Cisco Unified CallConnector Server

For small business employees to communicate effectively with suppliers and customers in today's competitive business environment, they need ready access to information, updated in real time. They also need to stay connected – to one another and to the business applications they use to do their jobs. With the right solution, your business can collaborate more effectively and problem-solve like never before.

Solution Overview

Cisco® Unified CallConnector Server (UCC-Server) is tightly integrated with Cisco Unified Communications Manager Express on Integrated Services Routers (CME-ISR) and the Cisco Unified CallConnector Personal, Advanced, and Operator clients to enable users to send instant messages, view presence and telephone status, click to make and control the calls on their phone, view archives of instant messages and call histories, visually access voicemail, and use their contact information from the directories.

Cisco Unified CallConnector Server offers businesses the flexibility of rich, easy-to-use applications that streamline the communications of their employees by providing them with real-time information on the presence status or availability of people that they want to communicate with, and offering multiple methods for communicating with them. Cisco Unified CallConnector Server provides:

- An integrated presence and telephone status server that delivers real-time availability information on other CallConnector users, including whether they are on a call
- A graphical management interface for configuring and setting up the Cisco Unified CallConnector solution
- Centralized directories and archives of instant messages and call histories for retrieval by the CallConnector clients
- Local management of the Advanced Client licenses to view, reserve, deallocate, and add additional licenses
- Support for multisite deployments with connections to multiple Cisco Integrated Services Routers

Cisco Unified CallConnector Server is the server component of the Cisco Unified CallConnector solution, a suite of server applications that connect to Cisco Unified Communications Manager Express to make the unified communications services available to the CallConnector clients (Figure 1).

Figure 1. Cisco Unified CallConnector Server and Clients
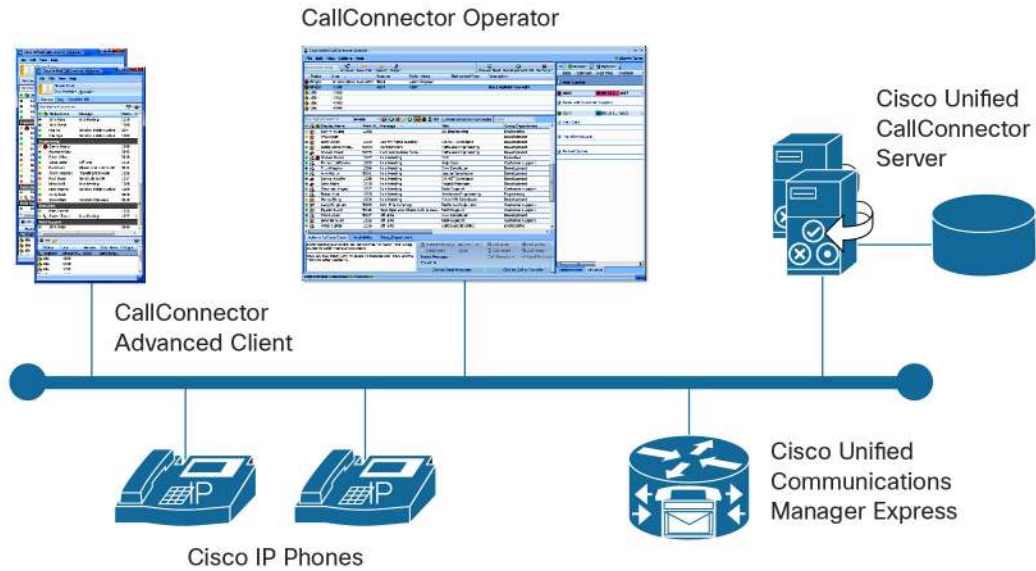
CallConnector Presence, Telephone Status, and Instant Messaging

Cisco Unified CallConnector Server maintains user presence information and provides real-time updates of presence state changes to all connected clients. It also enforces the access rules to the presence information. Administrators can set up rules governing access to the presence information for each group or department.

Users can update their own presence status, a manager can update the status of any member of their group, and operators and administrators can change the presence information of anyone in the organization.

