



Microsoft

Office 365

Microsoft Lync Online Beta Service Description

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Introduction

Microsoft® Lync™ Online is a hosted, enterprise-class communications solution based on Microsoft Lync 2010. Lync Online provides organizations with next-generation communications capabilities, including Presence, Instant Messaging (IM), and PC-to-PC audio and video calling. In addition, Lync Online works with Microsoft Office 2010, Microsoft Exchange, and Microsoft SharePoint®, helping users communicate using the applications they understand.

Organizations can purchase Lync Online as a standalone service from Microsoft Online Services or as part of Office 365, which includes Lync Online, Microsoft Exchange Online, Microsoft SharePoint Online, Microsoft Office Professional Plus, and Office Web Apps.

Note

Not all Office 365 subscription plans include these services.

This service description is intended to help IT professionals by describing the features that are included with Lync Online.

Features of Microsoft Online Services

Lync Online is one of several online services offered by Microsoft. These Internet-based services are designed to help meet your needs for robust security, 24/7 reliability, and user productivity.

Each service is designed for reliability, availability, and performance with a financially backed service level agreement (SLA) for a guaranteed 99.9-percent scheduled uptime. Microsoft deploys patches, security updates, and back-end upgrades, helping to eliminate the time and effort you spend managing your servers, while keeping you in control.

Subscribers to Lync Online benefit from a set of features that are common to all of the Microsoft business-class online services:

- **Secure access:** Each offering from Microsoft Online Services is accessed through 128-bit Secure Sockets Layer (SSL) or TSL encryption. Anyone who intercepts a communication sees only encrypted text.
- **Intrusion monitoring:** Microsoft continuously monitors the Microsoft Online Services systems for any unusual or suspicious activity. If Microsoft detects such activity, it investigates and responds appropriately. In the unlikely event that a significant incident occurs, the customer is notified.
- **Security audits:** Microsoft regularly assesses the Microsoft Online Services infrastructure to ensure that the latest compliance policies and antivirus signatures are installed, along with high-level configuration settings and required security updates. The services have:
 - Achieved [ISO 27001](#) certification.
 - Completed [SAS70](#) Type I and II audits.
 - Added controls that assist customers in complying with [HIPAA](#) and [FERPA](#).
 - Achieved the EU Safe Harbor seal.

Note

These certifications and audits apply to the services when they are generally available and do not apply to the Office 365 Beta services.

- **High availability:** Microsoft Online Services have a 99.9-percent scheduled uptime. If a customer's service is affected, Microsoft Online Services offers financial remedies subject to the terms and conditions of the SLA.

 **Note**

The SLA is not offered during the Beta period.

- **Business continuity:** Redundant network architecture is hosted at geographically dispersed Microsoft data centers to handle unscheduled service outages. Data centers act as backups for each other: If one fails, the affected customers are transferred to another data center with limited interruption of service.

 **Note**

The business continuity architecture and service apply to the services when they are generally available and do not apply to Beta services.

- **Microsoft Online Portal:** This easy-to-use web site is the center for activities related to Microsoft Online Services. The portal provides services based on your specific needs. Prospective subscribers can use the portal to sign up for a free trial. End users accessing the portal can find online help and launch Microsoft SharePoint Site collections, Microsoft Outlook® Web Access, and Microsoft Lync Online. Service administrators can manage users, administer services, download tools, and learn about service administration from online help.
- **Directory Synchronization tool:** For subscribers with Active Directory® deployed on-premises, this tool helps keep the on-premises Active Directory and the Microsoft Online Services directory synchronized.
- **Remote administration:** With Microsoft Windows PowerShell™, service administrators can perform many tasks using a script or automated process. For example, tasks such as creating users, resetting passwords, assigning licenses, and obtaining service-use data can be fully automated.

 **Note**

During the Beta, remote administration using PowerShell is available only for the Exchange Online service. Remote PowerShell administration for other Office 365 functions will be available after the initial general availability of Office 365.

