



# Cisco CallManager AutoAttendant

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Cisco CallManager AutoAttendant, a simple automated attendant, allows callers to locate people in your organization without talking to a receptionist. You can customize the prompts that are played for the caller, but you cannot customize how the software interacts with the customer.

Cisco CallManager AutoAttendant comes bundled with Cisco CallManager on the Cisco CallManager Extended Services CD. This version of Cisco CallManager AutoAttendant provides a four-CTI port limit. If you need a fully configurable automated attendant, you will need to purchase Cisco IP Interactive Voice Response (IP IVR), one of the Cisco Customer Response Applications (CRA).

This chapter describes Cisco CallManager AutoAttendant that is running on Cisco CallManager 4.1 with Cisco CRA 3.5.



## Note

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For information about supported versions of Cisco CRA with Cisco CallManager, see the Cisco CallManager Compatibility Matrix at the following URL: [http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/ccmcomp.htm#CompatibleApplications](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/ccmcomp.htm#CompatibleApplications)

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Use the following topics to understand, install, configure, and manage Cisco CallManager AutoAttendant:

- [Understanding Cisco CallManager AutoAttendant, page 7-2](#)
- [Installing and Upgrading Cisco CallManager AutoAttendant, page 7-5](#)
- [Configuring Cisco CallManager AutoAttendant, page 7-7](#)
- [Managing Cisco CallManager AutoAttendant, page 7-29](#)

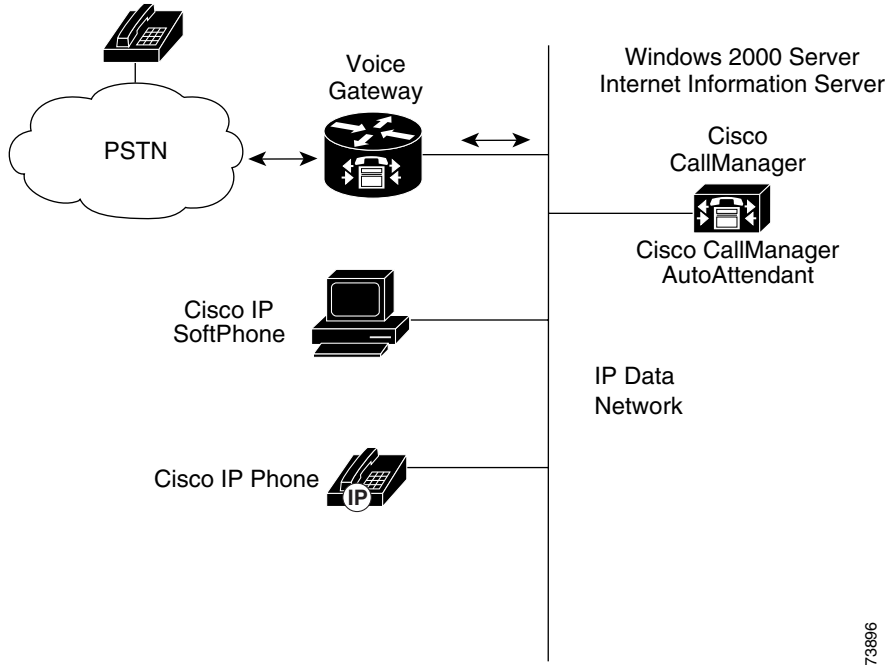
# Understanding Cisco CallManager AutoAttendant

Cisco CallManager AutoAttendant (see [Figure 7-1](#)) works with Cisco CallManager to receive calls on specific telephone extensions. The software interacts with the caller and allows the caller to search for and select the extension of the party (in your organization) that the caller is trying to reach.

This section provides an introduction to Cisco CallManager AutoAttendant:

- [Cisco CallManager AutoAttendant Overview, page 7-3](#)
- [Components of Cisco CallManager AutoAttendant, page 7-4](#)

**Figure 7-1 Using Cisco CallManager AutoAttendant**



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## Cisco CallManager AutoAttendant Overview

Cisco CallManager AutoAttendant provides the following script:

- Answers a call
- Plays a user-configurable welcome prompt
- Plays a main menu prompt that asks the caller to perform one of three actions:
  - Press 0 for the operator.
  - Press 1 to enter an extension number.
  - Press 2 to spell by name.
- If the caller chooses to spell by name (option 2), the system compares the letters that are entered with the names that are configured to the available extensions.
  - If a match exists, the system announces a transfer to the matched user and waits for up to 2 seconds for the caller to press any DTMF key to stop the transfer. If the caller does not stop the transfer, the system performs an explicit confirmation: it prompts the user for confirmation of the name and transfers the call to that user's primary extension.
  - If more than one match occurs, the system prompts the caller to choose the correct extension.
  - If too many matches occur, the system prompts the caller to enter more characters.
- When the caller has specified the destination, the system transfers the call.
  - If the line is busy or not in service, the system informs the caller accordingly and replays the main menu prompt.