Cisco Unified CallConnector Server maintains four categories of presence information: availability, location, away message, and telephone status. Table 1 briefly describes each category.

Table 1. Presence Information Maintained by Cisco Unified CallConnector Server

Availability	Availability states include Available, Busy, Away, and Unavailable. Users can make changes to their availability from the CallConnector clients.
Location	Location information specifies where the user is at the present time. The options include At Work, At Home, On the Road, or On Vacation.
Away message	The away message is a free-format text message with which the users can leave instructions or provide additional information on their whereabouts to their colleagues.
Telephone status	The telephone status is based on extension numbers and indicates whether the number is idle, ringing, or in a connected state.

Business Instant Messaging

The CallConnector solution provides a feature-rich instant messaging capability to provide users with another method of real-time communication (Figure 2). Using the server's capabilities, the CallConnector clients provide personal instant messaging, group chat, and the ability to escalate an instant message (IM) session to a voice call or to send email or text messages.

Figure 2. Cisco Unified CallConnector Instant Messaging Window
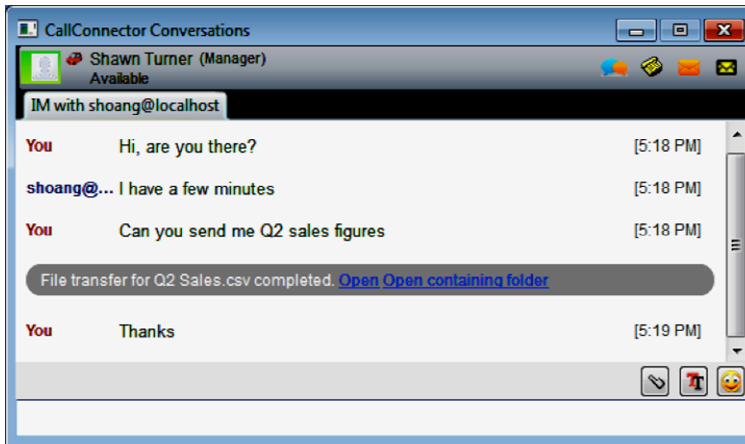
Instant messaging features include:

- User-to-user instant messages, consisting of short messages exchanged between two users in the business.
- Group chat that allows users to create a temporary IM conference and invite other users to join. All users in the chat group receive the messages entered by chat session participants.

All instant messages are stored on the CallConnector Server until they are backed up or removed based on the rules set by the administrator.

Cisco Unified CallConnector Clients

Cisco Unified CallConnector Operator: A feature-rich desktop attendant console designed specifically for the fast call handling plus contact management and messaging requirements of a small business operator position (Figure 3). With Cisco Unified CallConnector Operator, operators can:

- Handle incoming calls quickly and transfer them to the appropriate and available employees with ease
- View incoming calls for answering at a glance, plus view the status of parked, transferred, and held calls
- Easily send instant messages, email, or text (Short Message Service [SMS]) messages to employees who are not available to take calls
- Quickly search for users in the directory and manage the organization's directories
- View and update the availability, location, and telephone status of all employees

