central Management store. The use of Active Directory Domain Services (AD DS) also provides backward compatibility with earlier releases of Office Communications Server.

To administer servers and services, you use Lync Server Management Shell or the Lync Server Control Panel, which then configure the settings in the Central Management store. The Central Management Server, which runs on one Front End pool or one Standard Edition server in your deployment, replicates the configuration changes to all of the servers in your deployment.

New Lync Server Management Shell

In Microsoft Lync Server 2010, the Lync Server Management Shell is a new method of administration and management. Lync Server Management Shell is a powerful management interface, built on the Windows PowerShell command line interface, that includes a comprehensive set of cmdlets that are specific to Lync Server 2010. With Lync Server Management Shell, you gain a rich set of configuration and automation controls. The Lync Server Management Shell includes cmdlets for all Lync Server 2010 administration tasks.

New Role-Based Access Control Feature

Microsoft Lync Server 2010 introduces role-based access control (RBAC). With RBAC, administrative privilege is granted by assigning users to pre-defined administrative roles. Lync Server 2010 includes 11 predefined roles that cover many common administrative tasks. You can use RBAC to follow the principle of "least privilege," in which users are given only the administrative abilities that their jobs require.

Each role is associated with a specific list of Lync Server Management Shell cmdlets that users in that role are allowed to run.

See Also

Role-Based Access Control

New Web-Based Management Tools

Microsoft Lync Server 2010 introduces a new web-based graphical user interface for administrators, called Lync Server Control Panel. This replaces the administrative interfaces of previous releases, which were Microsoft Management Console (MMC) snap-ins.

With a web-based user interface, administrators can manage their systems from anywhere on the corporate network without specialized management software installed on their computers. The Lync Server Control Panel can be used to perform many Lync Server 2010 tasks, and those tasks are presented in an easy-to-learn manner, with Help available.

When an administrator uses Lync Server Control Panel, it calls the appropriate underlying Lync Server Management Shell cmdlets to run the tasks. RBAC restrictions affect administrators who use Lync Server Control Panel.

Lync Server Control Panel supports the Windows Internet Explorer 8 Internet browser, Internet Explorer 7, and Mozilla Firefox 3. It requires the Microsoft Silverlight 4 browser plug-in.

New DNS Load Balancing Feature

Microsoft Lync Server 2010 introduces DNS load balancing, a software solution that can greatly reduce the administration overhead for configuring load balancing on your network.

DNS load balancing balances the network traffic that is unique to Lync Server 2010, such as SIP traffic and media traffic. Although you will still need hardware load balancers for your server pools, their setup and administration will be primarily for HTTP traffic, which the administrators of hardware load balancers are accustomed to.

If you choose to deploy DNS load balancing, your organization's administration overhead for hardware load balancers will be greatly reduced. Additionally, complex troubleshooting of issues related to misconfiguration of load balancers for SIP traffic will be eliminated. DNS load balancing also ensures that hardware load balancer issues do not affect such elements of SIP traffic as the basic routing of calls.

Using DNS load balancing may also enable you to purchase lower-cost hardware load balancers than if you used the hardware load balancers for all types of traffic. You should still make sure to use load balancers that have passed interoperability qualification testing with Lync Server 2010. For details about load balancers that have passed interoperability testing, see "Lync Server 2010 Load Balancer Partners" at http://go.microsoft.com/fwlink/?LinkId=202452.

DNS load balancing is supported for Front End pools, Edge Server pools, Mediation Server pools, and Director pools.

See Also

DNS Load Balancing

Server Connection Refusal

Microsoft Lync Server 2010 communications software introduces a new *user sign-in mode* that enables you to take a server offline (for example, to apply software or hardware upgrades) without any loss of service to users. You can set user sign-in mode to stop a server from taking new connections and calls.

When you specify a Front End Server to not accept new connections, the behavior for existing sessions depends on the type of session. For many Front End Server sessions, such as conferences and peer-to-peer calls , the session is seamlessly transferred to another server in the pool while in progress. For other features, such as Response Group application, existing connections on the server continue until they naturally end. When all existing sessions have ended, the server is ready to be taken offline.

See Also

Preventing New Connections to Lync Server 2010

Topology Changes

Topology requirements and considerations for Microsoft Lync Server 2010 communications software are different from those for earlier releases of Office Communications Server, as explained in the following sections.

In This Section

- Lync Server 2010 Sites
- New A/V Conferencing Server Role
- Enhanced Virtualization Support
- Other Topology Changes

Lync Server 2010 Sites

In Microsoft Lync Server 2010, you define *sites* that contain Lync Server 2010 components. A site in Lync Server is a set of Lync Server computers that are well connected by a high-speed, low-latency network, such as a single local area network (LAN) or two LANs connected by a high-speed fiber optic network.

Note:

> Although the use of sites in Lync Server and Active Directory Domain Services are similar, your Lync Server sites can be different from your Active Directory Domain Services and Microsoft Exchange Server sites. Lync Server does not use the sites you have defined for Active Directory Domain Services.

A Lync Server site can be either a *central site* or a *branch site*. A central site contains at least one Front End pool or one Standard Edition server. A branch site is associated with exactly one central site, and the users at the branch site get most of their Lync Server functionality from the servers at the associated central site.Each branch site contains at least a public switched telephone network (PSTN) connection and can also include a *Mediation Server*. Alternatively, a branch site could run a *Survivable Branch Appliance*, which is a new device introduced in Lync Server 2010 that combines a PSTN gateway with a Lync Server Registrar and Mediation Server.

Branch sites with a Survivable Branch Appliance can retain Enterprise Voice communications if the WAN fails or the central site goes offline. For details about the Survivable Branch Appliance and branch site resiliency, see Planning for Enterprise Voice Resiliency in the Planning documentation.

New A/V Conferencing Server Role

In Microsoft Lync Server 2010, Audio/Video (A/V) Conferencing service functionality, which usually runs on the Front End Server, can also run in a stand-alone server role called A/V Conferencing Server. The A/V Conferencing Server, which you can deploy as a load-balanced pool, provides greater scalability and improved performance for A/V conferencing.

If your site has more than 10,000 users, we recommend that you deploy a separate A/V Conferencing pool.

See Also

Topologies for Web Conferencing and A/V Conferencing

Enhanced Virtualization Support

You can run a virtualized topology of Microsoft Lync Server 2010 in both small and enterprise topologies.

The small topology includes a virtualized Standard Edition server, along with optionally an Edge Server (either physical or virtualized) and Monitoring Server and Archiving Server (physical).

The enterprise topology includes a virtualized Front End pool, along with all other Lync Server 2010 roles running on either virtual or physical machines.

All virtualized topologies support all workloads, including Enterprise Voice.

For details, see Running in a Virtualized Environment in the Planning documentation.

Other Topology Changes

Microsoft Lync Server 2010 includes some topology changes concerning the Director, Mediation Server, Archiving Server, and Monitoring Server:

- In Lync Server 2010, the Director is now a unique server role. In previous releases, you could configure a Front End Server as a Director, but internally it was deployed as a Front End Server and required you to take additional configuration steps to preserve its Director role. In Lync Server, when you deploy a server as a Director, you cannot home users on it. Its purpose as a next-hop server for connection requests and for the Edge Server will be preserved.

  The Director does not require a separate back-end database; instead, it uses a local version of the SQL Server Express Edition database software, which is installed automatically when you deploy a Director.

  A Director is not designated as either a Standard Edition server or an Enterprise Edition server; it does not require any type of Microsoft Lync Server 2010 license.

- A Mediation Server can be collocated on the Front End Server. Collocation is recommended if you are not using SIP trunking or Direct SIP.

Operating System and Processor Support

Microsoft Lync Server 2010 is available only in a 64-bit edition, which requires 64-bit hardware and the 64-bit edition of the Windows Server operating system. Client computers are not required to have 64-bit hardware or software.

All server roles of Lync Server 2010 require one of the following operating systems:

- The 64-bit edition of Windows Server 2008 R2 Standard, the 64-bit edition of Windows Server 2008 R2 Enterprise, or the 64-bit edition of Windows Server 2008 R2 Datacenter

- The 64-bit edition of Windows Server 2008 SP2 Standard, the 64-bit edition of Windows Server 2008 SP2 Enterprise, or the 64-bit edition of Windows Server 2008 SP2 Datacenter

New Presence Features

Microsoft Lync Server 2010 introduces two new features that enhance presence, as follows:

- **Enhanced privacy controls**

  Privacy controls are enhanced, giving users more choices in how to make their personal information available to others. For example, a user can choose to show his or her presence information only to those people in his or her Contacts list. A user can also choose whether to display location information.

- **Photographs in Contacts lists**

  Contacts lists in Microsoft Lync 2010 can show photographs of the contacts.

- **Message waiting indicator for some phones running Microsoft Lync 2010 Phone Edition**

  Lync Server 2010 introduces a new class of phones running Lync 2010 Phone Edition that includes the Aastra 6721ip common area phone, Aastra 6725ip desk phone, HP 4110 IP Phone (common area phone), HP 4120 IP Phone (desk phone), Polycom CX500 IP common area phone, Polycom CX600 IP desk phone, and Polycom CX3000 IP conference phone. These phones display a message waiting indicator provided by Exchange Server 2010 Unified Messaging.

New Conferencing Features

Microsoft Lync Server 2010 introduces several new features that enhance conferencing, as described in the following lists.

New Web Conferencing and A/V Conferencing Features

- **Single meeting client**

  Microsoft Lync 2010 is the only client needed for all types of Lync Server 2010 meetings, including both scheduled meetings and impromptu meetings. This client replaces the need for the Live Meeting client and the Microsoft Office Outlook 2007 Add-In.

- **New web-based client**

  Microsoft Lync Web App is a browser-based version of Lync 2010 that allows people who do not have a Lync Server 2010 account and have not installed Lync 2010 to participate in meetings, using either Windows or the Macintosh operating system. It's a "light" program that takes up very little space on your hard disk drive and is relatively quick to get up and running.

It is designed mainly for external partners who are invited to Lync 2010 meetings, but is also useful for employees who are not at their usual computer at meeting time, or have not yet upgraded to Lync 2010. For details, see Lync Web App Features.

- **New downloadable meeting client**

  Microsoft Lync 2010 Attendee is a new downloadable client that enables users without Microsoft Lync 2010 to attend meetings. This downloadable client, designed for external users who are invited to your organization's meetings, enables them to join a meeting, but it does not include any functionality for IM, presence, or meeting scheduling.

  The first time a user without Lync 2010 attempts to join a meeting, he or she is prompted to download Lync 2010 Attendee. The Attendee client remains on the user's computer.

  For details, see Lync 2010 Attendee Features.

- **Meet simple URL**

  With Lync Server 2010, you can create simple URLs for joining meetings, dial-in conferencing, and administrative tasks that are easy to remember and to communicate. One simple URL is the Meet simple URL, which becomes the base for all links which users click to join conferences. For example, you could set your Meet simple URL to https://meet.Contoso.com. In this case, the URL for a particular meeting may be https://meet.contoso.com/username/JPLMVB, which is much shorter and easier to remember than meeting URLs in past versions of Lync Server 2010 and Office Communications Server.

- **New Conferencing Modes**

  With Lync Server 2010, during a conference you can share your entire desktop or an individual application. Lync Server also provides client-side meeting recording and playback, whiteboard and annotation tools, and presentations created using the Microsoft PowerPoint presentation graphics program. A whiteboard is a blank canvas that can be used for collaboration, with text, ink, drawings and images.

  When files are uploaded to a meeting, participants can view and save the files in the original file format.

- **Lobby provides improved user join experience**

  Anonymous users and participants who use dial-in conferencing but for whom authentication fails no longer need to disconnect and retry. These users are transferred to the lobby, the leader is notified, and the users then wait until a leader either accepts or rejects them or their connection times out. While in the lobby, the users hear music.

- **New meeting admission policy and controls**

  Users who organize meetings can change authorization types after sending the invitation, if they discover the original settings were incorrect. They can even change these authorization types during the meeting.

- **Enhanced meeting access levels**

  Users can specify a more granular set of access rights on meetings they organize.

- **Assigned Conference IDs**

By default, every meeting organized by a particular user has the same conference URL and conference ID for dial-in users. This enables dial-in users to remember just one conference ID to join all meetings organized by this user, and is similar to how meetings hosted on audio conference providers work.

- **Presentation Mode**

In an A/V conference, the presenter can set the conference state so that all other participants, including anybody who subsequently joins the meeting, are muted. While the conference is in this state, individual participants cannot unmute themselves. The presenter can later change the conference state, for example, to open the conference for questions. At that time, users receive a notification that they can now unmute themselves.

- **Controls to Toggle Entry and Exit Announcements**

By default, entry and exit announcements in an A/V conference are audible to everyone, no matter how they join the conference. Each user can turn these announcements on or off for his or her own client.

New Dial-In Conferencing Features

- **Lobby provides improved user join experience**

Participants who use dial-in conferencing but for whom authentication fails no longer need to disconnect and retry. These users are transferred to the lobby, the leader is notified, and the users then wait until a leader either accepts or rejects them or their connection times out. While in the lobby, the users hear music.

- **Access to DTMF commands during call**

After dial-in participants are admitted to a conference, they can run dual-tone multifrequency (DTMF) commands by using the phone keypad. Dial-in conference leaders can run DTMF commands to admit people from the lobby, toggle audience mute, lock or unlock the conference, and turn entry and exit announcements on or off. All dial-in participants can exercise DTMF commands to hear Help, play a private roll call, and mute themselves.

- **Recorded name for anonymous callers**

Users who are not authenticated are prompted to record their name. The recorded name identifies unauthenticated users in the conference.

- **Simplified leader join**

When dialing into a conference, a leader can join more easily than in past versions of Lync Server 2010 and Office Communications Server. Entering the caller's phone number is no longer required.

New Features for External User Access

In Microsoft Lync Server 2010, you manage Edge Servers from the internal network. All configuration data for servers and services resides in the Central Management store, which you can manage by using internal administrative tools. After you deploy Edge Servers and configure the required ports, configuration data is automatically pushed from the Central Management store to each Edge Server. This strategy offers the following advantages:

- **Simplified installation.** You do not have to install administrative tools on Edge Servers.

