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## Microsoft® Office Live Communications Server 2005 with Service Pack 1 Feature Guide

*Microsoft Corporation*

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### **Abstract**

Microsoft® Office Live Communications Server 2005 with service pack 1 (SP1) delivers instant messaging and presence as part of a scalable, enterprise-grade solution offering enhanced security, seamless integration with other Microsoft products, and an extensible, industry-standard development platform. Your organization can realize cost savings and improved business efficiencies, increased individual productivity and enhanced intellectual property protection with this easy-to-manage, highly available solution.

With Live Communications Server, your team can connect with co-workers, partners, suppliers and customers in real time, share critical and time-sensitive information and collaborate with other organizations as easily as they do today with co-workers, while taking advantage of built-in security measures to help safeguard your proprietary business information.

Targeted new features facilitate real-time communication across multiple geographies, time zones and organizational boundaries, enabling you to make better decisions faster. This white paper describes the benefits of Live Communications Server and provides specific examples of organizations that have realized value from these new methods of real-time communication.

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## Overview of Live Communications Server 2005

Microsoft® Office Live Communications Server 2005 (Live Communications Server 2005) provides a powerful, scalable, enterprise-grade IM (instant messaging) and integrated presence solution. IM is the ability to transfer text messages in real time over an Internet Protocol (IP) network such as the Internet or a corporate network. Presence awareness is the ability to detect another user's availability on one or more devices. Live Communications Server also supports peer-to-peer audio, video, application-sharing and data collaboration, instantly accelerating the workflow of today's information workers. Live Communications Server 2005 improves business efficiencies across organizational boundaries by extending IM and other real-time communication capabilities to trusted partners, customers and suppliers and, with the addition of Public IM Connectivity, also extending to users of the public IM service providers Microsoft Network (MSN®), America Online (AOL®) and Yahoo!®.

This groundbreaking version of Live Communications Server uses a highly available, scalable architecture and with the upgrade to SP1, an improved set of administration tools to make it even simpler to deploy and manage real-time communications both within an enterprise and between an organization and one or more external organizations. Integrated with both the Microsoft Office System and the Windows Server System, Live Communications Server 2005 fits seamlessly into your existing work processes and infrastructure to deliver immediate benefits to your organization.

### Standard and Enterprise Editions

Organizations may choose from two editions of Live Communications Server 2005, Standard or Enterprise. Each is tailored to meet specific organizational needs identified by customers. Please see Error! Reference source not found. for more information on the differences between the product editions.

Live Communications Server 2005 **Standard Edition** consists of a single, stand-alone IM and presence server along with a local MSDE (Microsoft Data Engine) database for storing user data. A Live Communications Server 2005 Standard Edition server uses the same basic platform as a Live Communications Server 2003, but now supports up to 15,000 concurrent connections. Standard Edition is the appropriate choice in small deployments where enterprise-level capacity and performance are not required.


















































Live Communications Server 2005 Standard Edition assigns users to a single home server. Although a domain might contain two or more home servers, each user is assigned to only one home server. User data, such as contact lists and registration status, are stored in a SQL MSDE database on the same server.




















































Live Communications Server 2005 **Enterprise Edition** utilizes a new concept called a server pool. A server pool consists of a group of Enterprise Edition front-end servers connected to a separate, shared SQL Server database. This two-tier architecture enables Enterprise Edition to deliver substantial improvements in availability, scalability, performance and data recovery.












Live Communications Server 2005 Enterprise Edition is different from Standard Edition in the following ways:

- **Availability:** Enterprise Edition uses two-tier server architecture that enables users to find and connect to the next available Enterprise Edition server, even if one or more have failed.
- **Scalability:** In large deployments, numerous individual Standard Edition home servers may be necessary to manage users and direct traffic. Since all user data is stored in a central SQL server with Enterprise Edition, you can simply add more Enterprise Edition front-end servers to handle to increasing load and capacity.
- **Two-Tier Architecture:** Live Communications Server 2005 Enterprise Edition enables two new server roles: a front-end pool of Enterprise Edition servers for handling client connections and a back-end database server (using SQL Server) for storing user data.
- **Data Recovery:** In addition, Enterprise Edition uses SQL server to store user data. SQL can be clustered and/or backed up for improved data safety using standard SQL data recovery processes.

**Table 1: Live Communications Server Feature Comparison**

KEY:  = Feature Included  = Improved in LCS 2005  = New in LCS 2005	Live Communications Server 2003	Live Communications Server 2005 w/SP1 Standard Edition	Live Communications Server 2005 w/SP1 Enterprise Edition
<b>Connect and Collaborate</b>			
Microsoft® Office Live Meeting integration			
Share security-enhanced IM and presence between 2 or more organizations (federation)			
Connectivity to MSN, AOL and Yahoo public IM service providers <sup>1</sup>			
Link corporate telephone system and computers (PBX/PSTN integration) <sup>3</sup>			
<b>Presence Awareness and Contacts</b>			
Presence status control (online, away, busy)			
Do not disturb setting, disabling notifications <sup>3</sup>			
Server-side or "roaming" contact list			
Integration with Microsoft Office programs			
Support for Microsoft Office Communicator 2005 <sup>2</sup>			
Offline status <sup>3</sup>			
150+ contacts supported			
Contact search outside contact list <sup>3</sup>			
Microsoft Exchange free/busy information <sup>3</sup>			
<b>Real-Time Collaboration Features</b>			
Instant messaging (IM)			
Audio and video			
Handwriting messages (ink support)			
Application- and whiteboard-sharing			
Desktop sharing (remote assistance)			