Figure 3.   Cisco Unified CallConnector Operator Console
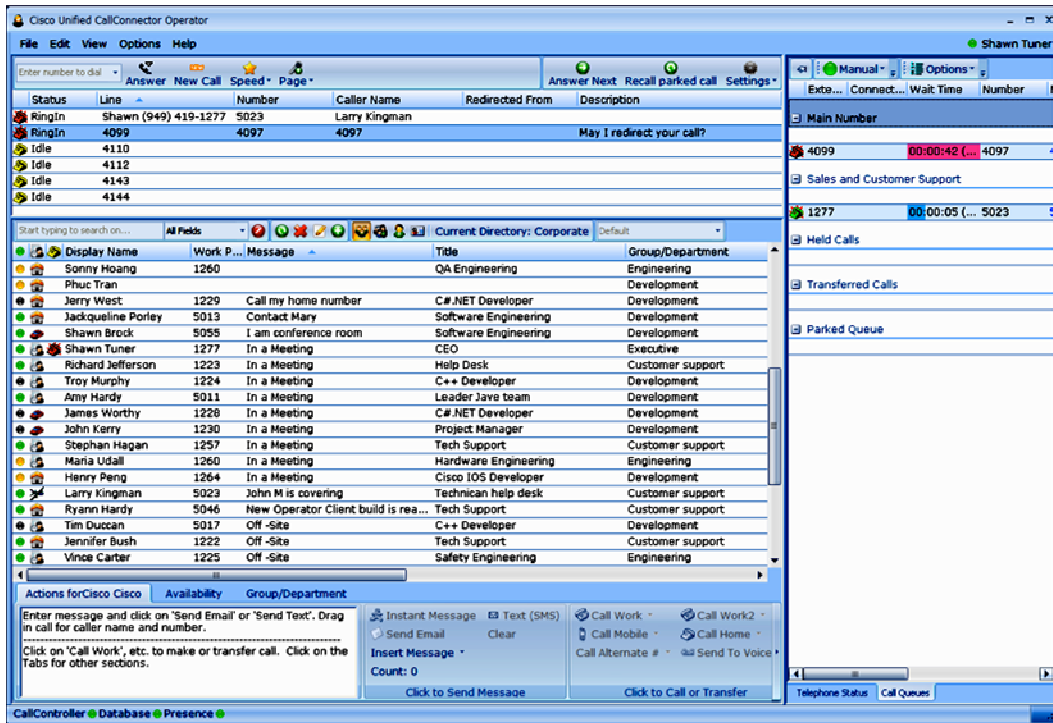
Cisco Unified CallConnector Advanced Client: A single unified client for Windows PCs that provides quick and easy access to powerful communications tools. Key features include presence, instant messaging with federation, visual voicemail access, PC-based click-to-call capability, employee directory, communications history, and Outlook contact integration. Customers can also use toolbars in Outlook and Internet Explorer for accessing the unified communication services (Figures 4 and 5).

Figure 4.   Cisco Unified CallConnector Advanced Client Outlook 2010 Toolbar
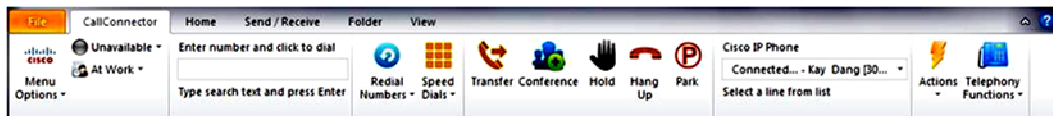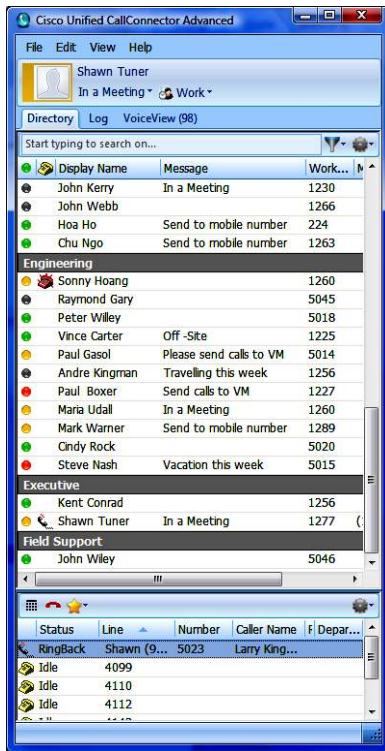
Figure 5. Cisco Unified CallConnector Advanced Client

Cisco Unified CallConnector Personal Client: Facilitate increased productivity and more effective communications with the following features:

- An easy-to-use toolbar within Microsoft Outlook and Internet Explorer for dialing numbers, controlling calls, and accessing contact information
- Bringing all contacts together for using auto-dialing or starting a new email message to a contact
- Inbound-call screen popup with Outlook contact names and clickable options to take the call, send it to voicemail, or send a quick message
- Contact directories and call logs showing the missed, incoming, and outgoing calls with click-to-call back capability

The Cisco Unified CallConnector Personal Client can be setup to work with the CallConnector Server to obtain presence and telephone status information in the corporate directory.