- **Streamlined management of Lync Server 2010 components.** Edge Servers can now be configured from a centralized location with a single user interface.

- **Consistent synchronization of internal and external Lync Server 2010 configuration changes.** Server configuration changes are pushed out to Edge Servers as they are made.

- **Improved security.** Administrators do not need to log on to Edge Servers to perform administrative tasks.

For details about the Central Management store and administrative tools for Lync Server 2010, see New Management and Administration Tools. For details about external user access, see Planning for External User Access in the Planning documentation.

New Enterprise Voice Features

The Microsoft Lync Server 2010 communications software introduces several new features that enhance Enterprise Voice.

- Enhanced Voice Resiliency in Central Sites and Branch Offices

- Call Admission Control Functionality

- Hosted Exchange Unified Messaging (UM)

- Mediation Server Bypass

- Emergency Dialing (E9-1-1)

- New Mediation Server and Gateway Topologies

- Configuring Call Translation Rules

- Malicious Call Tracing

- New Call Management Features

Enhanced Voice Resiliency in Central Sites and Branch Offices

In Microsoft Lync Server 2010, enhanced client registration, discovery, and routing improve service resiliency and flexibility in the design and deployment of your Enterprise Voice solution.

The Registrar authenticates users and provides routing services. The Registrar is not a stand-alone server role but is installed on Standard Edition servers, Front End Servers, and Survivable Branch Appliances.

Each user is assigned to a particular Front End pool, which becomes that user's primary Registrar pool. Each pool can have a designated secondary Registrar pool, which is used in if the primary pool fails.

Central Site Resiliency

If a user's primary and secondary Registrar pools are at different central sites that are connected by a resilient WAN link, if the primary pool fails, the user can be immediately transferred to the secondary pool. The first sign-in server—typically a Director—will always direct the user's client to either the primary pool or, in the event of failover, to the secondary pool.

If clients connect to the secondary Registrar pool, the following voice features will be available:

- All two-party functionality, including instant messaging and audio/video calls

- Outbound PSTN calls

- Inbound PSTN calls, if the carrier provides the ability to failover to a secondary central site

- Enterprise calls both within a site and between sites
- Basic call handling, including call hold, retrieval, and transfer
- Advanced call handling, depending on user's call-forwarding settings, including call forwarding, simultaneous ringing of endpoints, and call delegation features
- Call detail recording (CDR)
- Location Information service for emergency calls

Branch Site Resiliency

For smaller branch sites without on-site IT administrators, a Survivable Branch Appliance (that is, a "branch in a box" that is easy to deploy, configure, and remotely manage) can provide basic voice services to users in the branch site during a WAN outage.

The Survivable Branch Appliance is a combination of a server (often a blade server) and a PSTN gateway. It is designed for branch sites that do not have a Lync Server 2010 Front End pool or Standard Edition server. The Survivable Branch Appliance can provide basic phone services to users at the branch site when the WAN link to the Lync Server central site is down.

The blade server of the Survivable Branch Appliance runs the Windows Server 2008 R2 operating system and the Lync Server Registrar service and Mediation Server. Because the location of the Survivable Branch Appliance may not have IT personnel, the appliance is designed for easy deployment and remote management. Before a Survivable Branch Appliance is deployed, administrators can set up its account and configuration at the central site. A technician at the branch site then begins the deployment, and the deployment can be completed by the branch site technician or by administrators at the central site.

If the WAN connection between a branch site and its central site fails, the Survivable Branch Appliance provides the following voice features to users at the branch site:

- All two-party functionality, including instant messaging and audio/video (A/V) calls
- PSTN inbound and outbound calls
- Intrasite and intersite calls
- Call hold, retrieve, and transfer
- User authentication and authorization
- Leaving and retrieving voice mail
- Call forwarding, simultaneous ringing, call delegation, and team calling
- Call detail recording (CDR).
- PSTN dial-in conferencing with Conferencing Auto-Attendant

See Also

Planning for Enterprise Voice Resiliency

Call Admission Control Functionality

Real-time communications are sensitive to the latency and packet loss that can occur on congested networks. The Microsoft Lync Server 2010 communications software introduces call admission control (CAC, also known as bandwidth management) to help preserve the Quality of Experience (QoE) for users on congested networks. CAC detects how much network bandwidth is available and then determines whether new real-time communications sessions can be

established. If there is insufficient bandwidth, CAC can also provide an alternative route for calls, such as the public switched telephone network (PSTN) or the Internet by way of the Edge Servers.

Hosted Exchange Unified Messaging (UM)

In addition to the support that previous releases have provided for integration with on-premises deployments of Exchange Unified Messaging (UM), Lync Server 2010 introduces support for integration with hosted Exchange UM. This integration enables Lync Server to provide voice messaging to your users if you transfer some or all of them to a hosted Exchange service provider, such as Microsoft Exchange Online.

The following configurations are supported:

- **On-premises**: Lync Server and Exchange UM are both deployed on local servers within your enterprise.

- **Cross-premises**: Lync Server is deployed on local servers within your enterprise and Exchange UM is hosted by an online service provider, such as Microsoft Exchange Online.

- **Mixed**: Your Lync Server deployment has some user mailboxes homed on local Exchange servers within your enterprise and some mailboxes homed by an online service provider, such as Microsoft Exchange Online.

  📝 **Note:**

  The mixed configuration can be used as a transitional solution during evaluation and stepwise migration of users to hosted Exchange UM or as a permanent solution if you opt to keep some users' Exchange UM services on-premises and others online.

Mediation Server Bypass

In Microsoft Lync Server 2010, we recommend that you configure voice traffic to bypass the Mediation Server when possible. Doing so helps improve call quality by optimizing the media path, reducing latency, minimizing unnecessary transcoding, limiting packet loss, and eliminating potential points of failure.

Mediation Server bypass also provides you bandwidth savings in configurations where a Mediation Server and a PSTN gateway or PBX are at different sites connected by WAN links, especially if bandwidth over the link is limited. Offloading the media processing from the Mediation Server also improves scalability.

See Also

Media Bypass

Emergency Dialing (E9-1-1)

Enhanced 9-1-1 (E9-1-1) is an emergency notification system that associates the calling party's telephone number with a physical address. By using this physical address or location information, a Public Safety Answering Point (PSAP) can immediately dispatch emergency services to the caller in distress. Traditional 9-1-1 service associates a telephone number only with its billing address, which may not be the location where the emergency call originates. For example, an organization may occupy a large building or a series of buildings). By deploying an E9-1-1 system, an organization can provide the exact location of the emergency call, such as the building, floor, and conference room, to the appropriate PSAP.

In order to support E9-1-1 as part of a Microsoft Lync Server 2010 Enterprise Voice deployment, you must obtain E9-1-1 routing service from a certified emergency services provider.

Lync Server 2010 currently supports E9-1-1 only in the United States.

New Mediation Server and Gateway Topologies

New for the Mediation Server in Microsoft Lync Server 2010 is the ability for a single Mediation Server to route outbound calls through multiple gateways. In previous releases, there was a 1:1 ratio of Mediation Server to gateways.

Also new for Lync Server 2010 is the ability for a Mediation Server to be deployed as a pool. A Mediation pool can be collocated with the Front End pool, or it can be a stand-alone pool.

See Also

Multiple Gateway Support

Configuring Call Translation Rules

As in previous versions, Microsoft Lync Server 2010 requires that all dial strings be normalized to E.164 format for the purpose of performing reverse number lookup (RNL) during call routing. Downstream components, such as gateways, PBXs, and SIP trunks, may require numbers in local dialing formats. As a result, in Microsoft Office Communications Server 2007, it was sometimes necessary to individually configure downstream components, or even reroute calls, in order to accept E.164 dial strings.

With Lync Server 2010, however, you can create one or more rules that assist in manipulating the Request URI E.164 format before the call is routed to the gateway. For example, you could write a rule to remove +44 from the head of a dial string and replace it with 0144 before the call is routed to a gateway.

Malicious Call Tracing

By using malicious call tracing, users can flag harassing, threatening, or obscene phone calls. Immediately after hanging up, the user can select an option to report the call as malicious. When such a call is reported, a trace request is sent to mark the record of the call, and an event is logged. Administrators can then identify the call, the calling number, and the gateway or SIP trunk over which the call was received.

Monitoring Server must be deployed for malicious call tracing to be used.

New Call Management Features

The following sections describe the changes in call management features in the Microsoft Lync Server 2010 communications software.

- [New Response Group Application Features](#)
- [New Announcement Application](#)
- [New Call Park Application](#)

New Response Group Application Features

With the Response Group application, you can route and queue incoming calls to designated persons for special purposes, such as customer service, an internal help desk, or general telephone support for a department.

The following Response Group application features are new in Microsoft Lync Server 2010.

- **Anonymous calls**

  You can configure a response group so that agents can accept incoming calls and make outgoing calls on behalf of the response group without revealing their identity. When anonymous calling is enabled, callers cannot call agents directly unless the agent expressly offers a direct number. During an anonymous call, the agent can see that the call is anonymous. The agent can put the call on hold, make both blind and consultative transfers, and park and retrieve the call. Anonymous calls cannot start from an instant messaging (IM) or audio/video session, but the agent or the caller can add IM and video after the call is established.

  Anonymous calls do not support conferencing, application sharing, desktop sharing, file transfer, whiteboarding and data collaboration, or call recording.

  ⚠ **Warning:**

  A consultative transfer is where the agent who received the call first (that is, the "transfer initiator") talks to the agent or user that they want to transfer call to (that is, the "transfer receiver") before they actually transfer the call. Consultative transfers are supported when the transfer receiver is not anonymous. If the transfer initiator consultative transfers a call to a PSTN or a Lync user and uses the anonymous option, the call will appear to transfer properly to the receiver. However, the transfer will fail and the transferred caller is disconnected. The transfer initiator can be either anonymous or known, but the effect is the same if the transfer receiver is anonymous.

- **Attendant routing method**

  With the new attendant routing method, all agents who are signed into Lync Server 2010 and the Response Group application are called at the same time for every incoming call, regardless of their current presence status. With attendant routing, Microsoft Lync 2010 Attendant users who are designated as agents can see all the calls that are waiting and answer waiting calls in any order. When a call is answered, the other Microsoft Lync 2010 Attendant users no longer see the call.

- **Integrated manageability**

  In Lync Server 2010, Response Group manageability is integrated with Lync Server 2010 manageability: Lync Server Management Shell cmdlets support all Response Group management tasks, and Microsoft Lync Server 2010 Control Panel supports common Response Group management tasks.

- **Caller experience improvements**

  In Lync Server 2010, Response Group supports more flexible interactive voice response (IVR) configurations and prompts, such as for invalid or no response to IVR questions and messages before music on hold or queue timeouts.

- **Web service**

  In Lync Server 2010, the Response Group application provides a more robust web service that supports customized agent consoles. You can use the web service to retrieve information

about agents, agent group membership, agent sign-in status, call status for groups, and the response groups that support anonymous calls.

See Also

Response Group Application

New Announcement Application

The new Announcement application in Microsoft Lync Server 2010 makes it possible to configure how phone calls are handled if the dialed number is valid but is not assigned to a user or common area. Such calls can be transferred to a predetermined destination, or they can be answered with a recorded announcement, or both.

With the Announcement application, a caller who misdials will not hear a busy signal, and the SIP client will not receive an error message.

The Announcement application is a call management component of Enterprise Voice. When you deploy Enterprise Voice, you must configure the unassigned number routing table and Announcement application settings before you enable the Announcement application.

See Also

Announcement Application

New Call Park Application

The new Call Park application in Microsoft Lync Server 2010 makes it possible for Enterprise Voice users to put a call on hold and then retrieve it later from any phone. When a user parks a call, Call Park provides an *orbit* number that identifies where the call is temporarily held. The user who parked the call can either dial the orbit number to retrieve the parked call or use an external mechanism, such as instant messaging or a paging system, to notify someone else of the number for retrieval.

Call Park is useful for continuing a call from a different location and for transferring a call when the final recipient is unknown.

Call Park is a call management feature of Enterprise Voice. When you deploy Enterprise Voice, you must configure the orbit routing table and Call Park settings, and enable Call Park for users through voice policy before it can be used.

See Also

Call Park Application

New Address Book Features

Microsoft Lync Server 2010 creates and uses an Address Book Service to supply clients with these features:

- Global Address List derived from Active Directory which provides contacts and attributes of contacts
- Distribution List Expansion for groups and contact membership in groups
- Phone Number normalization from a local format into the RFC 3966/ITU E.164 format

The Address Book Service (ABS) along with the Address Book Web Query (ABWQ), service all client types in Lync Server 2010. The ABS further enhances the performance of the infrastructure

by contacting Active Directory (AD DS) at scheduled intervals to collect and update information stored in the ABS databases. The databases (Rtcab and Rtcab1) are stored as part of the databases deployed on either an Enterprise or Standard Edition Front End for the operation of the Front End, similar to information managed and maintained for presence information.

The Address Book Service and the Address Book Web Query perform similar functions, but in different ways. The ABS queries and downloads information from AD DS to be maintained in either a full download of contact information, delta files, or compact delta files. By maintaining the three types of download extracts, a new client can receive the full download and then receive either delta files or compact delta files, based on current need of the client.

Distribution List Expansion is a feature inherent to the way that contacts are stored in the ABS database files or the ABWQ. With the ABS files, the contact is associated with the groups and members of the groups. Group information is available to the client through the updated ABS files. ABWQ will directly query AD DS in the event a client asks for group membership of a client and return the group membership after the information is retrieved from AD DS.

For a fully functional communications system involving telephony, normalizing phone numbers into a usable format – regardless of where the client is – is a critical feature. If a user is making a voice call to another person on a public switched telephone network (PSTN), the phone number of the other person may be in a format that may not work without being reformatted to conventions that are accepted on the PSTN. For example, the user calls the other contact at the number that is listed for them. The number listed for the contact is from AD DS, which does not perform any phone number normalization. The number might be in the form of 555-1010. Phone number normalization will convert the local form 555-1010 to +14255551010. Normalization occurs when ABS reads the information from AD DS and normalizes it, then stores the normalized form in the address book file and index databases – RTCab and RTCab1.

What's New, What's Changed in Lync Server 2010 Address Book Services

Lync Server 2010 improves on the Address Book Services from previous releases, namely Microsoft Office Communicator 2007 and Microsoft Office Communicator 2007 R2.