KEY:  = Feature Included  = Improved in LCS 2005  = New in LCS 2005	Live Communications Server 2003	Live Communications Server 2005 w/SP1 Standard Edition	Live Communications Server 2005 w/SP1 Enterprise Edition
Point-to-point file transfer			
Multi-party data and application sharing <sup>3</sup>			
Support for the Public IM Connectivity Service <sup>2'3</sup>			
<b>Server Performance</b>			
Active user capacity	8-10,000 per server	 Up to 15,000 per server	 Over 100,000 per server pool
Scalability planning tools			
Failover support for planned growth or unplanned downtime			
Clustering capability			
<b>Security</b>			
Optional logging of text messages			
Optional archiving of text messages <sup>4</sup>			
Audio/video and IM text encryption			
Kerberos, NT LAN Manager (NTLM) authentication			
Protection against unsolicited instant messages (SPIM control filters)			
URL blocking			
<b>Administration and Reporting</b>			
Manage Live Communications Server 2003 and 2005 servers			
Support for Microsoft Operations Manager 2000 and 2005 versions and Microsoft Management Console (MMC)			
Active Directory service integration			
Group Policy Object management			
Enable users by per-user, bulk-user and per-feature basis			
Data recovery			
XML-based management tools			

KEY:	Live Communications Server 2003	Live Communications Server 2005 w/SP1 Standard Edition	Live Communications Server 2005 w/SP1 Enterprise Edition
 = Feature Included  = Improved in LCS 2005  = New in LCS 2005			
Enhanced federation support using DNS <sup>2</sup>			
<b>Extensible Standards-Based Platform</b>			
Server application programming interface (API)			
Updated client APIs			

<sup>1</sup> Public IM Connectivity is a separate service license and is additional to the Live Communications Server Client Access License (CAL). For pricing and licensing details, please visit [How to Buy Live Communications Server](#).

<sup>2</sup> This feature requires Live Communications Server 2005 Service Pack 1 (SP1). For more information on SP1, see the [Live Communications Server Service Pack 1 Overview](#).

<sup>3</sup> This feature is best supported when using Microsoft Office Communicator 2005. For more information on Office Communicator, see the [Microsoft Office Communicator 2005 Overview](#).

<sup>4</sup> This feature requires a non-Microsoft partner solution for full compliance with United States government regulations for electronic communication required by the Sarbanes-Oxley Act of 2002 (SOX), the Health Insurance Portability and Accountability Act (HIPAA), the National Association of Securities Dealers (NASD), and the Securities and Exchange Commission (SEC). Get more information on [Live Communications Server partner solutions](#).



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## Key Benefits of Live Communications Server 2005

### Cost Savings and Increased Productivity

Live Communications Server provides both instant messaging and presence awareness, a critical enterprise capability allowing users to discover if others are available to collaborate, communicate and share information. With advanced presence technology, Live Communications Server offers instant access to team members, partners, suppliers and customers across multiple geographies, time zones and organizational boundaries. With Service Pack 1, customers can connect and communicate with users of the public IM service providers: Microsoft Network (MSN), America Online (AOL) and Yahoo!. This means information can flow rapidly and efficiently, reducing costs and enabling better, faster decision-making.

When information workers can see their colleagues on instant messenger (IM), they can immediately get the answers to quick questions involving work issues. Cutting through the e-mail clutter and less invasive than a phone call, IM focuses in on the exact information needed to keep business processes moving forward.

For example, Live Communications Server enables users to display their status (away, idle, busy, do not disturb, etc.) to other users. One can also determine who is offline or unavailable. By right clicking on a user that is offline, users will see if a contact is available via other forms of communication such as e-mail or telephone if the organization has taken advantage of telephony integration. The new advances in Live Communications Server 2005 allow people to communicate across firewalls with the same enterprise-grade benefits as internal-only conversations enjoyed in previous versions. Workers can also log in to their IM interface from remote locations using a simple Internet connection and their Live Communications Server-compatible instant messaging client. These specific real-time communications capabilities immediately increase the productivity of team members regardless of their physical location.

### Integration with Microsoft Office Communicator 2005

While Live Communications Server 2005 supports Microsoft Windows Messenger 5.1 for basic presence and IM scenarios, SP1 provides incredible benefits when combined with the new Microsoft Office Communicator 2005 client, scheduled for availability in the second quarter of 2005. Microsoft Office Communicator 2005 features supported by Live Communications Server 2005 include:

- Easy-to-use contact search capabilities, using the new Live Communications Server Address Book Service, allows users to easily search for others from their corporate global address list (GAL), as well as local address information on their computer.
- Integration with Microsoft Office® Outlook® and Microsoft Exchange Server™ to let users view other contacts' free/busy information from their schedule, as well as displaying their out of office (OOF) messages directly in Office Communicator 2005
- Extended presence, including the ability to allow users to set 'custom notes', to provide more rich information to other contacts, enabling them to make more informed decisions on how to interact. This information is displayed whether or not a user is on or offline, using the offline presence capabilities of Live Communications Server 2005.
- With appropriate Private Branch Exchange (PBX) or Public Switched Telephone Networks (PSTN) gateway infrastructure in place, Office Communicator 2005 provides

integration with enterprise telephony systems, allowing the user to control their enterprise phone directly from their computer to initiate calls and even divert calls to a remote location when they are not at their desk.

- Conference calls with partner service providers can be started directly from Office Communicator 2005, making it much easier for information workers to communicate with others.

With Live Communications Server 2005 SP1 and partner solutions for telephony integration, Office Communicator 2005 supports some enterprise telephony scenarios, including call control, call intercept, and presence-enabled call forwarding as well as easy-to-initiate PSTN conference calling and Microsoft Office® Live Meeting sessions.

