



## Configuring System Components

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Command-line interface (CLI) commands are available to configure Cisco Unity Express system components. Some commands are entered in EXEC mode and others in configuration mode.

This chapter configures the basic Cisco Unity Express components:

- SIP parameters that Cisco Unity Express needs to communicate with Cisco CallManager Express.
- Voice mail, auto attendant, and greeting management system applications that ship with Cisco Unity Express.

Additional procedures for configuring optional or advanced system components, such as servers and custom auto attendant scripts, are described in [“Advanced Configuration” on page 105](#).

All the procedures in this chapter can be implemented using either CLI commands or the graphical user interface (GUI) options. Use the CLI procedures for bulk provisioning, scripting, upgrading, and troubleshooting systems.

This chapter contains the following procedures for configuring Cisco Unity Express system components:

- [Configuring the SIP Proxy Server Location for Cisco Unity Express, page 42](#)
- [Configuring the Voice Mail Application, page 43](#)
- [Configuring the Greeting Management System Application, page 46](#)
- [Configuring and Managing the Auto Attendant Application, page 47](#)
- [Configuring Auto Attendant Scripts, page 53](#)
- [Configuring SIP Triggers for the Applications, page 54](#)
- [Deleting a SIP Application Trigger, page 56](#)
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- [Configuring System-Wide Mailbox Default Values, page 61](#)
- [Configuring the MWI On and Off Extensions, page 63](#)
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# Configuring the SIP Proxy Server Location for Cisco Unity Express

The Session Initiation Protocol (SIP) proxy server resides on the router with an installed Cisco Unity Express module. The SIP proxy server location information must be configured properly to enable all communications between Cisco Unity Express and Cisco CallManager Express. The SIP proxy server also enables the message waiting indicators (MWIs) to work with the Cisco Unity Express voice mail application.



## Note

The SIP proxy server used to support Cisco Unity Express does not provide the full equivalent functionality as the Cisco SIP Proxy Server product.

## Prerequisites

The following information is required to configure the SIP proxy server for Cisco Unity Express:

- Hostname or IP address of the router where the SIP proxy server resides
- UDP or TCP port of the router where the SIP proxy server resides

## SUMMARY STEPS

1. `config t`
2. `ccn subsystem sip`
3. `gateway address ip_address`
4. `gateway port port_number`
5. `end`
6. `exit`
7. `show ccn subsystem sip`
8. `copy running-config startup-config`

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>config t</code>	Enters configuration mode.
Step 2	<code>ccn subsystem sip</code>	Enters SIP configuration mode.
Step 3	<code>gateway address ip_address</code>  Example: se-10-0-0-0(config-sip)# <code>gateway address 10.100.6.9</code>	Specifies the hostname or IP address of the router where the SIP proxy server resides.
Step 4	<code>gateway port port_number</code>  Example: se-10-0-0-0(config-sip)# <code>gateway port 5060</code>	Specifies the UDP/TCP port number on the router where the SIP proxy server resides.

	Command or Action	Purpose
Step 5	<code>end</code>	Exits SIP configuration mode.
Step 6	<code>exit</code>	Exits configuration mode.
Step 7	<code>show ccn subsystem sip</code>	Displays the SIP subsystem parameters.
	<b>Example:</b> <code>se-10-0-0-0# show ccn subsystem sip</code>	
Step 8	<code>copy running-config startup-config</code>	Copies the configuration changes to the startup configuration.

## Example

The following example illustrates the `show ccn subsystem sip` output:

```
se-10-0-0-0# show ccn subsystem sip

SIP Gateway:                10.100.6.9
SIP Port Number:           5060
se-10-0-0-0#
```

## What to Do Next

Configure the voice mail application. See [“Configuring the Voice Mail Application” on page 43](#).

## Configuring the Voice Mail Application

After the Cisco Unity Express software is installed on the system, the voice mail application that ships with Cisco Unity Express must be configured using the procedures described in this section. The application is enabled by default.

To configure the voice-mail access and operator telephone numbers, see [“Configuring SIP Triggers for the Applications” on page 54](#).

The commands are used in both EXEC and configuration modes.

## Sharing Ports Among Applications and Triggers

One of the parameters that you may configure for the voice mail and auto attendant applications is the maximum number of callers who can access the application concurrently at any given time. This parameter, **maxsessions**, is limited by the number of ports on the Cisco Unity Express module. (See [“Software Licenses and Factory-Set Limits” on page 3](#) for the number of ports on your module.)

Consider your expected call traffic when assigning the number of ports to an application. One application may need more available ports than another, but each application should have at least one port available for incoming calls.

Suppose, for example, that your module has 4 ports and you assign 4 to the voice mail application **maxsessions** and 4 to the auto attendant **maxsessions**. If 4 callers access voice mail simultaneously, no ports will be available for auto attendant callers. Only when 0, 1, 2, or 3 callers access voice mail simultaneously will at least one port be available for auto attendant.

Suppose, instead, you assign 3 to the voice-mail **maxsessions** and 3 to the auto attendant **maxsessions**. At no time will one application use up all the ports. If voice mail has 3 active calls, then 1 caller can access auto attendant. A second call to auto attendant will not go through at that moment.

Similarly, you must assign the **maxsessions** parameter to each application trigger, which is the telephone number that activates the application’s script. The value of the trigger’s **maxsessions** must not exceed the application’s **maxsessions** value.

