Configuring System Components

Last Updated: July 25, 2006

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

This chapter describes how to configure the following basic Cisco Unity Express components:

- SIP parameters that Cisco Unity Express needs to communicate with Cisco Unified CallManager Express (Cisco Unified CME).
- JTAPI parameters that Cisco Unity Express needs to communicate with Cisco Unified CallManager.
- Voice-mail, auto-attendant, and Administration via Telephone 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 195.

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 SIP Call Control Parameters, page 34
  - Configuring the SIP Proxy Server Location for Cisco Unity Express, page 34
  - Configuring the Call Transfer Mode, page 36
  - Configuring DTMF Options, page 38
  - Configuring the MWI Notification Option, page 41
  - Configuring the MWI On and Off Extensions (Cisco Unified CME Only), page 44
  - Configuring Cisco Unified CME SIP Options for RFC Compliance, page 46
- Configuring JTAPI Parameters (Cisco Unified CallManager Only), page 48
- Configuring the Voice-Mail Application, page 52
- Configuring the Administration via Telephone Application, page 55
- Configuring and Managing the Auto-Attendant Application, page 55
- Configuring Auto-Attendant Scripts, page 63
- Configuring SIP Triggers for the Applications, page 64
- Configuring JTAPI Triggers for the Applications (Cisco Unified CallManager Only), page 66
Configuring SIP Call Control Parameters

This section describes the procedures for configuring SIP call control parameters and contains the following sections:

- Configuring the SIP Proxy Server Location for Cisco Unity Express, page 34
- Configuring the Call Transfer Mode, page 36
- Configuring DTMF Options, page 38
- Configuring the MWI Notification Option, page 41
- Configuring the MWI On and Off Extensions (Cisco Unified CME Only), page 44
- Configuring Cisco Unified CME SIP Options for RFC Compliance, page 46

Configuring the SIP Proxy Server Location for Cisco Unity Express

The Session Initiation Protocol (SIP) proxy server resides on the router where Cisco Unified CME is installed. Beginning in Cisco Unity Express 2.1, Cisco Unified CME can be installed on a different router from where the Cisco Unity Express hardware and software is installed. The SIP proxy server location information must be configured properly to enable all communications between Cisco Unity Express and Cisco Unified CME. The SIP proxy server also enables the message waiting indicators (MWIs) to work with the Cisco Unity Express voice-mail application.

Required Data for This Procedure

The following information is required to configure the SIP proxy server:

- Hostname or IP address of the router where the SIP proxy server resides
- UDP 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`
### Configuring SIP Call Control Parameters

**7.** show ccn subsystem sip  
**8.** copy running-config startup-config

#### DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ccn subsystem sip</td>
<td>Enters SIP configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# ccn subsystem sip</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> gateway address ip-address</td>
<td>Specifies the hostname or IP address of the router where the SIP proxy server resides.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-sip)# gateway address 10.100.6.9</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> gateway port port-number</td>
<td>Specifies the UDP port number on which the SIP proxy server listens for incoming SIP messages. The default value is 5060.</td>
</tr>
<tr>
<td><strong>Note</strong> It is strongly recommended that this port number not be changed.</td>
<td></td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-sip)# gateway port 5060</td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong> end</td>
<td>Exits SIP configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-sip)# end</td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong> exit</td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config)# exit</td>
<td></td>
</tr>
<tr>
<td><strong>Step 7</strong> show ccn subsystem sip</td>
<td>Displays the SIP subsystem parameters.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# show ccn subsystem sip</td>
<td></td>
</tr>
<tr>
<td><strong>Step 8</strong> copy running-config startup-config</td>
<td>Copies the configuration changes to the startup configuration.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# copy running-config startup-config</td>
<td></td>
</tr>
</tbody>
</table>
Examples

The following example illustrates the `show ccn subsystem sip` output, which displays the SIP gateway IP address and SIP port number:

```
se-10-0-0-0# show ccn subsystem sip
SIP Gateway:                            10.10.5.1
SIP Port Number:                        5060
DTMF Relay:                             sip-notify,sub-notify
MWI Notification:                      sub-notify
Transfer Mode:                          refer-consult
SIP RFC Compliance:                    Pre-RFC3261
```

Configuring the Call Transfer Mode

Cisco Unity Express permits configuration of attended and semi-attended call transfer modes in addition to blind transfers.

Additionally, a remote location can send blind transfer calls to Cisco Unity Express. Cisco Unity Express handles these calls as new SIP calls.