## Integration with the Microsoft Office System and Windows Server System

Microsoft works to ensure that customers can extend current infrastructure investments, yet have the opportunity to incorporate new technologies into existing computing environments. Live Communications Server 2005 is part of the Windows Server System, and adheres to the common engineering criteria described in this Windows Server overview:

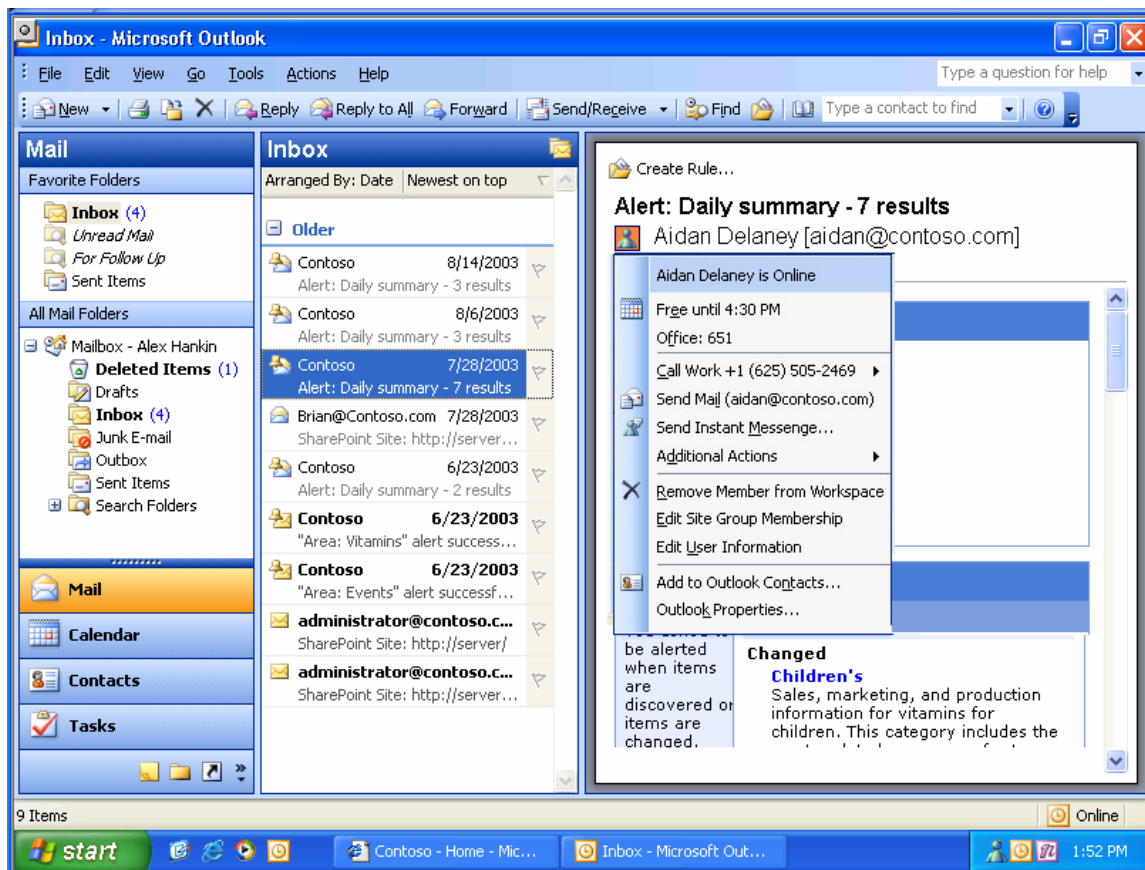
<http://www.microsoft.com/windowsserversystem/overview/commoncriteria.mspx>.

Integrating presence with the Microsoft Office System is unique to Live Communications Server. Rather than forcing people to break concentration in order to get the information they need to complete their work, Live Communications Server provides in-context communication to keep your team on task and increase their productivity. Workers may instantly find and communicate with people from within familiar programs such as Microsoft Outlook, Microsoft Excel and Microsoft Word. This integration occurs wherever the user sees a 'paw,' the icon representing a person's presence status. When co-workers have accurate information about team members' availability, they do not waste time trying to contact them through inappropriate means. This translates into increased productivity and frequently reduces costs as well.

**Table 2: Microsoft Products with Presence Powered by Live Communications Server**

Feature	Application
Instant Messaging	Microsoft® Office Communicator 2005
	Microsoft® Windows Messenger 5.1
Collaboration	Microsoft® Office SharePoint Portal Server
	Microsoft® Windows SharePoint Services
	Microsoft® Office Live Meeting
Communication	Microsoft® Outlook
	Microsoft Exchange Server 2003
Productivity	Microsoft® Excel
	Microsoft® Word
	Microsoft® PowerPoint
	Microsoft® Office Visio
	Microsoft® Publisher