## Prerequisites

The following information is required to configure the voice mail application:

- Maximum number of users who can access voice mail simultaneously

### SUMMARY STEPS

1. **config t**
2. **ccn application *fullname***
3. (Optional) **description “*text*”**
4. **maxsessions *number***
5. **end**
6. **exit**
7. **show ccn scripts**
8. **show ccn application**
9. **copy running-config startup-config**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>config t</code>	Enters configuration mode.
Step 2	<code>ccn application <i>fullname</i></code>  <b>Example:</b> <code>se-10-0-0-0(config)# ccn application voicemail</code>	Specifies the application to configure and enters application configuration mode. Use the full name of the application for the <i>fullname</i> argument.
Step 3	<code>description "text"</code>  <b>Example:</b> <code>se-10-0-0-0(config-application)# description "Voice Mail"</code>	(Optional) Enter a description of the application. Use double quotes around the text.
Step 4	<code>maxsessions <i>number</i></code>  <b>Example:</b> <code>se-10-0-0-0(config-application)# maxsessions 6</code>	Specifies the <i>number</i> of users who can access this application simultaneously. See <a href="#">“Sharing Ports Among Applications and Triggers”</a> on page 44 for guidelines on assigning this value.
Step 5	<code>end</code>	Exits application configuration mode.
Step 6	<code>exit</code>	Exits configuration mode.
Step 7	<code>show ccn scripts</code>  <b>Example:</b> <code>se-10-0-0-0# show ccn scripts</code>	Displays the configured script names and their descriptions.
Step 8	<code>show ccn application</code>  <b>Example:</b> <code>se-10-0-0-0# show ccn application</code>	Displays details about each configured application.
Step 9	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Example

The following example illustrates the `show ccn scripts` output:

```
se-10-0-0-0# show ccn scripts

Name:                setmwi.aef
Create Date:         Tue Apr 20 20:22:27 PDT 1993
Last Modified Date:  Tue Apr 20 20:22:27 PDT 1993
Length in Bytes:    21990

Name:                voicebrowser.aef
Create Date:         Tue Apr 20 20:22:39 PDT 1993
Last Modified Date:  Tue Apr 20 20:22:39 PDT 1993
Length in Bytes:    13409

Name:                aa.aef
Create Date:         Tue Apr 20 20:22:47 PDT 1993
```

```
Last Modified Date:      Tue Apr 20 20:22:47 PDT 1993
Length in Bytes:        56227
```

The following example illustrates the **show ccn application** output:

```
se-10-0-0-0# show ccn application

Name:                    voicemail
Description:             Voice Mail
Script:                  voicebrowser.aef
ID number:               1
Enabled:                 yes
Maximum number of sessions: 6
logoutUri:               http://localhost/voicemail/vxmlscripts/m
bxLogout.jsp
uri:                     http://localhost/voicemail/vxmlscripts/1
ogin.vxml

se-10-0-0-0#
```

## Configuring the Greeting Management System Application

The Greeting Management System (GMS) application is a telephony-based interface that allows Cisco Unity Express administrators to record new audio prompts or delete existing custom audio prompts without using a PC or sound-editing software. These prompts can then be used in various Cisco Unity Express Automated Attendant (AA) scripts, such as the Welcome prompt in the default auto attendant. The Emergency Alternate Greeting (EAG) is an option within the GMS that allows users to record, modify, and enable or disable a special greeting to be played prior to the regular greeting, notifying callers of some temporary event or message.

The Cisco Unity Express module installation automatically configures the GMS application. This application permits recording and administration of auto attendant prompts using the telephone user interface (TUI).

Only users with administrative (superuser) privileges or greeting management (ManagePrompt) privileges have access to the GMS. (See [“Adding and Modifying a Group” on page 71](#) for information about assigning privileges.) When a caller dials the GMS number, the GMS authenticates the caller by requesting the caller’s extension and PIN. The GMS disconnects the caller if the caller does not have administrative authority.

To configure the GMS access telephone number, see [“Configuring SIP Triggers for the Applications” on page 54](#).

# Configuring and Managing the Auto Attendant Application

After the Cisco Unity Express software is installed on the system, the auto attendant application that ships with Cisco Unity Express must be configured using the procedures described in this section.

The only component of the default auto attendant which resides in the user directory is an audio prompt file called **AAWelcome.wav**. This is the default welcome greeting prompt. All other audio prompt files used by the auto attendant reside in the system directory and cannot be downloaded, copied, or uploaded by users. To customize the default welcome greeting prompt, see [“Customizing the Default Auto Attendant Welcome Prompt” on page 51](#).

The default auto attendant script provided with Cisco Unity Express is named **aa.aef**. This file resides in the system directory, and cannot be downloaded, copied, or uploaded by users. This default auto attendant application is also known as the “system script”, or “system AA”. This default script supports basic functions such as dial-by-extension, dial-by-spelling username, and call operator functions. If additional functionality is required, then you must create a customized auto attendant script. To create customized script files, see [“Configuring Auto Attendant Scripts” on page 53](#).

To configure the auto attendant access telephone number, see [“Configuring SIP Triggers for the Applications” on page 54](#).

The commands are used in both EXEC and configuration modes.

See [“Configuring Application Parameters” on page 108](#) for procedures to configure user-defined parameters.