Client Usage of the Address Book Web Query

The Address Book Web Query is available to Lync 2010 and Lync 2010 Phone Edition. For backward compatibility, Microsoft Office Communicator and Microsoft Office Communicator Mobile can use the Address Book Web Query service. However, Lync and Office Communicator will use the Address Book Service if it is available. The following table shows which client will use which service, based on availability.

Address Book Service Availability	Communicator 2007, Communicator 2007 R2	Lync	Communicator Phone Edition	Lync Phone Edition	Communicator Mobile or Lync Web App
ABS and ABWQ available	Will use the ABS file download	Will use the ABS file download	Will use ABS/ Device file download	Will use ABWQ	Will use ABWQ

Address Book Service Availability	Communicator 2007, Communicator 2007 R2	Lync	Communicator Phone Edition	Lync Phone Edition	Communicator Mobile or Lync Web App
ABWQ only	Will disable contact search	Will use ABWQ	Will disable contact search	Will use ABWQ	Will use ABWQ
ABS only	Will use ABS file download	Will use ABS file download	Will use ABS/ Device file download	Will use ABS/ Device file download	Will disable contact search

An in-band provisioning setting determines if the Address Book Service is available. The in-band provisioning setting AbsUsage is defined as one of three values:

- WebSearchOnly
- FileDownloadOnly
- WebSearchAndFileDownload

For those clients that prefer the Address Book Service, they will then use the Address Book Service download files over the Address Book Web Query. If the Address Book Service is not available, then the Address Book Web Query is used on a per request basis against the RTCab or RTCab1 database, depending on which one is currently active.

In This Section

- [Phone Normalization Rules]
- [PartitionByOU Replaced with msRTCSIP-GroupingID]

Phone Normalization Rules

In Lync Server 2010, the normalization rules are applied after the number is received from the Address Book Service. The Address Book Service removes any white space and non-mandatory characters from the phone number before applying the normalization rule. Examples of non-mandatory characters: !, @, ., - and *.

This processing order simplifies the normalization rules because there is no longer a need to account for the possibility of white space or non-mandatory characters in the phone number. The change in the way that numbers are formatted prior to normalization was done to be consistent with the method used for normalization in other parts of the Lync Server product. The processing order also simplifies the normalization rules that are required to properly format the number when it is presented to the client.

In prior releases, your regex rules for normalization might have looked like the following:

```
^\(?(\d\{3})?[\s\-\./](\d{3})[\s()\-\./](\d{4})[\s]*[x|X](\d{5})$
+1$1$2$3;ext=$4
```

The previous rule can be rewritten in Lync Server as the following because there is not any white space or non-mandatory characters to find:

```
(\d{10})[x|X](\d{5})
```

```
+1$1;ext=$2
```

The new processing method does have the potential to render some normalization rules that worked in previous versions of Office Communications Server to fail. Because the rule is now applied after whitespace and other specific characters are removed, a regex expression that anticipates these specific characters no longer functions as expected. For example:

```
\s*\(\s*\d\d\d\s*\)\s*\-\s*\d\d\d\s*\-\s*\d\d\d\d
```

This expressions fails because the '-' character has been removed by pre-processing. The match for ()- is no longer able to match the expected character in the input string. To resolve the previous regex to work with the new pre-processed format, you can now simplify it to the following:

```
\d{10}
```

The new regex rule simply matches ten digits.

PartitionByOU Replaced with msRTCSIP-GroupingID

In Office Communications Server 2007 R2, if the parameter PartitionByOU (maintained in Windows Management Instrumentation (WMI)) is set to TRUE, then a user search returns only contacts of other users that are members of the same organizational unit (OU) as the user that submitted the search. This is a very handy feature if your organization has a group of users that would prefer not to have their contacts revealed by general user searches.

In Lync Server 2010, WMI is deprecated in favor of the Central Management store and Active Directory Domain Services (AD DS) for the management and storage of settings for user or server objects. The re-engineering of this feature takes into account that many organizations have a very rich structure of OUs, and limiting users to siloes based on OUs became a boundary that was no longer feasible as a user management practice. Users need to have visibility beyond their OU. Lync Server 2010 adds an attribute onto user objects. This attribute, msRTCSIP-GroupingID, can be populated with the Globally Unique Identification (GUID) unique to users that need to be able to search for each other. Unless the user is a member of the tagged group, the search results will not display the user contacts. However, it should be noted that even though a user may not be able to receive search results for specific users by means of the Address Book, this does not prevent them from using email contact information or manual entry of contact or phone number information.

For customers that are currently on Office Communications Server 2007 R2 that have been using the PartitionByOU method, there are two possible scenarios to move from the PartitionByOU to the msRTCSIP-GroupingID method.

Option 1: Set the msRTCSIP-GroupingID attribute on the user object with the GUID of the OU, for all users in that OU. This method ensures that the members will still retain the same functionality that they have enjoyed to date. The attribute can be populated with a Windows PowerShell cmdlet or script.

Option 2: Design the partition that you want from scratch, and then populate the attribute of the user objects according to your organization's needs. New customers and existing Office Communications Server customers who are looking to redesign their current solution would use this approach.

A recommended approach would to be to write a Windows PowerShell script to populate the attribute for the users that you silo into the groupings.

If you choose to use the msRTCSIP-GroupingID to silo users into specific groups, the following table describes a simple configuration:

Users	GroupingID	OU ID
User1	GUID 1	GUID X
User2	GUID 3	GUID X
User3	GUID 2	GUID X
User4	GUID 1	GUID X
User5	GUID 3	GUID X

If User1 searches for contacts, the result would be User4, and User2 would have a result containing User5. The OU ID has no impact on the search results, only the GroupingID attribute.

New Monitoring Server Features

Microsoft Lync Server 2010 communications software introduces several features that enhance Monitoring Server for return on investment (ROI) analysis, asset management, and operational monitoring. These new features include:

- **Richer Reporting, including Dashboard View**

  Monitoring Server takes advantage of Microsoft SQL Server Reporting Services to provide richer reporting on system usage for ROI analysis, voice quality for diagnostics scenarios, and IP phone and media device asset management.

  A dashboard presents an aggregation of these reports, proactively informing administrators about usage trends and the health of the deployment.

- **Comprehensive Data for Usage Tracking and Voice Quality Diagnostics**

  The call detail recording (CDR) and Quality of Experience (QoE) databases have been updated to include new usage and diagnostic data for all new Lync Server 2010 features, conferencing, registration, and device diagnostics. New database schemas incorporate these changes.

- **New Management Features**

  Monitoring Server now uses Lync Server Management Shell cmdlets for all administration and management tasks. Lync Server provides centralized deployment for Monitoring Server from Topology Builder and the Deployment Wizard.

- **Optimized Infrastructure**

  The Monitoring Server infrastructure has been optimized to improve reliability and maintainability.

New Archiving Server Features

Microsoft Lync Server 2010 communications software introduces several features that enhance your organization's ability to archive instant messaging (IM) and meeting content for compliance purposes, as follows:

- **Archiving of IM content and meeting content consolidated**

  In previous versions of Office Communications Server, the archiving of IM content and web conferencing (meeting) content was managed separately, and the two types of archived content were stored separately. In Lync Server 2010, the two types of archiving are consolidated in several key ways.

  - Archiving policy settings for both IM and meetings are unified for easier administration.
  - The core archiving store consolidates IM content and web conferencing attendee entries and exits. (The content of meeting handouts is still stored on a separate file share.)

- **Searchable transcript of archived information**

  Lync Server 2010 also introduces a new session export tool that you can use by running a Lync Server cmdlet. The tool creates a searchable transcript of archived content. This transcript includes IM content, meeting attendee entries and exits, and links to files shared during conferences.

- **Per-user settings honored for conferences**

  In Lync Server 2010, per-user archiving settings are honored for all types of conferences. If a particular user's activity is archived, all the instant messages and meeting content in both IM conferences and web conferences that the user participates in will be archived.

- **New policy settings**

  Additionally, Lync Server 2010 includes new policy settings you can use to disable Lync Server 2010 features that cannot be archived, such as annotation, application sharing, and peer-to-peer file transfers. This behavior helps ensure that all of your users' communications will be archived, if required for compliance.

New Group Chat Server Features

Microsoft Lync Server 2010, Group Chat enables you to participate in multiparty, topic-based conversations that persist over time. Lync Server 2010, Group Chat can help your organization do the following:

- Improve communication between geographically dispersed and cross-functional teams
- Broaden information awareness and participation
- Improve communication with your extended organization
- Reduce information overload
- Improve information awareness
- Increase dispersion of important knowledge and information

This topic describes feature changes between the new version of Group Chat Server (Lync Server 2010, Group Chat) and the previous version (Microsoft Office Communications Server 2007 R2 Group Chat). For additional details about the latest version of Group Chat Server and Microsoft Lync 2010 Group Chat, the new client, see the following:

- The Lync 2010 Group Chat Help at http://go.microsoft.com/fwlink/?linkid=209000, which provides a detailed list of Lync 2010 Group Chat features, how they work, and how to use them while running Group Chat.

- The Planning for Group Chat Server in the Planning documentation, Deploying Group Chat Server in the Deployment documentation, Migrating Group Chat Server in the Migrating documentation, and Administering Group Chat Server in the Operations documentation, all of which provide instructions for setting up Group Chat Server.

- The Group Chat Server Documentation.msi file (Windows Installer file) allows users to access comprehensive offline documentation about Group Chat Server.

Lync Server 2010 Platform Compatibility

In this release, Group Chat Server and Group Chat have been rebuilt to be compatible with the Microsoft Lync Server 2010 and Microsoft Lync 2010 code bases: Unified Communications Client Platform (UCCP) and Microsoft Unified Communications Managed API (UCMA) 3.0. Setup versioning has been updated to support Group Chat Cumulative Updates (CUs) and to help make upgrades in the future more seamless.

Lync 2010 Group Chat Monitoring with a New System Center Operations Manager Management Pack

A new Microsoft System Center Operations Manager (formerly Microsoft Operations Manager) Management Pack for Group Chat Server supports health monitoring for a Group Chat installation and these critical Group Chat Server services:

- Channel service

- Lookup service

- Compliance service

The new Group Chat Server System Center Operations Manager Management Pack uses both Windows event logs and the state of the services.

For details about downloading the Lync Server 2010, Group Chat Monitoring Management Pack Group Chat, see "Lync Server 2010 Group Chat Monitoring Management Pack" at http://go.microsoft.com/fwlink/?LinkId=209888.

Unicode Support

Content—for chat channel names and in-chat content—can now be entered in Unicode. You can name channels in full UTF-8, and users can participate in chat rooms and type messages in Chinese, Arabic, or other UTF-8 languages.

Zero Logging Level

To preserve disk space, Group Chat does not generate log file entries, by default. You can change the logging level by changing the `level value` in %appdata%\Microsoft\Group Chat \Group Chat Client\GroupChatConsoleLogger.xml from "none" to "fatal," "critical," "error," "warn," "info," "debug," or "trace." For example:

```
<log4mgc>

    <file value="%userprofile%\tracing\GroupChatConsole.log" />

    <maximumFileSize value="20" />
```

```
<!-- in MB, 2047 max-->
<maxSizeRollBackups value="10" />
<filemode value="append" />
<level value="TRACE" />
</log4mgc>
```

Ego Filter Enhancements

Ego filtering includes the following enhancements to ignore common terms in user names. By default, the ego filter excludes any text between and including the following characters:

- "(" and ")"
- "[" and "]"
- "<" and ">"
- "{" and "}"

📝 **Note:**

This affects only the default ego filter. You can still customize the filter.

The ego filter no longer triggers whenever you type the letters "IT"; for example, "Sara Davis (IT Dept)". The text can be excluded only if the "words in brackets" are closed. For example:

- "Sara Davis (IT Dept)" becomes "Sara Davis"
- "Sara Davis (IT Dept" becomes "Sara Davis IT Dept"
- "Sara Davis [IT Dept (HR Unit)" becomes "Sara Davis IT Dept"

New Features and Improvements in the User Interface

The Lync 2010 Group Chat user interface and its accompanying icons, including its emoticons, have been upgraded and resized to match the Lync 2010 user interface.

Presence Privacy Changes

When Lync 2010 Group Chat is not the primary instant messaging (IM) and presence client and is running side-by-side with Lync, Group Chat will not violate the Lync Server 2010 presence privacy mode. For details about Lync Server presence privacy modes, see Administering Group Chat Server in the Operations documentation.

The Lync Server presence privacy mode for Group Chat operates under the following conditions:

- Stop Group Chat from doing any access control entry (ACE) bootstrapping when running side-by-side with Lync.
- If Group Chat already stops IM, presence, and Buddy List operations when running with Lync, stop bootstrapping as well in this mode.
- Presence privacy mode does not work if Group Chat is running in IM and presence mode.
- When running in presence privacy mode, Lync must be configured in its IM and presence disabled mode, or it reverts out of presence privacy mode.

Note:

Group Chat should always be running on the same computer as Lync for it to work side-by-side in presence privacy mode. You can run Group Chat without Lync and still run Lync in presence privacy mode on another computer, as long as you keep IM disabled on the computer running Group Chat. We do not recommend this scenario.

New Mobility Feature

Cumulative update for Lync Server 2010: November 2011 introduces the new mobility feature. When you deploy the mobility feature, users can use their mobile devices for Lync 2010 functionality, including presence, instant messaging (IM), contacts, and dial-out conferencing (a feature in which the Lync Server A/V Conferencing service calls the mobile device). The mobility feature also supports Enterprise Voice features, such as single number reach (with which you can receive calls on a mobile device that were dialed to your work number), Call via Work (with which you can call out from a mobile device using your work identity), voice mail, and missed calls on mobile devices.

With Lync Server 2010 mobility, users have access to Lync 2010 functionality on the following mobile devices:

- Supported Apple iOS devices
- Windows Phone
- Android
- Nokia

The automatic discovery feature allows a mobile device to locate Lync Server 2010 resources from anywhere, without requiring the user to manually enter a URL in the device settings.

The push notification feature sends a notification to a mobile device for an event that occurred when the mobile application was suspended, such as for a missed call or an instant message invitation.