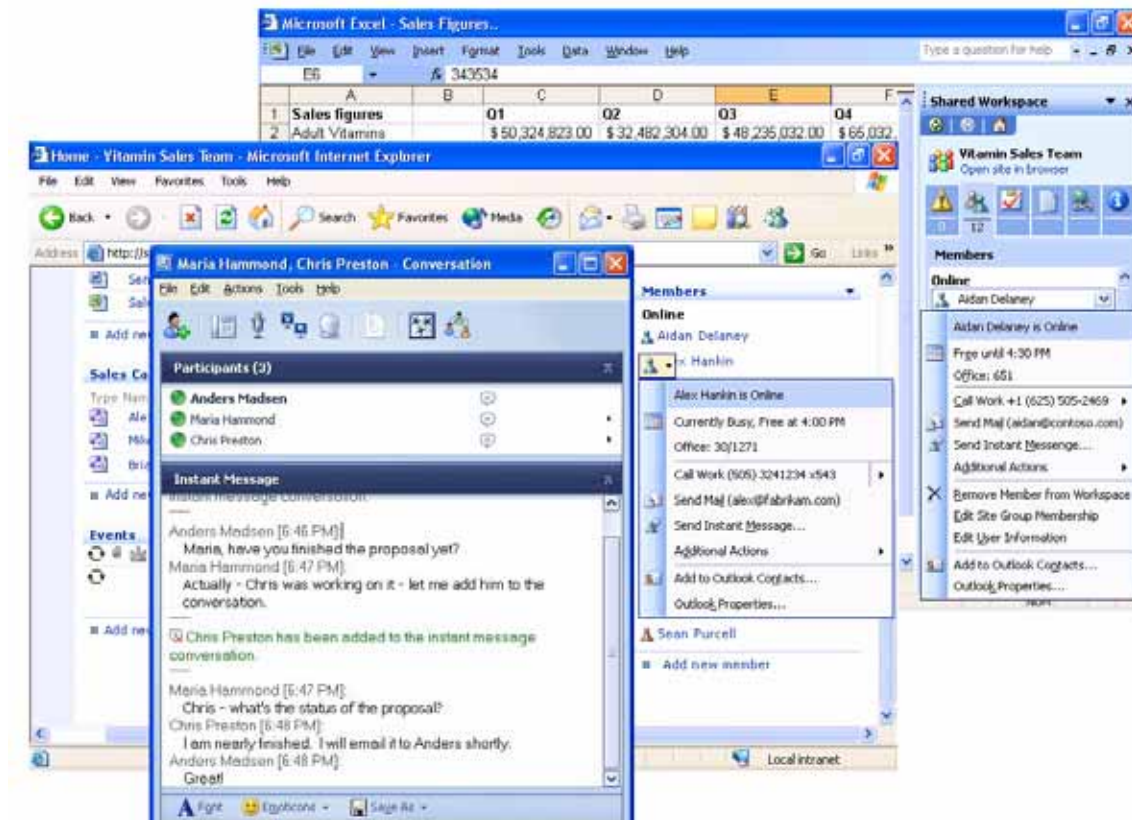
Presence icons automatically appear next to people's names in several leading Microsoft products (See Error! Reference source not found.). This kind of information makes it clear when and where you can reach your colleagues at a moment's notice.



**Figure 1: Presence within Microsoft® Office Outlook**

Customers will find presence awareness already built into Microsoft® Outlook 2003, a leading communication tool in today's business world. Connecting with colleagues is as easy as hovering over a presence icon, so people can instantly see if someone is online or busy. This information is available for everyone connected to not just those listed in a contact list.

The advent of intranet and extranet portals allows people to share documents, calendars, contact lists and more without the problems of asynchronous collaboration. Rather than sending a document to several individuals, it is much faster and more efficient to publish it once, referring colleagues to a Web site.



**Figure 2: Presence in Microsoft® SharePoint and Microsoft® Office Excel**

There, several people can work or provide comments on the same document; eliminating multiple outdated versions and cluttered e-mail strings.

To support these scenarios, SharePoint offers presence awareness throughout its interface. Presence icons show up in lists and XML-based Web parts. Meeting Workspaces (created on SharePoint team sites with the click of a button from Microsoft Outlook) provide dynamic presence icons next to each team member's name. Member Lists, with presence icons for each person who is a member of that SharePoint site, are also conveniently visible to the users.

Workers can instantly see who is online and available to discuss documents or upcoming meetings, regardless of time zone or location. With Microsoft® Exchange integration, the user can even check a person's schedule and get up-to-date availability information directly from their calendar. This makes it easy to determine when someone will be free to communicate.

Presence is integrated into other Microsoft Office System programs through Document Workspaces and Smart Tags. Smart Tags are XML-based tools that recognize certain names, phrases or numbers in Microsoft Word and Excel. The item appears with a subtle dotted red underline, letting the user know there is a range of actions that can be taken instantly with a click of the mouse. Examples include sending an e-mail, checking someone's schedule, initiating an instant message or finding out someone's job title. Adding presence information to these programs with Live Communications Server allows the user to communicate with relevant people directly within a familiar interface.

## Enterprise-Grade Solution

IT managers appreciate the numerous Live Communications Server 2005 improvements in administration, security, scalability and reliability. It fits smoothly into an existing Microsoft infrastructure as part of the Windows Server System and the Microsoft Office System. By directly lowering the costs of managing a real-time communications infrastructure, Live Communications Server makes it easier to deliver cutting-edge communication services to all end-users.

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### Architecture and Scalability

Live Communications Server 2005 Standard Edition consists of a single, stand-alone IM and presence server along with a local MSDE (Microsoft Data Engine) database for storing user data.

- All user data stored on single “home server”
- User data stored locally in SQL MSDE database
- Supports approx 15,000 active users per server
- Requires Windows 2003 for server installation
- Requires Active Directory running Windows 2000 SP3 or Windows 2003
- Offers remote user access and federation features

The Live Communications Server 2005 Standard Edition provides 50% more capacity than the 2003 version, supporting up to 15,000 concurrent active users. For those enterprises with tens of thousands of employees, or those wishing to take advantage of a clustered architecture, Live Communications Server 2005 Enterprise Edition is appropriate.

Live Communications Server 2005 Enterprise Edition consists of a pool of servers connected to a separate, shared SQL Server database. This two-tier architecture enables Enterprise Edition to deliver substantial improvements in availability, scalability, performance and data recovery.

- All user data stored on SQL 2000 back-end server. Can utilize new or existing SQL server database
- Front-end/back-end server architecture offering fail-over support
- Supports over 125,000 active users per “server pool”
- Requires Windows 2003 for server installation
- Requires Active Directory running Windows 2000 SP3 or Windows 2003
- Requires SQL Server 2000 SP3 for back-end database
- Offers remote user access and federation features

Live Communications Server 2005 with SP1 improves on the features of Live Communications Server 2005 in both the Standard and Enterprise editions by extending the federation model, enhancing functionality, and increasing performance and infrastructure support. These improvements include:

- Enhanced federation, which uses DNS-SRV resolution to connect to federation partners.
- Enhanced Spam over IM (SPIM) control with updated server-side filters
- IM URL filter to block messages that contain URL's or attempt to initiate a file transfer
- Tools for enabling public IM connectivity to MSN, AOL, and Yahoo!.
- Support for multiple-tree Active Directory forests.
- Improved server API performance.
- Support for the new presence and collaboration client, Microsoft® Office Communicator 2005.