## Prerequisites

The following information is required to configure auto attendant:

- To use your own welcome greeting, create a .wav file containing the prerecorded welcome greeting. This file must be uploaded to Cisco Unity Express module so that it can be located and saved in the auto attendant script. Alternatively, you can use the greeting management system (GMS) to record the welcome greeting. See [“Recording an Auto Attendant Greeting or Prompt File” on page 51](#) for guidelines on recording a greeting. See [“Uploading the Auto Attendant Greeting or Prompt File” on page 52](#) for the procedure to upload the prompt to Cisco Unity Express.
- Application name
- Number of times the auto attendant will replay instructions to a caller before the call is disconnected. This count begins when the caller moves past the main menu and starts to hear instructions for a submenu. The main menu will play five times and then, if the caller makes no choice or incorrect choices, will transfer to the operator.
- Extension number of the operator. Auto attendant dials this extension when the caller presses the zero (“0”) button.
- The customized WAV filename if you change the default auto attendant welcome prompt.
- Telephone number that the caller must dial to reach the auto attendant. In many cases, this number is your company telephone number.
- Maximum number of callers that auto attendant can handle simultaneously. See [“Sharing Ports Among Applications and Triggers” on page 44](#) for guidelines on assigning this value.

## SUMMARY STEPS

1. **config t**
2. **ccn application** *fullname*
3. (Optional) **description** "*text*"
4. **maxsessions** *number*
5. **parameter** "*name*" "*value*"
6. **enabled**
7. **end**
8. **exit**
9. **show ccn scripts**
10. **show ccn application**
11. **copy running-config startup-config**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>config t</b>	Enters configuration mode.
Step 2	<b>ccn application</b> <i>fullname</i>  <b>Example:</b> se-10-0-0-0(config)# <b>ccn application</b> AutoAttendant	Specifies the application to configure and enters application configuration mode. Use the full name of the application for the <i>fullname</i> argument.
Step 3	<b>description</b> " <i>text</i> "  <b>Example:</b> se-10-0-0-0(config-application)# <b>description</b> "Auto Attendant"	(Optional) Enter a description of the application. Use double quotes around the text.
Step 4	<b>maxsessions</b> <i>number</i>  <b>Example:</b> se-10-0-0-0(config-application)# <b>maxsessions</b> 4	Specifies the number of users who can access this application simultaneously. See <a href="#">“Sharing Ports Among Applications and Triggers”</a> on page 44 for guidelines on assigning this value.

	Command or Action	Purpose
Step 5	<p><b>parameter</b> <i>"name"</i> <i>"value"</i></p> <p><b>Example:</b>  se-10-0-0-0(config-application)# <b>parameter</b> <b>"operExtn"</b>  <b>"1000"</b>  se-10-0-0-0(config-application)# <b>parameter</b> <b>"MaxRetry"</b>  <b>"3"</b>  se-10-0-0-0(config-application)# <b>parameter</b>  <b>"welcomePrompt"</b> <b>"ciscowelcome.wav"</b></p>	<p>Specifies parameters for the application. Each parameter must have a name and a value, which is written within double quotes. The parameters below are case-sensitive. For more information about configuring application parameters, see the <a href="#">“Configuring Application Parameters”</a> section on page 108.</p> <p>For the auto attendant application, the parameters are:</p> <ul style="list-style-type: none"> <li>• <b>“operExtn”</b>—Extension that the system dials when a caller presses “0” to reach the auto attendant operator. This is also the extension where the call will be transferred to if there is no user input (timeout).</li> <li>• <b>“MaxRetry”</b>—Maximum number of times a user can incorrectly choose a submenu option before the application disconnects the call. The default is 3.</li> <li>• <b>“welcomePrompt”</b>—The WAV filename containing the customized auto attendant welcome prompt that is uploaded to the Cisco Unity Express module. This is the only greeting or prompt that can be customized when using the default auto attendant. For more information, see the <a href="#">“Customizing the Default Auto Attendant Welcome Prompt”</a> section on page 51.</li> </ul> <p>Note that entering this parameter does not upload the WAV file to the Cisco Unity Express module. See the <a href="#">“Uploading the Auto Attendant Greeting or Prompt File”</a> section on page 52.</p>
Step 6	<p><b>enabled</b></p> <p><b>Example:</b>  se-10-0-0-0(config-application)# <b>enabled</b></p>	<p>Allows the application to be accessible to the system.</p>
Step 7	<p><b>end</b></p>	<p>Exits application configuration mode.</p>
Step 8	<p><b>exit</b></p>	<p>Exits configuration mode.</p>
Step 9	<p><b>show ccn scripts</b></p> <p><b>Example:</b>  se-10-0-0-0# <b>show ccn scripts</b></p>	<p>Displays the configured script names and their descriptions.</p>

	Command or Action	Purpose
Step 10	<code>show ccn application</code>	Displays details about each configured application.
	<b>Example:</b> <code>se-10-0-0-0# show ccn application</code>	
Step 11	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Examples