**Related Topic:**

[Components of Cisco CallManager AutoAttendant, page 7-4](#)

## Components of Cisco CallManager AutoAttendant

The Cisco Customer Response Platform provides the components that are required to run Cisco CallManager AutoAttendant. The platform provides a multimedia (voice/data/web) IP-enabled customer care application environment.

**Note**

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Cisco Customer Response Applications (CRA), which was renamed Cisco Customer Response Solutions (CRS) with its 3.0 release, gets marketed under the names IPCC Express and IP IVR. The Cisco website and packaging materials reflect the new name but the user interface and, therefore, the documentation do not.

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Cisco CallManager AutoAttendant uses four main components of the Cisco Customer Response Platform:

- Gateway—Connects the enterprise IP telephony network to the Public Switched Telephone Network (PSTN) and to other private telephone systems such as Public Branch Exchange (PBX). You must purchase gateways separately.
- Cisco CallManager Server—Provides the features that are required to implement IP phones, manage gateways, provides failover and redundancy service for the telephony system, and directs voice over IP traffic to the Cisco Customer Response Application (Cisco CRA) system. You must purchase Cisco CallManager separately.
- Cisco IP Telephony Directory—Provides the repository for configuration information and Cisco CRA application scripts. The repository acts as the subdirectory that stores scripts. Cisco CallManager AutoAttendant comes with a predefined script that you cannot alter. The Cisco CallManager AutoAttendant package includes the Cisco IP Telephony Directory.
- Cisco CRA Server—Contains the Cisco CRA Engine that runs Cisco CallManager AutoAttendant. The Cisco CallManager AutoAttendant package includes the Cisco CRA Server and Engine.

You must install Cisco CallManager AutoAttendant co-resident on the same server as Cisco CallManager.

For more information about the Cisco Customer Response Platform, refer to the following URL.

<http://www.cisco.com/en/US/products/ps5883/index.html>

**Related Topic**

[Installing and Upgrading Cisco CallManager AutoAttendant, page 7-5](#)

# Installing and Upgrading Cisco CallManager AutoAttendant

Use these topics to install or upgrade Cisco CallManager AutoAttendant:

- [Hardware and Software Requirements, page 7-5.](#)
- [Installing or Upgrading Cisco CallManager AutoAttendant, page 7-5.](#)

## Hardware and Software Requirements

Before you install this version of Cisco CallManager AutoAttendant, you must have a functioning voice over IP system. You must have installed and configured Cisco CallManager 4.1. This software manages the telephony system.

Cisco CallManager AutoAttendant runs on the Cisco Media Convergence Server (Cisco MCS) platform or on a Cisco-certified server such as the Compaq DL320 and DL380 and the IBM-330 and IBM-340. Ensure that the server is running Microsoft Windows 2000.

You must install Cisco CallManager AutoAttendant co-resident on the same server as Cisco CallManager.

## Installing or Upgrading Cisco CallManager AutoAttendant

Install Cisco CallManager and Windows 2000 before you install Cisco CallManager AutoAttendant. For information, refer to the following documents:

- Cisco CallManager installation documentation at:  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_callmg/4\\_0/install/instcall/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_callmg/4_0/install/instcall/index.htm)
- Cisco IP Telephony Operating System at:  
[http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel\\_os/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/iptel_os/index.htm)

You must configure proxy settings for Internet Explorer and verify that you can browse to internal and external web sites. For details on configuring your proxy settings, contact your network administrator.

### Before You Begin

Ensure that you have met all preinstallation requirements that are described in [Hardware and Software Requirements, page 7-5](#)

These topics describe how to install Cisco CallManager AutoAttendant:

- [Installing Cisco CallManager AutoAttendant, page 7-6](#)
- [Upgrading or Reinstalling Cisco CallManager AutoAttendant, page 7-7.](#)

## Installing Cisco CallManager AutoAttendant

Use this section to install Cisco CallManager AutoAttendant for the first time.

### Procedure

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- |               |  |
|---------------|--|
| <b>Step 1</b> | Insert the Cisco CallManager Extended Services CD.   |
| <b>Step 2</b> | Click the .exe file to start the installation program and follow the on-screen instructions. |
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### Related Topics

- [Hardware and Software Requirements, page 7-5](#)
- [Upgrading or Reinstalling Cisco CallManager AutoAttendant, page 7-7](#)
- [Configuring Cisco CallManager AutoAttendant, page 7-7](#)

## Upgrading or Reinstalling Cisco CallManager AutoAttendant

This procedure describes how to upgrade to Cisco CallManager AutoAttendant from an earlier version of Cisco CallManager AutoAttendant or Cisco CallManager Extended Services or how to reinstall the current version of Cisco CallManager AutoAttendant.

### Procedure

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- Step 1** On the Cisco CallManager server, choose **Start>Programs>Cisco CRA Administrator>Application Administrator**.
- Step 2** Enter your user name and password and click **OK**.
- Step 3** Follow the on-screen instructions.
- You do not need to reboot after this procedure.
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### Related Topics

- [Hardware and Software Requirements, page 7-5](#)
- [Configuring Cisco CallManager AutoAttendant, page 7-7](#)

## Configuring Cisco CallManager AutoAttendant

These topics describe how to configure Cisco CallManager and the Cisco Customer Response Application (CRA) Engine in preparation for deploying Cisco CallManager AutoAttendant.

