

Configuring AutoAttendant with CRA 3.0 and Cisco CallManager 3.2

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Related Information

Introduction

This document describes how to configure the AutoAttendant. The Cisco AutoAttendant application accepts inbound calls, queries the caller for destination information, and can rapidly dispatch the call without operator intervention. However, the caller can select an option to route to an operator extension. First, you need to create the call processing logic on the Cisco CallManager for the AutoAttendant. Then, you need to configure the AutoAttendant application on the Cisco Customer Response Applications (CRA) server.

Prerequisites

Requirements

Readers of this document should have knowledge of these topics:

- Cisco AutoAttendant 1.1.3
- Cisco CallManager 3.2.2c
- Cisco CRA 3.0
- Administrator logins must be available for both the Cisco CallManager and Cisco CRA 3.0 server.

Components Used

The information in this document is based on these software and hardware versions:

- Cisco CallManager 3.2
- Cisco CRA 3.0

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure

that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Configure Cisco AutoAttendant

Complete the tasks in these sections to configure Cisco AutoAttendant.

Task 1: Add CTI Route Points in Cisco CallManager

Complete these steps to add Cisco Telephony Integration (CTI) route points in Cisco CallManager:

1. On the publisher (the server with the master copy of the database), select **Start > Programs > Cisco CallManager 3.2 > CallManager Administration** to start Cisco CallManager Administration.
2. Select **Device > Add a New Device** to add the CTI route point.
3. Click the **Device Type** drop-down arrow and select **CTI Route Point**.
4. Click **Next**.

The CTI Route Point Configuration page appears.

5. In the Device Name field, enter a name of your choice for the CTI route point.

Choose a name that is descriptive (for example, **AA_RP**).

6. Select the device pool from the Device Pool field for this CTI route point. If no other pool has been created, select **Default**.
7. Click **Insert**.

This screen capture shows the CTI Route Point Configuration page:

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

CTI Route Point Configuration [Add a New CTI Route Point](#)
[Back to Find/List CTI Route Points](#)

Directory Numbers
Lines can be added after the new CTI Route Point is inserted in the database.

Device: New
Status: AA_RP was successfully deleted.

CTI Route Point Configuration

Device Information

Device Name*

Description

Device Pool* [\(View details\)](#)

Calling Search Space

Location

* indicates a required item.

8. Click **OK** to add a directory number for line 1 of this CTI route point.

The Directory Number Configuration page appears.

9. In the Directory Number field, enter the directory number for this CTI route point (for example, **4000**). This is the number that users dial to reach this CTI route point.
10. Click **Insert**.

This screen capture shows the Directory Number Configuration page:

The screenshot shows the Cisco CallManager Administration interface. At the top, there is a navigation menu with options: System, Route Plan, Service, Feature, Device, User, Application, and Help. Below the menu is the Cisco CallManager Administration logo and the Cisco Systems logo. The main heading is "Directory Number Configuration" with a link "Configure Device (AA_RP)". On the left, a sidebar shows "Devices using this Directory Number" with a plus icon and "AA_RP (Line 1)". The main content area is titled "Directory Number: New" with a status of "Ready". It contains two buttons: "Insert" and "Cancel Changes". Below these are three sections: "Directory Number" with a text field for "Directory Number*" containing "4000" and a dropdown for "Partition" set to "<None >"; "Directory Number Settings" with dropdowns for "Voice Mail Profile" (set to "<None >"), "Calling Search Space" (set to "<None >"), "User Hold Audio Source" (set to "<None >"), and "Network Hold Audio Source" (set to "<None >").

11. Click **OK** to return to the CTI Route Point Configuration page.

Task 2: Add CTI Ports in Cisco CallManager

Complete these steps to add CTI ports in Cisco CallManager:

1. Select **Device > Add a New Device** to add a CTI Port.
2. Click the **Device Type** drop-down arrow and select **Phone**.
3. Click **Next**.
4. Click the **Phone Type** drop-down arrow and select **CTI Port**.
5. Click **Next**.

The Phone Configuration page appears.

6. In the Device Name field, enter a name for the device (for example, **CTI_Port1**).
7. Click the **Device Pool** drop-down arrow and select the device pool for this CTI port. If there is no other pool, select **Default**.
8. Click **Insert**.

