

Cisco Unity 5.0 for Microsoft Exchange

Cisco® Unified Communications is a comprehensive IP communications system of voice, video, data, and mobility products and applications. It enables more effective, more secure, more personal communications that directly affect both productivity and operational effectiveness. It brings people together by enabling a new way of communicating—where security is everywhere and information is always available...whenever and wherever it is needed. Cisco Unified Communications is part of an integrated solution that includes network infrastructure, security, mobility, network management products, lifecycle services, flexible deployment and outsourced management options, end-user and partner financing packages, and third-party communications applications.

Cisco Unified Communications messaging options include:

- **Cisco Unity**—Scales to meet the needs of large departments and agencies and delivers powerful voice, integrated, and unified messaging options that transparently integrate with Microsoft Exchange (including 2007), Lotus Domino, and Novell GroupWise.
- **Cisco Unity Connection**—Combines integrated messaging, voice recognition and call transfer rules into an easy-to-manage system for medium-sized departments and agencies with up to 3000 users. For organizations with up to 500 users, Cisco Unity Connection is available as a single server solution with Cisco Unified Communications Manager Business Edition.
- **Cisco Unity Express**—Available in select integrated services routers, Cisco Unity Express provides cost-effective voice and integrated messaging, automated attendant, and interactive voice response (IVR) capabilities for small or branch/regional offices with up to 250 users.

Cisco Unity is a foundational element in bringing unified communications solutions to federal agency organizations. This application is a secure, proven, and reliable solution that delivers powerful voice, integrated, and unified messaging options that transparently integrate with Microsoft Exchange, Lotus Domino, and Novell GroupWise. The Cisco Unity solution provides powerful migration tools for investment protection, industry-leading security features such as Secure Messaging, robust auto-attendant functions, and a broad range of productivity-enhancing features.

Intelligent Voice Messaging

At its core, Cisco Unity is a powerful and intelligent voice messaging system that allows individual users interact with the system in the way that is most comfortable and convenient for them. The self-enrollment conversation is so easy to use that new employees can personalize their voice mailboxes and begin using Cisco Unity within minutes. This solution provides full menu options to guide users through its many features and then, as they become more experienced, gives them the option to switch to brief menus for faster system navigation. Regardless of their level of comfort or expertise, context-sensitive help is only a single touch-tone away.

When new messages arrive, Cisco Unity can announce the number, type, and priority of the messages received, the date and time they were sent, or deliver messages to another extension, mobile telephone, or remote location. When listening to your messages, you can use telephone touch-tones to adjust volume control and playback speed, and forward, rewind, and pause messages. And to help colleagues and customers reach you more efficiently, you can record up to five different personal greetings. You may, for example, want a specific greeting when you are out of the office or on the phone.

Desktop Message Access

Integrated Messaging

Integrated messaging allows users to access their voice messages through their Outlook e-mail, or any Internet Mail Access Protocol (IMAP) client, and does not require Active Directory or Exchange expertise. Integrated messaging users can still take advantage of the features inherent in Cisco Unity.

Powerful Unified Messaging

Cisco Unity Unified Messaging integrates transparently with Microsoft Exchange, allowing users to handle all their messages—e-mail, voice, and fax—through a single inbox using the Outlook e-mail client. Icons provide simple visual descriptions of each message type and because every message is delivered to one inbox, you can see the number, type, and status of all your communications at a single glance. You also can reply to, forward, and save your messages—regardless of media type—in public or personal Microsoft Outlook folders with just a click of the mouse.

With the text-to-speech (TTS) capability of Cisco Unity Unified Messaging, you get information about all your messages—and even hear the text portion of e-mail messages—over the telephone. Depending on the capabilities of your fax server, you can even print e-mail, attachments, and incoming faxes on a nearby fax machine.

Web Access to Voice Messages

The Cisco Unity Inbox is a browser-based message access console that provides a dedicated voicemail inbox that can be used to deliver unified-messaging functions to voicemail-only users. Users can use the Cisco Unity Inbox interface to listen to any message in their voicemail inbox through either their PC or phone. With the Cisco Unity Inbox, you can receive notification of new voicemail messages right in your e-mail inbox using Simple Mail Transfer Protocol (SMTP) notification. Message notification provides an HTML link that you can click on to automatically launch the Cisco Unity Inbox message access console, enabling you to play voice messages in WAV file format.