## Configuration Checklist for Cisco CallManager

Table 7-1 describes the procedures you perform to configure Cisco CallManager AutoAttendant.

**Table 7-1 Configuration Checklist for Cisco CallManager AutoAttendant**

Configuration Steps	Related Procedures and Topics
<b>Step 1</b> Configure Cisco CallManager to create the telephone number and other telephony entities that Cisco CallManager AutoAttendant requires.	See the <a href="#">“Configuring Cisco CallManager” section on page 7-9.</a>
<b>Step 2</b> Configure the Cisco Customer Response Applications (CRA) Engine. You must install and configure Cisco CRA before you can use Cisco CallManager AutoAttendant. The Cisco CRA Engine controls the software and its connection to the telephony system	See <a href="#">“Configuring the Cisco Customer Response Application Engine” section on page 7-13.</a>
<b>Step 3</b> Customize Cisco CallManager AutoAttendant, so its prompts are meaningful to how you are using the automated attendant.	See the <a href="#">“Customizing Cisco CallManager AutoAttendant” section on page 7-24.</a>

# Configuring Cisco CallManager

Before you can use Cisco CallManager AutoAttendant, you must configure Cisco CallManager as shown in [Table 7-2](#):

**Table 7-2 Configuration Checklist for Cisco CallManager**

Configuration Steps	Related Procedures and Topics
<b>Step 1</b> Create a CTI route point. This action specifies the telephone number that people will call to use Cisco CallManager AutoAttendant.	See the <a href="#">“Adding CTI Route Points in Cisco CallManager”</a> section on page 7-9.
<b>Step 2</b> Create CTI ports for use by the CTI route point. The number of ports that you create determines the number of simultaneous callers that can use Cisco CallManager AutoAttendant. The version of Cisco CallManager AutoAttendant, that comes bundled with Cisco CallManager has a four-port limit.	See <a href="#">“Adding CTI Ports in Cisco CallManager”</a> section on page 7-11.
<b>Step 3</b> Create a Cisco CallManager user for Cisco CallManager AutoAttendant and associate the CTI route points and CTI ports that you created to this user.	See <a href="#">“Creating a Cisco CallManager User for Cisco CallManager AutoAttendant”</a> section on page 7-12.

These topics assume that you know how to use Cisco CallManager. For more information about Cisco CallManager, refer to the *Cisco CallManager Administration Guide* and the *Cisco CallManager System Guide*.

## Adding CTI Route Points in Cisco CallManager

Create a CTI route point in Cisco CallManager for Cisco CallManager AutoAttendant use. This route point specifies the telephone number that callers will call to use the automated attendant.

### Procedure

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- Step 1** In Cisco CallManager, choose **Device > CTI Route Point**.  
The Find and List CTI Route Points window displays.
- Step 2** Click **Add a new CTI Route Point**.  
The CTI Route Point Configuration window displays.
- Step 3** Fill in the CTI route point properties:
- Enter a unique name, such as **AutoAttendant**, in the Device Name field to identify this as the Cisco CallManager AutoAttendant number.
  - From the Device Pool menu, choose the appropriate device pool.
- Step 4** To add the new CTI route point, click **Insert**.  
Cisco CallManager adds the route point and asks whether you want to add a directory number for line 1. To add line 1, click **OK**.  
Cisco CallManager opens the Directory Number configuration window.
- Step 5** In the Directory Number field, enter the directory number for this CTI route point. This number specifies the number that callers will dial to reach this CTI route point (for example, 4000). You can also fill in other fields as appropriate for your telephony network.
- Step 6** Click **Insert**.  
Cisco CallManager assigns the directory number to the current device and asks you if you want to return to the current device configuration window. Click **OK** to return to the current device configuration window.  
Create only one line for the device.
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### Related Topics

- [Configuring Cisco CallManager, page 7-9](#)
- [Adding CTI Ports in Cisco CallManager, page 7-11](#)

## Adding CTI Ports in Cisco CallManager

Create CTI ports for use with the Cisco CallManager AutoAttendant CTI route point. The number of ports that you create determines the number of simultaneous callers that can use your automated attendant. If all ports are in use when a caller calls, the caller receives a busy signal.