Services Connector

For the best experience with Microsoft Online Services, a set of required components and updates must be applied to each workstation. To simplify the installation and maintenance of these components and updates, Microsoft provides an installable piece of software—or connector—at no charge. These updates are required for all workstations that use rich clients (such as Microsoft Office 2010 and connect to the online services).

The Services Connector provides multiple benefits, including:

- Automatically detecting necessary updates
- Installing updates and components upon approval or silently from a command line
- Automatically configuring Outlook and Lync for use with Microsoft Online Services
- Uninstalling itself from the client computer after running

A list of these update requirements will be published for companies that want to use an alternative method of deploying the updates.

 **Note**

The connector is not an authentication or sign-in service and should not be confused with single sign on.

Federated Identity and Single Sign On

With on-premises Active Directory, administrators can use a single sign on approach to Office 365 authentication. To achieve this, administrators can configure on-premises Active Directory Federation Services—a Microsoft Windows Server® 2008 service—to federate with the Microsoft Online Services federation gateway. After Active Directory Federation Services is configured, all Office 365 users whose identities are based on the federated domain can use their existing corporate logon to automatically authenticate to Office 365.

System Requirements

Table 1 shows the software required to access Microsoft Online Services—including Lync Online.

Table 1: Software supported by Microsoft Online Services

Software	Supported Version
Operating systems	Windows® 7 Windows Vista® Service Pack 2 Windows XP Service Pack 3 Windows XP Home Edition is supported but will not support federated identity Windows XP Media Center Edition is supported but will not support federated identity Mac OS X 10.5 (Leopard), 10.6 (Snow Leopard)
System software	Microsoft .NET Framework 3.0 (for Windows XP) Java client 1.4.2 (for Macintosh OS X)*
Office clients	Microsoft Office 2010 or Office 2007 Service Pack 2 Office 2008 for Mac and Microsoft Entourage® 2008 Web Services Edition Office 2011 for Mac and Outlook 2011 for Mac .NET 2.0 or later Microsoft Lync 2010 Communicator for Mac
Client applications	Services Connector
Browser software— Microsoft Online Portal	Internet Explorer 7 or later Mozilla Firefox 3.x Apple Safari 3.x
Browser software— Outlook Web App	Internet Explorer 7 or later Firefox 3 or higher Safari 3 or higher on Macintosh OS X 10.5 Chrome 3 and later versions Outlook Web App also has a light version that supports a reduced set of features across almost any browser

*Outlook Web Access Light is designed to optimize the Outlook Web Access experience for slower connections and alternative Web browsers. For more information about the differences between Outlook Web Access Premium and Outlook Web Access Light, see TechNet: Client Features in Outlook Web Access (<http://technet.microsoft.com/en-us/library/aa997437.aspx>).

International Availability

Office 365 Beta is available in Canada, France, Germany, Hong Kong, Ireland, Italy, Japan, Mexico, Puerto Rico, Singapore, Spain, United Kingdom, and United States.

Multinational customers that purchased services in an approved country may enable use by their end users that reside anywhere in the world, except for Argentina and countries currently embargoed by the U.S. Government. Features availability may vary by location.

Data Center Locations

Microsoft Online Services maintains primary and backup data centers distributed around the world. When a company signs up for a Microsoft Online service, its hosted environment is automatically provisioned in the appropriate data center based on the company's address. All users for the company are hosted from the same data center.

Note

The data center locations apply to the services when they are generally available and do not apply to Beta services.

Localization

Table 2 summarizes the languages supported by the Microsoft Online Services platform and related components.

Table 2: Supported languages for components related to Microsoft Online Services

Component	Supported languages
Microsoft Online Portal	English Japanese, German ¹ , French ¹ , Italian ¹ , Chinese Traditional ¹ , Danish ² , Dutch ² , Finnish ² , Norwegian (Bokmal) ² , Swedish ² , Brazilian Portuguese ² , Czech ² , Greek ² , Hungarian ² , Polish ² , Romanian ² .
Help content—for end users and IT professionals	English Japanese, German ¹ , French ¹ , Italian ¹ , Chinese Traditional ¹ , Danish ² , Spanish ² , Dutch ² , Finnish ² , Norwegian (Bokmal) ² , Swedish ² , Brazilian Portuguese ² , Czech ² , Greek ² , Hungarian ² , Polish ² , Romanian ² .
Directory Synchronization Tool	English, Japanese, German ² , French ² , Italian ² , Chinese Traditional ² , Danish ² , Spanish ² , Dutch ² , Finnish ² , Norwegian (Bokmal) ² , Swedish ² , Brazilian Portuguese ² , Czech ² , Greek ² , Hungarian ² , Polish ² , Romanian ² .