The following example illustrates the `show ccn scripts` output:

```
se-10-0-0-0# show ccn scripts

Name:                setmwi.aef
Create Date:         Tue Apr 20 20:22:27 PDT 1993
Last Modified Date: Tue Apr 20 20:22:27 PDT 1993
Length in Bytes:    21990

Name:                voicebrowser.aef
Create Date:         Tue Apr 20 20:22:39 PDT 1993
Last Modified Date: Tue Apr 20 20:22:39 PDT 1993
Length in Bytes:    13409

Name:                aa.aef
Create Date:         Tue Apr 20 20:22:47 PDT 1993
Last Modified Date: Tue Apr 20 20:22:47 PDT 1993
Length in Bytes:    56227

Name:                promptgmt.aef
Create Date:         Tue Apr 20 20:22:59 PDT 1993
Last Modified Date: Tue Apr 20 20:22:59 PDT 1993
Length in Bytes:    80781
se-10-0-0-0#
```

The following example illustrates the `show ccn application` output:

```
se-10-0-0-0# show ccn application

Name:                autoattendant
Description:         autoattendant
Script:              aa.aef
ID number:           2
Enabled:             yes
Maximum number of sessions: 4
MaxRetry:            3
operExtn:            1000
welcomePrompt:      AAWelcome.wav
se-10-0-0-0#
```

## Configuring Auto Attendant Prompts

Cisco Unity Express supports customized greeting and prompt files. The NM supports up to 50 prompts; the AIM supports up to 25 prompts. When using the default auto attendant, the only greeting or prompt that can be customized is the “WelcomePrompt” contained in the **AAwelcome.wav** file.

Customizing prompts requires the following procedures:

- [Recording an Auto Attendant Greeting or Prompt File, page 51](#)
- [Customizing the Default Auto Attendant Welcome Prompt, page 51](#)
- [Uploading the Auto Attendant Greeting or Prompt File, page 52](#)
- (Optional) [Downloading an Auto Attendant Greeting or Prompt File, page 52](#)
- (Optional) [Deleting an Auto Attendant Greeting or Prompt File, page 52](#)

### 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 1 MB, which corresponds to a greeting length of approximately 120 seconds. After recording the greeting, use the GUI or Cisco Unity Express CLI **ccn copy url** command to copy the file in to the Cisco Unity Express system. See the next section, “[Uploading the Auto Attendant Greeting or Prompt File,](#)” for the upload procedure.
- Use the GMS on the TUI to record the greeting or prompt. Dial the GMS telephone number and select the option to record a greeting. When finished recording, save the file. GMS automatically saves the file in Cisco Unity Express.

The GMS 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.

Cisco recommends using the GMS on the TUI to record greetings and prompts because the GMS provides higher sound quality compared to .wav files recorded using other methods.

### Customizing the Default Auto Attendant Welcome Prompt

The default auto attendant greeting included with the system lasts two seconds and plays the prompt “Welcome to the Automated Attendant”. You can record a custom welcome prompt specifically for your system to welcome callers. The default WAV filename is **AAwelcome.wav**. While the default welcome prompt in the WAV file lasts two seconds long, you can record a new welcome prompt up to 120 seconds long. The welcome prompt WAV file can be up to 1 MB in G.711 U-law format.

If you create a customized welcome prompt, use a different WAV filename and upload the new WAV file to the Cisco Unity Express module. Do not overwrite the default **AAwelcome.wav** filename. For information about uploading the welcome prompt WAV file, see “[Uploading the Auto Attendant Greeting or Prompt File](#)” on page 52.

Uploading the prompt will not make the auto attendant start using the new welcome prompt. You need to configure the prompt name as the parameter as described in the “[Configuring and Managing the Auto Attendant Application](#)” section on page 47.

**Note**

The WAV file for the welcome prompt is not interruptible, meaning that the longer the recorded welcome prompt is, the longer callers must wait before being able to enter digits to reach other extensions. Cisco recommends you record a short welcome prompt so that callers can access the auto attendant system quickly.

Following this welcome prompt, the default script plays the menu announcement listing the menu options for callers. These prompts within the default auto attendant provided with the system are not customizable. Note that if a caller uses the dial-by-extension option, the system will attempt to transfer to any extension, including extensions not defined using Cisco Unity Express. To prevent callers from transferring to extensions not defined using Cisco Unity Express, configure class of restrictions (COR) on the dial-peer, or develop a custom script to prevent the option.

## Uploading the Auto Attendant Greeting or Prompt File

After recording the .wav greeting or prompt file, upload the file using the **ccn copy** command in Cisco Unity Express EXEC mode:

```
ccn copy url source-ip-address prompt prompt-filename
```

**Example:**

```
se-10-0-0-0# ccn copy url ftp://10.100.10.123/AAprompt1.wav prompt AAprompt1.wav
se-10-0-0-0# ccn copy url http://www.server.com/AAgreeting.wav prompt AAgreeting.wav
```

This command is equivalent to using the GUI option **Voice Mail > Prompts** and selecting **Upload**.

An error message appears if you try to upload more than the maximum number of prompts allowed on your Cisco Unity Express module.

**Note**

The AAWelcome.wav file resides in the Prompts/user/en\_US/ directory. All the other system prompts reside in the Prompts/system/en\_US/ directory. When you upload the WAV file using the **ccn copy url** command, the updated file is uploaded back to the Prompts/user/en\_US/ directory, and not to the Prompts/system/en\_US/ directory.

## Downloading an Auto Attendant Greeting or Prompt File

Greetings and prompts can be copied from the auto attendant and stored to another server or PC.