### Procedure

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- Step 1** In Cisco CallManager, choose **Device > Phone**.  
Cisco CallManager opens the Find and List Phones window.
- Step 2** Click **Add a New Phone**.  
Cisco CallManager opens the Add a New Phone window.
- Step 3** Choose CTI Port for Phone Type and click **Next**.  
Cisco CallManager opens the Phone Configuration window.
- Step 4** Configure the CTI Port and enter at minimum this information:
- Device Name—Enter something meaningful to you, for example, CTI4001.
  - Device Pool—Choose an appropriate device pool.
- Step 5** Click **Insert**.  
Cisco CallManager creates the CTI port and asks whether you want to add a directory number for line 1. Click **OK**. Cisco CallManager opens the Directory Number Configuration window.
- Step 6** In the Directory Number field, enter an unused extension number for the port, such as 4001.
- Step 7** Click **Insert**.  
Cisco CallManager assigns the directory number to the current device. Click **OK** to return to the device configuration window.
- Repeat the procedure to create each CTI port that you require. Create only one line for each CTI port.
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**Related Topics**

- [Adding CTI Route Points in Cisco CallManager, page 7-9](#)
- [Creating a Cisco CallManager User for Cisco CallManager AutoAttendant, page 7-12](#)

## Creating a Cisco CallManager User for Cisco CallManager AutoAttendant

In Cisco CallManager, create a user for Cisco CallManager AutoAttendant. Cisco CallManager AutoAttendant uses this account to gain access to Cisco CallManager and control the CTI route points and CTI ports that you defined for its use.

**Procedure**

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- Step 1** In Cisco CallManager, choose **User > Add a New User**.  
Cisco CallManager opens the User Configuration window.
- Step 2** Complete the following required fields:
- First Name—Use a descriptive name such as “Automated.”
  - Last Name—Use a descriptive name such as “Attendant.”
  - UserID—Use a descriptive name such as “AutoAttendant.”
  - User Password and Confirm Password—Enter a password and enter it again for confirmation.
  - PIN and Confirm PIN—Enter a PIN and enter it again for confirmation.
  - Enable CTI Application Use—Check this checkbox.
- Step 3** To create the user, click **Insert**.  
Cisco CallManager adds the user.
- Step 4** In the left column, click **Device Association**.  
Cisco CallManager opens the Device Association subwindow of the User Information window.
- Step 5** Enter search criteria to list the desired route points and CTI ports or enter nothing to list all devices and click **Select Devices** to list the devices.

- Step 6** In the list that Cisco CallManager produces, choose these devices:
- The CTI route point that was created for the automated attendant. See [Adding CTI Route Points in Cisco CallManager, page 7-9](#), for more information.
  - All CTI ports that were created for Cisco CallManager AutoAttendant use. See [Adding CTI Ports in Cisco CallManager, page 7-11](#), for more information.

Make sure you click the **No Primary Extension** radio button.

- Step 7** To save your changes, click **Update Selected**.

#### Related Topics

- [Adding CTI Ports in Cisco CallManager, page 7-11](#)
- [Configuring the Cisco Customer Response Application Engine, page 7-13](#)

## Configuring the Cisco Customer Response Application Engine

After you have configured Cisco CallManager for Cisco CallManager AutoAttendant, configure the Cisco Customer Response Application (CRA) Engine to communicate with Cisco CallManager and the Cisco IP Telephony Directory. Perform the configuration steps shown in [Table 7-3](#):

**Table 7-3 Configuration Checklist for Cisco CRA Engine**

Configuration Steps	Related Procedures and Topics
<p><b>Step 1</b> Configure the IP Telephony Directory so Cisco CRA can use it. You may have already completed this configuration when you installed Cisco CRA.</p>	<p>See the “<a href="#">Logging In and Configuring Directory Information</a>” section on <a href="#">page 7-14</a>, for more information.</p>
<p><b>Step 2</b> Configure the Cisco CRA Engine JTAPI subsystem to use the Cisco CallManager user that you created for Cisco CallManager AutoAttendant.</p>	<p>See “<a href="#">Configuring the JTAPI Subsystem on the Cisco Customer Response Application Engine</a>” section on <a href="#">page 7-18</a>, for more information</p>

**Table 7-3 Configuration Checklist for Cisco CRA Engine**

Configuration Steps	Related Procedures and Topics
<b>Step 3</b> Add a CTI port group in the Cisco CRA Engine JTAPI subsystem that contains the CTI ports that you created for Cisco CallManager AutoAttendant use.	See the <a href="#">“Adding a CTI Port Group”</a> section on page 7-19, for more information.
<b>Step 4</b> Add the Cisco CallManager AutoAttendant application to the Cisco CRA Engine.	See the <a href="#">“Adding a New Cisco CallManager AutoAttendant”</a> section on page 7-22, for more information.

These topics only cover the basics of using and configuring Cisco CRA. See the Cisco CRA online help for more detailed information.

**Related Topic:**

[Logging In and Configuring Directory Information, page 7-14](#)

## Logging In and Configuring Directory Information

The Cisco IP Telephony Directory server stores two types of information that the Cisco Customer Response Application (Cisco CRA) Engine uses. First, it stores directory information, which includes CTI port and routing configurations. Second, it contains the repository subdirectory, which stores the applications that are used with the Cisco CRA Engine.

Cisco recommends that you use one Cisco CRA server for the IP Telephony Directory with Cisco CallManager AutoAttendant rather than split the directory information and repository subdirectories onto separate servers.



**Tip**

To start Cisco CRA Administration, open <http://servername/AppAdmin> in your web browser, where *servername* is the DNS name or IP address of the application server. Click Help for detailed information about using the interface.

To establish the directory server settings on a new Cisco CRA server, perform the following steps:

### Procedure

- Step 1** The first time that you log in to the Cisco CRA server, enter the username **Administrator** and the password **ciscocisco**. Click **Log On**.



