Overview of Cisco Unity Express Voice Mail and Auto Attendant

The Cisco Unity Express voice-mail and auto-attendant applications work with Cisco CallManager and Cisco CallManager Express (CME) to provide small- and medium-sized companies with the capability to:

- Create and maintain voice mailboxes for onsite or remote telephone users. Releases 2.1 and 2.2 support up to 100 mailboxes. The maximum number of mailboxes depends on the hardware module and license agreement purchased for Cisco Unity Express.
- Record and upload messages for callers to hear when they dial the company's telephone number, and prompts to guide the callers to specific extensions or employees.

Contents

Prerequisites for Implementing Cisco Unity Express on Cisco CME

Before starting Cisco Unity Express configuration, the Cisco CME system must be installed. If you did not or are not performing the Cisco CME installation, contact the installer or other support personnel to ensure that the following procedures are completed:

1. Install all Cisco CME and Cisco Unity Express hardware and verify functionality.
   - Attach the telephones so that they register with the Cisco CME router.
   - Verify that the Cisco CME router is configured with Cisco IOS Release 12.3(4)T or a later release for the network module (NM) and Cisco IOS Release 12.3(7)T or a later release for the advanced integration module (AIM).
   - Install the Cisco Unity Express NM or AIM in the same router where Cisco CME is installed.
   - For the NM, verify that the Enable LED is lit.

Caution If you are installing an AIM in your Cisco 3745 router, you must install it in the AIM slot labeled AIM1. Installing this AIM in the AIM slot labeled AIM0 of Cisco 3745 routers can damage the AIM.

Note We highly recommend attaching an uninterruptible power supply (UPS) to the router housing the Cisco Unity Express module. Any reliable UPS unit provides continuous power to maintain the operation of the router and the Cisco Unity Express module. Consider the unit's capacity and run time because power consumption differs among Cisco platforms. Ideally, a UPS should include a signaling mechanism that directs the router to shut down Cisco Unity Express properly and then powers off the router.

Cisco IOS Release 12.3(4)T supports automatic switchover to the UPS device if the following configuration is added to the router:

```
line aux 0
privilege level 15
modem Dialin
autocommand service-module service-engine slot/0 shutdown no-confirm
```

where *slot* is the Cisco Unity Express module's slot number.

2. Install and verify Cisco CME software functionality.
   a. You should be able to access the Cisco CME configuration web page.
   b. Verify that the Cisco CME router flash memory has the following files, which control the functionality of the Cisco Unity Express GUI:
      – CiscoLogo.gif
      – Delete.gif
      – Plus.gif
      – Tab.gif
      – admin_user.html
      – admin_user.js

– dom.js

– downarrow.gif

– ephone_admin.html

– logohome.gif

– normal_user.html

– normal_user.js

– sxiconad.gif

– telephony_service.html

– uparrow.gif

– xml-test.html

– xml.template

c. Configure the following path in Cisco CME configuration mode:

```
Router(config)# ip http path flash:
```

Verify the path with the **show run** command.

d. To configure the **ip unnumbered** command on the service-engine interface, use the Cisco IOS software commands on the router to create a static route to the Cisco Unity Express module, for example:

```
ip route 0.0.0.0 0.0.0.0 91.91.19.1
ip route 10.3.6.128 255.255.255.255 Service-Engine1/0
```

In this example, 10.3.6.128 is the IP address of the Cisco Unity Express module and Service-Engine1/0 is the router slot hosting the Cisco Unity Express module.

e. Verify that a SIP dial peer is configured to point to the Cisco Unity Express module, that it specifies G.711 U-law and SIP Notify for DTMF Relay, and VAD is turned off, for example:

```
dial-peer voice 6000 voip <------ SIP dial-peer pointing to Cisco Unity Express
 destination-pattern 6...
 session protocol sipv2
 dtmf-relay sip-notify
 session target ipv4:10.3.2.100 <---- Cisco Unity Express IP address
 codec g711ulaw
 no vad
```

Configure the appropriate number of SIP dial peers to support your dial plan.