This screen capture shows the Phone Configuration page:

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Phone Configuration

[Add a new phone](#)
[Back to Find/List Phones](#)

Directory Numbers
Lines can be added after the new phone is inserted in the database.

Phone: New
Status: Ready

Phone Configuration (Model = CTI Port)

Device Information

Device Name*	<input type="text" value="CTI_Port1"/>
Description	<input type="text" value="CTI_Port1"/>
Device Pool*	<input type="text" value="Default"/> (View details)
Calling Search Space	<input type="text" value="< None >"/>
Media Resource Group List	<input type="text" value="< None >"/>
User Hold Audio Source	<input type="text" value="< None >"/>
Network Hold Audio Source	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>

9. Click **OK** to add a directory number for line 1 of this CTI port.
10. In the Directory Number field, enter the directory number of this CTI port (for example, **4001**).
11. Click **Insert**.

This screen capture shows the Directory Number Configuration page:

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Directory Number Configuration

[Configure Device \(CTI Port1\)](#)

Devices using this Directory Number

CTI_Port1 (Line 1)

Directory Number: New
Status: Ready

Directory Number

Directory Number*	<input type="text" value="4001"/>
Partition	<input type="text" value="< None >"/>

Directory Number Settings

Voice Mail Profile	<input type="text" value="< None >"/> (Choose <None> to use default)
Calling Search Space	<input type="text" value="< None >"/>
User Hold Audio Source	<input type="text" value="< None >"/>
Network Hold Audio Source	<input type="text" value="< None >"/>
Call Waiting	<input type="text" value="Default"/>
Auto Answer	<input type="text" value="Auto Answer Off"/>

Note: CTI port groups must contain sequential CTI port directory numbers.

12. Click **OK** to return to the Phone Configuration page.
13. Repeat step 1 through step 12 to add additional ports (for this example, these ports are added: CTI_Port2 DN 4002, CTI_Port3 DN 4003, CTI_Port4 DN 4004)

Task 3: Create a Cisco CallManager User for Cisco CallManager AutoAttendant

Complete these steps to create a Cisco CallManager user for Cisco CallManager AutoAttendant:

1. Select **User > Add a New User** to add a new user for AutoAttendant.

The User Information page appears.

2. Enter a name in the First Name field (for example, **JTAPI**), enter a name in the Last Name field (for example, **User**), and enter a user identification in the User ID field (for example, **JTAPIUser**).
3. In the User Password and Confirm Password fields, enter a password of your choice.
4. In the PIN and Confirm PIN fields, enter a numeric Personal Identification Number (PIN) of your choice.
5. Check the **Enable CTI Application Use** check box.
6. Click **Insert**.

This screen capture shows the User Information page:

The screenshot shows the Cisco CallManager Administration interface. At the top, there is a navigation menu with options: System, Route Plan, Service, Feature, Device, User, Application, and Help. Below the menu is the header "Cisco CallManager Administration For Cisco IP Telephony Solutions" and the Cisco Systems logo. The main heading is "User Information" with a "Back to User List" link. On the left, there is a section for "Application Profiles of" with a note: "<No Application Profiles> Application Profiles can be accessed after the new User is inserted in the directory." To the right of this section are "Insert" and "Cancel Changes" buttons. The form fields are: First Name* (JTAPI), Last Name* (User), User ID* (JTAPIUser), User Password* (masked with asterisks), Confirm Password* (masked with asterisks), PIN* (masked with asterisks), Confirm PIN* (masked with asterisks), Telephone Number, Manager User ID, Department, UserLocale (set to <None >), and Enable CTI Application Use (checked).



Caution: When you create a Cisco CallManager user for Cisco CallManager AutoAttendant,

you must check the **Enable CTI Application Use** check box on the Cisco CallManager Add a New User page. If you do not check the **Enable CTI Application Use** check box, the Cisco CRA Engine can not receive calls from Cisco CallManager.