**Note** Because the login name and password are case-sensitive, enter them exactly as shown.



**Note** Enter the specified username and password for first-time setup process only.

The Cisco CRA Administrator Setup window displays.

- Step 2** Click **Setup**.

The Directory Setup window displays.

- Step 3** Enter the directory configuration information as described in [Table 7-4](#).

**Table 7-4 Directory Configuration Defaults**

Field	Description	Default for DC Directory
Directory hostname	Hostname or IP address of the Cisco IP Telephony Directory server where the profile resides or will reside with the CRA engine profile.	
Directory port number	Port number of the Cisco IP Telephony Directory.	8404
Directory user (DN)	The user name (also called the distinguished name) that is configured on the directory server for the user that has permission to modify the Cisco IP Telephony tree and object entries.	cn=Directory Manager, o=cisco.com.
Directory password	Password for the Directory user.	ciscocisco

**Table 7-4** Directory Configuration Defaults (continued)

Field	Description	Default for DC Directory
Base Context	Branch of the Cisco IP Telephony Directory tree that contains the Cisco configuration information.	o=cisco.com
User Base	Branch of the Cisco IP Telephony Directory tree that contains user information.	ou=Users, o=cisco.com
Server Type	Type of LDAP directory, such as MS Active Directory, Netscape Directory Server 4.0, or DC Directory.	DC Directory
Configuration Profile Name	Profile name that identifies this CRA server configuration or repository.	

**Step 4** Click **Next**.

The second Directory Setup window displays.

**Step 5** To configure the Directory setup for Netscape, Active Directory and Other, perform the following step:

From the Server Type drop-down arrow, choose the appropriate directory (for example, Netscape).

The following fields adjust to the new information:

- Directory User
- Base Context
- User Base

**Step 6** Click **Edit** and enter a new profile or use the Profile Name drop-down arrow to choose a profile.**Step 7** To enter the new profile, click **OK**.**Step 8** Click **Next**.

The third Directory Setup window displays.

**Step 9** Accept the default setting: **Use the default Repository profile** to create the repository profile on the same server and with the same name.

*-Or*

If you want to maintain separate profiles for your configuration and repository, click the **Use a different Repository profile** radio button. When this option is chosen, the system prompts the user for directory information for the repository profile, which provides the windows to capture the directory information for the repository.

The Repository Configuration window appears. Complete these fields with the configuration information that is appropriate for your repository directory.

**Step 10** Click **OK**.

The User Maintenance window displays. Use this window to assign access levels to an Administrator.

**Step 11** In the User Maintenance window, choose the Group drop-down arrow and then choose **Administrator**.

**Step 12** From the CMUsers list box, choose an available CM User and click < to move a user to the CRA Administrator/Supervisor list box.

If the steps are correctly followed, a (Administrator) label displays after the user name.



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**Caution**

To update the system, you must choose at least one Administrator.

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**Step 13** To complete the process and initialize configuration and repository profiles, click **Finish**.

The Setup window displays your configuration choices.

**Step 14** Log in to the system again by using the administrator username and password that you created.



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**Note** The login name, **Administrator**, and the Password, **ciscocisco**, no longer work. Log in by using the configured administrator password.

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The Cisco CRA Administration window displays.

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**Related Topics**

- [Configuring the Cisco Customer Response Application Engine, page 7-13](#)
- [Configuring the JTAPI Subsystem on the Cisco Customer Response Application Engine, page 7-18](#)

## Configuring the JTAPI Subsystem on the Cisco Customer Response Application Engine

After you complete the directory configuration, you must configure the JTAPI subsystem on the Cisco Customer Response Application Engine (Cisco CRA Engine). The Cisco CRA Engine uses the JTAPI subsystem to send and receive calls from Cisco CallManager.

**Tip**

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To start Cisco CRA Administration, open <http://servername/AppAdmin> in your web browser, where *servername* is the DNS name or IP address of the application server. Click Help for detailed information on using the interface.

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**Procedure**

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- Step 1** From the Cisco CRA Administration main menu, choose **Subsystems > JTAPI**. The JTAPI Configuration window displays.
  - Step 2** In the JTAPI Provider(s) field, enter the IP address or DNS name of the Cisco Media Convergence Server (Cisco MCS) that is running Cisco CallManager CTI Manager. You can enter up to two CTI Managers, separated by a space. If the first CTI Manager becomes unavailable, the second one connects and maintains calls.
  - Step 3** In the UserID field, enter the Cisco CallManager UserID that you created in the [“Creating a Cisco CallManager User for Cisco CallManager AutoAttendant” section on page 7-12](#) (for example, “AutoAttendant”).
  - Step 4** In the Password field, enter the password that you defined for this UserID.

- Step 5** To apply changes, click **Update**.  
The following message appears:  
“JTAPI Subsystem configured successfully!!”
- Step 6** To close the dialog box, click **OK**.
- 

### Related Topics

- [Logging In and Configuring Directory Information, page 7-14](#)
- [Adding a CTI Port Group, page 7-19](#)

## Adding a CTI Port Group

Identify the CTI ports that you created for Cisco CallManager AutoAttendant use on JTAPI Configuration in the Cisco CRA Administration configuration. These ports comprise a *CTI port group*.