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## Security and Privacy

Live Communications Server 2005 is specifically designed to help address business requirements for heightened security in today's computing environments. In accordance with the Microsoft company-wide Trustworthy Computing initiative, Live Communications Server 2005 provides many new features and enhancements to improve reliability, manageability, and security.

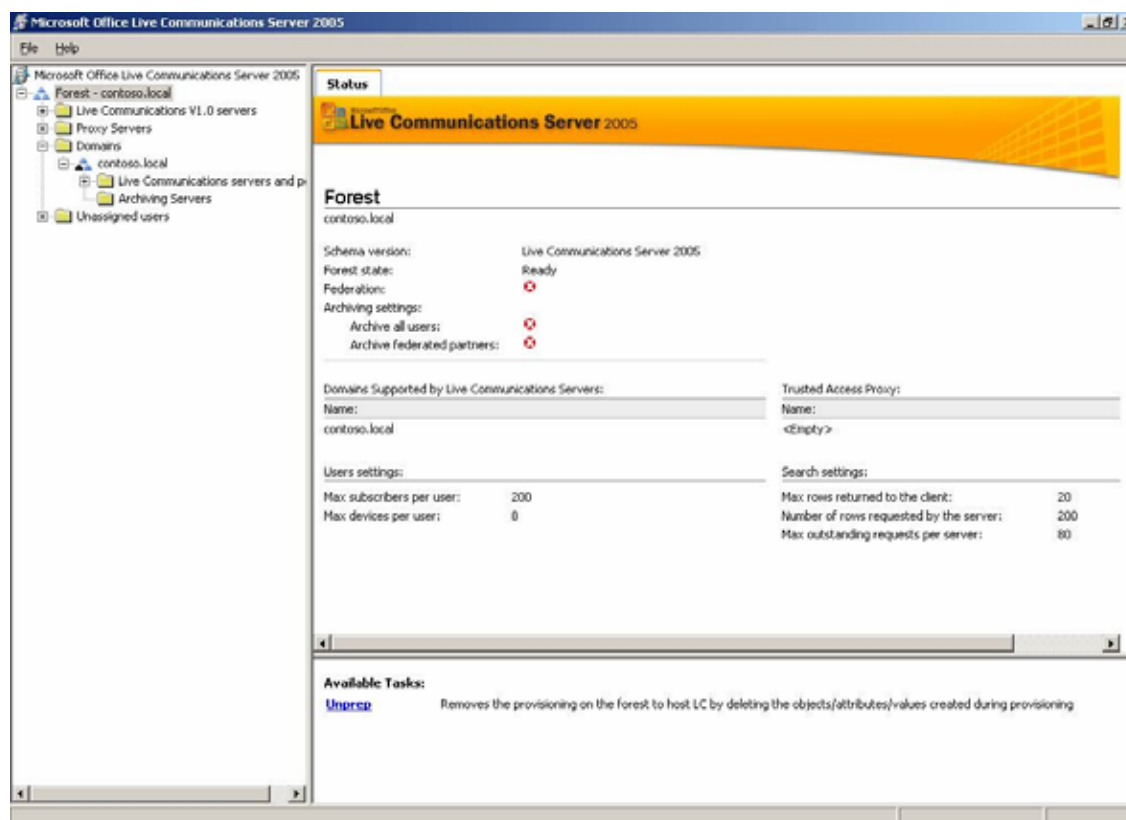
A key benefit for IT managers using Live Communications Server 2005 is the control of sensitive corporate information sent between workers and users of public IM service providers. When users have public IM clients at work, conversations are exposed rather than encrypted. These public IM services do not provide logging or archiving capabilities, making it impossible to comply with any applicable regulations such as the Sarbanes-Oxley Act (financial services) and the Health Insurance Portability and Accountability Act (HIPAA). With SP1, users can use a single client to communicate with users of MSN® Messenger, AOL® Instant Messenger™ (AIM®) and Yahoo!® Messenger clients, and those transactions can optionally be logged and archived.

Another key benefit that comes with the upgrade to SP1 are the new settings and spam over IM (SPIM) control for each enterprise-to-enterprise connection. These new, optional SPIM filters can be configured to suit the particular needs of each organization to reduce unauthorized or unsolicited messages that can slow employee productivity and increase network load.

Finally, the new IM URL filter application provides a way to block messages that contain URLs, hyperlinks or attempts to initiate a file transfer. This application, enabled by default, helps prevent the propagation of a virus or worm throughout your organization via these means.

## Manageability

With the new management tools built into Live Communications Server 2005, IT managers can get more of the info they need about their server environment at a glance. They save time and reduce training costs by using familiar Windows GUI-based administration tools, including Windows Management Interface (WMI), Microsoft Management Console (MMC) and Microsoft Operations Manager (MOM) to manage users, servers and global settings, plus monitor the entire real-time collaboration system. (See **Figure 3: Live Communications Server 2005 Advanced Management Tools**).



**Figure 3: Live Communications Server 2005 Advanced Management Tools**

Live Communications Server 2005 with SP1 adds further administrative controls to the set of robust planning and deployment tools that were introduced in Live Communications Server 2005. These new tools allow IT managers to have control over the number of incoming and outgoing connections created on an individual Access Proxy.