To deploy the new mobility feature, you must install cumulative update for Lync Server 2010: November 2011 on your Front End Servers and Directors.

New Client Features

The following sections explain the new features in Microsoft Lync Server 2010 clients and other differences between Lync Server 2010 clients and previous client versions.

In This Section

- Lync 2010 New Features
- Lync 2010 Attendee Features
- Lync Web App Features
- Lync for Mobile Clients
-
- Lync Online Web Scheduler Features

- [What's New in Client Deployment](#)
- [What's New for Devices](#)

Lync 2010 New Features

This topic describes Microsoft Lync 2010 changes and enhancements made since the release of Microsoft Office Communicator 2007 R2.

If you are migrating from Microsoft Office Communications Server 2007, see also "New Client Features" in the Microsoft Office Communications Server 2007 R2 documentation at http://go.microsoft.com/fwlink/?LinkId=169718.

New User Interface

In addition to a new look, Lync 2010 has improved usability and new features that encourage communication and facilitate impromptu meetings and conversations among colleagues.

- The Contacts list is enhanced with additional customization and search features. (For details, see the "Contacts Enhancements" section later in this topic.)
- The Conversations list displays a user's current and recent conversations. If multiple conversations are in progress, the user can switch from one Conversation window to another by clicking a conversation in the list. Lync obtains conversation history from Microsoft Exchange Server and displays it in the Conversations list so that users can view and continue their past conversations.
- The Activity Feeds list lets users see note and status updates for people in their Contacts list. Users can now easily see each other's latest activities, such as office moves or new personal photos, or a history of the last several status notes that have been posted. Contacts can see each others' updates if they are assigned a Family and Friends, Workgroup, Colleagues or External Contacts privacy relationship.
- The Phone view contains a dial pad for making calls, a list of voice-mail messages, and a Check button for testing call quality.

The "Me" Area

The top of the Lync user interface shows how users appear to their contacts, and lets users quickly update their status and other information.

- The new personal picture feature displays a user's picture to others and lets the user see pictures of other people in the organization. Users can control whether they want to show their picture and whether they want to see pictures of others. If you enable it, users can also change their picture from the default photo, which is stored in Active Directory Domain Services, to a custom picture on Microsoft SharePoint services or a public website.
- Lync keeps track of how available a user is by showing whether the user is in a meeting, in a call, or away from the desk. Red, yellow, and green indicators let users know a contact's status at a glance. There is also a new "Off Work" status.
- With new location features, Lync can detect a user's location when he or she travels between work and home so that Enhanced 9-1-1 (E9-1-1) services will be able to find the user more easily in an emergency. Users can also use this feature to let contacts see whether they are on the road or in a different building.

Contacts Enhancements

The new Contacts list and contact cards make it easier to find people and keep track of contacts.

- The view of contacts is more customizable in Lync. Users can display contacts by group, availability, or level of privacy, with or without photos, and they can start conversations and meetings from the Contacts list by pointing to the contact. In addition, it is easy to edit contact information.

- The Frequent Contacts group shows the 10 contacts a user most frequently has conversations with (not necessarily the most recent). Lync pre-populates the group with the user's team members. Users can pin their favorite or important contacts to the top of their Frequent Contacts group.

- Searching for contacts is more robust because users can conduct a skill search. This feature lets users search for people in their organization by using any property listed on SharePoint (for example, name, email, skills, area of expertise, and so on) This feature is available only if the system administrator has deployed SharePoint and turned on Lync and SharePoint integration.

- New expanded contact cards show more information, including static information collected from the corporate directory, customized phone numbers, and presence, location, and time zone information. Calendar free/busy information from Exchange Server is also shown. The Organization tab on the contact card shows where the person fits into the organizational structure and lets users navigate the hierarchy.

- If your organization has deployed Microsoft Exchange Server 2010, a single unified contact store for contacts across Lync, the Microsoft Outlook messaging and collaboration client, and other endpoints eliminates the need to maintain multiple contact lists, and provides a consistent experience across programs.

Privacy Features

New privacy features offer users more control over who can access their information.

- *Access levels* are now called *privacy relationships*. Users can assign their contacts different privacy relationships, such as Family or Workgroup, depending on their relationship to the user. Users can also add trusted domains for people outside the organization.

- Enhanced presence privacy is a new option. With enhanced presence privacy, a user's presence is visible to contacts in his or her Contacts list but not to other people in the organization.

Office and Windows 7 Integration

With the greater interoperability of Lync with Microsoft Office and the Windows 7 operating system, users can access Lync features from within Office and Windows.

- When users run Microsoft Office 2010 products with Lync, they can perform many of the same actions in Office programs that they can perform in Lync. Lync features, such as sending instant messages and sharing documents, are available in Office 2010 products, including Outlook, the Microsoft Word word-processing program, the Microsoft PowerPoint presentation graphics program, and Microsoft Excel spreadsheet software. This functionality is available in SharePoint services, too.

- Lync contacts appear in Outlook. Users can start instant messaging (IM) or phone conversations from Office applications, without switching to Lync. And now users can send an Outlook email message directly from Lync.

- Lync features are available from the Windows 7 taskbar.

Program Sharing, Desktop Sharing, and Collaboration Features

Sharing and collaboration features in Lync have been expanded from desktop sharing to include program sharing, whiteboards, annotation tools, polls, and PowerPoint presentations.

- Users can upload, navigate through, and annotate PowerPoint presentations during an online conversation or meeting. Any file presented is transmitted to all meeting participants, who can save it on their computers. Users can restrict PowerPoint presentation availability according to participant role (organizer, presenters, and everyone) when the PowerPoint presentation is not being shared.

- A whiteboard is a blank screen that can be used for collaborating with the help of tools such as text, ink, shapes, and images. Annotations made on whiteboards will be seen by all participants. The whiteboard feature enhances collaboration by allowing meeting participants to discuss ideas, brainstorm, take notes, and so on.

- The laser pointer tool can be used during PowerPoint slide presentations and whiteboard sessions.

- Users can share files with meeting participants by uploading them as attachments. During a meeting, participants can download the attachments. Users can restrict the availability of attachments according to meeting participants' roles (organizer, presenters, or everyone).

- The polling feature enhances collaboration by allowing presenters to quickly determine participants' preferences. During online meetings and conversations, presenters can use polls to gather anonymous responses from participants. All presenters can see the results and can either hide the results or show them to all participants.

Recording and Playback

- When enabled by the administrator, the recording feature allows organizers and presenters to record all aspects of a Lync session, including who entered the meeting, audio and video, and content from IM conversations, program sharing sessions, PowerPoint presentations, handouts, whiteboards, and so on.

- Recordings are saved to the organizer's or presenter's computer but can also be published to a location that is available to others.

Improved Meeting Join Experience

In Lync, users can join meetings faster and schedule meetings more simply.

- An improved Online Meeting Add-in for Microsoft Lync 2010 and meeting user interface makes it easier to schedule meetings in Outlook and invite others before and during meetings.

- Join metrics included with Lync can be used to measure join performance, which is targeted at less than two seconds when Lync is installed.

- Entry points for joining a meeting are displayed wherever meeting information is available, which improves discoverability and lets users join meetings without having to switch programs.

- Meeting URLs are simpler, easier to remember, and easier to communicate. The invitation has been simplified by including a shorter https:// URL. The organizer can also change the language of the invitation from another language to English and schedule online meetings when Lync is not available.

- Authentication-related join failures caused by inadvertent access control configurations or last-minute changes to attendees are prevented. Anonymous users and participants for whom authentication fails are transferred to a waiting area called the *lobby*. Presenters can then either admit these users to the meeting or reject them.

- From the invitation, mobile phone users can click once to join the audio portion of meetings.

PSTN Dial-In and Dial-Out Conferencing

A number of enhancements improve the experience for people joining conferences through public switched telephone network (PSTN) calls.

- In Microsoft Lync Server 2010, there are a minimal number of concise prompts that users must respond to when they join a call.

- Callers are no longer disconnected if no one is available to accept the call. Instead, they wait in the lobby. In Lync Server 2010, organizers can decline admittance to any caller waiting in the lobby.

- Callers have access to dual-tone multifrequency (DTMF) commands through the Help menu.

- Callers are notified when calls are recorded.

- Dial-in settings are automatically configured for audio conferencing. No audio conferencing provider configuration is required.

- Meeting dial-out is an optional feature that allows users to join the audio portion of a meeting by using a PSTN number. With dial-out phoning, the Lync Server A/V Conferencing service calls the user, and the user answers the phone to join the meeting.

Video Enhancements

The video experience in Lync features improved video controls and the full-screen experience, in addition to support for panoramic video, multipoint video, subscription video, and VGA video in conferences.

Manager/Delegate Enhancements

In addition to the features listed in the "Call Handling: Delegation and Response Group Enhancements" section later in this topic, Lync has added support for delegate features so that delegates do not have to switch between Lync and the Microsoft Lync 2010 Attendant console. Lync now provides: notification when a user is added as someone's delegate, the ability to make calls on behalf of the manager, and an automatic contact group that contains people for whom a user is a delegate. In Lync, a delegate can support multiple managers and make use of collaboration tools, such as program sharing and file transfer, which are not supported by Lync 2010 Attendant.

Call Park and Retrieve

Administrators can enable the Call Park feature, which lets users put a call on hold and then either retrieve it themselves or notify other users (for example, by IM) to retrieve the call from their own phones or a common area phone.

Call Quality Checks and Diagnostics

Lync provides notifications to help users improve the quality of their calls if it detects device, network, or computer issues during a call.

- A network health indicator monitors the quality of the network at regular intervals. If network quality is poor, a message is sent that recommends that a user make a test call to ensure the quality is sufficient for the type of call the user needs to make.

- Approximately twelve potential audio problems are diagnosed, such as echo, speaking too softly, and low bandwidth. Sources of audio problems may include the network, computer, devices, or multiple issues occurring at the same time.

- A Check Call Quality button allows users to make a test call on Lync so that they can check the voice quality of the call. It allows users to hear how they would sound in a real call. When users make a test call, the Audio Test service prompts them to record a voice sample after a beep. The sample records for a pre-defined time period (for example 10 seconds), and then it plays back to the user. If the network is sub-optimal, or if users do not have a good device setup, they will discover this from the recording playback.

- During a call, if a user has a device setup that is adding poor audio (for example, echo or noise), Lync informs the user and others in the call that they are using a device that is causing poor audio quality. The information that is sent to others in the call will help them improve the quality of the call. For example, presenters can mute the user's line if the user is just listening in on the call.

Improved Audio Device Handling

Improved audio device handling allows for easier installation and identification of multiple audio devices. Users can switch devices in a conversation with a single click. Administrators can choose to advise users to use a device that is optimized for Lync and provide a link to the support team's website. Device tuning settings are located in the Lync - Options dialog box.

Location and Emergency Services Support (E9-1-1)

When enabled, the Emergency Services Service Provider allows Lync to transmit a location to emergency responders when an emergency services number is dialed (such as 9-1-1 in the United States).

- The location information transmitted to emergency responders is the location that the administrator has assigned to a user's location (for example, the user's office number) and entered into the location database or, if such a location is not available, the location the user may have manually entered in the Location field.

- Two policies are available to administrators: enable E9-1-1 without enforcing location and enable E9-1-1 with the requirement that users accept a disclaimer that their physical location will not be provided to emergency responders should they choose not to provide the location. All E9-1-1 related notifications are customizable according to the organization's legal policy.

- A user's geographic location data is determined in one of two ways: The user can manually enter a location, or the Lync Server Location Information service provides the location data to Lync. In addition, a user's time zone is retrieved from Windows.

Call Handling: Delegation and Response Group Enhancements

Lync includes call delegation and response group enhancements.

- In Lync Server, support for delegate features−such as shared lines (making and receiving calls on behalf of a manager), direct access to a manager at all times, and quick transfer of calls to a manager−allow delegates to manage calls more efficiently.

- Response group call handling is enhanced to allow agents to answer calls anonymously so that workflow is not circumvented by callers calling a direct line.

- Administrators can set up Microsoft Exchange Calendar Delegate sync-up with Lync Server. When enabled, Exchange Calendar Delegates with appropriate user rights and permissions (equal to or greater than Nonediting Author permissions) are automatically added as a user's delegates in Lync.

Enhanced Phone Experience

Lync provides enhanced phone capabilities with all the functions of a traditional public branch exchange (PBX) system plus useful productivity features.

- The Phone view provides a list of voice-mail messages and call logs and includes an on-screen dial pad.

- Users can quickly place a test call to check the quality of their audio.

- A Collect Logs feature allows users to collect Lync logs so that Microsoft can investigate audio, video, or connectivity issues that users may encounter. Users will need to manually upload the logs by following their enterprise administrator's instructions. The enterprise administrator will send the logs to Microsoft for troubleshooting purposes.

- Users can select their personal favorite song or other recorded announcement to play while their callers are on hold.

Lync 2010 Attendee Features

Microsoft Lync 2010 Attendee is a new client in Microsoft Lync Server 2010. Lync 2010 Attendee is a rich conferencing client that allows users who do not have Microsoft Lync 2010 installed to fully participate in Lync 2010 meetings. A Lync 2010 Attendee user can join meetings by using company credentials or as a guest.

Lync 2010 Attendee can be installed on a per-user basis, which enables you to selectively deploy this client, or you can allow users to download and install it as needed.

All of the in-meeting features are available to Lync 2010 Attendee users, including the following:

- Computer audio
- Video
- Dial-in and dial-out ("Call me") audio conferencing
- Detailed meeting roster
- Multiparty instant messaging (IM)

- Desktop and program sharing, including giving control to participants
- Collaboration features, including with Microsoft PowerPoint presentations, whiteboards, polls, and file sharing

Users can set the following options and preferences in Lync 2010 Attendee:

- General options, including IM formatting and Lync 2010 Attendee logging
- Personal options, including phone numbers and the preferred client for joining conference calls
- Ringtones and sounds
- Audio device settings
- Video device settings

Lync 2010 Attendee does not support other Lync 2010 features that are outside the meeting experience, such as presence, contacts, IM, and telephony features.