### Tip

To start Cisco CRA Administration, open `http://servername/AppAdmin` in your web browser, where *servername* is the DNS name or IP address of the application server. Click **Help** for detailed information on using the interface.

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### Procedure

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- Step 1** From the CRA Administration main window, choose **Subsystems > JTAPI**.  
The JTAPI Configuration window displays.



### Note

To access the CTI Ports window, you must ensure that the CRA Engine is running.

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- Step 2** To apply changes and restart the engine, click **Update**.
- Step 3** In the left column, click the **CTI Port Groups** hyperlink.  
The JTAPI Call Control Group window displays.

- Step 4** Click the **Add a New JTAPI Call Control Groups** hyperlink.  
The second JTAPI Call Control Group Configuration window displays.
- Step 5** Accept the automatic group ID or enter a group ID in the Group ID field. The Group ID corresponds to the trunk group number that is reported to the ICM when the CRA server is part of the Cisco IPCC solution.
- Step 6** To automatically populate the Description field, press the **Tab** key.
- Step 7** Click **Associate CTI Ports**.  
The Please assign CTI Ports for this Group window displays.
- Step 8** In the Directory Number column, click the checkboxes that contain the directory numbers that you established in [Adding CTI Ports in Cisco CallManager, page 7-11](#).



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**Note** You must complete configuration of ports in the Cisco Call Manager first, before assigning a user port to a group.

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- Step 9** To add the port to the list of available CTI ports and close the window, click **Update**.
- Step 10** Click **Add**.  
The Call Control Group appears in the Group ID column.
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**Related Topics:**

- [Configuring the JTAPI Subsystem on the Cisco Customer Response Application Engine, page 7-18](#)
- [Adding a New Cisco CallManager AutoAttendant, page 7-22](#)

## Provisioning Cisco Media Termination Subsystem

You can choose different types of media, from a simple type of media that is capable of supporting prompts and DTMF (Cisco Media Termination) to a more complex and rich type of media that is capable of supporting speech recognition in addition to prompts and DTMFs. You can even provision calls without media.

Because of these capabilities, you must provision media manually. Each call requires both a CTI port and a media channel for the system to be backward compatible or to support media interactions.

Furthermore, media resources are licensed and sold as IVR ports so you can provision more channels than you are licensed for and, at run-time, licensing will be enforced to prevent the system accepting calls, as this would violate your licensing agreements.

You can provision Call Control groups, multiple CMT Dialog groups, and Nuance ASR Dialog groups to allow for the sharing of resources between different applications. In addition, you can provision special applications to primarily use specific sets of resources. You can do this, for example, when you configure a JTAPI Trigger. For more information, see the *Cisco Customer Response Applications Administrator Guide*.

### Provisioning CMT Dialog Groups

The Cisco CRA server uses the Real-Time Transport Protocol (RTP) to send and receive media packets over the IP network. To ensure that the CRA Engine can communicate with your Cisco IP Telephony system, you need to configure the RTP ports that the CRA Engine will use to send and receive RTP data.

To configure a CMT Dialog, perform the following steps:

#### Procedure

---

- Step 1** Connect to Cisco CRA Administration.
- Step 2** From the CRA Administration main menu, choose **Subsystems > Cisco Media**. The Cisco Media Termination Dialog Group Configuration window displays.
- Step 3** Click the **Add a New CMT Dialog Group** hyperlink. The second Cisco Media Termination Dialog Group Configuration window displays.
- Step 4** Accept the automatic group ID or enter a group ID in the Group ID field.



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**Note** Ensure this Group ID is unique within all media group identifiers, including ASR.

---

- Step 5** To automatically populate the Description field, press the **Tab** key.

- Step 6** Enter a maximum number of channels available for the group in the Maximum Number Of Channels field.
- Step 7** Click **Add**.
- The Cisco Media Termination Dialog Group Configuration window displays.
- 

## Adding a New Cisco CallManager AutoAttendant

After you have configured the JTAPI subsystem on the Cisco CRA Engine, you can use one of the sample scripts to create an application and start the Cisco CRA Engine. To add a new Cisco CallManager AutoAttendant, use this procedure.



### Tip

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To start Cisco CRA Administration, open <http://servername/AppAdmin> in your web browser, where *servername* is the DNS name or IP address of the application server. Click **Help** for detailed information on using the interface.

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### Procedure

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- Step 1** From the CRA Administration main menu, choose **Applications > Configure Applications**.
- Cisco CRA Administration opens Application Configuration window.
- Step 2** Click the **Add New Application** link on the Application Configuration window.
- The Add a New Application window displays.
- Step 3** Click **Next**.
- The Cisco Script Application window displays.
- Step 4** In the Name field, enter the name of the application.
- Step 5** To automatically populate the Description field, press the **Tab** key.