f. The FTP server that communicates with Cisco Unity Express must support passive FTP requests. To configure this functionality on the FTP server, refer to the FTP server documentation.

g. Verify that a Cisco CME web administrator is configured with a user ID and password, for example:

```
telephony-service
 .
 .
 .
 .
 web admin system name admin password user1
```

or

```
 web admin system name admin secret 5 encrypted-password
```

Note If you plan to use the Cisco Unity Express graphical user interface (GUI) for configuration purposes, configure an administrator user ID with a password in the Cisco CME interface. You must log in to the GUI as this user. If no administrator user is created in Cisco CME, the administrator cannot proceed with the initialization wizard in the Cisco Unity Express GUI. In Release 1.1, an administrator is created during the installation procedure.

h. Configure the telephones and users. You can create additional users and telephones later using the Cisco Unity Express CLI commands or GUI options. The CLI commands and GUI options create the telephone users in the Cisco CME database; use a synchronization CLI command or GUI option to copy the users and telephones into the Cisco Unity Express database.

Use the following sample ephone-dn and ephone configurations to configure the telephones and users manually:

```
ephone-dn  1 <---- ephone dn configuration for a user
 number 8004
 name User1
 call-forward busy 6900
 call-forward noan 6900 timeout 10
!
!
ephone-dn  20 <---- ephone dn configuration for a group
 number 8801
 name Salesgroup
 call-forward busy 6900
 call-forward noan 6900 timeout 10
!
!
```

i. Configure the message waiting indicator (MWI) on and off extensions. Add the wildcard characters (.) to the DNs to represent the length of a telephone extension number.
Cisco Unity Express requires these wildcards when importing the MWI DNs from Cisco CME during the initialization wizard. If the wildcard characters are not configured in Cisco CME, the DNs will not appear as available choices in the MWI extension field. For example:

```
ephone-dn  30 <---- ephone-dn configurations for MWI on
 number 8000.... <---- valid MWI DN 4-digit extension
 mwi on
!
!
ephone-dn  31 <---- ephone-dn configurations for MWI off
 number 8001.... <---- valid MWI DN 4-digit extension
 mwi off
!
!
!
ephone  1 <--- ephone configured for the ephone-dn configured above
 username "admin1" password null
 mac-address 0009.B7F7.556A
 button  1:1 2:20 3:21 4:22 5:23
```

3. (Optional) If no users were created in the Cisco CME interface, create a list of all users, groups, and their extensions. Having this list eases the task of configuring many users and extensions.

Note Designate a primary extension for each user who will receive voice-mail messages. Cisco Unity Express does not activate the MWI for an E.164 number.

4. (Optional) Create an alternate welcome message for the auto-attendant application. A default welcome message comes with auto attendant. You can create a different message in a .wav file and install it as part of the auto-attendant configuration. See "Recording an Auto-Attendant Greeting or Prompt File" on page 14 for more information.
5. (Optional) Customize the auto-attendant prompt flow to meet your business requirements. See "Configuring Auto-Attendant Scripts" on page 15 for more information.
6. (Required) Record the IP address of the Cisco Unity Express module. Accessing the GUI to configure the system requires this IP address.

Restrictions for Implementing Cisco Unity Express

The following restrictions apply to Cisco Unity Express.

Networking

- Cisco Unity Express supports voice-mail networking only with other Cisco Unity Express and Cisco Unity voice-mail systems. Networking support for other voice-mail systems is not available in Cisco Unity Express.

System Functionality

- For the NM, only one person with administrator privileges and four people with user privileges may log in to the GUI simultaneously. For the AIM, only one administrator and two users may log in to the GUI simultaneously.
- Date and time are determined by the NTP server and cannot be set in the Cisco Unity Express software. Cisco Unity Express can be configured as a network transfer protocol (NTP) client. See the NTP configuration section in *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager Express* and your NTP server CLI for more information.
- Cisco Unity Express supports one language on the system at a time. See the *Release Notes for Cisco Unity Express Release 2.2* for a list of available languages. This language controls the telephone user interface (TUI) system prompts and greetings. The administrative interfaces (GUI and CLI) are available only in U.S. English. Cisco CallManager Express controls the telephone displays, which may be available in multiple languages, and are independent of the Cisco Unity Express supported languages.