Centralized Administration of CallConnector Solution

The CallConnector Configuration Manager provides a graphical interface for point-and-click configuration of the CallConnector solution. This allows the CallConnector clients to be centrally administered, making it easier for partners and administrators to manage the deployments across many desktops. From the Configuration Manager, administrators can:

- Download CME-ISR phone configuration parameters with a click of a button. Add user accounts and associate a phone with each user
- Import contact data into the CallConnector directories
- Set up the operator parameters for the call queues and park queues, speed numbers, and so on
- Activate the Server and Advanced Client licenses
- Publish new software versions for the clients to automatically upgrade

Table 2 describes the tasks that administrators can perform using the Configuration Manager.

The Configuration Manager runs on the CallConnector Server in two modes: as a standard Windows application (Figure 6) when started from the Configuration Manager icon or Programs menu, or as a service without a graphical interface when run from the command line from the Windows Task Scheduler. The service mode allows the Configuration Manager to be scheduled to run and automatically perform tasks.

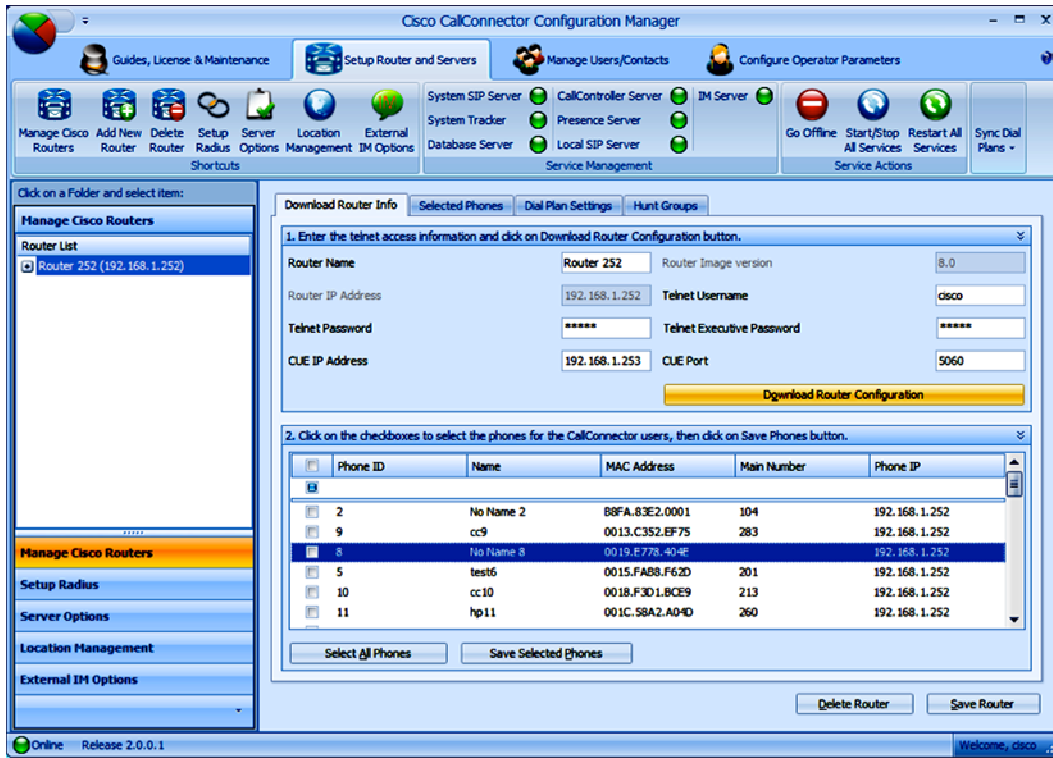**Figure 6.** Cisco CallConnector Configuration Manager

Table 2. Administrative and Management Services Available from the Configuration Manager