To copy a greeting or prompt file, use the **ccn copy** command in Cisco Unity Express EXEC mode:

```
ccn copy prompt prompt-file-name url destination-ip-address
```

**Example:**

```
se-10-0-0-0# ccn copy prompt AAprompt2.wav url ftp://10.100.10.123/AAprompt2.wav
```

## Deleting an Auto Attendant Greeting or Prompt File

To delete an auto attendant greeting or prompt file from Cisco Unity Express, use the **ccn delete** command in Cisco Unity Express EXEC mode:

```
ccn delete prompt prompt-filename
```

**Example:**

```
se-10-0-0-0# ccn delete prompt AAgreeting.wav
```

## Configuring Auto Attendant Scripts

Cisco Unity Express supports customized script files. The NM supports up to 8 scripts; the AIM supports up to 4 scripts.

Customizing scripts requires the following procedures:

- [Creating an Auto Attendant Script, page 53](#)
- [Uploading the Auto Attendant Script File, page 53](#)
- (Optional) [Downloading an Auto Attendant Script File, page 53](#)
- (Optional) [Deleting an Auto Attendant Script File, page 54](#)

## Creating an Auto Attendant Script

The auto attendant script file is created using the script editor program. Refer to *Cisco Unity Express Script Editor Guide* for guidelines and procedures for creating a script file.

The file cannot be larger than 256 KB.

After creating the script, use the GUI or Cisco Unity Express CLI **ccn copy** command to copy the file in to the Cisco Unity Express system. See the next section, “[Uploading the Auto Attendant Script File](#),” for the upload procedure.

## Uploading the Auto Attendant Script File

After recording the .wav greeting or prompt file, upload the file using the **ccn copy** command in Cisco Unity Express EXEC mode:

```
ccn copy url source-ip-address script script-filename
```

**Example:**

```
se-10-0-0-0# ccn copy url ftp://10.100.10.123/GMSscript.aef script GMSscript.aef  
se-10-0-0-0# ccn copy url http://www.server.com/GMSscript.aef script GMSscript.aef
```

This command is equivalent to using the GUI option **Voice Mail > Scripts** and selecting **Upload**.

An error message appears if you try to upload more than the maximum number of scripts allowed on your Cisco Unity Express module.

## Downloading an Auto Attendant Script File

Scripts can be copied from the auto attendant and stored on another server or PC.

To copy a script file, use the **ccn copy** command in Cisco Unity Express EXEC mode:

```
ccn copy script prompt-file-name url destination-ip-address
```

**Example:**

```
se-10-0-0-0# ccn copy script GMSscript.aef url ftp://10.100.10.123/GMSscript.aef
```

## Deleting an Auto Attendant Script File

To delete an auto attendant script file from Cisco Unity Express, use the **ccn delete** command in Cisco Unity Express EXEC mode:

```
ccn delete script script-filename
```

**Example:**

```
se-10-0-0-0# ccn delete script GMSscript.aef
Are you sure you want to delete this script? (y/n)
```

## Configuring SIP Triggers for the Applications

After the voice mail, auto attendant and GMS applications are configured, the system must be configured to start the voice mail, auto attendant, and GMS applications when a specific signal, or trigger, is invoked. The trigger is a telephone number. When a caller dials a specified telephone number, the SIP subsystem starts the voice mail, auto attendant, or GMS application.

See [“Advanced Configuration” on page 105](#) for procedures to configure multiple triggers for an application.

## Prerequisites

The following information is required to configure the SIP triggers for auto attendant:

- Telephone number that invokes the application. The number must be different for voice mail, auto attendant, and the GMS. The *number* value should match one of the patterns configured in the *destination-pattern* field of the SIP dial peer pointing to Cisco Unity Express.
- Maximum number of callers, or sessions, that can access the trigger simultaneously. See [“Sharing Ports Among Applications and Triggers” on page 44](#) for guidelines on assigning this value.

### SUMMARY STEPS

Starting from EXEC mode:

1. **config t**
2. **ccn trigger sip phonenumber** *number*
3. **application** *string*
4. **enabled**
5. **maxsessions** *number*
6. **end**
7. **exit**
8. **show ccn trigger**

## 9. copy running-config startup-config

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>conf t</code>	Enters configuration mode.
Step 2	<code>ccn trigger sip phonenum <i>number</i></code>  <b>Example:</b> se-10-0-0-0(config)# <code>ccn trigger sip phonenum 50150</code> se-10-0-0-0(config)# <code>ccn trigger sip phonenum 50160</code>	Specifies the telephone number that acts as the trigger to start the application on the Cisco Unity Express module and enters trigger configuration mode. The <i>number</i> value should match one of the patterns configured in the <i>destination-pattern</i> field of the SIP dial peer pointing to Cisco Unity Express.
Step 3	<code>application <i>string</i></code>  <b>Example:</b> se-10-0-0-0(config-trigger)# <code>application voicemail</code> se-10-0-0-0(config-trigger)# <code>application autoattendant</code> se-10-0-0-0(config-trigger)# <code>application promptmanagement</code>	Specifies the name of the application to start when the trigger is entered.
Step 4	<code>enabled</code>  <b>Example:</b> se-10-0-0-0(config-trigger)# <code>enabled</code>	Enables the trigger.
Step 5	<code>maxsessions <i>number</i></code>  <b>Example:</b> se-10-0-0-0(config-trigger)# <code>maxsessions 3</code> se-10-0-0-0(config-trigger)# <code>maxsessions 6</code>	Specifies the maximum number of callers the application can handle simultaneously. See <a href="#">“Sharing Ports Among Applications and Triggers”</a> on page 44 for guidelines on assigning this value.
Step 6	<code>end</code>	Exits trigger configuration mode.
Step 7	<code>exit</code>	Exits configuration mode.
Step 8	<code>show ccn trigger</code>  <b>Example:</b> se-10-0-0-0# <code>show ccn trigger</code>	Displays the parameter values for all configured triggers.
Step 9	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Examples