Voice Mail Application

- Cisco Unity Express supports two greetings per user, one standard greeting and one alternate greeting. The greetings' time is included in the user's allotted mailbox storage space.

Hardware Limitations

- Only one Cisco Unity Express module per router chassis is permitted, regardless of the number of module slots in the chassis.
- The AIM cannot be installed in slot 0 of the Cisco 3745 router chassis.
- The NM's front panel Fast Ethernet 0 port is not used by the Cisco Unity Express applications and is disabled. The Fast Ethernet 1 port connects the Cisco Unity Express network module to the router and is the only active Fast Ethernet port on the network module.
- The hard disk on the NM cannot be replaced. If the network module's hard disk crashes, the network module must be replaced.

- Online insertion and removal (OIR) of the Cisco Unity Express NM is available only on the Cisco 3745 and 3845 routers. The replacement module must be the same type as the original module. OIR is not available for the AIM.

Caution If the network module or AIM flash memory card must be replaced, manually shut down the Cisco Unity Express application before removing the module from the chassis to prevent file corruption and data loss.

Backup and Restore

Cisco Unity Express does not support the following backup and restore capabilities:

- Scheduled backup and restore operations. The backup and restore procedures begin when you enter the appropriate command.
- Centralized message storage arrangement. The Cisco Unity Express backup files cannot be used or integrated with other message stores.
- Selective backup and restore. Only full backup and restore functions are available. Individual voice-mail messages or other specific data cannot be stored or retrieved.

Other Restrictions

- Cisco Unity Express is an embedded system and provides no access to the Linux system. Users cannot add other Linux-based applications to the Cisco Unity Express module.
- Cisco Unity Express does not support managing and configuring using Simple Network Management Protocol (SNMP) except for hardware inventory.
- Cisco Unity Express does not support Cisco Networking Services (CNS) or Subnetwork Access Protocol (SNAP) autoprovisioning.
- Cisco Unity Express does not support CiscoWorks configmaker.

Recording an Auto-Attendant Greeting or Prompt File

Two methods are available to create auto-attendant greeting and prompt files:

- Create a .wav file with the following format: G.711 U-law, 8 kHz, 8 bit, Mono. The file cannot be larger than 500 KB. After recording the greeting, use the GUI option **Voice Mail > Prompts > Upload** or Cisco Unity Express CLI **ccn copy** command to copy the file in to the Cisco Unity Express system. See the GUI online help (OLH) or the *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager Express* for the upload procedure.
- Use the AvT on the TUI to record the greeting or prompt. Dial the AVT telephone number and select the option to record a greeting. When finished recording, save the file. AVT automatically saves the file in Cisco Unity Express.

  The AVT prompt filename has the format UserPrompt_DateTime.wav, for example: UserPrompt_11152003144055.wav. You may want to use CLI commands or GUI options to download the file to a PC, rename the file with a meaningful name, then upload the file back to Cisco Unity Express.

Configuring Auto-Attendant Scripts

Cisco Unity Express provides a set of auto-attendant prompts and a process, called a script, for handling callers' responses to the prompts. You can modify this script so that specific caller responses are handled in a different way. For example, callers can be directed to leave a voice message in a specific mailbox if they call after business hours.

Use the Microsoft Windows software-based script editor software that comes with Cisco Unity Express to modify the script or create a new script. Refer to the *Cisco Unity Express Script Editor Guide* for guidelines and procedures.

The file cannot be larger than 1 MB.

After creating the script file, save the file on your PC. Use the CLI interface or the GUI option **Voice Mail > Scripts** to upload the script file to the auto-attendant application.