7. Click **Device Associations**.
8. Click **Select Devices** to provide a list of available devices.
9. Check the check boxes that are associated with the Device Name fields in the Available Devices area of the User Information page.
10. Check the check boxes for these items, to use the examples provided here:

- ◆ AA_RP
- ◆ CTI_Port1
- ◆ CTI_Port2
- ◆ CTI_Port3
- ◆ CTI_Port4

11. Ensure that the **No Primary Extension** radio button is selected.
12. Click **Update**.

This screen capture shows the User Information page with the Available Devices listed:

The screenshot shows the Cisco CallManager Administration interface. The main heading is "User Information". Below it, there are links for "Personal Information" and "Back to User List". A status bar indicates "5 device(s) selected currently." Below this are "Update" and "Cancel Changes" buttons. The "Available Devices" section includes checkboxes for "Check All on Page" and "Check All in Search", and radio buttons for "No Primary Extension" and "No ICD Extension". A table lists the devices with columns for Type, Device Name, Description, Primary Ext., Extension, and ICD Ext.

Type	Device Name	Description	Primary Ext.	Extension	ICD Ext.
<input checked="" type="checkbox"/>	CTI_Port1	CTI_Port1	<input type="radio"/>	4001	<input type="radio"/>
<input checked="" type="checkbox"/>	CTI_Port2	CTI_Port2	<input type="radio"/>	4002	<input type="radio"/>
<input checked="" type="checkbox"/>	CTI_Port3	CTI_Port3	<input type="radio"/>	4003	<input type="radio"/>
<input checked="" type="checkbox"/>	CTI_Port4	CTI_Port4	<input type="radio"/>	4004	<input type="radio"/>
<input checked="" type="checkbox"/>	AA_RP	AA_RP	<input type="radio"/>	4000	<input type="radio"/>

Task 4: Associate AutoAttendant Profile to the User

In order to associate the AutoAttendant profile to a user, refer to Associating Auto Attendant Profiles.

Also, make sure that the AutoAttendant application profile is configured correctly for the user configuration in the DC Directory. The AA Installed flag should be set to **True** under the system profile in the DC Directory. Otherwise, when you add a user to the directory, the AutoAttendant Application Profile is not displayed, and a user cannot be linked to this profile.

Complete these steps in order to configure the application profile so that you can add or view users in the DC Directory:

1. Connect to the DC Directory Administrator and choose **Directory > Cisco.com > CCN**.
2. Click **systemProfile**. In the right panel, right-click **systemProfile** and choose **Properties**.
3. Go to the Application Install Status tab. Check if the value for AA Installed is set to **True**. If this is set to **False**, click **Modify** and change the value to **True**. Click **Apply** and then click **OK**.
4. Click **Services**. In the right panel, choose **World Wide Web Publishing Service**.
5. Click the **Restart Service** icon.

Task 5: Configure the JTAPI Subsystem on the Cisco Customer Response Application Engine

Complete these steps to configure the Java Telephony API (JTAPI) subsystem on the Cisco CRA engine:

1. On the CRA Server, select **Start > Programs > Cisco CRA Administrator > Application Administrator** to start Cisco CallManager Administration.
2. Select **Subsystems > JTAPI**.
3. In the JTAPI Provider(s) field, enter the IP address or DNS name of the Cisco CallManager.

Note: Cisco recommends that you use the IP address because, when you configure the DNS Name, you introduce the DNS Server as another point of failure.

4. In the User ID field, enter the Cisco CallManager User ID that you defined in Task 3: Create a Cisco CallManager User for Cisco CallManager AutoAttendant (for example, JTAPIUser).
5. In the Password field, enter the password that you defined for this User ID.
6. Click **Update** to enter your changes.

This screen capture shows the JTAPI Provider page:

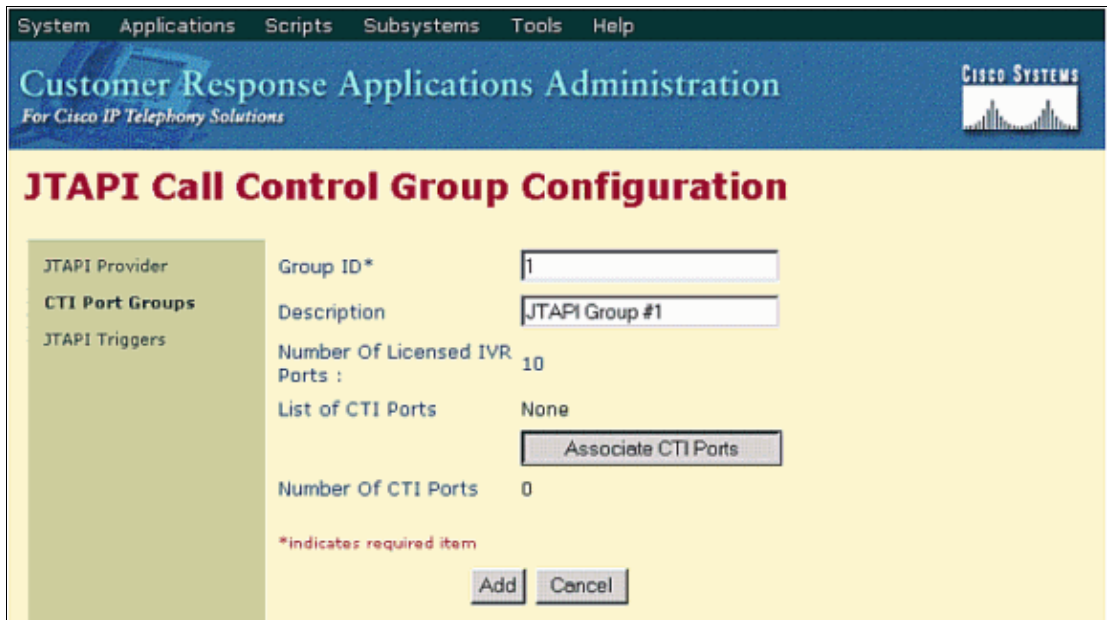
The screenshot displays the Cisco Customer Response Administration web interface. The main heading is "Customer Response Administration" with the subtitle "For Cisco IP Telephony Solutions". The page is titled "JTAPI Configuration". A navigation menu at the top includes "System", "Applications", "Scripts", "Subsystems", "Tools", and "Help". The "Subsystems" menu is expanded, showing options: "JTAPI", "ICD", "Database", "HTTP", "eMail", "Cisco Media", "Nuance ASR", and "Nuance TTS". The main content area is titled "JTAPI Provider" and contains a form with the following fields: "JTAPI Provider(s)*" with the value "10.1.1.1", "User ID*" with the value "JTAPIUser", and "Password*" with a masked password. A note below the form states "*indicates required item". At the bottom of the form are "Update" and "Cancel" buttons. A red note at the bottom of the page reads "Note: Any change to the Jtapi provider requires an engine restart".

Task 6: Add a CTI Port Group

Complete these steps to add a Cisco Telephony Integration (CTI) port group:

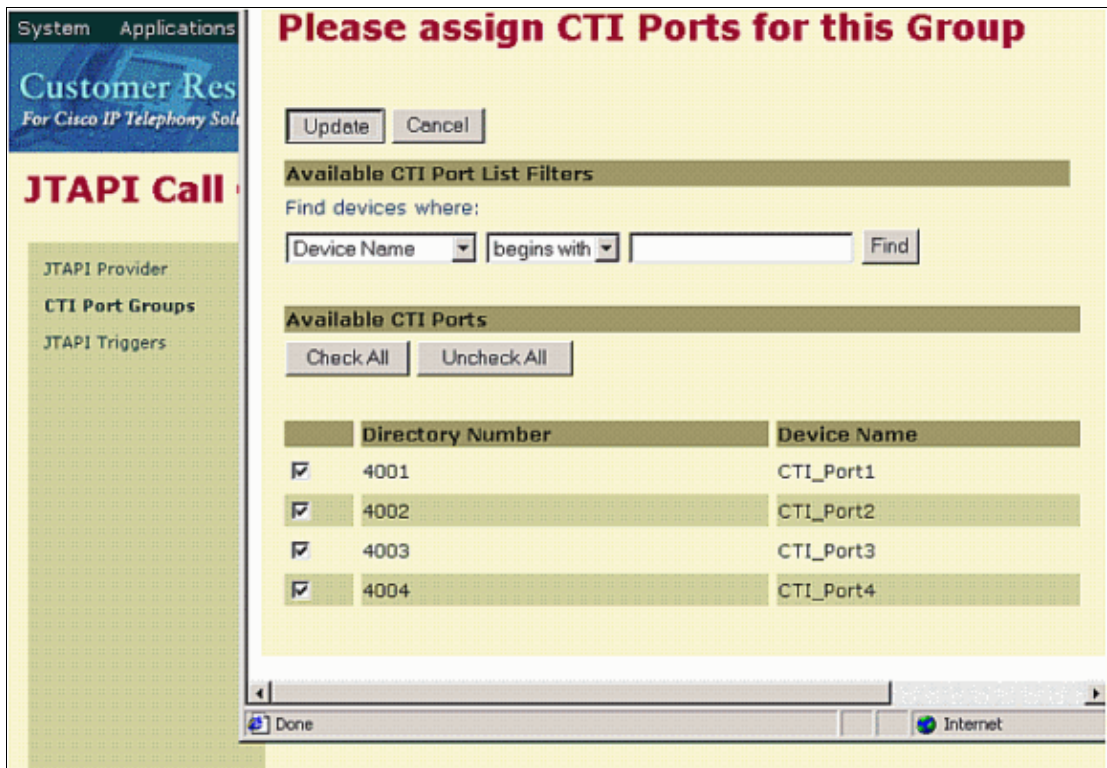
1. Click **CTI Port Groups** on the JTAPI Configuration page.
2. Click **Add a New JTAPI Call Control Group** on the JTAPI Call Control Group Configuration page.
3. In the Group ID field, enter a unique number (for example, **1**).
4. Click **Associate CTI Ports**.