Live Communications Server works seamlessly with existing Microsoft infrastructure elements such as Windows Active Directory® and Windows Server 2003. This makes it easy for the IT manager to consolidate network, server and IM user resources, giving them more security and control over the network.

## Location-Independent Access

With Live Communications Server 2005, the IT manager can offer seamless access to remote and home workers without the need for Virtual Private Networking (VPN). When someone wants to send a quick IM, requiring him or her to log on to a VPN is often time-prohibitive.

Federation is the ability to establish trusted relationships between your organization and one or more external organizations, allowing users to initiate and share IM sessions and subscribe to user presence across network boundaries.

Live Communications Server 2005 SP1 simplifies the deployment model for the federation feature delivered in Live Communications Server 2005 by making the discovery of Live Communications Server environments (or Access Proxies) dynamic, no longer requiring static configuration. This new enhanced federation feature that SP1 provides also gives network administrators the ability limit federation for their organizations to explicitly designated external domains (the recommended configuration), or extend it to any and all external domains.

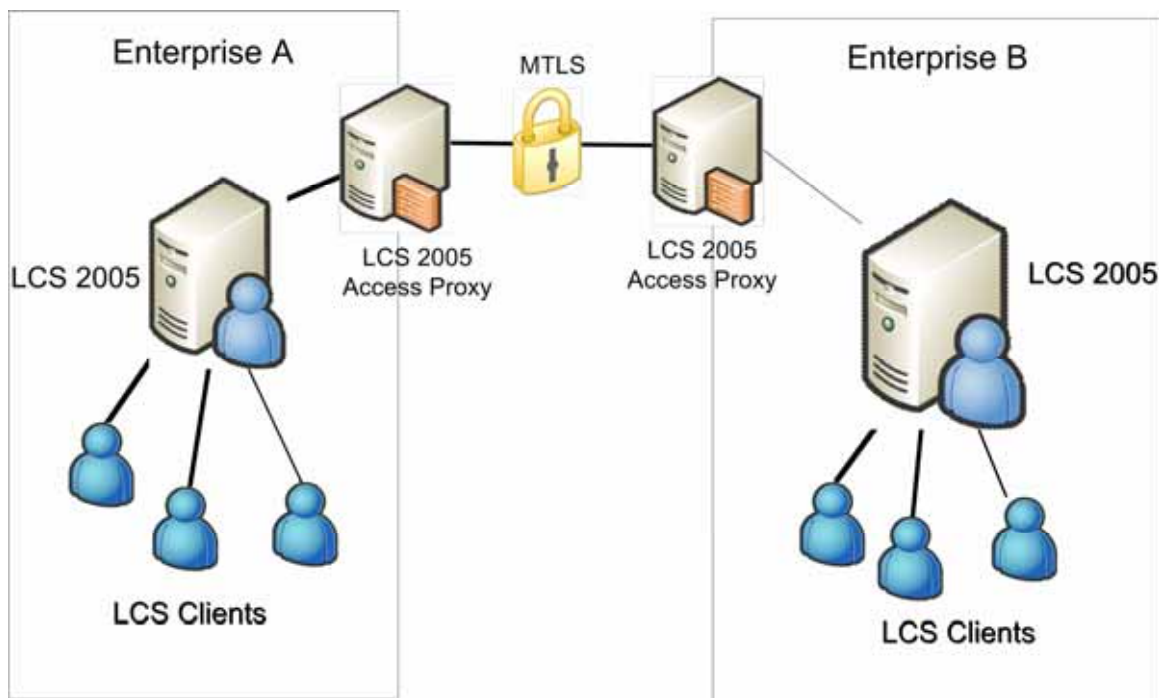


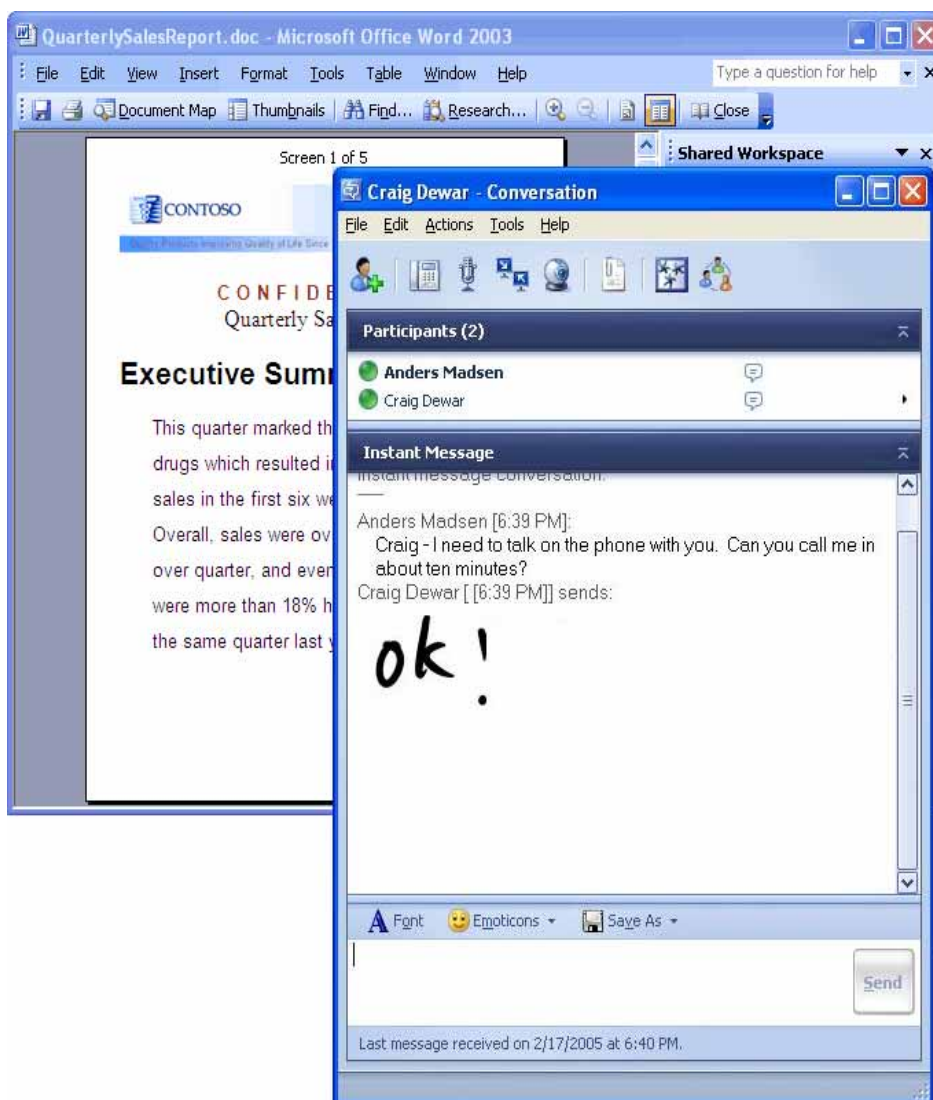
Figure 4: Federation with Live Communications Server