SUMMARY STEPS

1. `config t`
2. `ccn subsystem sip`
3. `transfer-mode {attended | semi-attended | blind refer | blind bye-also}`
4. `end`
5. `end`
6. `show ccn subsystem sip`

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
</tr>
<tr>
<td><code>config t</code></td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>Example:</td>
<td></td>
</tr>
<tr>
<td><code>se-10-0-0-0# config t</code></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
</tr>
<tr>
<td><code>ccn subsystem sip</code></td>
<td>Enters SIP configuration mode.</td>
</tr>
<tr>
<td>Example:</td>
<td></td>
</tr>
<tr>
<td><code>se-10-0-0-0(config)# ccn subsystem sip</code></td>
<td></td>
</tr>
</tbody>
</table>
## Configuring SIP Call Control Parameters

### Step 3
**Command or Action:**

```
transfer-mode {attended | semi-attended | blind refer | blind bye-also}
```

**Example:**

```
se-10-0-0-0(config-sip)# transfer-mode blind refer
```

**Purpose:** Specifies the transfer mode.

- **attended**—Transfers calls in attended mode using the REFER method. The transfer is completed when the destination extension answers the call.
- **semi-attended**—Transfers calls in semi-attended mode using the REFER method. The transfer is completed when the destination extension is ringing.
- **blind refer**—Transfers calls without consulting using the REFER method.
- **blind bye-also**—Transfers calls without consulting using the BYE/ALSO method. Cisco Unity Express uses this method if the remote end does not support REFER. This is the default value.

### Step 4
**Command or Action:**

```
end
```

**Example:**

```
se-10-0-0-0(config-sip)# end
```

**Purpose:** Exits SIP configuration mode.

### Step 5
**Command or Action:**

```
end
```

**Example:**

```
se-10-0-0-0(config)# end
```

**Purpose:** Exits configuration mode.

### Step 6
**Command or Action:**

```
show ccn subsystem sip
```

**Example:**

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

**Purpose:** Displays SIP configuration parameters.

### Examples

The following example displays the output of the `show ccn subsystem sip` command.

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

SIP Gateway: 172.19.167.208
SIP Port Number: 5060
DTMF Relay: sip-notify rtp-nte
MWI Notification: outcall
Transfer Mode: attended (REFER)
SIP RFC Compliance: Pre-RFC3261
```
Configuring DTMF Options

Several options are available for handling incoming and outgoing DTMF signals for SIP calls from Cisco Unified CME and Cisco SRST mode.

Cisco Unity Express provides the following options for transferring DTMF signals for incoming and outgoing SIP calls.

- **rtp-nte**—Uses the media path to relay incoming and outgoing DTMF signals.

  To use the **rtp-nte** option, verify that the Cisco IOS SIP gateway is configured to use Unsolicited NOTIFY for SIP calls, as shown in the following example:

  ```
dial-peer voice 1000 voip
  destination-pattern 6700
  session protocol sipv2
  session target ipv4:10.100.9.6
  dtmf-relay sip-notify rtp-nte
  codec g711ulaw
  no vad
  ```

- **sub-notify**—Uses Subscribe and Notify messages to relay incoming DTMF signals to Cisco Unity Express. This option is not available for outgoing DTMF signals from Cisco Unity Express.

- **info**—Uses the Info message to relay outgoing DTMF signals from Cisco Unity Express to the Cisco IOS SIP gateway.

- **sip-notify**—Uses Unsolicited-Notify messages for incoming and outgoing DTMF signals.

  To use the **sip-notify** option, verify that the Cisco IOS SIP gateway is configured to use Unsolicited NOTIFY for SIP calls, as shown in the following example:

  ```
dial-peer voice 1 voip
  destination-pattern 6700
  session protocol sipv2
  session target ipv4:10.100.9.6
  dtmf-relay sip-notify
  codec g711ulaw
  no vad
  ```

Configure more than one option for transferring DTMF signals. The order in which you configure the options determines their order of preference.

**Table 11** shows the various option combinations, the remote end capability, and the signaling option for incoming and outgoing DTMF signals.

<table>
<thead>
<tr>
<th>Cisco Unity Express Configuration</th>
<th>Option Supported at Remote End</th>
<th>Option Used for Incoming DTMF to Cisco Unity Express</th>
<th>Option Used for Outgoing DTMF from Cisco Unity Express</th>
</tr>
</thead>
<tbody>
<tr>
<td>sub-notify</td>
<td>—</td>
<td>sub-notify</td>
<td>no DTMF</td>
</tr>
<tr>
<td>info</td>
<td>—</td>
<td>no DTMF</td>
<td>info</td>
</tr>
<tr>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, rtp-nte</td>
<td>rtp-nte, sip-notify</td>
<td>sip-notify¹</td>
<td>sip-notify¹</td>
</tr>
<tr>
<td>sip-notify, rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
</tbody>
</table>
Table 11  DTMF Relay Option Combinations (continued)

<table>
<thead>
<tr>
<th>Cisco Unity Express Configuration</th>
<th>Option Supported at Remote End</th>
<th>Option Used for Incoming DTMF to Cisco Unity Express</th>
<th>Option Used for Outgoing DTMF from Cisco Unity Express</th>
</tr>
</thead>
<tbody>
<tr>
<td>sip-notify, info</td>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, info</td>
<td>no support²</td>
<td>no DTMF</td>
<td>info</td>
</tr>
<tr>
<td>sip-notify, sub-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, sub-notify</td>
<td>no support²</td>
<td>sub-notify</td>
<td>sub-notify</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, info</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, info</td>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, info</td>
<td>no support²</td>
<td>no DTMF</td>
<td>info</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>no support²</td>
<td>sub-notify</td>
<td>no DTMF</td>
</tr>
<tr>
<td>sub-notify, info</td>
<td>—</td>
<td>sub-notify</td>
<td>info</td>
</tr>
<tr>
<td>rtp-nte, sub-notify</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>rtp-nte, sub-notify</td>
<td>no support²</td>
<td>sub-notify</td>
<td>no DTMF</td>
</tr>
<tr>
<td>rtp-nte, info</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>rtp-nte, info</td>
<td>no support²</td>
<td>no DTMF</td>
<td>info</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>sip-notify, rtp-nte</td>
<td>sip-notify</td>
<td>sip-notify</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
<td>rtp-nte</td>
</tr>
<tr>
<td>sip-notify, rtp-nte, sub-notify</td>
<td>no support²</td>
<td>sub-notify</td>
<td>info</td>
</tr>
</tbody>
</table>

1. For incoming call. For outgoing call, the remote end decides between rtp-nte and sip-notify.
2. No support for rtp-nte and sip-notify.

**SUMMARY STEPS**

1. `config t`
2. `ccn subsystem sip`
3. `dtmf-relay {rtp-nte | sub-notify | info | sip-notify}`
   
   To configure more than one signal option, specify them using a single `dtmf-relay` command.
4. `end`
5. `end`
6. `show ccn subsystem sip`
### DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>config t</strong></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0# config t</code></td>
</tr>
<tr>
<td></td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td><strong>ccn subsystem sip</strong></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0(config)# ccn subsystem sip</code></td>
</tr>
<tr>
<td></td>
<td>Enters SIP configuration mode.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>**dtmf-relay {rtp-nte</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0(config-sip)# dtmf-relay sip-notify rtp-nte</code></td>
</tr>
<tr>
<td></td>
<td>Specifies the DTMF signal handling option. Use a single <code>dtmf-relay</code> command to specify more than one signal option.</td>
</tr>
<tr>
<td></td>
<td>• <strong>rtp-nte</strong>—Uses the media path to relay incoming and outgoing DTMF signals.</td>
</tr>
<tr>
<td></td>
<td>• <strong>sub-notify</strong>—Uses Subscribe and Notify messages to relay for incoming DTMF signals to Cisco Unity Express.</td>
</tr>
<tr>
<td></td>
<td>• <strong>info</strong>—Uses the Info message to relay outgoing DTMF signals from Cisco Unity Express to the Cisco IOS SIP gateway.</td>
</tr>
<tr>
<td></td>
<td>• <strong>sip-notify</strong>—Uses Unsolicited-Notify messages to relay incoming and outgoing DTMF signals.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> Verify that the Cisco IOS gateway has a dial-peer configured to use <strong>rtp-nte</strong>.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> Verify that the Cisco IOS gateway has a dial-peer configured to use <strong>sip-notify</strong>.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td><strong>end</strong></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0(config-sip)# end</code></td>
</tr>
<tr>
<td></td>
<td>Exits SIP configuration mode.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td><strong>end</strong></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0(config)# end</code></td>
</tr>
<tr>
<td></td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td><strong>show ccn subsystem sip</strong></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td><code>se-10-0-0-0# show ccn subsystem sip</code></td>
</tr>
<tr>
<td></td>
<td>Displays SIP configuration parameters.</td>
</tr>
</tbody>
</table>

### Examples

The following example displays the output of the **show ccn subsystem sip** command.
Configuring System Components

Configuring SIP Call Control Parameters

Configuring the MWI Notification Option

Cisco Unity Express expands MWI status update capability to include Cisco Unified CallManager and Cisco SRST mode. Three notification options are available:

- Outcall Notification, page 41
- Sub-Notify Notification, page 41
- Unsolicited Notification, page 42

The Voice Mail > Message Waiting Indicators > Settings also configures the MWI notification option.

Outcall Notification

Only Cisco Unified CME can use the SIP outcall mechanism for generating MWI notifications. Outcall will not work between Cisco Unity Express and a Cisco Unified CallManager system.

Note

If the MWI notification option is outcall, configure the MWI on and off extensions. See “Configuring the MWI On and Off Extensions (Cisco Unified CME Only)” on page 44.

The outcall option is available for backward compatibility. It is recommended that you use either sub-notify or unsolicited for the MWI notification option.

To use the outcall option, Cisco Unified CME must configure each ephone-dn that is registered to receive MWI notifications as follows:

```bash
ephone-dn 30
  number 8000
  mwi on

ephone-dn 31
  number 8001
  mwi off
```

Sub-Notify Notification

Both Cisco Unified CME and Cisco Unified CallManager in SRST mode can use the sub-notify mechanism for generating MWI notifications. With this mechanism, the MWI notifications will reflect the accurate status of messages in a subscriber’s voice mailbox.

After an ephone-dn is configured with the sub-notify option, Cisco Unified CME sends a Subscribe message to Cisco Unity Express to register the phone for MWI notifications. When a new voice message arrives in the voice mailbox for the ephone-dn, Cisco Unity Express updates the MWI status. If Cisco Unity Express does not receive the Subscribe message for the ephone-dn, Cisco Unity Express will not update the MWI status when a new message arrives.
To use the **sub-notify** option, Cisco Unified CME must configure each ephone-dn that is registered to receive MWI notifications as follows:

**For Cisco IOS Releases Prior to 12.3(11)T7**

```
sip-ua
  mwi-server ipv4:10.100.9.6 transport udp port 5060 number 2010
  ephone-dn 35 mwi sip
```

**For Cisco IOS Releases 12.3(11)T7 and Later**

```
sip-ua
  mwi-server ipv4:10.100.9.6 transport udp port 5060 number 2010
  ephone-dn 35 mwi sip
```

**For Cisco SRST Mode**

```
sip-ua
  mwi-server ipv4:10.100.9.6 transport udp port 5060 number 2010
  call-manager-fallback.
    mwi relay
```

The SIP server IP address used in these commands must be the IP address of Cisco Unity Express. In the examples shown above, this is 10.100.9.6.

### Unsolicited Notification

Both Cisco Unified CME and Cisco Unified CallManager in SRST mode can use the **unsolicited** mechanism for generating MWI notifications. With this mechanism, the MWI notifications will reflect the accurate status of messages in a subscriber’s voice mailbox.

The **unsolicited** option does not require Cisco Unified CME to send a subscription request for each ephone-dn to Cisco Unity Express for MWI notifications. Cisco Unity Express sends Notify messages to Cisco Unified CME whenever the voice mailbox for any ephone-dn receives a new message. In this way, the MWI status reflects the current voice mailbox message status.

To use the **unsolicited** option, Cisco Unified CME must configure each ephone-dn that is registered to receive MWI notifications as follows:

**For Cisco IOS Releases Prior to 12.3(11)T7**

```
telephony-service
  mwi sip-server 10.100.9.6 transport udp port 5060 unsolicited number 2010
```
ephone-dn 35
mwi sip

For Cisco IOS Release 12.3(11)T7 and Later
sip-ua
.
  mwi-server ipv4:10.100.9.6 transport udp port 5060 unsolicited
  number 2010
  ephone-dn 35
  mwi sip

For Cisco SRST Mode
sip-ua
.
.
  mwi-server ipv4:10.100.9.6 transport udp port 5060 unsolicited
  number 2010
  call-manager-fallback.
  mwi relay

The SIP server IP address used in these commands must be the IP address of Cisco Unity Express. In the examples shown above, this is 10.100.9.6.

SUMMARY STEPS

1. config t
2. ccn subsystem sip
3. mwi sip {outcall | sub-notify | unsolicited}
4. end
5. end
6. show ccn subsystem sip

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
</tr>
<tr>
<td>config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
</tr>
<tr>
<td>ccn subsystem sip</td>
<td>Enters SIP configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0(config)# ccn subsystem sip</td>
<td></td>
</tr>
</tbody>
</table>
Configuring SIP Call Control Parameters

Examples

The following example displays the output of the `show ccn subsystem sip` command.