The following sample configuration sets two triggers for the voice mail application:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# ccn trigger sip phonenumber 50150
se-10-0-0-0(config-trigger)# application voicemail
se-10-0-0-0(config-trigger)# maxsessions 4
se-10-0-0-0(config-trigger)# enabled
se-10-0-0-0(config-trigger)# end
se-10-0-0-0(config)#
se-10-0-0-0(config)# ccn trigger sip phonenumber 50160
se-10-0-0-0(config-trigger)# application autoattendant
se-10-0-0-0(config-trigger)# maxsessions 3
se-10-0-0-0(config-trigger)# enabled
se-10-0-0-0(config-trigger)# end
se-10-0-0-0#
```

The output for **show ccn trigger** will look similar to the following:

```
se-10-0-0-0# show ccn trigger

Name:                    50150
Type:                   SIP
Application:             voicemail
Locale:                  systemDefault
Idle Timeout:           5000
Enabled:                 yes
Maximum number of sessions: 4

Name:                    50160
Type:                   SIP
Application:             autoattendant
Locale:                  systemDefault
Idle Timeout:           5000
Enabled:                 yes
Maximum number of sessions: 8
se-10-0-0-0#
```

## Deleting a SIP Application Trigger

Use this procedure to delete a SIP application trigger. Deleting the trigger does not delete the application, although the application needs at least one trigger in order to be invoked by the system.

### Prerequisites

The trigger number is required to delete a trigger.

#### SUMMARY STEPS

1. **show ccn trigger**
2. **config t**
3. **no ccn trigger sip phonenumber *number***
4. **exit**

5. `show ccn trigger`
6. `copy running-config startup-config`

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>show ccn trigger</code>	Displays the currently configured triggers. Look for the telephone number that you want to delete. Verify that this telephone number is associated with the correct application.
Step 2	<code>config t</code>	Enters configuration mode.
Step 3	<code>no ccn trigger sip phonenumber number</code>	Deletes the trigger number.
	<b>Example:</b> <pre>se-10-0-0-0(config)# no ccn trigger sip phonenumber 50100</pre>	
Step 4	<code>exit</code>	Exits configuration mode.
Step 5	<code>show ccn trigger</code>	Displays the configured triggers.
Step 6	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Example

The output for `show ccn trigger` will look similar to the following:

```
se-10-0-0-0# show ccn trigger

Name:                6500
Type:                SIP
Application:         voicemail
Locale:              systemDefault
Idle Timeout:        5000
Enabled:             yes
Maximum number of sessions: 4

Name:                6700
Type:                SIP
Application:         autoattendant
Locale:              systemDefault
Idle Timeout:        5000
Enabled:             yes
Maximum number of sessions: 8
se-10-0-0-0#
```

The following configuration removes a trigger from the voice mail application:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# no ccn trigger sip phonenumber 50170
se-10-0-0-0(config)# exit
```

Now the output for **show ccn trigger** will look similar to the following:

```
se-10-0-0-0# show ccn trigger

Name:                50170
Type:                SIP
Application:         autoattendant
Locale:              systemDefault
Idle Timeout:        5000
Enabled:             yes
Maximum number of sessions: 8
se-10-0-0-0#
```

## Deleting an Application

If you configure an application that you do not want to keep, use this procedure to delete the application and any triggers associated with that application. If you do not delete the triggers, the application will be invoked when one of the triggers is called.

After you delete the application and triggers, the script associated with the application remains installed on your server but is not used by Cisco Unity Express.

To make this application usable, reconfigure it.

The default voice mail, auto attendant, and greeting management system applications that shipped with Cisco Unity Express cannot be deleted.

## Prerequisites

The following information is required to delete an application:

- Application name
- All trigger numbers associated with the application

### SUMMARY STEPS

1. **show ccn application**
2. **show ccn trigger**
3. **config t**
4. **no ccn trigger sip phonenumber *number***
5. **no ccn application *name***
6. **exit**
7. **show ccn application**
8. **show ccn trigger**
9. **copy running-config startup-config**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>show ccn application</code>	Displays the currently configured applications. Look for the name of the application you want to delete.
Step 2	<code>show ccn trigger</code>	Displays the currently configured triggers. Look for the telephone numbers associated with the application you want to delete.
Step 3	<code>config t</code>	Enters configuration mode.
Step 4	<code>no ccn trigger sip phonenumber number</code>  <b>Examples:</b>  <code>se-10-0-0-0(config)# no ccn trigger sip phonenumber 50170</code>	Deletes a trigger associated with this application. Repeat this command for each trigger associated with the application.
Step 5	<code>no ccn application name</code>  <b>Example:</b> <code>se-10-0-0-0(config)# no ccn application autoattendant</code>	Deletes the application called name.
Step 6	<code>exit</code>	Exits configuration mode.
Step 7	<code>show ccn application</code>	Displays the currently configured applications. Confirm that the deleted application is not displayed.
Step 8	<code>show ccn trigger</code>	Displays the triggers for each configured application.
Step 9	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Example