Differences Between the AIM and NM

Cisco Unity Express is supported on both the AIM and the NM. Cisco Unity Express features work the same way on both modules with the following exceptions:

- The AIM is a 4-port module that stores a maximum of 50 voice mailboxes and 8 hours of voice messages. The NM is an 8-port module that stores a maximum of 100 voice mailboxes and 100 hours of voice messages.
- A **trace** or **log** command issued on the NM automatically saves the data to the disk. On the AIM, the trace and log data are not saved to flash memory. A Cisco Unity Express CLI command is available to save the data to the AIM flash memory.
- Cisco Unity Express tracks the use and wear activity of the AIM flash memory. This tracking is not necessary for the NM. The CLI command **show interface ide 0** and the GUI option **Reports > System** displays the flash memory wear data.

Software Licenses and Factory-Set Limits

Factory-set system limits are determined by the ordered license. Limits for the NM-CUE and NM-CUE-EC are shown in Table 2 and Table 3. Limits for the AIM-CUE are shown in Table 4 and Table 5.

Table 2 System Capacities for Mailboxes, Storage Hours, Ports, Scripts, and Prompts on the NM-CUE and NM-CUE-EC

Cisco Unity Express License/Software SKU	Total Mailbox Storage (Hours)	Default Mailbox Size (Minutes)[1]	Number of Concurrent VoiceMail and Auto Attendant Ports/Sessions	Number of Scripts	Number of Prompts
SCUE-LIC-12CCM SCUE-LIC-12CME	100	353	8 (NM-CUE) 16 (NM-CUE-EC)	8	50
SCUE-LIC-25CCM SCUE-LIC-25CME	100	171	8 (NM-CUE) 16 (NM-CUE-EC)	8	50
SCUE-LIC-50CCM SCUE-LIC-50CME	100	92	8 (NM-CUE) 16 (NM-CUE-EC)	8	50
SCUE-LIC-100CCM SCUE-LIC-100CME	100	50	8 (NM-CUE) 16 (NM-CUE-EC)	8	50

1. The default mailbox size calculation includes the allocation for the General Delivery Mailboxes (GDMs).

Table 3 Maximum Number of Mailboxes, Groups, Owners, and Members on the NM-CUE and NM-CUE-EC

Cisco Unity Express License/Software SKU	Default Number of Personal Mailboxes	Default Number of General Delivery Mailboxes	Total Number of Mailboxes	Number of Groups[1]	Number of Owners[1]	Number of Members[1]
SCUE-LIC-12CCM SCUE-LIC-12CME	12	5	17	20	400	880
SCUE-LIC-25CCM SCUE-LIC-25CME	25	10	35	20	400	1000
SCUE-LIC-50CCM SCUE-LIC-50CME	50	15	65	30	400	1000
SCUE-LIC-100CCM SCUE-LIC-100CME	100	20	100	40	400	1000

1. Per Cisco Unity Express system.

Table 4 System Capacities for Mailboxes, Storage Hours, Ports, Scripts, and Prompts on the AIM-CUE

Cisco Unity Express License/Software SKU	Total Mailbox Storage (Hours)[1]	Default Mailbox Size (Minutes)[2]	Number of Concurrent VoiceMail and Auto Attendant Ports/Sessions	Number of Scripts	Number of Prompts
SCUE-LIC-12CCM SCUE-LIC-12CME	14	45	4 (Cisco 2600XM, Cisco 2650XM, Cisco 2651XM, Cisco 2691) 6 (Cisco 2800 series, Cisco 3700 series, Cisco 3800 series)	4	25

Table 4 System Capacities for Mailboxes, Storage Hours, Ports, Scripts, and Prompts on the AIM-CUE (continued)

Cisco Unity Express License/Software SKU	Total Mailbox Storage (Hours)[1]	Default Mailbox Size (Minutes)[2]	Number of Concurrent VoiceMail and Auto Attendant Ports/Sessions	Number of Scripts	Number of Prompts
SCUE-LIC-25CCM SCUE-LIC-25CME	14	22	4 (Cisco 2600XM, Cisco 2650XM, Cisco 2651XM, Cisco 2691) 6 (Cisco 2800 series, Cisco 3700 series, Cisco 3800 series)	4	25
SCUE-LIC-50CCM SCUE-LIC-50CME	14	12	4 (Cisco 2600XM, Cisco 2650XM, Cisco 2651XM, Cisco 2691) 6 (Cisco 2800 series, Cisco 3700 series, Cisco 3800 series)	4	25

1. The storage value shown is for the AIM-CUE with the 1-GB compact flash. The earlier AIM-CUE version with the 512-MB compact flash supports 4.5 hours (270 minutes of mailbox storage. To use Cisco Unity Express 2.1, Cisco recommends that older AIM-CUE modules with 512-MB compact be replaced with the 1-GB compact flash AIM-CUE module.
2. The default mailbox size calculation includes the allocation for the General Delivery Mailboxes (GDMs).