Component	Supported languages
Services Connector	English, Japanese, German ² , French ² , Italian ² , Chinese Traditional ² , Danish ² , Spanish ² , Dutch ² , Finnish ² , Norwegian (Bokmal) ² , Swedish ² , Brazilian Portuguese ² , Czech ² , Greek ² , Hungarian ² , Polish ² , Romanian ² .
Support—phone, web, email	English, Brazilian Portuguese, French, German, Italian, Japanese, Spanish, Swedish (see Online Help for phone support in different languages)

¹ Supported at Beta.

² Supported at general availability.

Language support in Microsoft Exchange Online, SharePoint Online, Lync Online, and client applications (such as Microsoft Office 2010) is detailed in the individual service descriptions for these services.

Flexible Subscription Plans

Each user who accesses the Office 365 service requires a User Subscription License (USL). Microsoft offers Office 365 subscription plans designed for a variety of organizations. They include plans for infrequent users with light, computer-based workloads; plans designed specifically for small businesses; and plans for large enterprises.

To determine which plan is right for you, visit www.microsoft.com/online.

For beta, two types of subscriptions are available:

- The **Office 365 (Plan E3) Beta** provides the full capabilities of Office 365 services.
- The **Office 365 (Plan K2) Beta** is designed for users who require fewer messaging and collaboration features because they are infrequent users.

Note

These subscriptions are specific to the beta release. The commercial offering of the service will have different pricing, licensing, and packaging. New subscription types may be added and features may be added or removed from the license types displayed here.

Technical Support

The Microsoft Online Services technical support team helps people with administrator permissions for their company's Office 365 Beta services. Administrators help their company's Office 365 Beta end users. For contact information, see Online Help in the services Administration Center.

Service Benefits

Lync Online is a powerful, enterprise-grade communication solution that can improve business efficiencies, increase productivity, and provide cost savings.

Organizations can gain the following major benefits from using Lync Online:



- **Know whether others are available to communicate.** Repeatedly attempting to reach each other by phone or email is a common communication problem in today's business world. Often the problem stems from workers who are physically separated by geography and time zones and who lack visibility into other people's availability or presence. Presence information is especially important when there is a need for a critical business discussion or a time-sensitive decision has to be made. Lync Online helps organizations increase individual productivity by adding presence, IM, and PC-to-PC audio and video calling to the business IT infrastructure.
- **Presence and click-to-communicate from Microsoft Office Outlook.** Collaborating with others can be challenging for workers whose jobs require constant use of business productivity applications during the work day. Lync Online connects presence and real-time collaboration capabilities with the Microsoft Office Outlook messaging and collaboration client. This enables higher productivity by allowing workers to collaborate using the programs they're already familiar with.
- **Connect with people and be more productive through a rich and immersive online meeting experience.** Online meetings enable users to connect wherever they are through PC-based audio, video, and web conferencing, both as scheduled meetings and spontaneous, ad hoc collaboration sessions. With Lync Online, users can collaborate, share information, and coordinate their efforts in real time, all within the context of an existing workflow. Lync Online supports an integrated conferencing experience, enabling users to join the same conference from the PC (via the Microsoft Lync 2010 client) or from a phone (requires a separate PSTN audio conferencing service).
- **Collaborate within SharePoint sites.** Lync Online serves as the presence engine for SharePoint team sites and portals, providing presence and IM access from within Windows SharePoint Services and SharePoint Server sites. For example, users can enable the Members Web Part to see the presence of anyone associated with a SharePoint site, which allows information workers to spend more productive time in their business productivity applications.
- **Communicate with other organizations.** The federation feature of Lync Online establishes trusted relationships between an organization and one or more external organizations. This allows users to see user presence and communicate across organizational boundaries.
- **Communicate with public IM service providers.** Public IM connectivity (PIC) allows an organization to securely connect its existing base of enterprise-enabled IM users to trusted contacts using public IM services that can be provided by Microsoft Windows Live™ Messenger and MSN® Messenger.
- **Reduce costs.** Lync Online allows person-to-person communication across an organization without expensive business travel or costly phone bills. The Lync Online service allows organizations to focus IT resources on developing value instead of running IT infrastructure. Microsoft manages the risks and complexity of operational systems.
- **Online Meetings.** Lync Online helps people collaborate through voice and video conferencing and simplifies the user experience by incorporating video into the unified client. With Lync Online, users can easily schedule an online meeting with video or seamlessly escalate to video spontaneously. Support is available for a wide variety of video conferencing options, including integration with room-based conferencing systems.