## Scenarios and Examples

### Timely Info: Presence, Contacts and IM at Work

Live Communications Server 2005 makes it possible for collaboration and communication to be part of every application. Presence information from the server can be integrated into productivity applications and enterprise LOB applications. When users are working in a document and have questions, they can initiate an IM session with a team member or partner using one of the public IM service providers, use Microsoft® Office Communicator 2005 to share the file, and make changes to the file immediately.



**Figure 5: Instantly Connecting with Work Contacts within Existing Business Processes**

### Instant Meetings: Reducing Travel Costs

When IM does not provide enough collaborative discussion, users can immediately initiate an audio conversation, using a regular computer microphone and speakers or a headset device. Users can also make PC-to-phone and phone-to-PC audio calls through the standard public switched telephone network (PSTN) with an appropriate gateway deployment. Video conferencing adds another dimension to audio. In a video conference, users can see and hear each other in real time.

### Sharing Documents: Reduce Network Load

With file transfer, users can transfer files as part of an IM conversation, reducing e-mail storage capacity as users share files in a targeted fashion, without using e-mail.

With the whiteboard feature, users can write as they might in a conference room on a traditional whiteboard. Additionally, users can paste content from other applications into the whiteboard if they want to share information without allowing other users to see their desktop.

## **Support Staff: Saving Time and Money**

Moving help desk response from e-mail and/or phone to IM means faster resolution of issues and lower telephone charges. The remote assistance capabilities of Live Communications Server and Microsoft Office Communicator 2005 allow help desk personnel to provide instant help to users, no matter where they are located. The technician can either view or take complete control of the machine, enabling them to better diagnose issues and fix them quickly.

By using Live Communications Server as a real-time communications platform, user lists are fully authenticated through Active Directory, so staff can feel comfortable using this capability.

This scenario can save hours of time for IT personnel on a weekly basis, translating into thousands of dollars in cost reductions. When common user issues can be dealt with remotely, as they occur, technical staff can work equally well on-site or remotely. Users will not be stuck waiting for someone to help them, as this type of assistance is easily provided on an ad-hoc basis.

## **Across Firewalls: Better Decisions, Faster**

With the new federation feature, different organizations can share authenticated, encrypted instant messaging and presence information between teams. This enables collaboration to take place between suppliers, customers, partners, and different divisions of the same organization. Often companies will have separate networks for new acquisitions, geographically dispersed groups or different business units. With federation, all these teams can instantly be connected.

## **The Call Center: Customer Satisfaction**

When call center employees communicate with customers, they often need to discuss matters with a supervisor. With instant messaging, the worker can identify what supervisor is available to approve a special request or speak directly to a customer.

In the past, call center employees would have had to put the customer on hold while physically searching for an available supervisor, sometimes even having to call the customer back after e-mailing or phoning a co-worker. This typically would take several hours to days to resolve customer issues. Now, these requests can be completed within minutes, increasing customer satisfaction and saving precious minutes of call center employees' time.

## **Continuous Contact: Server Availability**

The ability for partners and customers to connect to a business in a timely manner is imperative to survival in today's business market; therefore, businesses cannot afford to have their communications infrastructure unavailable. With the new Enterprise Server pools, organizations have greater capacity, better performance, faster fail-over support and data backup. This will reduce, if not eliminate, the time that their servers are unavailable, reducing internal support costs and increasing profits.

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## Development with Live Communications Server

### Platform for Extensibility

The architecture of Live Communications Server uses the industry-standard protocols Session Initiation Protocol (SIP) and SIP for Instant Messaging and Presence Leveraging Extensions (SIMPLE), and includes a rich set of application programming interfaces (APIs). Microsoft supports these standards because of their broad potential in future communications, a potential that goes far beyond instant messaging.

Live Communications server offers both client and server Software Development Kits SDKs to encourage innovative uses of real-time communication information. There is a library of information online at the Microsoft Office Developer Center:

<http://msdn.microsoft.com/office/understanding/livecomm/default.aspx>.

### Partner Solutions

The Microsoft real-time communications partner ecosystem is particularly rich because the presence information provided by Live Communications Server is so valuable. Partner solutions for Live Communications Server fall into three main categories: platform extensions, vertical solutions and complementary services. Several key scenarios are described in Table 3, below. This is not a complete list of partner solutions for Live Communications Server 2005; rather it is a high-level representation of the most commonly offered products and services. Refer to the Live Communications Server Partner Directory for more information:

<http://www.microsoft.com/office/livecomm/prodinfo/partners.mspx>

**Table 3: Partner Solutions for Live Communications Server**

Scenario	Solution
Collaboration	Integrated Conferencing Integrated telephony (for Microsoft Office Communicator 2005) Multi-Party Voice/Video/Data Persistent Chat
Client Access	Web Browser Client SMS Gateway Mobile Clients
Security	Anti-Virus and Content Checking Compliance and Logging Session Border Control
Business Process	Alerts
Systems Management	Load Balancing Backup/Restore Clusters and SANs

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## System Requirements

When designing new product releases, Microsoft balances new features and functionality with providing customers the highest possible level of interoperability and/or coexistence with previous product versions.