Mobile Access to Voice Messages

Cisco Unity delivers all-in-one messaging for mobile users. Mobile workers using a Treo or BlackBerry device can simply double-click to play voice messages within their personal digital assistant (PDA) e-mail applications. Cisco Unity supports a variety of notification options, including Short Message Service (SMS), e-mail, paging, and out-dialing, which allow users to customize the way they are notified of new voice messages. Cisco Unity Unified Messaging for Exchange users can access their voice messages using Cisco Unified Mobile Communicator, which integrates with Exchange to provide mobile access to messages.

Personal Web Administration

Cisco Unity gives subscribers the ability to customize their personal settings by using the Cisco Unity Assistant, a dynamic interface in the browser-based Cisco Unity Personal Communications Assistant. Cisco Unity Assistant reduces the workload for system administrators and gives subscribers additional flexibility to customize their Cisco Unity system to suit changing demands in their work environment. Subscribers can quickly and easily establish or change personal settings such as their voicemail options, security code, personal distribution lists, and message delivery options. For ease of administration and security reasons, the system administrator decides which features and settings individual subscribers or classes of service can access.

Built For Migration

Designed for an IP environment, Cisco Unity plays a central role in the migration of your telephony infrastructure from time-division multiplexing (TDM) to IP. This application interoperates with Cisco Unified Communications Manager and traditional telephony systems to help you transition to IP telephony at your own pace and protect your existing infrastructure investments. Cisco Unity even integrates with multiple-vendor private branch exchange (PBX) systems at the same time, enabling branch office consolidation that reduces costs by centralizing messaging into a single system. In addition, Cisco Unity Session Initiation Protocol (SIP) integration provides native support for SIP proxy servers, designated SIP phones and clients, and SIP-enabled access gateways, to give SIP users access to the full array of benefits Cisco Unity delivers.

Networking Capability

Cisco Unity offers an optional digital networking module that enables the system to connect to other Cisco Unity servers at the same site through the LAN, or remote sites using a WAN or the Internet. Digital networking makes communicating with co-workers at remote locations fast and efficient by giving you the ability to send subscriber-to-subscriber messages anywhere in the world.

With digital networking you can use the global addressing feature—listing all system subscribers in a central directory—to quickly and conveniently send a message to a co-worker in another time zone. Subscriber-to-subscriber messages offer more reply options to the recipient, making it simpler to respond to an e-mail with a voice message, for example. Also, when retrieving messages over the telephone, voicemail from system subscribers is played with the sender's recorded name for greater recognition.

A powerful message networking option available with Cisco Unity is the Cisco Unity Bridge. With Cisco Unity Bridge, you can send subscriber-to-subscriber messages to anyone in your organization who resides on a TDM-based Avaya or Octel voicemail system supporting Octel Analog Networking. In addition, you have the added capability to simply "reply to" a networked message with a single touch-tone key. With Cisco Unity Bridge, users maintain advanced messaging capabilities on both systems as they migrate to Cisco Unity.

Cisco Unity also provides optional Voice Profile for Internet Mail (VPIM [digital]) and Audio Messaging Interchange Specification (AMIS [analog]) networking modules that allow message interchange between disparate messaging systems that also support these industry-standard messaging protocols. With VPIM or AMIS, customers who are migrating to Cisco Unity can continue to exchange messages with internal system subscribers who reside on a third-party messaging system, helping to ensure a smooth system migration.

Simplify Administration and Reduce Costs

The components of Cisco Unity extend the power of your Microsoft Exchange server, eliminating the inefficiencies associated with having multiple messaging systems, and simplifying the way you access and manage your system. Cisco Unity uses Microsoft Exchange message store and directory services to unify your system administration, collecting all messages in a single store and providing you with a single-address directory service.

By sharing a single directory with the data network, Cisco Unity Unified Messaging eliminates the redundancy of user account information maintained by various applications—such as e-mail and voicemail systems. Cisco Unity Unified Messaging also saves you hours of time in initial installation with a feature that imports the Microsoft Exchange accounts directory to create subscriber lists automatically. With the Cisco Unity approach, all messages are centrally stored, administered, and controlled, dramatically reducing the amount of time spent on support and maintenance, and minimizing the traffic on your LAN.

At the same time, Cisco Unity Unified Messaging also uses the Cisco Unity Message Repository to increase message store availability if Microsoft Exchange goes offline. Cisco Unity Message Repository helps enable Cisco Unity Unified Messaging to continue taking new voice messages when the e-mail system or network is offline. System subscribers also can retrieve these messages, minimizing service disruption.

Cisco Unity Unified Messaging takes full advantage of such powerful Microsoft Exchange features as digital networking, automatic message replication, message rules, foldering, and inbox assistant support. Through Microsoft Exchange e-mail gateway services, Cisco Unity Unified Messaging also can work with e-mail clients that support SMTP, Multipurpose Internet Mail Extensions (MIME), Post Office Protocol 3 (POP3), and IMAP4.