Features of Lync Online

This section describes the features of the Lync Online service. Where applicable, service options are noted along with feature limits.

Microsoft Lync 2010

To access the Lync Online service, users need Microsoft Lync 2010. Currently, Lync 2010 is available to service subscribers at no additional charge. Organizations can find information on how to download the current version of Lync 2010 in the Office 365 Administration portal. See [Appendix A](#) for Lync 2010 system requirements.

Limit

Microsoft Online does not support client deployment in a customer organization. Organizations should work with their IT partners if they need assistance deploying Lync 2010 to users.

Instant Messaging

Instant messaging (IM) is the ability to transfer text messages in real time over an Internet Protocol (IP) network such as the Internet or an organization's corporate network. IM text is encrypted for enhanced security.

Customer Responsibility

The Lync 2010 client uses Secure Socket Layer (SSL) for address book file download and distribution list expansion. Users must add the URLs used for the book file download and distribution list expansion features to the trusted sites list in Internet Explorer.

Presence

Presence is the ability to detect another user's availability. Using Lync 2010 and Lync Online, users can display their presence status—for example, Available, Away, Do Not Disturb, or Offline—to let others know their availability for consultation.

To easily monitor the presence information of another user, users can add other users to their contact list, and can organize and group these contacts in different ways (by department, for example). Users may also search their company's address book to find other users—which means it is not necessary to add someone to the contact list in order to detect presence or send an instant message.

Limit

Individual users can have a maximum of 250 presence subscribers or contacts in their Contact Lists. A presence subscriber is a user who can see the published availability of another user and receives updates as this availability changes. Presence subscribers added after the 250 limit is reached will still be able to send and receive instant messages to the user and add the user to a Contact List, but they will not see any presence information (presence is shown as "Presence Unknown").

Presence with Office Outlook and Other Office Applications

Lync Online can connect presence with Microsoft Office 2007 or Office 2010. Users can instantly find and communicate with people from within Office Outlook. This connection occurs wherever the user sees a colored presence indicator that represents a person's presence status. The user can then click the presence icon and initiate a communications using Lync 2010. (This feature is called "click-to-communicate.")

When Office Outlook calendar interoperability is enabled, the user's presence information is updated based on the Exchange calendar information.

Limit

Office Outlook interoperability is available only for Office Outlook users who have the Lync 2010 desktop client installed and properly configured.

Presence with SharePoint Online

Lync Online connects presence with SharePoint Online using the same presence indicator that is displayed in the Lync 2010 client. SharePoint users can initiate many useful Lync 2010 functions (for example, send an instant message) directly from a SharePoint site, making collaboration easy and intuitive.

Limit

SharePoint Online presence is available only for SharePoint users who have the Lync 2010 desktop client installed and properly configured.

Presence with Exchange Online

Lync Online connects presence with Exchange Online. This includes presence status in Outlook, presence status changes based on Exchange calendar information, IM and presence in Outlook Web Apps, out-of-office messages in Lync 2010, and click-to-communicate via Lync 2010 from Outlook.

Limit

Exchange Online presence is available only for users who have the Lync 2010 desktop client installed and properly configured.