### Standard Edition

To use Microsoft® Office Live Communications Server 2005 Standard Edition, you need:

- PC with a Pentium III compatible 550 MHz or higher processor, Dual Pentium 4-compatible 3.0 GHz recommended
- Microsoft Windows Server 2003 Standard, Enterprise or Datacenter Editions
- 256 MB of RAM or above, 2 GB of RAM recommended
- Dual 36 GB Ultra2 SCSI hard drives recommended
- Super VGA (800x600) resolution monitor, (1024X768) resolution is recommended
- Internet connection is required for viewing online help and documentation

Additional items or services required to use certain features:

- Microsoft Office Live Communications Server requires Microsoft Windows Active Directory 2000 SP3 or 2003.
- Microsoft® SharePoint® Portal Server or Windows SharePoint® Services for presence integration with portals and team sites.

### Archiving Service and Database Requirements

- Installation of the User Services component of the Standard Edition Live Communications Server 2005 will result in the installation of a dedicated Microsoft SQL™ Desktop Engine 2000 Service Pack 3a database instance.
- The Archiving Service requires a separate server with Microsoft SQL Server™ 2000 Standard or Enterprise Edition with service pack 3a.

For more detailed server requirements, see [www.microsoft.com/sql/techinfo/planning](http://www.microsoft.com/sql/techinfo/planning).

### Network Requirements

- For some features to work properly, Live Communications Server 2005 servers must be a member of a Microsoft Windows 2000 or Windows Server™ 2003 domain. A 100-megabits per second (Mbps) network interface card (NIC) is recommended.

### Client Software Requirements

- While Windows Messenger 5.1 supports basic presence and IM scenarios, the recommended client for Live Communications Server 2005 and public IM connectivity is Microsoft Office Communicator 2005.
- For more detailed client requirements, see [www.microsoft.com/livecomm](http://www.microsoft.com/livecomm).

## Enterprise Edition

To use Microsoft® Office Live Communications Server 2005 Enterprise Edition, you need:

- PC with a Pentium III compatible 550 MHz or higher processor, Dual Pentium 4-compatible 3.0 GHz recommended
- Microsoft Windows Server 2003 Standard, Enterprise or Datacenter Editions
- 256 MB of RAM or above, 2 GB of RAM recommended
- 36 GB Ultra2 SCSI hard drives is recommended
- Super VGA (800x600) resolution monitor, (1024X768) resolution is recommended
- Internet connection is required for viewing online help and documentation

Additional items or services required to use certain features:

- Microsoft Office Live Communications Server requires Microsoft Windows Active Directory 2000 SP3 or 2003
- SharePoint® Portal Server or Windows SharePoint® Services for presence integration with portals and team sites

### Database Requirements

- Installation of Live Communications Server 2005 Enterprise Edition Database will require Microsoft SQL Server 2000 Standard or Enterprise Edition with Service Pack 3a or higher. The SQL database should be installed on a separate machine:
- PC with a Pentium 4 compatible 3.0 GHz or higher processor
- Microsoft Windows Server 2003 Standard, Enterprise or Datacenter Editions
- 4 GB of RAM or above, 8 GB of RAM recommended
- Dual 36 GB Ultra2 SCSI hard drives recommended

For more detailed server requirements, see [www.microsoft.com/sql/techinfo/planning](http://www.microsoft.com/sql/techinfo/planning).

### Network Requirements

- For some features to work properly, Live Communications Server 2005 servers must be a member of a Microsoft Windows 2000 or Windows Server™ 2003 domain. A 100 megabits per second (Mbps) network interface card (NIC) is recommended.

### Client Software Requirements

- While Windows Messenger 5.1 supports basic presence and IM scenarios, the recommended client for Live Communications Server 2005 and public IM connectivity is Microsoft Office Communicator 2005.
- For more detailed client requirements, see [www.microsoft.com/livecomm](http://www.microsoft.com/livecomm).

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## Summary

Microsoft® Office Live Communications Server 2005 provides cost savings, improved business efficiencies and increased productivity in an enterprise-grade server. With standard protocols, advanced deployment and management tools, a strong partner ecosystem and innovative client features, Live Communications Server is the clear choice for today's organizations.

## Additional Resources

For more information, visit

- Microsoft® Office Live Communications Server: <http://www.microsoft.com/livecomm>
- Microsoft® Office Live Communications Server Deployment and Technical Resources <http://office.microsoft.com/en-us/FX011450741033.aspx>
- Microsoft Office Communicator 2005 <http://www.microsoft.com/livecomm>
- Public IM Connectivity for Live Communications Server 2005 <http://www.microsoft.com/office/livecomm/prodinfo/publicim.mspx>
- Microsoft® Windows SharePoint Services and Microsoft® Office SharePoint Portal Server: <http://www.microsoft.com/sharepoint>
- Microsoft® Windows Server: <http://www.microsoft.com/windowsserversystem>
- Microsoft® Office System: <http://www.microsoft.com/office/system>

For detailed system requirements and help planning, deploying and maintaining your Live Communications Server environment, please visit the Live Communications Server Deployment Resources Center. From <http://www.microsoft.com/livecomm>, choose the "Deployment Resources" link to download the specific product documentation that aligns with your deployment phase.