Lync Web App Features

Microsoft Lync Web App is a browser-based version of Microsoft Lync 2010 that allows people who are using a computer that doesn't have Lync 2010 or Microsoft Lync 2010 Attendee installed or who do not have a Microsoft Lync Server 2010 account to participate in online meetings. It's a program that takes up very little space on your hard disk drive and is relatively quick to set up and start using. It is designed mainly for external partners who are invited to Lync meetings, but it is also useful for employees who are not at their usual computer at meeting time or have not yet upgraded to Lync.

Lync Web App is supported on either Windows or Macintosh operating systems. For Windows users, all the in-meeting features are available, except for computer audio, video, and the ability to upload Microsoft PowerPoint presentations. The same features that are available to Windows users are also available to Macintosh users, with the exception of desktop and program sharing.

The available Lync Web App in-meeting features include the following:

- Dial-in and dial-out ("Call me") audio conferencing
- Detailed meeting roster
- Multiparty instant messaging (IM)
- Desktop and program sharing, including giving control to participants (available for Windows only; not available for Macintosh)
- Collaboration features, including whiteboards, polls, file sharing, and navigating PowerPoint presentations uploaded by others

Lync Web App does not support other Lync features that are outside the meeting experience, such as presence, contacts, IM, and telephony features.

To use Lync Web App, users must have the Microsoft Silverlight 4.0 browser plug-in or a later version of Silverlight installed. If Silverlight is not already installed when the user first starts Lync Web App, the user will be prompted for installation.

The desktop and program sharing features require a plug-in. The first time Windows users initiate a sharing session, they will be prompted to download the required sharing plug-in.

Lync for Mobile Clients

Cumulative update for Lync Server 2010: November 2011 introduces Lync 2010 for mobile clients. Users can use their mobile devices for Lync 2010 functionality, including presence, instant messaging (IM), contacts, and dial-out conferencing (conference server calls the mobile device). On select mobile devices, the mobility feature also supports Enterprise Voice features, such as single number reach (receive calls on a mobile device that were dialed to your work number), Call via Work (call from a mobile device using your work identity), voice mail, and missed calls on mobile devices.

Lync 2010 mobile clients are available for the following devices:

- Microsoft Lync 2010 for Windows Phone
- Microsoft Lync 2010 for iPhone
- Microsoft Lync 2010 for iPad
- Microsoft Lync 2010 for Android

For a comparison of the features available with each mobile device, see Mobile Client Comparison Tables.

Lync Online Web Scheduler Features

Cumulative update for Lync Server 2010: November 2011 introduces Microsoft Lync Online Web Scheduler. Lync Online Web Scheduler is a web-based meeting scheduling and management tool for users who do not have access to Microsoft Outlook, or who are on an operating system not based on Windows.

With Lync Online Web Scheduler, users can do the following:

- Schedule an online meeting or conference call
- Send invitations to meeting participants by using their favorite email program, or iCalendar
- Customize the meeting roles and permissions to fit the meeting type and participants
- Join a meeting from Web Scheduler or their email program
- View or edit their existing meetings
- Delete or cancel a meeting

Note:

Web Scheduler does not support scheduling recurring meetings, or interacting with the calendaring server.

What's New for Devices

The updated infrastructure in Microsoft Lync Server 2010 includes new features and capabilities that can potentially reduce your total cost of ownership (TCO) and improve your experience and the experience of your users. When using devices, you will notice support for new devices and new and improved management and troubleshooting tools.

New Line of IP Phones

Lync Server 2010 introduces support for seven new IP phones. Compared to the previously released IP phones, the new phones are:

- **More versatile.** For the first time, unified communications (UC) phones designed for common-area use and IP phones for conference rooms are available.

- **Less expensive.** The new IP phones can be sold at a lower price point because they do not include fingerprint readers and touch screens, and the new conferencing device does not include cameras.

- **Easier to use.** Features that contribute to improved ease of use include faster Internet speeds; sharper resolution; personal identification number (PIN) authentication so that users do not need to enter domain credentials for basic usage; and UI improvements, such as a calendar from which you can join a meeting with one click.

The new phones are built by Aastra, HP, and Polycom and include three desk phones, three common area phones, and a conferencing device.

For details about the new IP phones, see Choosing New Devices in the Planning documentation.

New Peripherals

Multiple vendors are working on providing new peripherals for use with Lync Server. For details about supported devices, including peripherals, see "Phones and Devices Qualified for Microsoft Lync" at http://go.microsoft.com/fwlink/?LinkId=208938. This list is updated as new devices are approved.

Improved Management Experience

In Lync Server, your deployment and management tasks should be more consistent, efficient, and simple, because of the following changes:

- Microsoft Lync Server 2010 Control Panel is web-based and has a consistent and streamlined user interface. For details, see Tools and Services for Managing and Troubleshooting Devices in the Operations documentation.

- The Lync Server Management Shell is the primary scripting interface and allows you to do everything you can do in Lync Server 2010 Control Panel, in addition to some unique tasks, at the command prompt. For details, see Tools and Services for Managing and Troubleshooting Devices in the Operations documentation.

- Central Management store is the new configuration data store, replacing Windows Management Instrumentation (WMI) and providing a schematized, simpler way of storing and sending configuration and topography. Now that the configuration information is stored in the Central Management store, you do not need to change the Active Directory Domain Services (AD DS) schema for Microsoft Lync 2010.

Improved Monitoring Capability

Lync Server provides a simple mechanism for tracking and reporting on the IP phones that are currently deployed in your organization. The new IP Phone Inventory Report tool is provided with the Monitoring Server Reports, for device asset tracking and monitoring. Call detail recording (CDR) captures device information based on registration activities (for example, manufacturer,

hardware version, MAC address, user account name, and software version). The IP Phone Inventory tool lets you use CDR information to track:

- Manufacturing and hardware versions so that you can see what devices are in deployment.

- Software versions, which is useful to look at after deploying a new update, as it lets you identify which devices have been successfully updated and which devices are still running older builds. You can use this information to identify devices that may be having issues with upgrading.

- Misplaced devices, by running a report based on the user account name and MAC address of the misplaced device so that you can find out if the device is being used on the network.

- Usage, to find out when a user last logged in to a device.

- General device inventory, to determine the number of devices currently deployed and identify all device owners.

In addition, the improved user interface gives users more information about issues and possible solutions.

Improved Troubleshooting Tools

This release includes new troubleshooting tools and improvements to logging. Device logs now include more information, and the logging level can be adjusted (that is, to low, medium, or high) to allow you to get the right level of information when troubleshooting. The new troubleshooting tools are synthetic transactions, power-on self test (POST), and Factory and Hard Reset.

For details, see Tools and Services for Managing and Troubleshooting Devices in the Operations documentation and Troubleshooting Devices in the Troubleshooting documentation.

What's New in Client Deployment

This topic describes the new client and server features you should be aware of when planning for deployment. Important changes or enhancements are available in the following areas:

- New unified communications (UC) clients
- Client configuration
- Installation and updates
- Alternate meeting clients for users who do not have Microsoft Lync 2010 installed
- Enhanced presence privacy
- Manager/delegate scenario changes
- Recording
- Lync 2010 user picture options

New UC Clients

Cumulative update for Lync Server 2010: November 2011 introduces the following new clients:

- Lync 2010 clients for mobile devices
- Microsoft Lync Online Web Scheduler

Lync 2010 for Mobile Clients

Cumulative update for Lync Server 2010: November 2011 introduces Lync 2010 for mobile clients. Users can use their mobile clients for Lync 2010 functionality, including presence, instant messaging (IM), contacts, and dial-out conferencing (that is, the conference server calls the mobile client). On select mobile clients, the mobility feature also supports Enterprise Voice features, such as single number reach (you receive calls on a mobile device that were dialed to your work number), Call via Work (you call from a mobile device using your work identity), voice mail, and missed calls on mobile clients. For a comparison of the features available with each mobile client, see Mobile Client Comparison Tables.

Lync Online Web Scheduler

Your deployment might include only on-premises clients (Lync 2010) or a combination of on-premises clients and hosted clients.

Lync Online is the hosted equivalent of Lync 2010, included with Microsoft Office Professional Plus. To learn more about Lync Online, use the following resources:

- Lync Online at the Cloud News & Features website at http://go.microsoft.com/fwlink/?LinkId=233221.

- Online services: Lync Online at the Office website at http://go.microsoft.com/fwlink/?LinkId=233222.

- Office 365 community website at http://go.microsoft.com/fwlink/?LinkId=233224.

Lync Online Web Scheduler is a web-based meeting scheduling and management tool for users who do not have access to Microsoft Outlook or are on an operating system not based on Windows. For more information, see [Lync Online Web Scheduler Features](#).

The remainder of this topic is about on-premises-only deployments (that is, deployments of only Lync Server 2010).

Client Configuration

In Microsoft Lync Server 2010, the Group Policy settings used in previous Microsoft Office Communications Server releases are now controlled by server settings that are sent to clients through in-band provisioning.

In-band provisioning settings are managed by using Microsoft Lync Server 2010 Control Panel, the Lync Server Management Shell, or both. These tools replace the Windows Management Interface (WMI) snap-in used to manage policy settings in earlier versions of Office Communications Server. For example, in Microsoft Office Communications Server 2007 R2, you could use Group Policy to override conferencing policies for specific users. In Lync Server 2010, you can centrally manage all policy settings and apply them at the global level, site level, or tag level (tags are settings that can be applied to a single user or to a group of users).

If you have an existing Office Communications Server 2007 R2 deployment, Communications Server 2007 R2 clients will continue to use Group Policy during side-by-side migration. However, if you want policy settings to carry over to Lync Server clients, you need to configure the equivalent Lync Server in-band provisioning settings. For details, see Migrating User Settings to Lync Server 2010 in the Migration documentation.

Note:

Certain policies are still required for client bootstrapping. These are policies that take effect before the client signs in and begins receiving in-band provisioning settings from the server. For details, see Key Client Policies and Settings.

Comparison of In-Band Provisioning Settings and Group Policy Settings

In-band provisioning settings	Group Policy settings
Administrators can handle all client configuration tasks in a single location, using a single user interface.	Administrators must often work with other departments in the organization (for example, administrators who manage Active Directory Domain Services [AD DS] or messaging) in order to configure clients.
Settings can be configured at the global (that is, domain or organizational unit), site, or tag level. Tags are settings that can be applied to a single user or to a group of users.	Settings can be configured only at the global and user levels.
Settings that are server-based provide a consistent end-user experience for people who are not joined to the corporate domain or who join using devices or remote clients.	Group Policy settings that are distributed by using AD DS require that users be connected to the corporate domain using a computer.
Settings take effect immediately.	Users must sign out of the Windows operating system and then sign back in for settings to take effect.
Settings that are server-based help improve client security because they do not depend on the client program to enforce the policy.	Client programs could be modified by a malicious user.

Installation and Updates

The new features related to installation and updates are the distribution of setup as an executable file and the addition of update link options to Lync Server Client Version Check.

Lync 2010 Setup Executable

In Microsoft Office Communicator 2007 R2 and Microsoft Office Communicator 2007, setup is provided as an installer (.msi) package. In Lync and Microsoft Lync 2010 Attendee, the setup files are provided as executable (.exe) programs. The Lync setup executable program is the recommended method for installing clients because it performs the following actions:

- Runs checks for prerequisites, and informs the user of programs that must close
- Installs the required versions of Microsoft Visual C++ components and the Microsoft Silverlight browser plug-in
- Uninstalls Lync 2010 Attendee

- Notifies the user that Windows Media Player 11 must be installed for recording features to work properly

- Uninstalls previous versions of the Office Communicator 2007 R2 or Office Communicator 2007 multi-user language pack

If you want to use Group Policy to deploy clients, you must extract the Windows Installer (.msi) files from the executable programs and use the Group Policy setting UseMSIForLyncInstallation to allow the .msi to run on client computers. You must also address all other actions that are ordinarily performed by the executable program. For details, see IT-Managed Installation of Lync 2010 in the Deployment documentation.

Client Version Update Options

Lync clients can now receive updated software from Windows Server Update Service (WSUS) or Microsoft Update instead of from a location hosted on Lync Server. When you set a Client Version Policy for Lync, the options **Allow and upgrade** and **Block and upgrade** are still available. However, you no longer need to specify a location on the server for updated software. Instead, if you are using WSUS, clients receive updates from WSUS. Otherwise, clients receive updates from Microsoft Update.

🗒 **Note:**

> Selecting the **Allow and upgrade** and **Block and upgrade** options causes a notification to appear the next time users sign into Lync. The notification states that an update is available, even if updates have not yet been released to WSUS or Microsoft Update. To avoid confusion, you should choose this action only after updates become available.

Alternate Meeting Clients

Users without Lync installed can take advantage of the enhanced conferencing and collaboration features of Lync Server by using either Microsoft Lync Web App or Lync 2010 Attendee. In addition, you can determine which clients are available to users by configuring the meeting join page.

Using Alternate Meeting Clients

You can provide users who do not have Lync or Microsoft Lync 2010 Attendant installed with the following options for joining Lync Server meetings:

- Lync Web App

- Lync 2010 Attendee

- Communicator 2007 R2 or Communicator 2007

Use the following table to help you decide which of these clients is appropriate for your users and organization.

Conferencing Client Comparison Chart

Feature or requirement	Lync Web App	Lync 2010 Attendee	Office Communicator 2007 R2 or Office Communicator 2007
Web program	Yes	No	No

Feature or requirement	Lync Web App	Lync 2010 Attendee	Office Communicator 2007 R2 or Office Communicator 2007
Deployment or installation requirements	Silverlight Installation requires administrator rights and permissions.	Client program (includes Silverlight installation) Installation can be performed at an administrator or per-user level.	Not applicable
New Lync Server conferencing features	Yes	Yes	No
Dial-in conferencing	Yes	Yes	Communicator 2007 R2 only
Integrated IP audio and video	No	Yes	Yes
Anonymous join by federated or external users	Yes	Yes	Federated only
Authenticated join by internal users	Yes	Yes	Yes
Authenticated join by external users	Yes	Yes	No

[1]All features are available except for uploading files that are created using the Microsoft PowerPoint presentation graphics program. Installation of a Microsoft ActiveX control is required for desktop or program sharing.

[2]Dial-out conferencing is also supported, if it is enabled.