Remote Access

The Lync Online service provides users with the ability to connect directly to the Lync Online service over the Internet. This feature is available without the user connecting to the customer's corporate network through a remote access service (RAS) or virtual private connection (VPN).

Limit

File transfer is not available on remote access connections.

Distribution Lists

Using Lync 2010, service users can add email distribution lists to their Contact Lists. Instant messages may be sent to individual members of a distribution list or the entire distribution list.

Distribution lists can be expanded to see the individual members of such lists.

Limit

- Distribution list expansion is allowed only for distribution lists with 100 or fewer individual members (regardless of the members' presence or sign-in status).
- Distribution lists with more than 100 members are allowed but these distribution lists may not be expanded to display individual members of the list.
- A distribution list counts as one contact against the 250 contact limit per user. The distribution list counts as one contact regardless of the number of individual members within the distribution list.

File Transfer

The Lync Online service provides peer-to-peer file transfer capability so users can transfer files as part of an IM conversation without using email.

Limit

- File transfer is subject to the network policies that the organization applies to its corporate, VPN, and wireless networks.
- File transfer is not supported on remote access connections.

Lync Online and On-Premises Servers

Lync Online has capabilities for interoperability with on-premises server deployments:

Microsoft Exchange Server

Lync Online interoperability with an on-premises deployment of Microsoft Exchange Server 2007 and Microsoft Exchange Server 2010 is supported. The service provides automatic presence updates based on calendar information and Out of Office details that appear in Lync 2010.

Note

Lync 2010 will use the external web URLs defined for Exchange servers.

For more information about Exchange server URLs, visit <http://technet.microsoft.com/en-us/library/aa996902.aspx>.

Microsoft Lync Server 2010

Lync Online can interoperate with Microsoft Lync Server 2010 through the use of instant messaging federation. See [Instant Messaging Federation](#) in this document.

Microsoft SharePoint Server

Lync Online interoperates with on-premises SharePoint Server for presence integration in SharePoint and skill search via Lync (searching for people with specific expertise based on keywords in their SharePoint profile).

Note

Skill search in the Lync 2010 client is not supported with SharePoint Online.

PC-to-PC Audio and Video Communications

Using Lync 2010, Lync Online users can make PC-to-PC audio and video calls using a laptop/headset device and a Web camera. Conversation quality may vary depending on customer network performance. For the best experience, use a device that is optimized for Lync 2010.

For a full list of devices, visit <http://technet.microsoft.com/enus/office/ocs/bb970310.aspx>.

Person-to-person audio and video communication can across the internet between two PCs within the same Lync Online organization or between properly configured, supported, and permitted federated domains.

Instant Messaging Federation

Instant messaging federation enables a Lync Online user to connect with other organizations that use Lync Online as well as those that host their own Lync Server 2010 on premises. Lync Online users can also federate with trusted users from the Windows Live Messenger public IM network. All federated communications are encrypted between the IM systems using access proxy servers. Microsoft does not control encryption after messages are passed to the federated partner's network (if the partner is federated with an on-premises Lync Server 2010 or third-party network).

IM federation requires the consent and proper configuration of both parties of the federation relationship. Once the federation is set up by the administrators of both sides, users in each company can start seeing presence and communicating with users in the other company.

Note

Use of the term "federation" refers to Lync Online capabilities to communicate with other messaging systems and should not be confused with the requirements and capabilities of federated identities with Microsoft Online services.

Table 3 describes the supported communication features across federated link types:

Table 3: Federation features by link type

	IM and Presence	PC-to-PC Audio and Video
Lync Online tenants (other companies using Office 365/ Lync Online)	Yes	Yes
Lync Server 2010 on premises (any version)	Yes	Yes
Windows Live Messenger	Yes	No

Service administrators can control which systems are allowed to communicate with Lync Online users by using whitelists and blacklists.

Limit
<ul style="list-style-type: none">• Federation requires DNS configurations by the customer and each federated partner organization. Federated organizations are solely responsible for proper configuration of their environments to support federation.• Federated connections are not covered by the SLAs provided as a part of Office 365 subscriptions.• Federated connections are excluded from the service continuity management recovery time objectives (RTO) and recovery point objectives (RPO).• File transfer is not available with federated connections.