This screen capture shows the JTAPI Call Control Group Configuration page:



5. Check all of the CTI Ports that you added in Task 2: Add CTI Ports in Cisco CallManager, and click **Update**.

This screen capture shows the Please assign CTI Ports for this Group window:



6. Click **Add** to add the associated ports to the configured CTI Port Group.

Task 7: Create the Cisco Media Termination

Complete these steps to create the Cisco Media Termination:

1. Select **Subsystems > Cisco Media**.



2. Click **Add a New CMT Dialog Control Group**.
3. In the Group ID field, enter a unique number (for example, **1**).
4. In the Maximum Number of Channels field, enter a portion (or all) of the Licensed IVR Ports (for example, **5**).
5. Click **Add**.

This screen capture shows the Cisco Media Termination Dialog Group Configuration page:



Task 8: Add a New Cisco CallManager AutoAttendant Application

Complete these steps to add a new Cisco CallManager AutoAttendant application:

1. Select **Applications > Configure Applications**.



2. Click **Add a New Application** on the Application Configuration page.

3. Click the **Application Type** drop-down arrow and select **Cisco Script Application**.
4. Click **Next**.

This screen capture shows the Add a New Application page:

The screenshot shows the 'Add a New Application' page. At the top, there is a navigation bar with 'System', 'Applications', 'Scripts', 'Subsystems', 'Tools', and 'Help'. Below this is a header for 'Customer Response Applications Administration' with the subtitle 'For Cisco IP Telephony Solutions' and the Cisco Systems logo. The main heading is 'Add a New Application'. Below the heading, it says 'Select the type of application you would like to create:'. There is a form field for 'Application Type*' with a dropdown menu showing 'Cisco Script Application'. Below this, there is a note '*Indicates required item'. At the bottom, there are 'Next' and 'Cancel' buttons.