An Easy-to-Use System Administration Interface

Cisco Unity features an intuitive and easy-to-use graphical user interface, resulting in greater productivity for your organization. Moreover, this solution simplifies system administration with its embedded Microsoft Internet Information Server (IIS), single message store, and single directory service, providing superior performance and reliability. In addition to housing data in a central store, administration tasks can be handled conveniently and securely from a Web-based system administration console that IT staff can access from any networked PC using Internet Explorer.

The Cisco Unity administration console minimizes the complexity of Microsoft Windows and Microsoft Exchange so you do not have to be a Microsoft Certified Systems Engineer (MCSE) to administer the system. This interface integrates with Microsoft Windows 2000 through the use of snap-in HTML, and allows Cisco Unity to be configured and monitored from anywhere on the Internet using Internet Explorer instead of proprietary Windows-based interfaces. Additionally, Cisco Unity is supported on Windows 2003 for customers who have existing Exchange 2003 or 2007 environments.

Localizations for International Customers

Cisco Unity is localized to meet the needs of customers around the globe. Localized versions are available in multiple languages—five dialects of English (Australian, Canadian, New Zealand, United Kingdom, and United States), Arabic (Formal), three dialects of Chinese (Cantonese, Mainland Mandarin, and Taiwan Mandarin), Czech, Danish, Dutch, Flemish, French (European and Canadian), German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian and European), Russian, two dialects of Spanish (Latin American and European), and

Swedish. In addition, depending on the language, these versions feature everything from system prompts and subscriber conversations to the browser-based administration consoles and product documentation in the language of your choice.

Cisco Unity Features

New in Cisco Unity 5.0

- **Secure messaging**—Encryption of voicemail messages increases system security, allowing system administrators to enforce voicemail retention policies and prevent the compromise of voice messages with proprietary or confidential content forwarded to someone outside the system.
- **Message Monitor**—Voicemail messages can be screened as they are being recorded.
- **Interrupted Session Recovery**—Automatically return to in-progress message composition or playback if you ended a session prematurely. For example, someone stopped by your office with a quick question and you hung up the phone while in the middle of a message.
- **Cisco Unity Phone View**—Users can access their voicemail inbox through the IP phone interface. They can use the message locator to view the voicemail message queue or jump to a particular message in their inbox, view message header details, and play selected messages.
- **Speech Access**—Press or Say capability enables the use of voice commands to navigate menus and manage voicemail messages.
- **Exchange 2007 Support**—Exchange 2007 can be used with Cisco Unity as a Unified Messaging solution (refer to Cisco Unity System Requirements document for more information about specific deployment models).

Interoperability and Availability

- **VPIM support for multiple types of PBXs with one centralized Cisco Unity system**—Provides for digital interoperability
- **AMIS support**—Provides for analog interoperability
- **Cisco Unity Bridge**—Offers interoperability with traditional Avaya or Octel voicemail systems
- **Networked messages with Cisco Unity Express or Cisco Unity Connection with VPIM**
- **Cisco Unity Message Repository**—Manages new voice messages when the e-mail system or network is offline
- **Q Interface Signaling Protocol (QSIG) and Digital Private Network Signaling System (DPNSS) support**—Enhances integration with traditional private branch exchange (PBX)
- **Failover capability**—Prevents service disruption if the unified messaging server is unavailable, delivering enhanced reliability and serviceability

Message Access from the TUI

- **Play and process messages (repeat, reply, forward, delete, save, mark as new, hear day or time stamp, or skip to the next message)**
- **Deliver messages to users at designated telephone numbers**—for example, home, cellular or mobile telephone, or remote-office telephone
- **Reverse, pause, or fast forward during message playback**
- **Control volume and speed during message playback**

- Pause or resume during message recording
- Address messages to multiple recipients
- Perform global addressing
- Message go-to—Locate message by number or name
- Record message and specify as regular, urgent, private, or future delivery
- Record message and request return receipt
- Switch between spelling name and extension when addressing message
- Live reply—Immediately reply to messages from other subscribers by calling them back directly from the TUI
- Forward faxes to any fax machine from a touch-tone telephone
- Post greeting recordings

Message Access from the PC

- Access voice messages visually with IMAP client; note that customers can deploy either Cisco Unity Inbox or IMAP client access users
- With DVR-style interface in e-mail client, play, rewind, pause, or fast forward voice messages with a few mouse clicks
- Send voice and fax messages to anyone who can receive Internet e-mail
- Download all message types and respond to or create new messages offline
- Save voice and fax messages along with e-mail in public or personal Microsoft Exchange or Microsoft Outlook folders for a complete record of your communications
- Apply Microsoft Exchange Inbox Assistant rules to voice and fax mail