```
se-10-0-0-0# show ccn subsystem sip
SIP Gateway: 172.19.167.208
SIP Port Number: 5060
DTMF Relay: sip-notify, sub-notify
MWI Notification: outcall
Transfer Mode: consult (REFER)
```

Configuring the MWI On and Off Extensions (Cisco Unified CME Only)

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

This configuration is required only if the MWI notification option is configured as `outcall`. (See the earlier section “Configuring the MWI Notification Option” on page 41.)

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 the section, “Refreshing Message Waiting Indicators” on page 120 for the procedure to refresh MWI lights.
Prerequisites

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

Required Data for This Procedure

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

1. `config t`
2. `ccn application ciscomwiapplication`
3. `parameter strMWI_ON_DN on-extension`
4. `parameter strMWI_OFF_DN off-extension`
5. `end`
6. `exit`
7. `copy running-config startup-config`

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command of Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ccn application ciscomwiapplication</td>
<td>Enters configuration mode for the MWI application.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config)# ccn application ciscomwiapplication</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> parameter strMWI_ON_DN on-extension</td>
<td>Assigns the on-extension value as the MWI on extension.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-application)# parameter strMWI_ON_DN 7000</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> parameter strMWI_OFF_DN off-extension</td>
<td>Assigns the off-extension value as the MWI off extension.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-application)# parameter strMWI_OFF_DN 7001</td>
<td></td>
</tr>
</tbody>
</table>
Configuring Cisco Unified CME SIP Options for RFC Compliance

Cisco IOS software releases prior to the 12.4(2)T release are not RFC3261 compliant. The lack of compliance causes the Cisco Unity Express 2.3 software not to interwork properly with those older Cisco IOS releases when sip-notify or sub-notify are used for DTMF. Cisco Unity Express provides the protocol command to ensure compatibility with all Cisco IOS software releases.

Required Data for This Procedure

The release number of the Cisco IOS software running on your call platform.

SUMMARY STEPS

1. config t
2. ccn subsystem sip
3. protocol {pre-rfc3261 | rfc3261}
4. end
5. exit
6. show ccn subsystem sip
## DETAILED STEPS

<table>
<thead>
<tr>
<th>Command of Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ccn subsystem sip</td>
<td>Enters configuration mode for the SIP subsystem.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0(config-sip)# ccn subsystem sip</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> protocol (pre-rfc3261</td>
<td>rfc3261)</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0(config-sip)# protocol rfc3261</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> end</td>
<td>Exits SIP subsystem configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0(config-sip)# end</td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong> exit</td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0(config)# exit</td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong> show ccn subsystem sip</td>
<td>Displays the configured SIP subsystem parameters.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>se-10-0-0-0# show ccn subsystem sip</td>
<td></td>
</tr>
</tbody>
</table>

### Example

The following example sets the SIP protocol option to RFC3261 for call platforms using Cisco IOS release 12.4(2)T or later.

```plaintext
se-10-0-0-0# config t
se-10-0-0-0(config)# ccn subsystem sip
se-10-0-0-0(config-sip)# protocol rfc3261
se-10-0-0-0(config-sip)# end
se-10-0-0-0(config)# exit
se-10-0-0-0#
```

The following display illustrates the output for the `show ccn subsystem sip` command.