Service Available	Description
Run navigation wizards for step-by-step configuration instructions	The navigation wizards open the required configuration page and provide detailed instructions for the configuration task. They provide steps for day 0 and day N tasks, such as setting up the CallConnector Server or an operator console, adding or removing a user, or downloading the router configuration.
Activate CallConnector Server and Advanced Client licenses	Convert the CallConnector Server trial license to a full license by entering the PAK ID and registering (activating) the software. The Advanced Client licenses are also activated from this interface.
Manage Advanced Client licenses	View the allocation of the Advanced Client licenses to users, reserve licenses for specific users, and deallocate licenses that have been assigned for moves and changes.
Perform maintenance functions	Back up the databases and set up SMTP server parameters to send email notifications to users, among other tasks.
Publish software updates	Download new releases of the CallConnector client software and publish them. The clients query for this information at startup and can automatically upgrade to the newer version.
Download CME-ISR configuration information	Once configuration changes have been made on the CME-ISR, the Configuration Manager can download them to the CallConnector Server.
Set up dial plans	The dialing rules are specified centrally in the CallConnector Server for all clients. The CallConnector clients query the server for formatting the lookup and dialable numbers.
Configure the parameters for obtaining telephone status information	Information on the status of an extension is obtained from the CME-ISR, using the Radius messages. The Configuration Manager provides a one-click method to set up the required parameters on the router.
Select the phones for use by the CallConnector Server	Select the phones for the CallConnector Server from the list of all the phones configured on the CME-ISR.
Set up external IM server parameters	IM federation allows users to send and receive instant messages to people outside the organization. The parameters for the external servers are set in the Configuration Manager.

Service Available	Description
Add, modify, or delete CallConnector users	Add, modify, or delete the contact information, the login user name and password, phone, voice mailboxes, and so on for CallConnector users.
Import users and contacts	Import contact information to the corporate and external directories from multiple sources, including the CME-ISR, Exchange, or Active Directory.
Add, modify, or delete groups or departments	Add, modify, and delete the names of the organization's groups or departments.
Set up parameters for the operator console	Configure the parameters for the operator console, including the call queues, page and speed numbers, and so on.
Start, stop, and restart server applications	Some configuration changes require the CallConnector Server applications to be restarted. The Configuration Manager provides interfaces to view the running status and options for stopping and starting these server applications.

Manage Server and Advanced Client Licenses

Cisco Unified CallConnector Server and the CallConnector Advanced Client require registration or activation of the license to make them operable. The Advanced Client licenses are available in increments of eight. Once a license pack has been activated, the administrator can manage the allocation of the individual licenses to the client application installed on each user's desktop. The Configuration Manager supports the following license management capabilities:

- View the status of the CallConnector Server license
- Register or activate the Server license
- Activate the Advanced Client license pack
- View the available Advanced Client licenses
- Allocate, deallocate, and reserve the Advanced Client licenses for specific users

Synchronize with Communications Manager Express Configuration Changes

Cisco Unified CallConnector Server downloads and uses the phone-related configuration information in setting up connections to the CME-ISR and providing services to the CallConnector clients. When changes are made to the CME-ISR phone-related configuration, the information at the CallConnector Server may no longer be correct. Administrators can manually re-download the CME-ISR configuration, or they can schedule automatic downloads. The Configuration Manager can be scheduled to run at specified dates and times using the Windows Task Scheduler and instructed to perform one or more of the following services:

- Stop the CallConnector Server applications
- Start the CallConnector Server applications
- Download the CME phone configuration
- Import user information from the CME
- Purge and remove deleted database records from the log databases

With the automation of these functions, the administrator can make changes to the CME and have the changes applied on the CallConnector Server.

Publish Software Updates

When new versions of the client software are available, they can be automatically propagated to the users' desktops using the Publish Software Updates feature of Cisco Unified CallConnector Server. Administrators can download the newer CallConnector client versions from the Cisco download site and copy them to a network drive. They can then make this version available to the clients from the Configuration Manager. During startup, the Advanced and Operator clients check for newer versions and, with user approval, download and install the updated version.

The Publish Software Update feature makes the deployment of newer versions of the CallConnector clients much easier for partners and administrators.