Table 5 Maximum Number of Mailboxes, Groups, Owners, and Members on the AIM-CUE

Cisco Unity Express License/Software SKU	Default Number of Personal Mailboxes	Default Number of General Delivery Mailboxes	Total Number of Mailboxes	Number of Groups	Number of Owners	Number of Members
SCUE-LIC-12CCM SCUE-LIC-12CME	12	5	17	20	100	200
SCUE-LIC-25CCM SCUE-LIC-25CME	25	10	35	20	100	200
SCUE-LIC-50CCM SCUE-LIC-50CME	50	15	65	20	100	200

Networking Cisco Unity Express with Other Voice-Mail Systems

Cisco Unity Express supports the capability to network Cisco Unity Express with a voice-mail system located at a different site. Users can send and receive messages from subscribers on remotely located, compatible voice-mail systems configured on Cisco CallManager or Cisco CallManager Express call control platforms. Supported configurations include:

- Cisco Unity Express to Cisco Unity Express
- Cisco Unity to Cisco Unity Express
- Cisco Unity Express to Cisco Unity

For more information about configuring the networking capability, see *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager Express*.

Administration Interfaces

Cisco Unity Express offers two administration interfaces:

- Graphical user interface (GUI)—This user-friendly, web-based interface permits administration of all voice-mail and auto-attendant functions.

  The GUI is targeted for administrators familiar with web-based applications and who have little or no experience with Cisco IOS command structure.

- Command-line interface (CLI)—This text-based interface has the same administration and configuration capabilities as the GUI. Installation, upgrade, and troubleshooting functions are available only through the CLI commands. The administrator accesses this interface through a Telnet session to the router.

  The CLI is targeted for installers, resellers, support personnel, and others familiar with Cisco IOS command structure and routers. For them, accessing the system using the CLI may be easier than using the GUI, especially for troubleshooting, scripting, and bulk provisioning of many sites. Refer to the *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager Express* for more information about CLI configuration.

The GUI and CLI are accessible from a PC or server anywhere in the IP network. To access the GUI, use Microsoft Internet Explorer Version 6.0 or a later release. See "Overview of the Initialization Wizard" on page 25. Cisco Unity Express does not support the Netscape browser. To access the CLI, Telnet to the router, then use the **service-module** command.

Differences Between Cisco Unity Express and Cisco Unity

Cisco Unity Express is not the same application as Cisco Unity, although both of them are in the Cisco family of voice messaging products, and the differences are:

- Cisco Unity is a Microsoft Windows-based application and uses the Microsoft Windows operating system's messaging infrastructure. Cisco Unity Express is a Linux-based application.
- Cisco Unity is usually deployed in a central location that can be networked with multiple sites. Cisco Unity Express can be deployed in standalone locations that serve the local users.

  However, a Cisco Unity Express system can be administered from any location that has IP connectivity with the router housing the Cisco Unity Express application. If several sites in a network use Cisco Unity Express, they can be administered individually from a single PC or server. The administrator opens a browser on a PC or server to the GUI at each site or opens a Telnet session to the CLI at each site.

- Cisco Unity supports 100 or more mailboxes and Cisco Unity Express supports 100 or fewer mailboxes.
- Cisco Unity has a larger set of features than does Cisco Unity Express.

Cisco Unity Express uses Cisco Unity Release 3.1 voice-mail prompt recordings and prompt flow, which provides the end user with the same voice-mail look-and-feel.