Configuring the Meeting Join Page

You can control the clients that are available for joining scheduled Lync Server meetings by configuring the meeting join page. A user who tries to join a meeting but does not have Lync installed is presented with the meeting join page, which provides access to Lync Web App, Lync 2010 Attendee, or a previous version of Microsoft Office Communicator (Communicator 2007 R2 or Communicator 2007).

You can configure the client options that display on this page. For example, if you prefer not to deploy Lync 2010 Attendee, you can remove the download link from the meeting join page. For details about configuring the meeting join page, see Configure the Meeting Join Page in the Deployment documentation.

Enhanced Presence Privacy

With Lync Server enhanced privacy mode, a user's presence is visible to contacts in his or her Contacts list but not to other people in the company.

> ◆ **Important:**
>
> Do not enable this feature until all users in a given pool have been migrated to Lync. If earlier client versions are present within the pool, privacy management options can be compromised or reset.

To ensure that this feature works as expected, see Configuring Enhanced Presence Privacy Mode in the Deployment documentation.

Manager/Delegate Scenario Changes

Lync fully supports the manager/delegate scenario and is the recommended client for delegation. Certain delegate features are no longer provided in Lync 2010 Attendant, but they are provided in Lync. These delegate features include notification when a user is added as someone's delegate, the ability to make calls on behalf of the manager, and the automatic contact group that contains people for whom you are a delegate. In addition, a delegate can use Lync to support multiple managers and make use of collaboration tools, such as program sharing and file transfers, which are not provided in the Lync 2010 Attendant console.

Although Microsoft Office Communications Server 2007 R2 Attendant supported both manager/delegate scenarios and receptionist scenarios, Microsoft Lync 2010 Attendant is designed for the receptionist scenario only. If necessary, a delegate can use Lync 2010 Attendant to receive calls for the manager, but other delegate features are no longer included.

Lync 2010 Recording

The recording feature allows presenters to record all aspects of a Lync session including who attended, audio, video, and content, such as instant messaging (IM) conversations, program sharing, PowerPoint presentations, handouts, and whiteboards. By default, the ability to record is turned off. Recording can be enabled by configuring the recording conferencing policy. To do this, you can use Lync Server Control Panel to configure recording policies in the Conferencing group, or you can use Lync Server Management Shell to configure the AllowConferenceRecording, AllowExternalUsersToRecordMeetings, and EnableP2PRecording parameters of the **CsConferencingPolicy** cmdlet.

Lync 2010 User Picture Options

Lync allows users to display pictures. This section lists the default user picture options and then describes how you can modify these defaults by using Lync Server Management Shell.

By default, Lync users can access the following three choices from the Lync main window by clicking the Options button and then clicking My Picture.

Default Options for My Picture in Lync 2010

Option	Description
Do not show my picture	The user's picture is not shown

Option	Description
Default corporate picture	Shows the user picture in AD DS
Show a picture from a web address	The picture must meet the following criteria: • On a web server that does not require authentication • 30 kilobytes (KB) or less in size

If you plan to allow the **Default corporate picture** option, verify that user pictures are present in AD DS before deploying Lync.

If you plan to allow the **Show a picture from a web address** option, be aware that users must already have a personal picture on a public website, such as Windows Live Essentials, Flickr, or Facebook. For details, see the Lync Help and How-to at http://go.microsoft.com/fwlink/?LinkID=211130.

Changing User Picture Default Options

You can change what users see on the My Picture tab by using the **New-CsClientPolicy** cmdlet. For details about using **New-CsClientPolicy**, see New-CsClientPolicy in the Operations documentation. The following table shows the relevant parameters.

CsClientPolicy User Picture Options

CsClientPolicy parameter	Description
DisplayPhoto	Specify one of the following command-line settings: • **NoPhoto** Pictures are not displayed in Lync. • **PhotosFromADOnly** Only pictures that have been published in AD DS can be displayed. • **AllPhotos** Either pictures in AD DS or custom pictures can be displayed. AllPhotos is the default.
MaxPhotoSizeKB	Indicates the maximum size (in KB) for pictures displayed in Lync. Setting the MaxPhotoSize to 0 prevents any pictures from being displayed in Lync. The default value is 30 KB.

Glossary

This topic contains terms and definitions that pertain to Microsoft Lync Server 2010 and Microsoft Lync 2010.

Term	Definition
accept	A user interface button that the user presses to agree to an incoming file transfer, invitation, or application sharing.
Access Edge service	A service that runs on Lync Server that resides in the perimeter network and routes instant messaging (IM) and presence information from external users to internal users.
activity	A user action, such as a change to status, social tags, or profiles. Notification of these changes can be sent to other users through an activity feed.
activity feed	A feed that provides information, notifications and updates based on people, documents, and tags you are following.
Add to Contacts List	An item on the shortcut menu that adds a selected person to the user's Contacts list.
address	A string that identifies a user so that the user can receive Internet email. An e-mail address on the Internet typically consists of an account name, followed by the @ (at) symbol, a host name, and a domain name.
address book	A collection of contact information for particular individuals, groups or organizations.
administration queue	For Message Queuing, a queue that stores acknowledgment messages.

Term	Definition
administrator	The person responsible for setting up and managing local computers, stand-alone servers, member servers, or domain controllers. An administrator performs such duties as assigning user accounts and passwords, establishing security access levels, watching for unauthorized access, allocating storage space, and helping users with networking problems.
Advanced Connection Settings	The name of the dialog box in Lync and Office Communicator where a user can configure their connection settings to a server.
AF	A class for the delivery of video media streams.
alert	To notify by means of an alert that a particular event has occurred.
alert	An audible or visual warning signal, generated by a computer, indicating that a threshold has been or is about to be breached.
Always on Top	A user interface element that causes the application window to always be displayed over other open windows on the computer, even when it does not have focus.
Announcement application	A call management component of Enterprise Voice that causes unassigned calls to be transferred to a predetermined destination, or to play an audio announcement, or both.
anonymous user	An external user who does not have credentials in the Active Directory Domain Services. Unlike a federated user, an anonymous user is not authenticated.
answer	To accept an incoming telephone call.
Appear Away	An item on the user's My Status menu that can be selected while signed in to make it appear to other users that he or she is currently away.

Term	Definition
Application Server	A component of Front End Server that provides a platform by which to deploy, host, and manage unified communications applications.
application sharing	A feature that allows a user to share documents or applications with others. The user can also choose to give another person control of an application or the user's computer.
area	A part of the user interface dedicated to a particular purpose, such as "instant message area."
Assured Forwarding	A class for the delivery of video media streams.
attendant console	A console for call handling.
attendee	An online meeting participant who cannot initiate desktop or application sharing or presenting. Attendee permissions are controlled by the organizer and presenters.
audio call	A call for transmitting audio data, including but not limited to speech.
Audio/Video Conferencing Server	A server running Lync Server or Office Communications Server that mixes and manages audio and video inputs from multiple sources for multiparty audio and video conferences.
Audio/Video Edge service	A service that runs on a server running Lync Server that provides a single trusted connection point through which audio and video traffic enters and exits your network, traversing NATs and firewalls.
availability	The condition of a user that can be displayed to the user's contacts to communicate whether the user is currently online and available, offline and unavailable, and so on.

Term	Definition
available	A presence status the user can select, while signed in, to make it appear to other users that he or she is currently willing to be contacted.
available state	A state in which media can be allocated for use by applications.
Away	An item on the user's My Status menu that can be selected while signed in to make it appear to other users that he or she is currently away.
Be Right Back	An item on the user's My Status menu that can be selected to indicate that the user is away from the computer but will return shortly.
block	To prevent another user from initiating a conversation and from viewing your presence or other information, such as your personal information.
Blocked	The status label that indicates that a user has assigned this contact to the Blocked Contacts privacy relationship.
Blocked Contacts	A privacy relationship setting that prevents a person or domain from adding the user to contact lists, seeing the user's status, or sending instant messages to the user.
branch site	A site that is associated with one central site and contains at least a public switched telephone network (PSTN) gateway, and can include a Mediation Server. Or, a branch site could run a survivable branch appliance which makes the site more resistant if there are wide-area network failures.
Busy	An item on the user's My Status menu. This is a status the user can select to indicate that they are currently busy.
Busy Inactive	A presence status that indicates a person is in a meeting or is scheduled to be in a meeting, but their computer has been inactive for the idle time period setting.

Term	Definition
busy signal	The indication that the phone is busy.
CAC	A service that manages media quality over a wide area network (WAN) connection by either rerouting traffic or by denying connection requests when bandwidth is approaching saturation.
calendar data	Free or busy information for internal or federated contacts obtained by Lync or Office Communicator from Microsoft Outlook via a web service.
calendar information	Information about schedules and appointments that is stored in an Exchange Server 2007 user's mailbox and retrievable for display through a client interface or voice mail.
call	A voice session that can be conducted between two or more telephones, two or more devices (such as computers or PDAs), or between two or more such devices and telephones.
Call	A Lync menu that opens a list of options for the selected person. In Office Communicator, a menu item that opens a list of numbers for the selected person. When the user selects a phone number, Lync or Office Communicator places the call.
call admission control	A service that manages media quality over a wide area network (WAN) connection by either rerouting traffic or by denying connection requests when bandwidth is approaching saturation.
call delegation	A feature that allows a user to answer a call for another user or make calls on behalf of the other user.

Term	Definition
call detail recording	A function of the Monitoring Server for collecting information such as when a user signs in or out; starts, joins, leaves, or ends a conference or IM session; transfers a file; or places or answers a VoIP call. CDR captures only usage data; it does not archive the content of any communication activity.
call forwarding	A feature that allows for automatic forwarding of incoming calls.
Call Forwarding Off	The menu item that turns off the automatic forwarding of incoming calls.
Call Forwarding On	The menu item that displays a menu of options that the user can select to turn on the automatic forwarding of incoming calls.
Call Park	An application that lets an Enterprise Voice user put a call on hold from one telephone, and then later, retrieve the call from any telephone. It also manages Call Park orbits.
call recipient	The person whom, or place that, a caller is calling.
caller	The person who is calling another person or place.
Caller ID	The identity of the originator of an incoming call.
calling device	Equipment, telephone or computer, used to place a call.
CDR	A function of the Monitoring Server for collecting information such as when a user signs in or out; starts, joins, leaves, or ends a conference or IM session; transfers a file; or places or answers a VoIP call. CDR captures only usage data; it does not archive the content of any communication activity.

Term	Definition
CEIP	A Microsoft program that invites customers to provide Microsoft with more detailed information about how the software is used including the type and frequency of errors, software and hardware performance, and feature usage. This information is anonymous and voluntary, and is used strictly for the purposes of software development.
Central Management store	The central database (one per organization) that contains the data to define, set up, maintain, and administer a deployment, including the deployment topology and user policies.
Change Font	A button that opens the Change Font dialog box, where the user can select a new font, style, size, and effects for instant messages.
chat	A real-time conversation via computer using short instant messages between two or more participants. When a participant types a line of text and then presses the Enter key, that participant's words appear on the screens of the other participants, who can then respond in kind.
click to call	The feature with which a mobile phone user can place a voice call by clicking a contact's single phone number or Session Initiation Protocol (SIP) URI.
Close	The tooltip for the Close button.
Close button	In Windows-based programs, the box that has an × at the upper-right corner of the screen that, when clicked, closes the window.
Colleagues	A privacy relationship setting that allows a medium amount of information to be viewed, typically for people in your company and for people outside your company who work with you.

Term	Definition
Communicator	A enterprise instant messaging (IM) client that integrates IM, presence awareness, and telephony. Communicator users can simultaneously control multiple modes of communication, including IM, video conferencing, telephony, application sharing, and file transfer.
conference	A conversation between three or more people, where the communications technology is unknown or not specified.
conference call	A telephone conversation between three or more people.
Conference ID	A field label for the identifier of a conference that is conducted through a conferencing service provider.
Conferencing Add-in for Microsoft Outlook	A Microsoft Outlook add-in that allows you to schedule a Live Meeting or Lync or Office Communicator conference call from Outlook.
Conferencing Announcement service	A unified communications application that plays tones and prompts on certain actions, such as when conference participants enter or leave a conference, and when participants are muted or unmuted. This service is automatically installed and activated by default when you deploy a Conferencing workload and select the dial-in conferencing option.
conferencing device	A telephone with one or more speakers, multiple microphones, and video (optional), that is used for conference calls.
conferencing information	The identifier, password, and any other information that a user needs to participate in a conference that is conducted through a conferencing service provider.
conferencing service	An internally or externally hosted service for users to host multiparty conferences from their computers.

Term	Definition
conferencing service provider	An organization that provides computer audio conference services, which allow more than two people to participate in a conference over their computer's Internet connection.
connection	A physical link via wire, radio, fiber-optic cable, or other medium between two or more communications devices.
contact	A person whose information, such as ID or email address, has been added by the user to their contact list or to an address book.
contact card	A presentation of information about a contact, including presence status and activity.
contact group	A user-specified collection of contacts.
contact information	Information, such as name, phone number, email address, or address, that is used to contact someone.
Contacts list	A list of people, groups, or organizations with whom you communicate.
conversation	A real-time communication session between two or more users. A session can involve IM, video, or audio.
Conversation History	The folder in Outlook where instant messages and phone conversations are stored.
conversation invitation	A request for a conversation.
conversation note	A note you type on the Notes tab of a conversation window to potentially be forwarded along with the call and saved in the call history.
conversation window	The window that is displayed when the user is in any type of conversation. This window displays the list of conversation window participants, the conversation content for instant messaging and video conversations, and commands and controls for managing the conversation.

Term	Definition
copy	To duplicate information and reproduce it in another part of a document, in a different file or memory location, or in a different medium. A copy operation can affect data ranging from a single character to large segments of text, a graphics image, or from one to many data files.
Copy Number	The button that enables the user to copy the retrieval number of a parked call.
country code	In telephony, the one-, two-, or three-character sequence that represents the country/region being called.
Create New Group	A menu item that creates a new group for the user's Contacts list.
current conversation	A conversation that you are currently having, as opposed to a past conversation.
custom device	A microphone and speaker combination configured by the user in Lync and Office Communicator.
Customer Experience Improvement Program	A Microsoft program that invites customers to provide Microsoft with more detailed information about how the software is used including the type and frequency of errors, software and hardware performance, and feature usage. This information is anonymous and voluntary, and is used strictly for the purposes of software development.
dashboard	A set of reports or other data that is arranged in a panel format on a single page, or series of pages, in a web browser or SharePoint site.
default device	The device that Lync and Communicator uses by default when the user places a call (either PBX telephone phone or computer through a VOIP connection).