The following is sample output from the `show ccn application` and `show ccn trigger` commands:

```
se-10-0-0-0# show ccn application
```

```
Name:                voicemail
Description:         voicemail
Script:              voicebrowser.aef
ID number:           1
Enabled:              yes
Maximum number of sessions: 8
logoutUri:           http://localhost/voicemail/vxmlscripts/m
bxLogout.jsp        uri:
uri:                  http://localhost/voicemail/vxmlscripts/1
ogin.vxml
```

```
Name:                autoattendant
Description:         autoattendant
Script:              aa.aef
ID number:           2
Enabled:              yes
Maximum number of sessions: 8
```

```

MaxRetry: 3
operExtn: 0
welcomePrompt: AAWelcome.wav
se-10-0-0-0#

Name: myapplication
Description: My AA application
Script: myscript.aef
ID number: 3
Enabled: yes
Maximum number of sessions: 8
MaxRetry: 3
operExtn: 0
welcomePrompt: NewAAWelcome.wav
se-10-0-0-0#

```

```
se-10-0-0-0# show ccn trigger
```

```

Name: 6500
Type: SIP
Application: voicemail
Locale: systemDefault
Idle Timeout: 5000
Enabled: yes
Maximum number of sessions: 3

```

```

Name: 6700
Type: SIP
Application: autoattendant
Locale: systemDefault
Idle Timeout: 5000
Enabled: yes
Maximum number of sessions: 8

```

```

se-10-0-0-0#
Name: 7200
Type: SIP
Application: myapplication
Locale: systemDefault
Idle Timeout: 5000
Enabled: yes
Maximum number of sessions: 8
se-10-0-0-0#

```

The following configuration deletes the auto attendant application and its trigger:

```

se-10-0-0-0# config t
se-10-0-0-0(config)# no ccn trigger sip phonenumber 50170
se-10-0-0-0(config)# no ccn application myapplication
se-10-0-0-0(config)# exit

```

Now the output for the **show** commands looks similar to this:

```
se-10-0-0-0# show ccn application
```

```

Name: voicemail
Description: voicemail
Script: voicebrowser.aef
ID number: 1
Enabled: yes
Maximum number of sessions: 8
logoutUri: http://localhost/voicemail/vxmlscripts/m
bxLogout.jsp
uri: http://localhost/voicemail/vxmlscripts/1
ogin.vxml

```

```

se-10-0-0-0#

Name:                autoattendant
Description:         autoattendant
Script:              aa.aef
ID number:           2
Enabled:             yes
Maximum number of sessions: 8
MaxRetry:            3
operExtn:            0
welcomePrompt:      AAWelcome.wav
se-10-0-0-0#

se-10-0-0-0# show ccn trigger

Name:                6500
Type:                SIP
Application:         voicemail
Locale:              systemDefault
Idle Timeout:        5000
Enabled:             yes
Maximum number of sessions: 3

Name:                6700
Type:                SIP
Application:         autoattendant
Locale:              systemDefault
Idle Timeout:        5000
Enabled:             yes
Maximum number of sessions: 8
se-10-0-0-0#

```

## Configuring System-Wide Mailbox Default Values

The following system-wide parameters are configurable for all new voice mailboxes. These values are assigned automatically to a new voice mailbox. Several of these values have factory default values. See [“Feature Overview” on page 1](#) for the maximum values for your system.

- **Capacity**—The total amount of storage time in hours allowed for all mailboxes in the system. The factory default is the maximum allowed storage for your system.
- **Expiration date**—The number of days a message is saved in the mailbox. When the user logs in to the voice mailbox, the user hears a message listing all the expired messages. The user can save, skip, or delete each message. The factory default value is 30 days.
- **Language**—The language used for voice mail prompts. In Release 1.1.2, U.S. English is the only language available.
- **Mailbox size**—The maximum number of seconds of storage for voice messages in a mailbox. The factory default value is determined by dividing the maximum storage capacity by the maximum number of mailboxes (personal plus general delivery).
- **Message length**—The maximum number of seconds for any one stored message in a mailbox. The factory default is 60 seconds.
- **Recording time**—The maximum amount of time for a user’s recorded mailbox greeting.
- **Operator extension**—The extension of the voice-mail operator.

**Caution**

The voice-mail telephone number and the voice-mail operator's telephone number should not be the same. If they are, then a user trying to call the operator while in the voice-mail system will be directed back to the voice-mail system. Also, an outside caller who presses the button for the operator will be connected to the voice-mail system.

See “[Creating and Modifying a Voice Mailbox](#)” on page 75 for the procedure to configure different values for mailbox size, message length, and expiration date for a specific mailbox.