Centralized Directories for All CallConnector Clients

Cisco Unified CallConnector Server provides centralized directories for corporate and external contacts. A directory database is used to store the contact information. The CallConnector clients download and display the directory information from the server. The CallConnector Server provides the following facilities for managing the centralized directories:

- Graphical interfaces for adding, modifying, and deleting the directory contact information
- Import of CallConnector users from the CME-ISR
- Import of users from Active Directory
- Import of contacts into the corporate and external directories from CME-ISR, Exchange, Active Directory, and text files
- Ability to change the contact information from the operator console

Archive of History of Calls and Instant Messages

Cisco Unified CallConnector Server archives the communications history on the server database. These archives consist of the transaction information of all calls and the summary and details of the instant messages, and they can be viewed from the Advanced Client application. If the automatic purging rules have been set for the server, logs older than the maximum save duration are removed.

Support for Multiple Customer Sites

Cisco Unified CallConnector Server can be configured to support multiple sites, each with its own CME-ISR (Figure 7). Please see the Administrator's Guide for deployment guidelines.

Figure 7.   Cisco Unified CallConnector Server Multisite Deployment
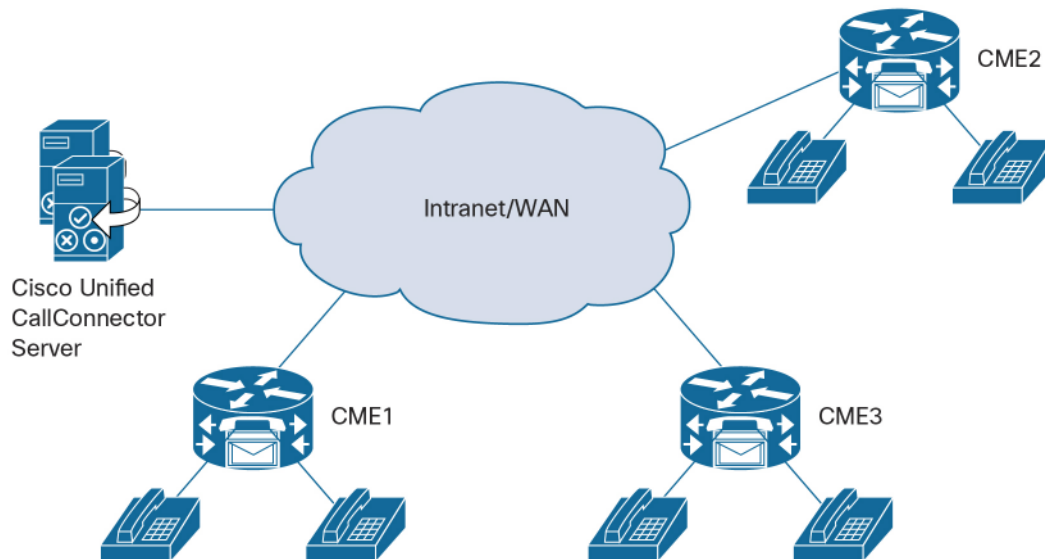
Deploying Cisco Unified CallConnector Server

The Cisco Unified CallConnector solution is a suite of client/server applications that require the Unified CallConnector Server. Cisco Unified CallConnector Server makes deploying and using the client applications easier by:

- Configuring client parameters on the server
- Performing all license management
- Configuring dialing plans on the server, instead of in each individual client
- Importing contact information from Active Directory or Exchange
- Initiating client software updates

Servers can be installed in virtual machine environments for ease of server management. An easy-to-use installation GUI is provided that connects to the Cisco CME-ISR for configuration information, imports the user contact information, and sets up the call control parameters.

Table 3 gives licensing options for Cisco Unified CallConnector Server and the Advanced Client.

Table 3.   Licensing Options for Cisco Unified CallConnector Server and Advanced Client

Description	Benefit
Unified CallConnector Server (includes 8 Advanced Client licenses)	Server license includes 8 Advanced Client licenses. This simplifies and reduces the cost for smaller deployments.
8-user license PAKs	Additional Advanced Client licenses are available in sets of 8.

