



Cisco Unity Messaging Integration

Cisco Unity comprises a communications solution that delivers voice messaging and unified messaging in a unified environment.

Unified messaging means that users can manage all message types from the same Inbox. Cisco Unity works in concert with an Exchange server or (for Cisco Unity 4.0 and later) a Domino server to collect and store all messages—both voice and e-mail—in one message facility. Users can then access voice and e-mail messages on a computer, through a touchtone phone, or over the Internet.

For complete, step-by-step instructions on how to integrate Cisco CallManager with the Cisco Unity messaging system, refer to the *Cisco CallManager 5.0 Integration Guide for Cisco Unity*.



Note

For information on how to integrate Cisco CallManager with the Cisco Unity Connection messaging system, refer to the *Cisco CallManager 5.0 SCCP Integration Guide for Cisco Unity Connection 1.1* or the *Cisco CallManager 5.0 SIP Trunk Integration Guide for Cisco Unity Connection 1.1*.

This section covers the following topics:

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- [Cisco Unity Cisco CallManager Integrated Mailbox Configuration, page 31-4](#)
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System Requirements

The following lists provide requirements for your phone system and the Cisco Unity server. For specific version information, refer to the *Cisco CallManager 5.0 Integration Guide for Cisco Unity*.

Phone System

- A Cisco IP Telephony applications server that consists of Cisco CallManager software that is running on a Cisco Media Convergence Server (MCS) or customer-provided server that meets approved Cisco configuration standards

- Cisco licenses for all phone lines, IP phones, and other H.323-compliant devices or software (such as Cisco Virtual Phone and Microsoft NetMeeting clients) that will be connected to the network, as well as one license for each Cisco Unity port
- IP phones for the Cisco CallManager extensions
- A LAN connection in each location where you will plug an IP phone into the network
- For multiple Cisco CallManager clusters, subscribers can dial an extension on another Cisco CallManager cluster without having to dial a trunk access code or prefix.

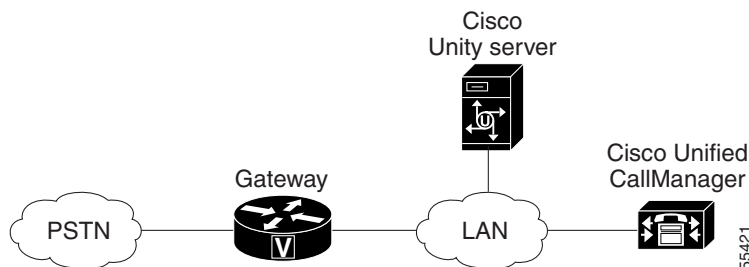
Cisco Unity Server

- Cisco Unity system that was installed and made ready for the integration as described in the *Cisco Unity Installation Guide*.
- The applicable Cisco Unity-CM TSP installed. For more information on compatible versions of the TSP, refer to the *Compatibility Matrix: Cisco Unity Connection*, the *Cisco Unity-CM TSP*, and the *Cisco CallManager Express* documentation.
- A license that enables the appropriate number of voice-messaging ports.

Integration Description

The integration uses the LAN to connect Cisco Unity and Cisco CallManager. The gateway provides connections to the PSTN. [Figure 31-1](#) shows the connections.

Figure 31-1 Connections Between the Phone System and Cisco Unity



Note

The following example applies only if the caller goes through the Cisco Unity Auto Attendant. Most other calls are routed directly to the correct voice mailbox. For example, callers who call a subscriber and get forwarded to voice mail go directly to the voice mailbox and can record a voice message. Subscribers who call in to check their voice messages from their own phones, go directly to their voice mailbox and can listen to voice messages.

1. When an external call arrives, the Cisco gateway sends the call over the LAN to the machine on which Cisco CallManager is installed.
2. For Cisco CallManager lines that are configured to route calls to Cisco Unity, Cisco CallManager routes the call to an available Cisco Unity extension.
3. Cisco Unity answers the call and plays the opening greeting.
4. During the opening greeting, the caller enters either the name of a subscriber or an extension; for example, 1234.

5. Cisco Unity notifies Cisco CallManager that it has a call for extension 1234.
6. At this point, the path of the call depends on whether Cisco Unity is set up to perform supervised transfers or release transfers. Refer to the *Cisco CallManager 5.0 Integration Guide for Cisco Unity 4.0* for more information.