**SUMMARY STEPS**

1. **config t**
2. **voicemail capacity time** *minutes*
3. **voicemail defaults** {**expiration** *days* | **language** | **mailboxsize** *mailboxsize\_seconds* | **messagesize** *messagesize\_seconds*}
4. **voicemail operator telephone** *tel\_number*
5. **voicemail recording time** *minutes*
6. **exit**
7. **copy running-config startup-config**

**DETAILED STEPS**

	Command or Action	Purpose
Step 1	<code>config t</code>	Enters configuration mode.
Step 2	<code>voicemail capacity time</code> <i>minutes</i>	Sets the <i>time</i> value as the system-wide maximum storage space in minutes allowed for all configured mailboxes.
	<b>Example:</b> <code>se-10-0-0-0(config)# voicemail capacity time 3000</code>	
Step 3	<code>voicemail default</code> { <b>expiration</b> <i>days</i>   <b>language</b>   <b>mailboxsize</b> <i>mailboxsize_seconds</i>   <b>messagesize</b> <i>messagesize_seconds</i> }	Assigns default values for new individual or general delivery mailboxes. These values can be configured later to other values for specific mailboxes.
	<b>Example:</b> <code>se-10-0-0-0(config)# voicemail default expiration 30</code> <code>se-10-0-0-0(config)# voicemail default mailboxsize 300</code> <code>se-10-0-0-0(config)# voicemail default messagesize 120</code>	<ul style="list-style-type: none"> <li>• <b>expiration</b> <i>days</i>—Sets the number of days a message can be stored in a mailbox before the voice-mail system deletes it.</li> <li>• <b>language</b>—Specifies the language used for voice-mail prompts. In Release 1.0, only U.S. English is available.</li> <li>• <b>mailboxsize</b> <i>mailboxsize_seconds</i>—Sets the maximum number of seconds for storing messages in a mailbox.</li> <li>• <b>messagesize</b> <i>messagesize_seconds</i>—Sets the maximum number of seconds for a caller's message stored in a mailbox.</li> </ul>

	Command or Action	Purpose
Step 4	<pre>voicemail operator telephone tel_number</pre> <p><b>Example:</b>  <pre>se-10-0-0-0(config)# voicemail operator telephone 9000</pre></p>	Assigns the <i>tel_number</i> value as the voice-mail operator's extension. A mailbox owner dials this extension while in the voice-mail system to reach the voice-mail operator. Do not assign this extension to a group. This extension need not be the same as the auto attendant operator extension.
Step 5	<pre>voicemail recording time minutes</pre> <p><b>Example:</b>  <pre>se-10-0-0-0(config)# voicemail recording time 10</pre></p>	Assigns the <i>time</i> value in minutes as the maximum recording time for any greeting or message in the voice-mail system.
Step 6	<pre>exit</pre>	Exits configuration mode.
Step 7	<pre>copy running-config startup-config</pre>	Copies the configuration change to the startup configuration.

## Configuring the MWI On and Off Extensions

Cisco Unity Express uses the MWI on and off extensions with the affected telephone extension to generate a SIP call to Cisco CME, which changes the status of the telephone's MWI light.

Cisco Unity Express refreshes the MWI lights automatically when new messages are received, saved, or deleted or when the software is initialized. Use the GUI option or CLI commands to refresh the MWI lights for a specific telephone or for all configured telephones. See [“Refreshing Message Waiting Indicators” on page 81](#) for the procedure to refresh MWI lights.

## Prerequisites

Verify that the MWI on and off extensions are configured on Cisco CME; otherwise, the MWI light will not work.

The following information is required to configure the MWI on and off extensions:

- Extension number dedicated to the MWI on extension
- Extension number dedicated to the MWI off extension

## SUMMARY STEPS

Starting from Cisco Unity Express EXEC mode:

1. **config t**
2. **ccn application ciscomwiapplication**
3. **parameter strMWI\_ON\_DN on\_extension**
4. **parameter strMWI\_OFF\_DN off\_extension**
5. **end**
6. **copy running-config startup-config**

## DETAILED STEPS

	Command of Action	Purpose
Step 1	<code>config t</code>	Enters configuration mode.
Step 2	<code>ccn application ciscoMWIapplication</code>	Enters configuration mode for the MWI application.
Step 3	<code>parameter strMWI_ON_DN on_extension</code>  <b>Example:</b> <code>se-10-0-0-0(config-application)# parameter strMWI_ON_DN 7000</code>	Assigns the <i>on_extension</i> value as the MWI on extension.
Step 4	<code>parameter strMWI_OFF_DN off_extension</code>  <b>Example:</b> <code>se-10-0-0-0(config-application)# parameter strMWI_OFF_DN 7001</code>	Assigns the <i>off_extension</i> value as the MWI off extension.
Step 5	<code>end</code>	Exits application configuration mode.
Step 6	<code>copy running-config startup-config</code>	Copies the configuration change to the startup configuration.

## Checking AIM Flash Memory Wear Activity

Cisco Unity Express tracks the use and wear of the AIM flash memory as log and trace data are saved to the module. To display this data, use the **show interface ide 0** command in Cisco Unity Express EXEC mode.

```
show interface ide 0
```

The following is sample output:

```
se-10-0-0-0# show interface ide 0
IDE hd0 is up, line protocol is up
 3496 reads, 46828544 bytes
 0 read errors
 9409 write, 137857024 bytes
 0 write errors
 0.099333333333333333% worn
```

To check the log and trace files on the flash memory, use the **log trace** command in Cisco Unity Express EXEC mode.

```
log trace
```

Logging and tracing to the flash memory is turned off by default. Executing the **log trace** command starts the log and trace functions immediately.

The command displays the `atrace.log` and `messages.log` files. Each file has a fixed length of 10 MB, and tracing or logging stops automatically when the file reaches this length. New files overwrite the old files.