Term	Definition
delegate	Someone who has been specified by a manager (or other person) to make or receive calls on their behalf. Delegates can change call forwarding settings and add other delegates. Delegates are automatically given "Team Access," which allows them to contact the "manager" even when his or her presence is set to Do not Disturb.
Delete Group	A menu item that removes a group and its contacts from the user's Contacts list.
desk phone	A telephone that sits on a desk and is to be used with Lync Server and Office Communications Server.
desktop sharing	A feature that allows a user to display his or her desktop to a meeting or to conversation participants.
dial in manually	Dial in to the audio conferencing provider from your physical telephone when the audio conferencing provider service cannot call you.
dial pad	A numeric keypad that is part of a device, is displayed on a device, or is in a computer program that you use to enter information in the context of a phone call.
dial-in conferencing	A feature that merges public switched telephone network (PSTN) and Voice over IP (VoIP) conferences, which allows participants to dial in to a conference from anywhere as an authenticated user without having to be on the corporate network. Typically, a local number is provided to avoid long-distance fees.
disconnected	Pertaining to a connection, session, or call that has, unintentionally or not, ended.
display name	A descriptive or user-friendly label for a control or object, displayed on the screen. The display name may differ from the internal name.

Term	Definition
distribution group	A mail-enabled Active Directory group object. In Exchange 2007, a distribution group refers to all mail-enabled groups, whether they are an Active Directory security group or an Active Directory distribution group. When an e-mail message is sent to a distribution group, all members of that list receive a copy of the message.
DNS load balancing	A software solution that balances the network traffic that is unique to Lync Server 2010, such as SIP and media traffic. DNS load balancing is supported for Front End pools, Edge server pools, Director pools, and stand-alone Mediation Server pools.
Do Not Disturb	An item on the user's My Status menu that the user can select to notify other users that he or she does not want to be interrupted.
DTMF	The signaling system used in telephones with touchtone keypads, in which each digit is associated with two specific frequencies.
dual forking	A configuration by which Lync Server or Office Communications Server operates in co-existence with the PBX.
dual-tone multiple-frequency	The signaling system used in telephones with touchtone keypads, in which each digit is associated with two specific frequencies.
E9-1-1	A service that provides information about the location of a caller who calls 9-1-1.
early media	Audio and video on a call that are exchanged before the recipient accepts the call. Examples include announcements, requests for input, and caller voice commands.
edge server	A server running Lync Server or Office Communications Server that resides in the perimeter network and routes traffic between the internal deployment and users who sign in from outside the firewall.

Term	Definition
EF	A class for the delivery of audio media streams.
emergency number	A telephone number that connects to a country or region's emergency system (for example, police and fire department).
emoticon	A small graphical symbol the user can insert into instant messages.
end a call	To end a phone call.
end call	An infotip for the button on the phone and video controls that ends the conversation.
Enhanced 9-1-1	A service that provides information about the location of a caller who calls 9-1-1.
enhanced presence	The capability of publishing customized status information that depends on a presence subscriber's relationship to the source of the status information.
enterprise user	A user who has an identity in Active Directory Domain Services.
Enterprise Voice	Implementation by Microsoft of VoIP telephony based on the industry-standard SIP protocol.
Enterprise Voice client	A voice client that is part of the Enterprise Voice solution from Microsoft; for example, Lync 2010 or Office Communicator 2007 R2.
Expedited Forwarding	A class for the delivery of audio media streams.
External Contacts	A privacy relationship setting that allows a small amount of information to be viewed, typically for nonfederated contacts.
federated	Pertaining to a contact who is external to the user's organization or enterprise but with whom the user's organization or enterprise is linked.
federated contact	A contact who is not part of the user's enterprise but with whom the user's enterprise is linked.

Term	Definition
federated user	An external user who has valid credentials from a federated partner, which is a trusted outside organization that is enabled for access to your Lync Server or Office Communications Server deployment.
federation	A trust relationship between two or more SIP domains that permits users in separate organizations to communicate in real time across network boundaries.
file transfer	The process of moving or transmitting a file from one location to another, as between two programs or over a network.
First Run	A client bootstrapping Group Policy setting that must exist in the registry before any end user signs in for the first time.
Focus	A feature of Lync Server or Office Communications Server that manages conference state.
Focus Factory	A feature of Lync Server or Office Communications Server that helps to manage conferences and schedule meetings.
forward	To move a call to another phone before the call is answered.
FQDN	A DNS name that has been stated to indicate its absolute location in the domain namespace tree. In contrast to relative names, an FQDN has a trailing period (.) to qualify its position to the root of the namespace (host.example.microsoft.com).
friendly name	A way of displaying contact names that uses the first and last name instead of the e-mail address or sign-in name, for each contact in the user's contact list.
Friends and Family	A privacy relationship setting that allows the most amount of information to be viewed.

Term	Definition
Front End Server	The principal server role in Lync Server and Office Communications Server. The Front End Server runs services for instant messaging, presence, web conferencing, audio/video conferencing, and telephony.
fully qualified domain name	A DNS name that has been stated to indicate its absolute location in the domain namespace tree. In contrast to relative names, an FQDN has a trailing period (.) to qualify its position to the root of the namespace (host.example.microsoft.com).
group call	A call to a call group that rings the group owner and call group simultaneously. When a member of the group answers the call, the other members get a notification with the status of the call.
Group Expansion service	A service that expands distribution groups so that members of a group can be viewed individually.
group member	A contact within a group in the Contacts list.
group name	A unique name that identifies a group of contacts in the Contacts list.
guest	A user who does not have a user account or who does not provide a password.
handset	The part of a telephone that includes a speaker and a voice transmitter and that you hold with your hand up to your ear.
hardware load balancer	A device that often combines an Ethernet layer 3 switch with the ability to load balance, and switch multiple streams of traffic, such as client to server, server to DNS, and management access to server pools.
headroom	Additional capacity that allows a network to accommodate an increase in traffic.
high importance	A flag that can be set for Lync and Communicator calls or instant messages to indicate the urgency of the conversation.

Term	Definition
HLB	A device that often combines an Ethernet layer 3 switch with the ability to load balance, and switch multiple streams of traffic, such as client to server, server to DNS, and management access to server pools.
hold	To temporarily suspend an active phone call.
Hold	A button on Phone Controls that places the current phone call on hold.
Home Phone	A button in the Options dialog box, on the Phones tab, that the user clicks to enter his or her home phone number.
hosted voice mail policy	A policy that provides information to the Lync Server 2010 ExUM Routing application about where to route calls for users whose mailboxes are located on a hosted Exchange service.
hot-desk phone	A shared telephone that is running Lync 2010 Phone Edition or Communicator Phone Edition which gives users full desk-phone functionality. Users log on to their user accounts and the features, policies, and settings associated with the user account will apply for as long as the user is logged on.
hunt group	A set of addresses that can be treated as a logical unit so that calls of a specific type (for example, support calls as opposed to sales calls) can be routed to it.
idle	Operational but not in use.
ignore	To take action to not answer a call. The call goes to voice mail if that service is available.
IM	A message sent in real time through a network to a private chat area.
IM	Pertaining to a message sent in real time through a network to a private chat area.

Term	Definition
IM	A method of real-time communication over the Internet in which a sender types a message to one or more recipients and the recipient immediately receives the message in a pop-up window.
IM Conferencing service	A service that runs on a Lync Server or Office Communications Server front-end server to mix and manage inputs from multiple clients in a multiparty instant messaging (IM) session.
IM service provider	A public or private organization that provides instant messaging services for multiple domains.
in a call	Pertaining to a user engaged in a phone conversation.
In a conference	The status label that indicates that a user is speaking with more than one person via phone.
In a meeting	The status label that indicates that a user has an accepted current meeting, marked Busy, on his or her calendar.
Inactive	Pertaining to a user who hasn't used his or her mouse, keyboard, computer, mobile phone, or communications device for a specified time.
incoming conversation	A conversation initiated by another user.
incoming conversation alert	A notification that the user receives when someone is sending an invitation to the user to begin a conversation in Lync or Communicator.
incoming instant message alert	A notification that the user receives when someone sends an instant message to that user.
incoming video	A video stream from a source that is external to the user's computer.
instant message	A message sent in real time through a network to a private chat area.

Term	Definition
instant message conversation	A real-time communication over the Internet in which a sender types a message to one or more recipients and the recipient(s) immediately receives the message in a pop-up window.
instant message session	A real-time communication over the Internet in which a sender types a message to one or more recipients and the recipient(s) immediately receives the message in a pop-up window.
instant messaging	Pertaining to a message sent in real time through a network to a private chat area.
instant messaging	A method of real-time communication over the Internet in which a sender types a message to one or more recipients and the recipient immediately receives the message in a pop-up window.
instant messaging (IM) window	The window that is displayed when the user is in any type of conversation. This window displays the list of conversation window participants, the conversation content for instant messaging and video conversations, and commands and controls for managing the conversation.
instant messaging session	A real-time communication over the Internet in which a sender types a message to one or more recipients and the recipient(s) immediately receives the message in a pop-up window.
internal IP address	An IP address that is assigned for the internal network of an organization.
invite	To ask someone to engage in an instant conversation.
join	To connect one or more people together in a conversation.

Term	Definition
LCR	A process that performs reverse number lookup on one-number calls and then routes the call over an IP connection to the public switched telephone network (PSTN) gateway that is nearest to the location of the destination phone number.
leader	A teleconferencing participant who can activate and deactivate a phone conference.
leader code	An access code that is needed in order for a user to join a conference as a leader. This string is entered in the Options dialog box, on the Accounts tab, under Conferencing Information.
least-cost routing	A process that performs reverse number lookup on one-number calls and then routes the call over an IP connection to the public switched telephone network (PSTN) gateway that is nearest to the location of the destination phone number.
lobby	A virtual waiting area where conference call invitees are held before the conference is activated. The invitees perceive that they are on hold.
Location Information service	A service that manages a table of network elements and locations for use by clients of Enhanced 9-1-1 (E9-1-1).
lock	To prevent users from joining a conference, whether or not they have an invitation.
Lync call	A call made from the user's computer (using Voice over Internet Protocol, or VoIP) to a contact who is also running Lync.
Lync Server Management Shell	The management command line interface built on Windows PowerShell technology that includes a set of cmdlets to help control administration and automation.
Lync Web App	A client based on Microsoft Silverlight that replaces Communicator Web Access in Microsoft Lync Server 2010.

Term	Definition
main operator extension	The extension at which Attendant console users who are answering calls for the corporate main phone number can be reached internally.
main window	The window that contains the Contacts list.
malicious call reporting	A feature that enables phone users to report disturbing calls to the system administrator. When the user selects to report a malicious call, data from the last call received is captured and sent to the system administrator.
malicious call tracing	A feature whereby a user can select an option to report a received call as malicious. By tracing the call, an administrator can then identify the call, the calling number, and the gateway or SIP trunk over which the call was received.
Manage Privacy Relationships	The menu that enables users to assign a privacy relationship to contacts.
Manual configuration	An option in the Advanced Phone Integration Configuration dialog box that enables the user-entered settings for phone integration instead of the automatic configuration settings.
media bypass	The removal of the Mediation Server from the media path whenever possible for calls whose signaling traverses the Mediation Server.
Mediation Server	A server running Lync Server or Office Communications Server that mediates signaling and voice between the Enterprise Voice IP network and the public switched telephone network.
meeting organizer	A user who can schedule meetings, send invitations, do all the sharing activities in a meeting, and admit participants from the lobby.
meeting participant	A presenter or attendee in a meeting.
member	A person who is part of a group.

Term	Definition
merge a conversation	To bring a separate conversation, including all its participants, into the current one.
Merge a Conversation	The heading, in the Invite menu, for the list of available conversations that a user can bring into the current conversation.
Message Taking Mode	A configuration of the Auto Attendant feature of Exchange Unified Messaging (UM) that limits the Auto Attendant to accept messages only.
Microsoft Lync Server 2010 Control Panel	A web-based server management user interface that administrators can use to manage their Lync Server systems from anywhere on the corporate network, without requiring specialized management software installed on their computers.
missed conversation	An incoming conversation that was not acknowledged by the user. Missed conversation notifications are saved and reported to the user.
Mobile Phone	A button in the Options dialog box, on the Phones tab, that the user clicks to enter his or her mobile phone number.
MPOP	The ability of a single user to sign in to a Lync Server or Office Communications Server server with multiple clients.
multiple points of presence	The ability of a single user to sign in to a Lync Server or Office Communications Server server with multiple clients.
mute	To eliminate or temporarily suppress the sound produced by a device, such as a computer or digital media device. A device in such a state has a volume level of zero.
Mute All Except Me	A button on Conference Controls that mutes the microphones of all conference participants except the user's microphone.
Mute Me	A button on Conference Controls that mutes the user's microphone in a conference.

Term	Definition
Mute Microphone	A button on Audio Controls that mutes the user's microphone.
Mute Speakers	A button on Audio Controls that mutes the user's speakers.
My Status	A menu item that opens another menu from which the user can change status settings.
NAT	An Internet Protocol (IP) translation process that allows a network with private addresses to access information on the Internet.
network address translation	An Internet Protocol (IP) translation process that allows a network with private addresses to access information on the Internet.
network region link	Link created between two regions that is configured for call admission control (CAC). Sets the bandwidth limitations on audio and video traffic between these regions.
New Group	The default name for a group of contacts created by the user.
note	Text entered by the user that is displayed to contacts.
notification	Information displayed to a user about someone else adding him or her to a contact list, a contact's offline or online status, a missed conversation, voice mail message, service problem, or other item.
Off Work	An item on the user's My Status drop-down menu. This is a status the user can select to say that he or she is not working right now, but is on personal time.
offline	Pertaining to a user who, during business hours (or at any time if no business hours have been set), is not signed in to any Lync or Communicator, or IM device and cannot be contacted by phone (no call forwarding information is published).