```plaintext
se-10-0-0-0# show ccn subsystem sip
SIP Gateway: 10.10.5.1
SIP Port Number: 5060
DTMF Relay: sip-notify,sub-notify
MVI Notification: sub-notify
```
Configuring JTAPI Parameters (Cisco Unified CallManager Only)

Use this procedure to configure the parameters that Cisco Unity Express needs to communicate with Cisco Unified CallManager.

Cisco Unified CallManager and Cisco Unity Express Version Compatibility
Cisco Unity Express can be configured to work with Cisco Unified CallManager 4.2 and 5.0. The following scenarios apply when installing Cisco Unity Express with a different version of Cisco Unified CallManager, or upgrading the Cisco Unified CallManager version:

- If Cisco Unity Express is installed with Cisco Unified CallManager 4.2 or 5.0, Cisco Unity Express will reload once after the reload that you initiate at the completion of the initialization wizard procedure.
- If Cisco Unity Express is installed with Cisco Unified CallManager 4.0 or lower, and Cisco Unified CallManager is upgraded to version 4.1, 4.2, or 5.0, then Cisco Unity Express reloads and updates its system files to work with the new version of Cisco Unified CallManager. No further action from you is required.

Caution
Cisco Unity Express 2.3 does not support versions of Cisco Unified CallManager prior to 4.1. If you are using an earlier version of Cisco Unified CallManager, you must upgrade to version 4.1 or higher to interoperate with Cisco Unity Express 2.3.

Required Data for This Procedure
The following information is required to configure the JTAPI parameters:

- IP address or hostname for the primary, secondary, and tertiary Cisco Unified CallManager servers
- JTAPI user ID and password from Cisco Unified CallManager. The password is case sensitive. These values must match the JTAPI user ID and password that were configured on Cisco Unified CallManager.
- List of CTI ports

Note
If you are using Cisco Unified CallManager 5.0 or later, verify that the AXL service is active. To do this, go to the Cisco Unified CallManager serviceability website, click on Tools > Service Activation. Look for Cisco AXL Web service.

SUMMARY STEPS
1. `config t`
2. `ccn subsystem jtapi`
3. `ccm-manager address {primary-server-ip-address | primary-server-hostname} {secondary-server-ip-address | secondary-server-hostname} {tertiary-server-ip-address | tertiary-server-hostname}

4. `ccm-manager username jtapi-user-id password jtapi-user-password

5. `ctiport cti-port-number

6. `end

7. `exit

8. `show ccn subsystem jtapi

9. `copy running-config startup-config
## Configuring JTAPI Parameters (Cisco Unified CallManager Only)

### DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>config t</strong></td>
</tr>
</tbody>
</table>
| **Example:** | `se-10-0-0-0# config t`  
`se-10-0-0-0(config)#` |
| **Purpose** | Enters configuration mode. |
| **Step 2** | **ccn subsystem jtapi** |
| **Example:** | `se-10-0-0-0(config)# ccn subsystem jtapi`  
`se-10-0-0-0(config-jtapi)#` |
| **Purpose** | Enters JTAPI configuration mode. |
| **Step 3** | **ccm-manager address** *(primary-server-ip-address | \*primary-server-hostname)*  
 *(secondary-server-ip-address | \*secondary-server-hostname)*  
 *(tertiary-server-ip-address | \*tertiary-server-hostname)* |
| **Example:** | `se-10-0-0-0(config-jtapi)# ccm-manager address`  
`10.100.10.120`  
`se-10-0-0-0(config-jtapi)# ccm-manager address`  
`10.100.10.120 10.120.10.120 10.130.10.120` |
| **Note** | Restart the system for these changes to take effect. |
| **Step 4** | **ccm-manager username** *jtapi-user-id password*  
*jtapi-user-password* |
| **Example:** | `se-10-0-0-0(config-jtapi)# ccm-manager username`  
`jtapiuser password myjtapi` |
| **Note** | Restart the system for these changes to take effect. |
| **Step 5** | **ctiport** *cti-port1 cti-port2 cti-port3 cti-port4...* |
| **Example:** | `se-10-0-0-0(config-jtapi)# ctiport 7008`  
`se-10-0-0-0(config-jtapi)# ctiport 7009`  
`se-10-0-0-0(config-jtapi)# ctiport 7010`  
`se-10-0-0-0(config-jtapi)# ctiport 7011`  
`se-10-0-0-0(config-jtapi)# ctiport 6001 6002 6003 6004 6005 6006 6007 6008` |
| **Step 6** | **end** |
| **Example:** | `se-10-0-0-0(config-jtapi)# end`  
`se-10-0-0-0(config)#` |
| **Purpose** | Exits JTAPI configuration mode. |
### Examples

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

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

Cisco Call Manager: 10.100.10.120
CCM JTAPI Username: jtapiuser
CCM JTAPI Password: ****
Call Control Group 1 CTI ports: 7008,7009,7010,7011
```
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 64 or “Configuring JTAPI Triggers for the Applications (Cisco Unified CallManager Only)” on page 66.

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 concurrently access the application 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 9 for the number of ports on your module.) For Cisco Unified CallManager, the ports are configured using the ctiport command (see “Configuring JTAPI Parameters (Cisco Unified CallManager Only)” on page 48).

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 four ports and you assign four to the voice-mail application maxsessions and four to the auto-attendant maxsessions. If four callers access voice-mail simultaneously, no ports will be available for auto-attendant callers. Only when zero, one, two, or three callers access voice-mail simultaneously will at least one port be available for auto-attendant.

Suppose, instead, that you assign three to the voice-mail maxsessions and three to the auto-attendant maxsessions. At no time will one application use up all the ports. If voice-mail has three active calls, one 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.