Interactions Between Cisco Unity Express and Cisco CME

Cisco CME is the software that controls the telephony functions. Cisco CME resides on a router, which accepts incoming and outgoing calls to your network. Cisco CME contains a call agent, which decides where an incoming or outgoing call should be sent. Cisco CME has a database of information that contains such elements as the telephone hardware identifications, extension numbers associated with the telephones, users on the system, logins, routing destinations, call handling features, and other system-wide parameters.

Cisco Unity Express is an application that enhances Cisco CME by providing the voice messaging and automated attendant capabilities. The Cisco Unity Express module contains the voice-mail and auto-attendant software. During the system installation process, the installer inserts this module into the Cisco CME router. A Cisco Unity Express database contains information about the voice mailboxes, auto-attendant prompts, and voice messages. The Cisco Unity Express and Cisco CME databases are synchronized to ensure that calls are handled correctly and voice messages are received and stored properly.

The integrated Cisco Unity Express and Cisco CME administration software allows you to configure the voice-mail and auto-attendant parameters and some of the Cisco CME parameters, such as extensions and telephones. As you go through the initialization and configuration procedures, be sure to save your data so that both databases have current information.

Differences Between Cisco Unity Express and Cisco CME

Cisco Unity Express is not the same application as Cisco CME, although both of them are in the Cisco family of voice messaging products, and the differences are:

- Cisco CME requires a web administrator to configure the router and other system components. Cisco CME users and administrators are stored in the Cisco CME database. Cisco CME does not treat the web administrator as a telephone user.

  Cisco Unity Express permits configured Cisco CME users to be copied into the Cisco Unity Express database. The Cisco CME administrator ID cannot be copied to the Cisco Unity Express database and, therefore, cannot be assigned as the administrator ID for Cisco Unity Express.

Caution Before starting the configuration using the GUI, the Cisco CME administrator must configure at least one telephone user on Cisco CME who will be copied to Cisco Unity Express during the initialization phase and designated as the Cisco Unity Express administrator. You need the Cisco Unity Express administrator's user ID and password to log back in to Cisco Unity Express GUI after the initialization process is completed.

- Cisco Unity Express allows only letters, numbers, and the characters underscore (_), dot (.), and dash (-) in user IDs. Any Cisco CME user IDs containing other characters cannot be copied into the Cisco Unity Express database. User IDs must start with a letter.
- Spaces are not allowed in passwords. Acceptable password characters are lowercase letters a through z, uppercase letters A through Z, digits 0 through 9, and the following symbols: - , . + = _ ! @ # $ ^ * ( ) ? / ~ < > & %
- In Release 1.0, user IDs and passwords are case sensitive.

Additional References

The following sections provide references related to Cisco Unity Express.

Documents Related to Cisco Unity Express

Related Topic	Document Title
Cisco Unity Express administration	• *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager* • *Cisco Unity Express 2.1/2.2 GUI Administrator Guide for Cisco CallManager* • *Cisco Unity Express 2.1/2.2 CLI Administrator Guide for Cisco CallManager Express* • *Cisco Unity Express 2.1/2.2 GUI Administrator Guide for Cisco CallManager Express* • *Cisco Unity Express Command Reference* • *Cisco Unity Express AvT Administrator Guide* • *Release Notes for Cisco Unity Express 2.2*
Cisco Unity Express voice-mail scripts	*Cisco Unity Express 2.2 Guide to Writing Auto-Attendant Scripts*
Cisco Unity Express voice-mail end user information	*Cisco Unity Express User Guides*
Cisco module hardware installation	• *Installing Cisco Network Modules in Cisco Access Routers* • *Installing Advanced Integration Modules in Cisco 2600 Series, Cisco 3600 Series, and Cisco 3700 Series Routers* • *Advanced Integration Module Quick Start Guide* • *Replacing Compact Flash Memory on Cisco AIM-CUE Advanced Integration Modules* • *AIM-CUE Slot Restriction on Cisco 3745 Routers*
Cisco Unity Express software copyrights and licenses	"Appendix A: Software Copyrights and Licenses" on page 69
Technical Assistance Center support documentation for Cisco Unity Express	Technical Notes for Cisco Unity Express