IM Security

Microsoft has extensive experience in designing and operating a highly available instant messaging solution. One key component is the Intelligent Instant Message Filter (IIMF) built into Lync Online, which helps protect both the customer network and the Microsoft managed network against the spread of the most common viruses and spam.

Subscribers to Lync Online benefit from an IIMF design that is built upon years of operating scalable, global IM systems, which can help to protect users from malicious content and links transmitted using IM.

Online Meetings (Audio/Video/Web Conferencing)

Online meetings enable users to connect from almost anywhere through PC-based audio, video, and web conferencing—both as scheduled meetings and as spontaneous collaboration sessions. With Lync Online, users can collaborate, share information, and coordinate their efforts in real time, all within the context of an existing workflow. Lync Online supports an integrated conferencing experience, enabling users to join the same conference from the PC (via the Lync 2010 client) or from a phone (requires a separate PSTN audio conferencing service).

PC-Based Audio

Lync Online provides Lync-based, multiparty audio conferencing capabilities. Through Lync Online, users can receive excellent audio quality, visual call controls and network quality status, and powerful user management features (for example, within Lync 2010, you can drag the invitee's name to a meeting).

Integration with PSTN Audio Conferencing Services

Public switched telephone network (PSTN) audio conferencing is the ability to dial into an audio conference from fixed-line phones or mobile phones. Through a separate, third-party PSTN audio conferencing service, Lync Online provides an integrated experience for scheduling and joining an online meeting for users who join via the Lync 2010 client on the PC and users who join from a phone.

Note

This capability is not included with Lync Online and requires a separate audio conferencing service from a certified audio conferencing partner.

Video

Lync Online helps people collaborate through voice and video conferencing and simplifies the user experience by incorporating video into the unified client. With Lync Online, users can easily schedule an online meeting with video or seamlessly escalate to video spontaneously. Support is available for a wide variety of video conferencing options, including integration with room-based conferencing systems.

Data Sharing (Web Conferencing)

Lync Online provides powerful multiparty data sharing capabilities including desktop sharing, application sharing, document sharing (via uploading for more control), virtual whiteboard, annotations, and polling.

Lync Web App for Participating in Online Meetings

Meeting attendees can join online meetings from leading web browsers to get capabilities such as conference calling, guest user support, PSTN dial-out audio (requires separate PSTN audio conferencing service), and desktop sharing on Windows, Mac, and Linux. The web client experience also enables high-fidelity viewing, file upload and download, presentation viewing, whiteboard, lobby, and presenter access controls.

Attendee Lync Client

The free Microsoft Lync 2010 Attendee client lets external or anonymous users join a scheduled online meeting with full fidelity PC-audio, video, and data sharing. This option extends the value of immersive online meetings to anyone. Attendees can join and participate in a Lync Online meeting, even if they are not a subscriber to Lync Online.

Scheduled Online Meetings

Through the integration of Lync Online and Outlook 2010, users gain single-click scheduling of online meetings, and participants can join with a single click from the Outlook reminder, or via Lync Web App. Organizers can easily set up meetings using predefined conference properties or can set meeting types and admission policies for specific needs. Details (such as meeting time, location, and attendees) follow the familiar Outlook template, and conference call-specific information (such as dial-in number and meeting passcode) are automatically populated (requires separate PSTN audio conferencing service).

Spontaneous Collaboration

Users can start or join a spontaneous conference easily with single click within Lync Web App or Outlook 2010. Without switching applications, Lync Online enables users to escalate simple instant messaging conversations or email conversations to PC-based, multiparty voice and video meetings with shared desktops, applications, and documents.

Limit

- PSTN audio conferencing with Lync Online requires a third-party audio conferencing service.
- Multiparty, PC-based audio and video conferencing features may be limited in some countries.
- The integrated conferencing experience may require incorporation of a partner solution.

Service Administration

The Microsoft Online Portal is a web portal that a customer's online service administrator uses to manage the Microsoft Online Services the company has subscribed to—including the Lync Online service.