Required Data for This Procedure

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

- Application name: voicemail
- Maximum number of subscribers who can access voice-mail simultaneously
SUMMARY STEPS

1. config t
2. ccn application voicemail
3. description “text”
4. maxsessions number
5. end
6. exit
7. show ccn application
8. copy running-config startup-config

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ccn application voicemail</td>
<td>Enters application configuration mode for the voice-mail application.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config)# ccn application voicemail</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> description “text”</td>
<td>(Optional) Enters a description of the application. Use double quotes around the text.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-application)# description “Voice Mail”</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> maxsessions number</td>
<td>Specifies the number of subscribers who can access this application simultaneously. See “Sharing Ports Among Applications and Triggers” on page 52 for guidelines on assigning this value.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-application)# maxsessions 6</td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong> end</td>
<td>Exits application configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-application)# end</td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong> exit</td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config)# exit</td>
<td></td>
</tr>
</tbody>
</table>
Example

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

```bash
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/mbxLogout.jsp
uri: http://localhost/voicemail/vxmlscripts/login.vxml
```

```bash
se-10-0-0-0#
```
Configuring the Administration via Telephone Application

The Administration via Telephone (AvT) application is a telephony-based interface that allows Cisco Unity Express that offers the following capabilities:

- Administrators can record new audio prompts or delete existing custom audio prompts without using a PC or sound-editing software, such as with the telephone user interface (TUI). 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 AvT that allows subscribers to record, modify, and enable or disable a special greeting to be played before the regular greeting, notifying callers of some temporary event or message.
- Administrators can rerecord existing prompts.
- Administrators can send broadcast messages. Subscribers who have the broadcast privilege can access a limited set of AvT capabilities.
- Administrators can record spoken names for remote locations and remote subscribers.

The Cisco Unity Express module installation automatically configures the AvT application. Only users with administrative (superuser) privileges or prompt management (ManagePrompt) privileges have access to the AvT. (See “Adding and Modifying a Group” on page 104 for information about assigning privileges.) When a caller dials the AvT number, the AvT authenticates the caller by requesting the caller’s extension and PIN. The AvT disconnects the caller if the caller does not have administrative authority.

To configure the AvT access telephone number, see “Configuring SIP Triggers for the Applications” on page 64 or “Configuring JTAPI Triggers for the Applications (Cisco Unified CallManager Only)” on page 66.

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.

Default Prompts

The administrator can download, copy, and upload only the following prompts: AAWelcome.wav, AAHolidayPrompt.wav, AABusinessOpen.wav, and AABusinessClosed.wav.

To customize the default welcome prompt, see “Customizing the Default Auto-Attendant Welcome Prompt” on page 61.

Default Auto-Attendant Script aa.aef

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. 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.
The aa.aef script supports holiday lists and business-hours schedules. When a call reaches the auto-attendant, the system checks if the current day is a holiday. If it is, the system plays a holiday prompt called `AAHolidayPrompt.wav`, which states “We are closed today. Please call back later.” The script then executes the next operation in the script.

If the current day is not a holiday, the system checks if the business is open or not. If the business is open, the system plays the `AABusinessOpen.wav` prompt, which is an empty file. If the business is closed, the system plays the `AABusinessClosed.wav` prompt, which states “We are currently closed. Please call back later.”

Following are the parameters that may be configured for the aa.aef script:

- `welcomePrompt`—default: AAWelcome.wav
- `operExtn`—default: none
- `holidayPrompt`—default: AAHolidayPrompt.wav
- `businessOpenPrompt`—default: AABusinessOpen.wav
- `businessClosedPrompt`—default: AABusinessClosed.wav
- `businessSchedule`—default: systemschedule
- `disconnectAfterMenu`—default: false
- `allowExternalTransfers`—default: false

To modify any of these prompts, see “Configuring Auto-Attendant Prompts” on page 60.

To create customized script files, see “Configuring Auto-Attendant Scripts” on page 63.

To create a business-hours schedule, see “Configuring Business Hours” on page 89.

To create a holiday list, see “Configuring a Holiday List” on page 85.

### Simple Auto-Attendant Script aasimple.aef

Another simple system script `aasimple.aef` is available for the auto-attendant application. This script can be associated with an auto-attendant application and cannot be deleted or downloaded.

This script makes the same checks for an alternate greeting, holiday hours, and business schedule as does the `aa.aef` script.