Cisco CallManager SIP Trunk Integration

Cisco Unity Connection 1.1 supports a SIP trunk integration with the Cisco CallManager phone system when the Cisco CallManager phone system has only SIP phones. Refer to the *Cisco CallManager 5.0 SIP Trunk Integration Guide for Cisco Unity Connection* for more detailed information. The following list describes a few tips that should be performed from the Cisco CallManager Administration side when integrating the Cisco CallManager phone system with Cisco Unity Connection by a SIP trunk:

- Create a SIP trunk that points to Cisco Unity 4.2 and ensure that “Redirecting Number IE Delivery - Outbound” is checked. This instructs Cisco CallManager to send the Diversion Header to Cisco Unity, so you access the correct voice mailbox. Refer to “[Trunk Configuration](#)” in the *Cisco CallManager Administration Guide*.



Note

Cisco CallManager SIP trunk integration applies to MWI. When you configure the SIP trunk security profile for the SIP voice-messaging trunk, check “Accept Unsolicited Notification.” This ensures that MWI will operate properly. You must enable “Accept Header Replacement” if you want to support transfers. This allows “REFER w/replaces” to be passed, which is used for Cisco Unity-initiated, supervised transfers.

- Assure that your phones support DTMF Relay as per RFC-2833. Cisco Unity will support both OOB and RFC-2833. For more information on compatible versions of the TSP, refer to the *Compatibility Matrix: Cisco Unity Connection*, the *Cisco Unity-CM TSP*, and the *Cisco CallManager Express* documentation.
- Define a route pattern (for example, 7555) and point that route pattern to the SIP trunk to Cisco Unity. Refer to “[Route Pattern Configuration](#)” in the *Cisco CallManager Administration Guide*.
- Define a voice mail pilot (for example, 7555). Refer to “[Cisco Voice-Mail Pilot Configuration](#)” in the *Cisco CallManager Administration Guide*.
- Define a voice mail profile (for example, VM Profile 1) with the voice mail pilot that you defined in the previous step. Refer to “[Voice-Mail Profile Configuration](#)” in the *Cisco CallManager Administration Guide*.



Note

Make the voice mail profile that you defined in the last step the system default.

Cisco Unity Cisco CallManager Integrated Mailbox Configuration

When Cisco CallManager release 5.0 integrates with Cisco Unity version 4.0(4) (or later) with Microsoft Exchange, Cisco CallManager administrators can create Cisco Unity subscriber voice mailboxes, one at a time, from the Directory Number Configuration or End User Configuration windows.

**Note**

For information on Cisco CallManager integration with Cisco Unity Connection, refer to the *Cisco CallManager 5.0 SCCP Integration Guide for Cisco Unity Connection 1.1* or the *Cisco CallManager 5.0 SIP Trunk Integration Guide for Cisco Unity Connection 1.1*.

Requirements

- Cisco CallManager release 5.0(x)
- Cisco Unity release 4.0(4) or later with Microsoft Exchange
- Cisco CallManager Integrated Voice Mailbox asp page (installed on the Cisco CallManager server from the Cisco Unity server)
- RIS Data Collector service that is activated on Cisco CallManager server

Restrictions

- After a mailbox is created, no automatic synchronization of mailbox data happens between Cisco Unity and Cisco CallManager. All changes get synchronized manually on both systems.
- The system does not support creation of Internet, VPIM, AMIS, Bridge, or Domino subscriber mailboxes from Cisco CallManager Administration.
- The system does not support bulk or batch import of Cisco Unity mailboxes by using the Bulk Administration Tool (BAT).
- Creation of Cisco Unity mailbox creates a Cisco Unity subscriber account directly in SQL, so new subscribers can be viewed and updated on the Cisco Unity Administrator when the create mailbox transaction completes.
- A log file records Cisco Unity mailbox transactions that are made by using Cisco CallManager Administration on the Cisco Unity server.
- The system writes associated diagnostic logs to a log file.
- Audit log and diagnostic files do not record the transmission of credentials across the network.

Securing the Voice-Mail Port

When you configure security for Cisco CallManager voice mail ports and Cisco Unity SCCP devices, a TLS connection (handshake) opens for authenticated devices after each device accepts the certificate of the other device; likewise, the system sends SRTP streams between devices; that is, if you configure the devices for encryption.

When the device security mode equals authenticated or encrypted, the Cisco Unity-CM TSP connects to Cisco CallManager through the Cisco CallManager TLS port. When the security mode equals non-secure, the Cisco Unity TSP connects to Cisco CallManager through the Cisco CallManager port.

For interactions, restrictions, and procedures on how to configure security, refer to the *Cisco CallManager Security Guide*.

Cisco Unity Configuration Checklist

Table 31-1 provides steps to configure the Cisco Unity voice-messaging system.