Term	Definition
Offline	Pertaining to a user who, during business hours (or at any time if no business hours have been set), is not signed in to any Lync or Communicator, or IM device and cannot be contacted by phone (no call forwarding information is published).
Online Meeting Add-in for Lync 2010	An add-in that enables the user to schedule a Microsoft Lync 2010 meeting or conference call.
Options	A UI element that opens the Options dialog box, where the user can change Lync or Communicator settings and preferences.
orbit	A number assigned to a parked call by the call park server.
organizer	A user who can schedule meetings, send invitations, do all the sharing activities in a meeting, and admit participants from the lobby.
Other Contacts	A default contact group name that Lync and Communicator use for all contacts who have not been placed in a user-defined contact group.
Other Phone	A button in the Options dialog box, on the Personal tab, that the user clicks to enter a phone number other than a work, home, or mobile phone number.
Out of office	A presence status displayed when a user sets up an Out of Office auto-reply in Microsoft Outlook. If the user doesn't have a personal note, their Outlook Out of Office message will appear as their personal note.
Out of Office message	The auto-reply text specified using Outlook's Automatic Replies or Out of Office Assistant.
Outlook integration	Connectivity between Lync or Office Communicator, and Outlook where Lync or Office Communicator receives data from Outlook to make the functions of Lync or Office Communicator work.

Term	Definition
Outside Voice Control	The application that connects a mobile device to the enterprise network. Outside Voice Control enables mobile devices that are running the mobile application of Lync Server 2010 or Office Communicator Mobile to send and receive calls that come through the enterprise network, in addition to calls that come through the mobile carrier network.
paging system	A system that allows users to send and receive messages when they are out of range.
park	To transfer a call to a holding point instead of holding the call at the phone device. It is retrieved by dialing the associated number for the holding point.
Parking Lot	An option on the Transfer button that lets you park a call.
participant	A presenter or attendee in a meeting.
participant	A person who is part of a conversation or conference, or a presenter or attendee in a meeting.
participant code	An access code that is required for a user to join a conference as a participant. This code is entered in the Options dialog box, on the Accounts tab, under Conferencing Information.
participant list	In a conversation window, this is the list of people who are currently participating in the conversation.
Pause	A button in a video conversation window that temporarily stops the video feed in the current video conversation. The infotip for this button toggles between Pause and Restart this video feed.

Term	Definition
PBX	A private telephone network in an organization. Individual telephone numbers or extension numbers are supported, and calls are automatically routed to them. Users can call each other using extensions. They can also place calls to outside numbers.
PBX phone	A proprietary phone connected to a PBX.
Personal Information Manager	An application that usually includes an address book and organizes unrelated information, such as notes, appointments, and names, in a useful way.
personal note	A text note provided by a user that is displayed along with his or her presence status.
phone	A wireless, mobile device that combines platform software, a browser, a modern chipset, and a telephone handset.
phone integration	A process that enables the user to integrate their PBX phone with Lync or Communicator, so they can place and receive calls from these products.
PIC contact	A contact who uses an instant messenger client from AOL, Yahoo, MSN, or the Windows Live network of Internet services.
Play	A button in a video conversation window that starts or restarts the video feed.
poll	An in-meeting vote conducted by a presenter. The presenter can decide whether or not to share the results of the poll in the meeting.
presence	A collection of attributes that provides an indication of a person's status, activity, location, willingness to communicate, and contact information.
presence icon	A color-coded icon that indicates a user's presence.

Term	Definition
presence status	One of the attributes that makes up presence and that indicates a person's availability and willingness to communicate.
Presence unknown	Pertaining to a user for whom no information is known. The user might not even exist, or there could be a typo in the SIP address.
present	Indicates the sharing activity of presenting a PowerPoint presentation. Only the PowerPoint document is shown and only the presenter can edit the content being presented.
presenter	A meeting participant who can do all sharing activities, including presenting, showing, sharing, and whiteboard, and admit participants from the lobby.
privacy relationship	A setting that determines how much information a contact can view about you.
Private Branch Exchange	A private telephone network in an organization. Individual telephone numbers or extension numbers are supported, and calls are automatically routed to them. Users can call each other using extensions. They can also place calls to outside numbers.
private IP address	An IP address that is assigned for the internal network of an organization.
private line	An additional phone number with a distinct ring tone that cannot be forwarded. A private line allows a person who delegates calls to have a direct, confidential line.
Product Support Services	A Microsoft business unit that offers a wide range of support options and resources to help businesses, organizations, and individuals worldwide attain the greatest success with Microsoft products.
PSTN	Public switched telephone network (PSTN) is used by standard analog telephone lines, available worldwide.

Term	Definition
PSTN connectivity	Connectivity with the public switched telephone network (PSTN) through integration with an audio conferencing provider.
public provider	An organization that provides public instant messaging (IM) connectivity and services, including the Windows Live network of Internet services.
public switched telephone network	Public switched telephone network (PSTN) is used by standard analog telephone lines, available worldwide.
public user	A user of public IM service providers, or providers and servers that use Extensible Messaging and Presence Protocol (XMPP), who has credentials and who therefore is handled as authenticated.
QoE	A measurement of a user's perception of the quality of an audio communication session. For example, in a voice communication, QoE monitors echoes and background noises such as hissing in the line.
Quality of Experience	A measurement of a user's perception of the quality of an audio communication session. For example, in a voice communication, QoE monitors echoes and background noises such as hissing in the line.
recording	A feature that allows presenters to capture and publish the audio and visual components of a meeting for later viewing.
Recording Manager	A feature that enables you to manage Lync 2010 conversations and meetings that you have recorded. From within Lync Recording Manager, you can play or rename recordings, or create a video format to share with others.
redirect	To take action to deflect a phone call after the phone rings but before the call is answered.
Registrar	A service that provides authentication, registration, and routing services.

Term	Definition
remote call control	The ability to send and receive calls on a desktop phone by using a computer-supported telecommunications application, such as Lync or Communicator.
Remove from Group	An item that deletes a selected contact from a contact group, when the contact is right-clicked.
Rename Group	An item that lets a user rename a group, when the group name in the Contacts list is right-clicked.
reply	To answer an instant message.
Reset Status	An item on the user's My Status menu that resets the user's status to the previous setting after the user has manually selected a status setting.
Response Group	The application that lets you route and queue incoming calls to designated persons for a special purpose, such as customer service.
restoration of service	The process of bringing service back online after data corruption, hardware or software failure, or disaster by either recovering data and settings or rebuilding a component in order to make its functionality available to users.
retrieve	To answer a call by dialing the associated number on the network where it has been parked.
return	To transfer control of the system from a called routine or program back to the calling routine or program. Some languages support an explicit return or exit statement; others allow return only at the end (last statement) of the called routine or program.
ring	A sound, vibration, visual clue, or any other indication that a call is coming in.

Term	Definition
ring	To create a sound, vibration, visual cue, or any other indication that the user has an incoming call.
ringtone	The sound made by a mobile device or other phone to indicate an incoming call or message, e.g., a series of beeps or an audio recording.
Schedule a Meeting	A menu item that opens an Outlook meeting invitation prepopulated with the selected contact(s).
screen sharing	Umbrella term for desktop or application sharing in a collaborative online meeting.
SDP	A protocol that Telephony API (TAPI) uses to advertise Internet Protocol (IP) multicast conferences. This protocol describes multimedia sessions for the purposes of session announcement, session invitation, and other forms of session initiation. SDP descriptors are stored in Active Directory.
Select All	Selects all the content in the current file or page.
Server Virtualization Validation Program	A certification program for Microsoft vendors that enables them to validate various virtualization configurations so that Microsoft customers can receive technical support for Windows Server in virtualized environments.
service record	A category of data in the Internet Domain Name System that specifies information on available services. The SRV record is used to locate domain controllers for Active Directory.
Session Initiation Protocol	A standard signaling protocol for establishing multi-media communications sessions between two or more users over an IP network.

Term	Definition
Session Initiation Protocol trunking	A mechanism for connecting the voice network of an enterprise to a service provider that offers public switched telephone network (PSTN) origination, termination, and emergency services without deploying PSTN gateways.
sharing	An activity that you can do with your desktop or applications in an online meeting.
sharing session	A collaborative meeting or formal presentation in which a participant has chosen to share an application or desktop.
Show Friendly Name	A selection that displays the first and last name, instead of the e-mail address or sign-in name, for each contact in the user's Contacts list.
Sign in as	The label for the list that enables a user to select a status before signing in. Possible status options are Available, Busy, Do Not Disturb, and so on.
sign-in name	The ID that the user enters to sign in to Lync or Communicator.
SIP	A standard signaling protocol for establishing multi-media communications sessions between two or more users over an IP network.
SIP message	Data sent between SIP elements as part of the protocol. SIP messages are either requests or responses.
SIP trunking	A mechanism for connecting the voice network of an enterprise to a service provider that offers public switched telephone network (PSTN) origination, termination, and emergency services without deploying PSTN gateways.

Term	Definition
SIP/PSTN gateway	A device that translates signaling and media in different formats between the Enterprise Voice infrastructure and a public switched telephone network (PSTN) or private branch exchange (PBX).
skin	A customized user interface that overlays an existing user interface. A skin customizes the look of the program but does not affect its functionality. Programs that allow the use of skins usually make standards available for the creation and distribution of new skins.
smartphone	A wireless, mobile device that combines platform software, a browser, a modern chipset, and a telephone handset.
softphone	A software program integrated within your computer to serve as a telephone.
software telephone	A software program integrated within your computer to serve as a telephone.
speakerphone	The microphone and speaker on a calling device/phone that allows you to converse with someone without using the handset or headset.
Spim	Unsolicited commercial instant messages or presence subscription requests sent to multiple users.
SRV record	A category of data in the Internet Domain Name System that specifies information on available services. The SRV record is used to locate domain controllers for Active Directory.
stage	A window that shows the content being shared in an online meeting docked alongside the Lync 2010 conversation window.
status	The condition of a user that can be displayed to the user's contacts to communicate whether the user is currently online and available, offline and unavailable, and so on.

Term	Definition
status alert	A notification that is sent when one of the user's tagged contacts changes status to Available or Offline.
support team	An organization or group that is responsible for providing technical support.
Survivable Branch Appliance	A telephony device that keeps the phones working if the connection to the central site is lost.
SVVP	A certification program for Microsoft vendors that enables them to validate various virtualization configurations so that Microsoft customers can receive technical support for Windows Server in virtualized environments.
synthetic transaction	A feature that can be used to test the availability or performance of a given service or application from the perspective of an end user, or to confirm the functionality of a low level service.
system administrator	The person responsible for setting up and managing local computers, stand-alone servers, member servers, or domain controllers. An administrator performs such duties as assigning user accounts and passwords, establishing security access levels, watching for unauthorized access, allocating storage space, and helping users with networking problems.
tag	To request an alert for a specific contact when that contact's presence status changes.
Tag for Status Change Alerts	A menu item that marks the selected contact so the user will receive presence alerts when this contact's presence changes from anything to Available or from anything to Unavailable.
tagged contact	A contact whose presence status is displayed in an alert whenever it changes.
Team Call	The feature that forwards a call from a team leader to an entire team according to a hunt group algorithm.

Term	Definition
team-call group	A group of people who can answer calls on behalf of someone else.
telecommunications device for the deaf	A device that enables the transmission of typed messages over phone lines. These devices typically include keyboards for typing messages to send and display and/or printers to receive messages from one device to another.
text telephony	A feature that enables those who are deaf or speech impaired to use the telephone with a teletypewriter.
title bar	The horizontal bar at the top of a window that displays the name of the window. Title bars can contain different buttons, such the Minimize, Maximize, and Close buttons, so that you can control how you want to view the window.
transfer	The act of sending the current phone call to a third person.
Transfer	A menu item that transfers the current phone call without the user remaining on the line to announce the call.
TTY	A feature that enables those who are deaf or speech impaired to use the telephone with a teletypewriter.
TTY/TDD	A device that enables the transmission of typed messages over phone lines. These devices typically include keyboards for typing messages to send and display and/or printers to receive messages from one device to another.
unidentified caller	A caller whose caller ID information is not available.
universal group	A security or distribution group that can contain users, groups, and computers from any domain in its forest as members.

Term	Definition
Unmute	A button on Audio Controls that turns off mute on the user's phone.
Unmute Microphone	A button on Audio Controls that turns off mute on the user's microphone.
Unmute Speakers	A button on Audio Controls that turns off mute on the user's speakers.
Urgent interruptions only	Pertaining to a user who sets their status to Do Not Disturb. For the user's contacts who have a Workgroup privacy relationship, the user is displayed with the Busy icon and Urgent interruptions only text.
video conference	A conversation between three or more participants in which one or more participants is broadcasting a video feed by using a webcam.
video conversation	An instant message conversation in which one or both participants is broadcasting a video feed by using a webcam.
video negotiation	A process in which a sending endpoint can determine the video capabilities of a receiving endpoint before it sends a video stream.
voice call	A telephone call where the human voice, rather than data, is transmitted (that is, an ordinary telephone call).
voice mail	A system that records and stores telephone messages in a user mailbox.

Term	Definition
Voice over Internet Protocol	The use of the Internet Protocol (IP) for transmitting voice communications. VoIP delivers digitized audio in packet form and can be used to transmit over intranets, extranets, and the Internet. It is essentially an inexpensive alternative to traditional telephone communication over the circuit-switched Public Switched Telephone Network (PSTN). VoIP covers computer-to-computer, computer-to-telephone, and telephone-based communications. For the sake of compatibility and interoperability, a group called the VoIP Forum promotes product development based on the ITU-T H.323 standard to transmit multimedia over the Internet.
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web connection	A connection between the user's device and a server that provides access to the Internet, typically through an Internet service provider.
whiteboard	Software that allows multiple users across a network to work together on a document that is simultaneously displayed on all the users' screens as though they are gathered around a physical whiteboard.
wiremap	A location map that determines a caller's location, and is configured by a VoIP administrator.

Term	Definition
Work Phone	A button in the Options dialog box, on the Phones tab, that users click to enter their work phone number. The Work Phone button is disabled if the work phone number has been supplied through the corporate directory.
Workgroup	A privacy relationship setting that allows a large amount of information to be viewed, usually assigned to people on your team.
working hours	A user's work day hours as specified in Microsoft Office Outlook by the day of the week and the start and end times.