In this portal, the service administrator can perform actions related to service administration and Lync Online including:

- Enable or disable Lync Online
- Create users and assign licenses that enable use of Lync Online
- File support tickets
- Access online help
- Manage IM Federation
- Manage basic online meetings settings

Appendix A: Lync 2010 System Requirements

Table 4 contains the minimum hardware and software requirements for Lync 2010.

Table 4: Hardware and Software Requirements for Lync 2010

System component	Minimum requirement
Operating system	Windows 7 32-bit operating system. Windows Vista 32-bit operating system. Windows XP Professional with Service Pack 2 (SP2). Windows Installer 3.1 and Microsoft Core XML services (MSXML) 6.0 SP1 must be installed before deploying Lync 2010.
Computer/processor	Data and voice: 1 gigahertz (GHz) or higher processor; 2 GHz 32-bit or 64-bit processor recommended. For video: Dual Core 1.9 GHz or higher for VGA; Quad Core 2.0 GHz or higher for High Definition. For the Microsoft RoundTable™ conferencing device: 2 GHz or higher.
Display resolution	1024x768 required
Graphics hardware	Support for Microsoft DirectX 9 application programming interface 128 MB of graphics memory (minimum) Microsoft Windows Display Driver Model driver Pixel Shader 2.0 in hardware 32 bits per pixel
Memory	1 GB of RAM (2 GB recommended).
Telephony	Microphone and speakers, headset with microphone, or equivalent device.
Video source	USB 2.0 video camera or RoundTable device.
Bandwidth requirements	Data: 56 kbps (minimum); 56 kbps (high-quality). Voice: 50 kbps (minimum); 80 kbps (high-quality). Video: 50 kbps (minimum); 250 kbps for CIF, 600 kbps for VGA, 1.5 Mbps for High Definition (high-quality). RoundTable device: 50 kbps (minimum); 250 kbps (high-quality). The required and recommended bandwidth speeds are cumulative. For example, to use voice, webcam, and the RoundTable device, the minimum bandwidth would be 50+50+50=150 kbps.
Installation and updates	Administrator privileges or, in Standard User mode, administrator credentials.

Other Requirements

- Microsoft Core XML services (MSXML) 6.0 SP1 must be installed before installing Lync 2010.
- Outlook 2010/Office Outlook 2007 and Exchange Server 2010/2007 or Exchange Online are required for Outlook interoperability options.
- For interoperability with Microsoft Office to work correctly, users may need to install an update to Outlook 2007. For details about the Outlook update, see Microsoft Knowledge Base article 936864, "Description of the 2007 Office hotfix package" at <http://go.microsoft.com/fwlink/?LinkID=143112>.
- Microsoft Silverlight™ 4.0 is installed automatically during setup.

Appendix B: Feature Comparison Matrix

The following matrix compares features across delivery models according to the most updated plan of record: Office Communications Server (on-premises) and Lync Online

		Office Communications Server (on-premises)		Lync Online	
Feature	Version	Microsoft Communications Server 2007 R2	Microsoft Lync Server 2010	Office Communications Online Current Offering	Lync Online (in Office 365 Beta)
	IM/Presence				
1-to-1 and Multiparty IM/Presence		Yes	Yes	Yes	Yes
Address book search		Yes	Yes	Yes	Yes
DL expansion (DLX)		Yes	Yes	Yes	Yes
File transfers		Yes	Yes	Yes (inside firewall only)	Yes
PC-to-PC audio/video		Yes	Yes	Yes (inside firewall only)	Yes
Click-to-communicate from Office Apps		Yes	Yes	Yes	Yes
Communicator Expert search in SharePoint Online		No	Yes	No	No
Contact Card with photos		No	Yes	No	Yes
Persistent Group Chat		Yes	Yes	No	No
Privacy mode		No	Yes	No	No