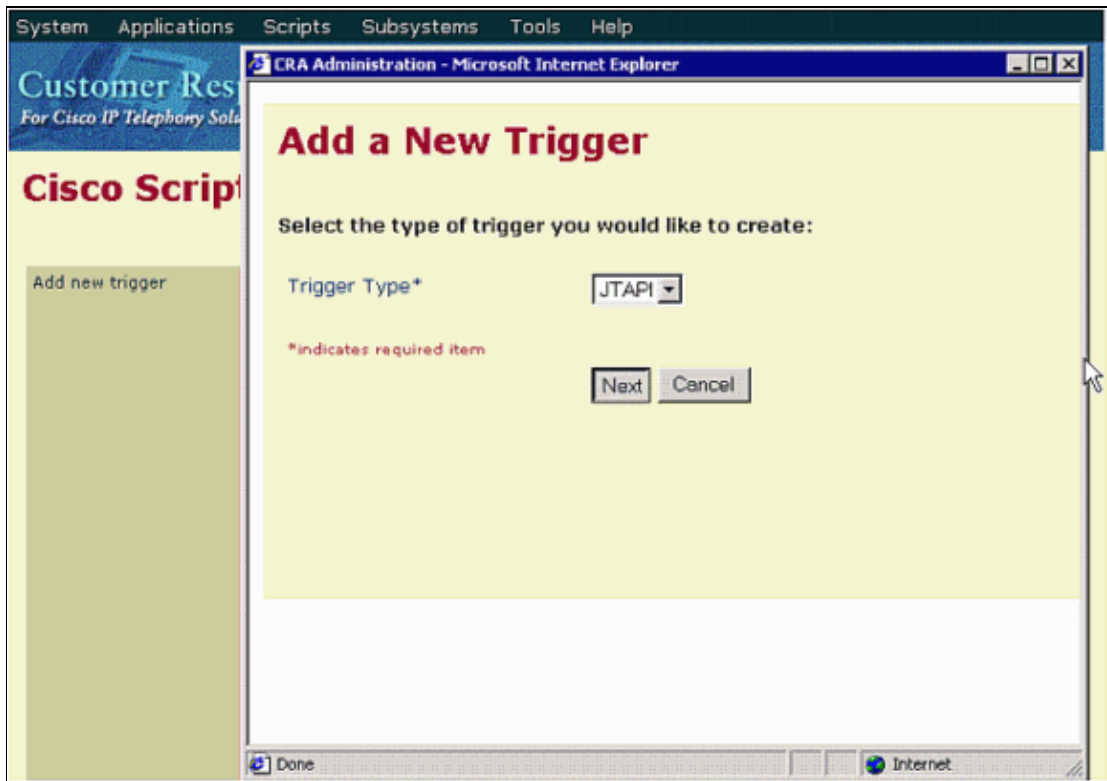
5. In the Name field, enter a name for the application (for example, **AA**).
6. In the ID field, enter a unique number (for example, **1**).
7. In the Maximum Number of Sessions field, enter the number of CTI ports that you added in Cisco CallManager. If you are using the provided sample values, enter **4**.
8. Click the **Script** drop-down arrow and select **aa.aef**.
9. In the operExtn field, enter the extension of the phone that will be used by the human operator (for example, **2003**).
10. Click **Add**.

This screen capture shows the Cisco Script Application page:

The screenshot shows the 'Cisco Script Application' page. At the top, there is a navigation bar with 'System', 'Applications', 'Scripts', 'Subsystems', 'Tools', and 'Help'. Below this is a header for 'Customer Response Applications Administration' with the subtitle 'For Cisco IP Telephony Solutions' and the Cisco Systems logo. The main heading is 'Cisco Script Application'. Below the heading, there is a link '[Back to Application List](#)'. On the left side, there is a note 'Triggers can be added after application is created'. The main form has several fields: 'Name*' with value 'AA', 'Description' with value 'AA', 'ID*' with value '1', 'Maximum Number of Sessions*' with value '4', 'Enabled*' with radio buttons for 'Yes' (selected) and 'No'. Below these is a section for 'Script*' with a dropdown menu showing 'aa.aef' and an 'Edit' button. Below that is 'welcomePrompt*' with a dropdown menu showing 'AAWelcome.wav' and an 'Edit' button. Below that is 'MaxRetry*' with value '3'. Below that is 'operExtn*' with value '2003'. At the bottom, there is a section for 'Default Script' with a dropdown menu showing '- System Default -' and an 'Edit' button. Below the form, there is a note '*Indicates required item'. At the bottom, there are 'Add' and 'Cancel' buttons.