End-User Features

- Customize your message-notification options, manage personal greetings, or change passwords with Cisco Unity Assistant (the Cisco Unity Personal Communications Assistant Web browser-based personal administrator)
- Select conversation type; full or brief prompts are available
- Change prompt and message playback speed
- Address and then record a message, or record and then address a message
- Record up to five personal greetings (alternate, busy, internal, off-hours, or standard)
- Specify the order in which messages are presented over the phone, by message type (voice, fax, or e-mail), urgency, or LIFO/FIFO
- Create private distribution lists and address messages to them through TUI (Telephone User Interface) or using Unity Assistant (web browser client)
- Set an expiration date for any personal greeting
- Manage an alternate greeting, require callers to listen to full greeting, or notify users when a greeting is on
- Provide message notification for new messages through devices such as SMTP text, pagers, and phone destinations
- Provide message notification with Short Message Service SMS text messaging for mobile users; Cisco Unity supports the Short Message Peer to Peer (SMPP) 3.4 protocol for interoperability with all major Short Message Service Center providers

- With a cascade message-notification feature, additional notification types can be sent if a message is not retrieved
- Select whether message counts are announced; type, totals, saved, and new counts are available
- Specify whether Cisco Unity announces a transferred call
- Specify call forward to a personal greeting or busy greeting
- Specify an after-greeting action; after a subscriber greeting, callers can be directed to leave a message, sign in, or hang up, or they can be sent to call handlers, a directory handler, an interview handler, or a subscriber

System Administration Overview

- Cisco Unity takes advantage of your communications infrastructure investment by integrating with Cisco Unified Communications Manager and leading traditional telephone systems—even simultaneously—paving the way for a smooth transition to IP telephony.
- Cisco Unity natively supports SIP proxy servers, designated SIP phones and clients, and SIP-enabled access gateways.
- An intuitive browser-based system administration console and tools simplify installation, maintenance, and daily use and enable maintenance from any PC on the network, saving time, expense, and effort.
- Cisco Unity Assistant (the Cisco Unity Personal Communications Assistant Web browser-based personal administrator) allows IT staff to enable end users to manage more of their own accounts, saving time and decentralizing routine administration.
- Superior component-based server architecture provides a solid and flexible foundation for future growth.
- Innovative use of streaming media provides efficient audio delivery.
- Fault-tolerant system tools include robust security, file replication, event logging, and optional software Redundant Array of Independent Disks (RAID) levels 0–5.
- Cisco Unity offers full localization in U.S. English, French, German, and Japanese—including system prompts, subscriber conversations, browser-based administration consoles, and product documentation.
- Localized telephone system prompts are available in multiple languages, including five dialects of English (Australian, Canadian, New Zealand, United Kingdom, and United States), Arabic (Formal), three dialects of Chinese (Cantonese, Mainland Mandarin, and Taiwan Mandarin), Czech, Danish, Dutch, Flemish, French (European and Canadian), German, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese (Brazilian and European), Russian, two dialects of Spanish (Latin American and European), and Swedish.
- Cisco Unity supports physical terminal line (tty) conversation for accessibility.
- Cisco Unity is scalable to 144 ports* and 7500 unified-messaging users per server (depending on server type; refer to Cisco Unity Supported Platforms list). These servers are then networked to support larger enterprise environments.

*New in Cisco Unity 5.0

System Administration Features

- Alternate extensions—Configured by system administrator or by user
- Alternate key mappings for message retrieval to aid users in transitioning from their existing voicemail system
- Automatic gain control that gives subscribers consistent message volume playback levels
- Configurable billing ID
- Ability to browse to another Cisco Unity Administrator on a networked Cisco Unity server
- Call-holding queue
- Call handlers that accept calls, play recorded prompts, route calls, and accept messages
- Caller ID
- Configurable call routing and auto attendant
- Configurable call screening
- Class of service to control subscriber access to features
- Ability to create subscribers individually or in bulk
- Cross-server live reply for Cisco Unified Communications Manager deployments
- Cross-server logon for Cisco Unified Communications Manager deployments
- Day and time stamps for messages
- Directory handlers to manage how callers search directory
- Directory search by spelling a subscriber name, allowing entry of up to 24 letters
- Easy mailbox access from personal greetings; log in to TUI without entering ID
- Encrypted Skinny Client Control Protocol (SCCP) and Secure Real-Time Transport Protocol (SRTP) for Cisco Unified Communications Manager integrations
- Event logging
- Failover—Automatic or manual
- Failback—Automatic or manual
- Full mailbox warning
- Guided installation
- Configurable list of observed holidays
- Hospitality
 - Guest conversation customized for hotel and resort industry
 - Property management systems (PMS) interface (requires purchase of PMS hotel communication software from Percipia Networks)
- Provides interview handlers to collect recorded input from callers
- Identified subscriber messaging (ISM) between networked Cisco Unity servers in the same dialing domain
- Ability to configure how Cisco Unity handles messages that are interrupted by disconnected calls
- Message-waiting indicator (MWI)
- Ability to move subscriber mailboxes without shutting down Cisco Unity