**Step 6** In the ID field, enter a unique ID. The ID gets reported in Historical Reporting to identify this application.



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**Note** The system automatically generates an ID; therefore, you can use the ID that the field contains or erase the value and enter a new one.

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**Step 7** In the Maximum Number of Sessions field, enter the maximum number of sessions that can be running this application simultaneously.



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**Note** Depending on the Script and Default Script selection, the window may refresh and provide additional fields and drop-down menu options.

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**Step 8** From the Script drop-down arrow, choose the script that will be running the application. The script for Cisco CallManager AutoAttendant specifies aa.aef.

**Step 9** From the Default Script drop-down menu, accept **System Default**. The default script executes when an error occurs with the configured application script.

**Step 10** Click **Add**.

The following message displays:

“The operation has been executed successfully”

**Step 11** To close the dialog box, click **OK**.

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### Related Topics

- [Adding a New Cisco CallManager AutoAttendant, page 7-22](#)
- [Customizing Cisco CallManager AutoAttendant, page 7-24](#)

## Customizing Cisco CallManager AutoAttendant

Cisco CallManager AutoAttendant comes with a prerecorded welcome prompt. By default, it spells out user names; it does not attempt to pronounce names. You can customize your automated attendant by adding your own welcome prompt and recordings of your user spoken names. These topics describe how to customize Cisco CallManager AutoAttendant:

- [Modifying an Instance of Cisco CallManager AutoAttendant, page 7-24](#)
- [Configuring Prompts, page 7-25](#)

## Modifying an Instance of Cisco CallManager AutoAttendant

This section describes how to modify Cisco CallManager AutoAttendant settings.

**Tip**

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To start Cisco CRA Administration, open `http://servername/AppAdmin` in your web browser, where *servername* is the DNS name or IP address of the application server. Click Help for detailed information on using the interface.

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**Procedure**

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- Step 1** From the Cisco CRA Administration main window, choose **Applications > Configure Applications**.
- Step 2** Click the instance of Cisco CallManager AutoAttendant that you want to configure.
- Step 3** You can change these settings:
- **Description**—The description of the application.
  - **ID**—The application ID. The system reports the ID in Historical Reporting to identify this application.
  - **Maximum Number of Sessions**—The maximum number of simultaneous callers that can use this automated attendant. This number should not exceed the number of CTI Ports that were created for its use.
  - **Enabled**—Indications that the automated attendant is running.
  - **Script**—The script that will be running the application.

- **welcomePrompt**—The prompt that initially plays when the automated attendant answers the phone. See [Configuring the Welcome Prompt, page 7-27](#), for information about how to upload prompts.
- **MaxRetry**—The number of times that a caller is returned to the Cisco CallManager AutoAttendant script main menu if caller encounters an error. The default specifies 3.
- **operExtn**—The extension of the phone that the operator will use.
- **Default Script**—The script that executes when an error occurs with the configured application script.

**Step 4** To save your changes, click **Update**.

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#### Related Topics

- [Adding a CTI Port Group, page 7-19](#)
- [Configuring Prompts, page 7-25](#)

## Configuring Prompts

Through Cisco CRA Administration Media Configuration, you can modify the prompts that Cisco CallManager AutoAttendant uses. You can also upload spoken names for each person in the organization, so callers receive spoken names rather than spelled-out names when the automated attendant is asking the caller to confirm which party they want.

These topics describe how to customize these features:

- [Recording the Welcome Prompt, page 7-25](#)
- [Configuring the Welcome Prompt, page 7-27](#)
- [Uploading a Spoken Name, page 7-28](#)

#### Recording the Welcome Prompt

Cisco CallManager AutoAttendant comes with a prerecorded, generic welcome prompt. You should record your own welcome prompt to customize your automated attendant for the specific role that it is to fulfill for your organization.

You can use any sound recording software to record the welcome prompt if the software can save the prompt in the required file format. You can record a different welcome prompt for each instance of Cisco CallManager AutoAttendant that you create.

This section describes how to record the welcome prompt by using Microsoft Sound Recorder. Save the prompt as a .wav file in CCITT (mu-law) 8-kHz, 8-bit, mono format. You must have a microphone and speakers on your system to use the software.

### Procedure

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- Step 1** Start the Sound Recorder software; for example, by choosing **Start>Programs>Accessories>Entertainment>Sound Recorder**.
- Step 2** Click the **Record** button and say your greeting into the microphone.
- Step 3** When you finish the greeting, click the **Stop** button.
- Step 4** To check your greeting
- Click the **Rewind** button (also called “Seek to Start”) or drag the slider back to the beginning of the recording.
  - To play the recording, click the **Play** button. Rerecord your greeting until you are satisfied.
- Step 5** When you are satisfied with your greeting, save the recording:
- Choose **File>Save As**.
  - To set the recording options, click **Change**. (You can also do this by choosing **Properties** from the Sound Recorder File menu). Choose these options:
    - Name—Choose **[untitled]**.
    - Format—Choose **CCITT u-law**.
    - Attributes—Choose **8.000 kHz, 8 Bit, Mono 7 kb/sec**.
- You can save these settings to reuse later by clicking **Save As** and entering a name for the format.
- To close the Sound Selection window, click **OK**.
  - Browse to the directory where you want to save the file, enter a file name, and click **Save**. Use the .wav file extension.
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### Related Topics

- [Configuring Prompts, page 7-25](#)
- [Configuring the Welcome Prompt, page 7-27](#)

### Configuring the Welcome Prompt

Cisco CallManager AutoAttendant can only use welcome prompts that are stored on the Cisco CRA Engine. To configure your automated attendant to use a customized welcome prompt, you must upload it to the server and configure the appropriate Cisco CallManager AutoAttendant instance.