System Requirements

Table 4 lists the computer requirements for the Cisco Unified CallConnector Advanced Client, Table 5 lists the requirements for the CallConnector Operator Client, Table 6 lists the requirements for CallConnector Server, and Table 7 lists the software version needed for Cisco Unified Communications Manager Express.

Table 4.   Cisco Unified CallConnector Advanced Client Requirements

Parameter	Requirement
Disk space	200 MB free hard disk space Reserve an additional 100 MB for upgrades
Hardware	3.2-GHz or faster dual-core or compatible processor for workstation
Memory	2 GB RAM minimum
Operating system	Microsoft Windows XP Advanced (Service Pack 2 or later), Windows Vista, or Windows 7 (32-bit or 64-bit version) **Note**: Windows 7 Terminal Server or Citrix client environments are not supported.
IP phone	Cisco Unified IP Phones 7931G, 7940G, 7941G, 7942G, 7945G, 7960G, 7961G, 7962G, 7965G, 7970G, 7971G, 7975G, 6921, 6961

Table 5.   Cisco Unified CallConnector Operator Client Requirements

Parameter	Requirement
Disk space	250 MB free hard disk space Reserve an additional 150 MB for upgrades
Hardware	3.2-GHz or faster processor for workstation
Memory	2 GB RAM minimum
Operating system	Microsoft Windows XP Advanced (Service Pack 2 or later), Windows Vista, or Windows 7 (32-bit or 64-bit version)
IP phone	Cisco Unified IP Phones 7931G, 7940G, 7941G, 7942G, 7945G, 7960G, 7961G, 7962G, 7965G, 7970G, 7971G, or 7975G, 6921, 6961

Table 6.   Cisco Unified CallConnector Server Minimum System Requirements

Parameter	Description
Disk space	Smaller sites (up to 25 users): 1 GB free hard disk space Sites with 25 to 75 users: 3 GB free hard disk space Larger sites with 75 to 250 users: 5 GB free hard disk space
Hardware	Smaller sites (up to 25 users): 2.66-GHz or faster multicore processor Sites with 25 to 75 users: 2.66-GHz or faster quad-core processor Larger sites with 75 to 250 users: dedicated 3-GHz or faster quad-core processor
Memory	Smaller sites (up to 25 users): 2 GB system memory Sites with 25 to 75 users: 4 GB system memory Larger sites with 75 to 250 users: 8 GB system memory recommended
Operating system	Microsoft Windows 7 Microsoft Windows XP Professional (Service Pack 2 or later) Windows Vista Windows Server 2003 or 2008 (recommended) Windows Small Business Server 32- or 64-bit versions of Windows OS supported
IP phone	Cisco Unified IP Phones 7931G, 7940G, 7941G, 7942G, 7945G, 7960G, 7961G, 7962G, 7965G, 7970G, 7971G, 7975G, 6921, 6961
Applications	Microsoft Internet Explorer 6.0 with Service Pack 2 or Internet Explorer 7.0 to 8.0
Multisite	Up to 5 sites, 450 users max across sites

Table 7.   Cisco Unified Communication Manager Express Requirementsisco

Cisco Unified CME Software Version	Cisco IOS® Software Release
8.0	15.0 XA
8.1	15.1.T2
8.5	15.1.T3

Ordering Information

To place an order, contact your local Cisco representative, visit the Ordering home page on the Cisco website, or refer to Table 8.

Table 8.   Ordering Information

Product Name	Part Number
Cisco Unified CallConnector Server	SW-UCC-SERVER
Cisco SMARTnet® support	CON-SAU-UCCSERV
Cisco Unified CallConnector Advanced Client (8 PAK)	L-SW-UCC-8ADVANCED
Cisco SMARTnet support	CON-SAU-UCC8AD
Cisco Unified CallConnector Operator Client	L-SW-UCC-OPERATOR
Cisco SMARTnet support	CON-SAU-UCCOPS

For More Information

For more information about the Cisco Unified Communications Manager Express solution, including Cisco Unified CallConnector Advanced Client, Operator Client, and Server, visit www.cisco.com/go/unifiedcallconnector. If you have questions, send e-mail to access-ccme-cue@cisco.com.

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 reduce 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 business needs.

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