Related Topic	Document Title
Cisco CallManager	Release 4.1(3) • *Cisco CallManager Administration Guide, Release 4.1(3)* • *Cisco CallManager System Guide, Release 4.1(3)* • *Cisco CallManager Features and Services Guide, Release 4.1(3)* Release 4.1(2) • *Cisco CallManager Administration Guide, Release 4.1(2)* • *Cisco CallManager System Guide, Release 4.1(2)* • *Cisco CallManager Features and Services Guide, Release 4.1(2)* Release 4.0(1): • *Cisco CallManager Administration Guide, Release 4.0(1)* • *Cisco CallManager System Guide, Release 4.0(1)* • *Cisco CallManager Features and Services Guide, Release 4.0(1)* Release 3.3(4) • *Cisco CallManager Administration Guide, Release 3.3(4)* • *Cisco CallManager System Guide, Release 3.3(4)* • *Cisco CallManager Features and Services Guide, Release 3.3(4)* Release 3.3(3): • *Cisco CallManager Administration Guide, Release 3.3(3)* • *Cisco CallManager System Guide, Release 3.3(3)* • *Cisco CallManager Features and Services Guide, Release 3.3(3)*

Related Topic	Document Title
Cisco CallManager Express	Release 3.4: • *Cisco CallManager Express Configuration Guides* • *Cisco CallManager Express Command Reference* Release 3.3: • *Cisco CallManager Express 3.3 System Administrator Guide* • *Cisco CallManager Express Command Reference* Release 3.2: • *Cisco CallManager Express System Administrator Guide* • *Cisco CallManager Express Command Reference* • *TAPI Developer Guide for Cisco CME/SRST* • *XML Developer Guide for Cisco CME/SRST* • *Integrating Cisco CallManager Express and Cisco Unity Express* Release 3.0: • *Cisco CallManager Express System Administrator Guide* • *Cisco CallManager Express Command Reference 3.0* • *Cisco SRST System Administrator's Guide Version 3.0* • *Integrating Cisco CallManager Express Versions 3.0 and 3.1 with Cisco Unity Express*
Cisco Unity	• *Networking in Cisco Unity Guide*
Cisco hardware platforms	• *Cisco 2600 Series Hardware Installation Guide* • *Cisco 2600 series hardware configuration notes* • *Voice features on Cisco 2600 series routers* • *Cisco 2800 Series Hardware Installation* • *Cisco 3700 Series Hardware Installation Guide* • *Cisco 3700 series hardware configuration notes* • *Software Configuration Guide* • *Cisco 3800 Series Hardware Installation*

Related Cisco IOS Documents

Related Topic	Document Title
Cisco IOS configuration	• *Cisco IOS Debug Command Reference, Release 12.4T* • *Cisco IOS Voice Command Reference* **Note** For general voice configuration topics, refer to the *Cisco IOS Voice Configuration Library, Release 12.4*.
Cisco IOS configuration examples	Cisco Systems Technologies website at http://cisco.com/en/US/tech/index.html **Note** From the website, choose a technology category and subsequent hierarchy of subcategories, and then click **Technical Documentation > Configuration Examples**.
Cisco IOS voice troubleshooting information	*Cisco IOS Voice Troubleshooting and Monitoring Guide*

MIBs

MIBs	MIBs Link
• CISCO-UNITY-EXPRESS-MIB	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

RFCs

RFCs	Title
1869	*SMTP Service Extensions*
1893	*Enhanced Mail System Status Codes*
2045	*Multipurpose Internet Mail Extensions Part One: Format of Internet Message Bodies, RFC*
2421	*Voice Profile for Internet Mail - Version 2*
2821	*Simple Mail Transfer Protocol*

Technical Assistance

Description	Link
Technical Assistance Center (TAC) home page, containing 30,000 pages of searchable technical content, including links to products, technologies, solutions, technical tips, and tools. Registered Cisco.com users can log in from this page to access even more content.	http://www.cisco.com/public/support/tac/home.shtml