Conferencing and Data Collaboration Using Office Communicator 2007 R2				
Desktop sharing	Yes	Yes	No	Yes
Application sharing	No	Yes	No	Yes
Whiteboarding and annotations	No	Yes	No	Yes
PowerPoint upload	No	Yes	No	Yes
Spontaneous multiparty PC-Audio/Video/data sharing (using Lync)	Yes	Yes	No	Yes
Scheduled Online meetings via Outlook	Yes	Yes	No	Yes
Scheduling online meetings in Outlook Web App	No	No	No	No
Client-side recording and playback	No	Yes	No	Yes
Lobby	No	Yes	No	Yes
Interoperability with third-party PSTN audio conferencing providers	No	No	No	Yes
Interoperability with on-premises video conferencing systems	No	Yes	No	No
Enterprise Voice				
PSTN calling via Office Communicator (incoming/outgoing calls)	Yes	Yes	No	No
IP desk phone support	Yes	Yes	No	No
Call controls (hold, transfer, forward, simulring)	Yes	Yes	No	No
Office Communications Server Online with Exchange Online UM interoperability (for voice mail)	No	Yes	No	No
Team call	Yes	Yes	No	No
Response groups	Yes	Yes	No	No
Delegation (boss-admin) in Communicator	No	Yes	No	No
Private Line (secondary DID for execs)	No	Yes	No	No
Call park	No	Yes	No	No
Outgoing DID manipulation	No	Yes	No	No
E-911 via Communicator	No	Yes	No	No
Branch Office Appliance	No	Yes	No	No

Call Admissions Control (CAC)	No	Yes	No	No
Support for analog devices (for example, FAX)	Yes	Yes	No	No
Direct connectivity with PBX via gateways	Yes	Yes	No	No
Direct connectivity for audio with on-premises IP-PBXs	No	Yes	No	No
Direct SIP for signaling (presence updates) with on-premises IP-PBX	No	No	No	No
RCC (click-to-call) with on-premises PBX	Yes	Yes	No	No
Malicious call trace	No	Yes	No	No
Interoperability with call center solutions (Aspect)	Yes	Yes	No	No
Voice Interoperability with Third-Party Carriers and Service Providers				
Interoperability with third-party PSTN audio conferencing providers	No	No	No	Yes
Client Support				
Office Communicator 2007 R2	Yes	Yes	Yes	No (yes for migration of existing Office 365 customers only)
Lync 2010	No	Yes	No	Yes
Lync 2010 Attendee (joining online meetings)	Yes	Yes	No	Yes
Lync Web Access for joining online meetings	Yes	Yes	No	Yes
Microsoft Lync Phone Edition (Lync-based IP phones)	Yes	Yes	No	No
Communicator Mobile (Windows phones)	Yes	Yes	No	No
Communicator Mobile for Non-Windows OS (for example, Nokia, BlackBerry, iPhone)	Yes (Nokia)	TBD	No	No
Mac Messenger	Yes	Yes	No	No

Federation and Public IM Connectivity (PIC)				
Federation with other Office Communications Server/Communications Online organizations	Yes	Yes	No	Yes
IBM Same-time federation	Yes	Yes	No	No
IM/P federation with XMPP (Google Talk)	Yes	Yes	No	No
PIC with Windows Live, AOL, Yahoo	Yes	Yes	No	Yes (Windows Live only)
Security and Archiving				
IM and media encryption	Yes	Yes	Yes	Yes
IM filtering	Yes	Yes	Yes	Yes
Anti-malware scanning for meeting content and file transfers	Yes (partner solutions)	Yes (partner solutions)	No	No
IM archiving (server side)	Yes	Yes	No	No
Exchange/SharePoint Co-Existence				
Presence with Exchange/SharePoint on premises	Yes	Yes	Yes	Yes
UM interoperability with Exchange on premises	Yes	Yes	No	No
Presence with Exchange/SharePoint online	Yes	Yes	Yes	Yes
Microsoft Lync Server 2010 on-premises UM interoperability with Exchange Online	No	Yes	No	Yes
Administration/Manageability				
PowerShell support	Yes	Yes	No	No
Bigfin (web) UI	No	Yes	No	No
Reporting (CDR, QoE)	Yes	Yes	No	No
Support for third-party applications				
Lync automation APIs (client side)	Yes	Yes	Limited pilots	Yes
Server-side APIs	Yes	Yes	No	No