Table 31-1 Cisco Unity Configuration Checklist

Configuration Steps		Procedures and Related Topics
Step 1	Ensure that you have met the system requirements for Cisco CallManager and Cisco Unity.	System Requirements, page 31-1 <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 2	Add voice-mail ports (directory numbers) for each port that you are connecting to Cisco Unity.	Cisco Voice-Mail Port Configuration , <i>Cisco CallManager Administration Guide</i> <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 3	Add a voice-mail pilot number for the voice-mail ports.	Cisco Voice-Mail Pilot Configuration , <i>Cisco CallManager Administration Guide</i> <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 4	Specify MWI and voice-mail extensions.	Service Parameters Configuration , <i>Cisco CallManager Administration Guide</i> Message Waiting Configuration , <i>Cisco CallManager Administration Guide</i> <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 5	Add the Voice Mail Port DN's to a line group.	Configuring a Line Group , <i>Cisco CallManager Administration</i>
Step 6	Add the line group that contains the Voice Mail Port DN's to a hunt list.	Adding a Route List , <i>Cisco CallManager Administration</i>
Step 7	Associate the hunt list that contains the line group with a hunt pilot. Note The hunt pilot must match the voice-mail pilot that is configured and used by the voice-mail profiles.	Configuring a Route Pattern , <i>Cisco CallManager Administration Guide</i>
Step 8	Set up the voice-mail pilot number.	Cisco Voice-Mail Pilot Configuration , <i>Cisco CallManager Administration Guide</i>
Step 9	Set up the voice-mail profile.	Voice-Mail Profile Configuration , <i>Cisco CallManager Administration Guide</i> <i>Cisco CallManager Integration Guide for Cisco Unity</i>

Table 31-1 Cisco Unity Configuration Checklist (continued)

Configuration Steps		Procedures and Related Topics
Step 10	Set up the voice-mail service parameters.	Service Parameters Configuration , <i>Cisco CallManager Administration Guide</i> . <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 11	Enable the DTMF relay feature in the gateways.	<i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i>
Step 12	Install, configure, and test the TAPI service provider [for Cisco Unity 3.1(x) and earlier].	
Step 13	Configure Cisco Unity for the integration [for Cisco Unity 3.1(x) and earlier]. For multiple clusters of Cisco CallManager, set up MWI ports. Create a new integration between Cisco Unity and Cisco CallManager.	Message Waiting Configuration , <i>Cisco CallManager Administration Guide</i>
Step 14	Set up Cisco CallManager authentication and encryption (Cisco Unity 4.0(5) and later).	<i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i> <i>Cisco CallManager Security Guide</i>
Step 15	Test the integration.	<i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i> <i>Cisco Unity Troubleshooting Guide</i> Refer to the installation guide for the phone system.
Step 16	Integrate the secondary server for Cisco Unity failover (use when Cisco Unity failover is installed).	<i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i> <i>Cisco Unity Failover Guide</i>
Step 17	Configure an application user.  Note You must use the same user name and password that you defined in Cisco Unity Administrator.	Application User Configuration , <i>Cisco CallManager Administration Guide</i> <i>Cisco CallManager Installation Guide for Cisco Unity</i>

Table 31-1 Cisco Unity Configuration Checklist (continued)

Configuration Steps	Procedures and Related Topics
Step 18 Choose the auto-generated Cisco Unity server in the Application Server Configuration window in Cisco CallManager Administration.  Note For application user, choose the application user you created in Step 17.	Application Server Configuration, <i>Cisco CallManager Administration Guide</i>
Step 19 If using Cisco CallManager Administration to configure voice mail subscribers, perform the following steps [requires Cisco Unity 4.0(4) or later]: • Copy the voicemailbox.asp file to the Cisco CallManager server. • Set up the Cisco Unity Cisco CallManager Integrated Mailbox Configuration administrator account. (You must perform this step for the failover server if subscribers will be created on the failover server.) • Create a Cisco Unity voice mailbox.  Note You must configure both Cisco Unity and Cisco CallManager Administration (for example, set up Cisco Unity voice mailbox templates, Cisco CallManager dial plans) to create voice mailboxes.	<i>Cisco CallManager Installation Guide for Cisco Unity</i> <i>Cisco CallManager 5.0 Integration Guide for Cisco Unity</i> Directory Number Configuration, <i>Cisco CallManager Administration Guide</i> End User Configuration, <i>Cisco CallManager Administration Guide</i>

Where to Find More Information

Additional Cisco Documentation

- [Cisco Voice-Mail Port Configuration](#), *Cisco CallManager Administration Guide*
- [Service Parameters Configuration](#), *Cisco CallManager Administration Guide*
- [Directory Number Configuration](#), *Cisco CallManager Administration Guide*
- [End User Configuration](#), *Cisco CallManager Administration Guide*
- [Application User Configuration](#), *Cisco CallManager Administration Guide*
- *Cisco CallManager 5.0 Integration Guide for Cisco Unity*
- *Cisco CallManager 5.0 SIP Trunk Integration Guide for Cisco Unity Connection*
- *Cisco Unity Installation Guide*
- *Cisco Unity Troubleshooting Guide*