#### Tip

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To start Cisco CRA Administration, open <http://servername/AppAdmin> in your web browser, where *servername* is the DNS name or IP address of the application server. Click Help for detailed information on using the interface.

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### Procedure

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**Step 1** From the Cisco CRA Administration main menu, choose **Tools > Prompt Management**.

The Prompt Management window displays.



**Note** Before adding a new user prompt, you need to Create a .wav file source folder. Use the Create Folder function to create a source folder.

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**Step 2** From the Language Directory drop-down menu, choose the specific language and directory where the prompt should be uploaded.

**Step 3** To add a new prompt

- Click the **Add a new prompt** hyperlink.  
The the Prompt File Name dialog box displays.
- To open the Choose file dialog box, click **Browse**.
- Navigate to the source .wav file folder and double-click the .wav file that you want to upload to the Cisco CRA Engine.
- Confirm your choice in the **Destination File Name** field by clicking in the field.

- e. To upload the .wav file, click **Upload**.  
The system displays a message that the upload was successful.
- f. Click the **Return to Prompt Management** hyperlink.  
The window refreshes, and the file displays in the Prompt Management window.

**Step 4** To replace an existing prompt with a new .wav file

- a. Click the arrow in the Upload column for the prompt that you want to modify.  
The Choose file dialog box opens.
  - b. Enter the name of the .wav file that you want to use to replace the existing prompt.
  - c. When you have provided the .wav file and prompt name information, click **Upload**.
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### Related Topics

- [Recording the Welcome Prompt, page 7-25](#)
- [Uploading a Spoken Name, page 7-28](#)

### Uploading a Spoken Name

By default, Cisco CallManager AutoAttendant spells out the names of parties when it asks a caller to choose between more than one matching name or to confirm that the user wants to connect to the party. You can upload spoken names to the system, so your automated attendant plays spoken names rather than spelling them out.

To upload Cisco CallManager Spoken Names in your users voices, upload the corresponding .wav files into the directory by performing the following steps:

### Procedure

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- Step 1** Ask users to record their names in the manner that is described in the [“Recording the Welcome Prompt” section on page 7-25](#), and to save their files as *userId.wav*, where *userId* is their user name.
- Step 2** Connect to Cisco CRA Administration.

- Step 3** From the Cisco CRA Administration main menu, choose **Tools > Spoken Name Upload**.
- The Spoken Name Prompt Upload window displays.
- Step 4** In the User Id\* field, enter a User ID.
- Step 5** Enter the path that contains the Spoken Name .wav file in the Spoken Name (.wav)\* field or click **Browse** and navigate to the directory that contains the Spoken Name .wav file.
- Step 6** To upload the file, click **Upload**.

### Related Topic

[Configuring the Welcome Prompt, page 7-27](#)

## Managing Cisco CallManager AutoAttendant

Use Cisco CRA Administration to manage Cisco CallManager AutoAttendant. Use the online help to learn how to use the interface and perform these tasks. [Table 7-5](#) describes the management tasks.

**Table 7-5** *Managing Cisco CallManager AutoAttendant*

Task	Purpose	Commands (from the Cisco CRA Administration main window)
Start and stop the Cisco CRA Engine	Make sure that the engine is running for your automated attendant to work. You can stop and restart the engine to help resolve or troubleshoot problems.	Choose <b>System &gt; Engine</b> .
Change the Cisco CRA Engine configuration	Modify the engine configuration to resolve problems.	Choose <b>System &gt; Engine</b> ; then, click <b>Engine Configuration</b> . See the online help for detailed information.
Set up trace files	Set up trace files to collect troubleshooting information.	Choose <b>System &gt; Engine</b> ; then, click <b>Trace Configuration</b> . See the online help for detailed information.

Table 7-5 Managing Cisco CallManager AutoAttendant (continued)

Task	Purpose	Commands (from the Cisco CRA Administration main window)
View trace files	View trace files to see the results of your tracing.	Choose <b>System &gt; Engine</b> ; then, click <b>Trace Files</b> . Choose the trace file that you created.
Monitor performance in real time	You can monitor the performance of the system while it is running if you install the real-time reporting monitor.	Choose <b>Tools &gt; Real Time Reporting</b> . See the online help for information on installing and using Real Time Reporting.

**Related Topics**

- [Configuring Cisco CallManager AutoAttendant, page 7-7](#)
- [Troubleshooting Cisco CallManager AutoAttendant, page A-29](#)