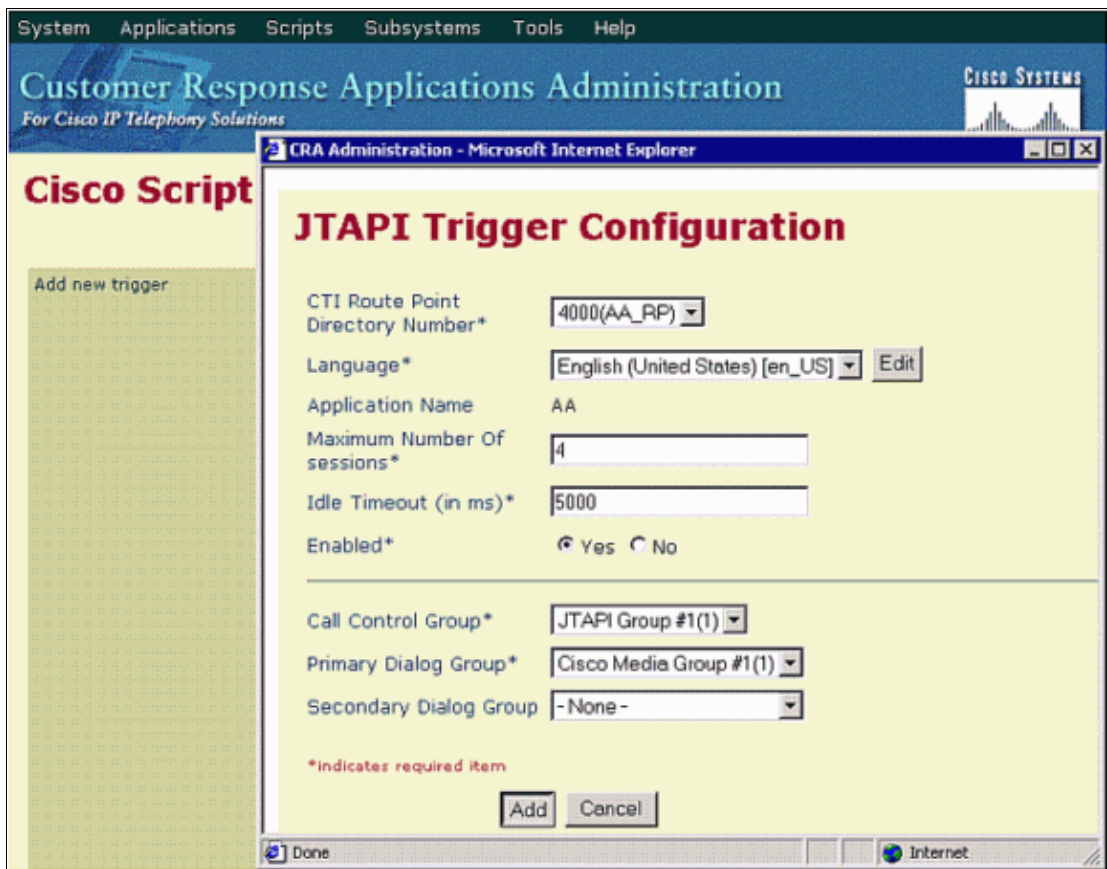
11. Click **Add A New Trigger**.
12. Click the **Trigger Type** drop-down arrow and select **JTAPI**.
13. Click **Next**.

This screen capture shows the Add a New Trigger window:



14. Click the **CTI Route Point Directory Number** drop-down arrow and select the route point that will be dialed for this application.
15. Click the **Language** drop-down arrow and select the language for this application.
16. In the Maximum Number of Sessions field, enter the number of CTI ports that you added in Cisco CallManager. If you are using the provided sample values, enter **4**.
17. Click the **Call Control Group** drop-down arrow and select the call control group that you configured in Task 5: Add a CTI Port Group.
18. Click the **Primary Dialog Group** drop-down arrow and select the primary dialog group that you configured in Task 6: Create the Cisco Media Termination.
19. Click **Add**.

This screen capture shows the JTAPI Trigger Configuration window:



20. Select **System > Engine**.

21. When the Engine Status indicates that it is Running and when the Subsystems Status data indicate that they are IN_SERVICE, then the Cisco CallManager AutoAttendant is functional.

Dial the directory number of the CTI route point that you added to Cisco CallManager, to call into the Cisco CallManager AutoAttendant (see Task 1: Add CTI Route Points in Cisco CallManager). If you are using the provided sample values, dial **4000**.

This screen capture shows the Engine page:

System Applications Scripts Subsystems Tools Help

Customer Response Applications Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Engine

Engine Status	Engine Status	
Engine Configuration	System	Status
Trace Configuration	Engine	Running
Trace Files	Subsystems	Status
	JTAPI Subsystem	IN_SERVICE
	Database Subsystem	OUT_OF_SERVICE
	Nuance ASR Subsystem	OUT_OF_SERVICE
	CMT Subsystem	IN_SERVICE
	HTTP Subsystem	IN_SERVICE
	Application Subsystem	IN_SERVICE
	Voice Browser Subsystem	IN_SERVICE
	Enterprise Server Data Subsystem	IN_SERVICE
	eMail Subsystem	OUT_OF_SERVICE
	RM-CM Subsystem	OUT_OF_SERVICE
	Core Reporting Subsystem	IN_SERVICE
	Nuance TTS Subsystem	OUT_OF_SERVICE

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Troubleshooting Cisco IP Telephony](#) 
- [Technical Support – Cisco Systems](#)

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