- Multiple administrative levels to control access to pages in system administration GUI by class of service (read, modify, or delete rights)
- Multiple audio codec support
- Multiple time-zone support
- Music on hold
- Non-delivery or delivery receipt reason details presented in GUI inbox
- OS, message store, and third-party software support
 - Message store support: Microsoft Exchange 2000, 2003, and 2007
 - Support for Exchange 2000, 2003, and 2007 clustering
 - Windows 2000 Server on the Cisco Unity server
 - Windows 2000 Advanced Server on the Cisco Unity server
 - Windows Server 2003 on the Cisco Unity server (refer to release notes for details)
 - Windows Server 2003 Enterprise Edition on the Cisco Unity server (refer to release notes for details)
 - Support for data-protection software
 - Support for remote-access software
 - Support for monitoring software
- Public distribution lists; users can specify those to which new users will be added
- Configurable restriction tables
- Exclude return receipts registry controlled feature
- Configurable schedules
- Self-enrollment for subscribers to set password, record voice name, and specify directory listing
- Shared subscriber licenses among networked Cisco Unity servers (license pooling)
- Status monitor to give the system administrators real-time status of fax and telephone ports, reports in progress, and system configuration
- System broadcast messages for single Cisco Unity server deployments and multiple server deployments
- Configurable system greetings
- 12- and 24-hour clock support for time stamps
- Automatic system time clock adjustment for daylight savings time
- TUI greetings administrator (Cisco Unity Greetings Administrator)

Fax

- Optional Cisco Fax Server, a full-featured fax solution based on the market-leading Captaris RightFax 9.0 product line
- For information on the supported third-party fax server hardware and software; refer to: <http://www.cisco.com/en/US/products/ps6178/index.html>

Security

- Secure messaging to enforce voicemail retention policies and prevent the compromise of voicemail messages with proprietary or confidential content forwarded to someone outside the enterprise*
- Host intrusion prevention system—Cisco Security Agent standalone agent to protect Cisco Unity servers from worm and virus attacks; optional Cisco Security Agent management console
- Password and PIN security policy options to enforce expiration, complexity, reuse, and lockout
- Optional RSA Secure-ID 2-factor one-time PIN authentication server interface
- Call-restriction tables to prevent toll fraud
- Security event logging and reports of failed login and account lockouts to help detect "PIN cracker" attack attempts
- SRTP and signaling encryption to ensure secure communication between Cisco Unity and Cisco Unified Communications Manager
- Subscriber PIN reset feature in Cisco Unity Assistant to reduce help desk calls and operating expenses
- Message archiving utilities to enforce corporate electronic records-retention policies
- Support for HTTPS for secure Web access to Cisco Unity

*New in Cisco Unity 5.0

Reports

- Administrative Access Activity Report
- AMIS Out Traffic Report
- AMIS In Traffic Report
- Call Handler Traffic Report
- Distribution Lists Report
- Event Log Report
- Failed Login Report
- Outcall Billing Report
- Port Usage Report
- Subscribers Report
- Subscriber Message Activity Report
- System Configuration Report
- Transfer Billing Report
- Unresolved References Report

For a full list and description of Cisco Unity reports, refer to the Cisco Unity System Administration Guide, "Reports" chapter.

Cisco Unified Communications Services And Support

Using the Cisco Lifecycle Services approach, Cisco and its partners offer a broad portfolio of end-to-end services to support the Cisco Unified Communications system. These services are based on proven methodologies for deploying, operating, and optimizing IP communications solutions. Initial

planning and design services, for example, can help you meet aggressive deployment schedules and minimize network disruption during implementation. Operate services reduce the risk of communications downtime with expert technical support, and optimize services enhance solution performance for operational excellence. Cisco and its partners offer a system-level service and support approach that can help you create and maintain a resilient, converged network that meets your agency needs.


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