The initial greeting prompt is a configurable parameter. Use the GUI options or CLI commands to configure the prompt with the names and extensions of the people who can be reached with the auto-attendant application. For example, the prompt may play “For Al, press 10. For Bob, press 20. For the operator, press 0.”

The caller can enter an extension without pressing the pound key (#). After the caller enters the extension, the script attempts to transfer to that extension. The script does not attempt to validate the extension before the transfer.

The script has another parameter (extensionLength) that specifies the length of the extension used by the Cisco Unity Express system. This parameter must be configured correctly for the script to be able to do a successful transfer.

Following are the parameters that may be configured for the aasimple.aef script:

- `welcomePrompt`—default: AAWelcome.wav
- `operExtn`—default: 0
- `MaxRetry`—default: 3
Configuring System Components

Configuring and Managing the Auto-Attendant Application

57

Cisco Unity Express 2.3 CLI Administrator Guide

OL-10350-02

- holidayPrompt—default: AAHolidayPrompt.wav
- businessOpenPrompt—default: AABusinessOpen.wav
- businessClosedPrompt—default: AABusinessClosed.wav
- playExtensionsPrompt—default: AASPlayExtensions.wav
- extensionLength—default: 1
- businessSchedule—default: systemschedule
- disconnectAfterMenu—default: false
- allowExternalTransfers—default: false

To modify any of these prompts, see “Configuring Auto-Attendant Prompts” on page 60.
To create customized script files, see “Configuring Auto-Attendant Scripts” on page 63.
To create a business-hours schedule, see “Configuring Business Hours” on page 89.
To create a holiday list, see “Configuring a Holiday List” on page 85.

Configuring Other Auto-Attendant Parameters

To configure the auto-attendant access telephone number, see “Configuring SIP Triggers for the Applications” on page 64 or “Configuring JTAPI Triggers for the Applications (Cisco Unified CallManager Only)” on page 66.

The commands are used in both EXEC and configuration modes.

See “Configuring Application Parameters” on page 196 for procedures to configure user-defined parameters.

Required Data for This Procedure

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 the Cisco Unity Express module so that it can be located and saved in the auto-attendant script. Alternatively, you can use the Administration via Telephone (AvT) application to record the welcome greeting. See “Recording an Auto-Attendant Greeting or Prompt File” on page 61 for guidelines on recording a greeting. See “Uploading the Auto-Attendant Greeting or Prompt File” on page 61 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 52 for guidelines on assigning this value.

SUMMARY STEPS

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

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>ccn application autoattendant</td>
<td>Specifying the application to configure and enters application configuration mode. Use the full name of the application for the full-name argument.</td>
</tr>
<tr>
<td>description “text”</td>
<td>(Optional) Enters a description of the application. Use double quotes around the text.</td>
</tr>
<tr>
<td>maxsessions number</td>
<td>Specifies the number of callers who can access this application simultaneously. See “Sharing Ports Among Applications and Triggers” on page 52 for guidelines on assigning this value.</td>
</tr>
</tbody>
</table>
Configuring System Components

Configuring and Managing the Auto-Attendant Application

Step 5

**parameter** "name" "value"

**Example:**

```bash
se-10-0-0-0(config-application)# parameter "operExtn" "1000"
se-10-0-0-0(config-application)# parameter "MaxRetry" "3"
se-10-0-0-0(config-application)# parameter "welcomePrompt" "ciscowelcome.wav"
```

Specifies parameters for the application. Each parameter must have a name and a value, which is enclosed in double quotes. The parameters below are case-sensitive. For more information, see the “Configuring Application Parameters” section on page 196.

For the auto-attendant application, the parameters are:

- **“operExtn”**—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 caller input (timeout).
- **“MaxRetry”**—Maximum number of times a caller can incorrectly choose a submenu option before the application disconnects the call. The default is 3.
- **“welcomePrompt”**—The .wav filename containing the customized AA welcome prompt that is uploaded to the Cisco Unity Express module.
- **“busOpenPrompt”**—The .wav filename containing the customized AA business open prompt. The default is AABusinessOpen.wav.
- **“busClosedPrompt”**—The .wav filename containing the customized AA business closed prompt. The default is AABusinessClosed.wav.
- **“businessSchedule”**—The .filename containing the business open and closed times. The default is systemschedule.
- **“holidayPrompt”**—The .wav filename containing the customized AA holiday message prompt. The default file is AAHolidayPrompt.wav.
- **“disconnectAfterMenu”**—Indicator that disconnects the caller after the menu is played. The default status is false.
- **“allowExternalTransfers”**—Indicator that permits external transfers. The default status is false.

Step 6

**end**

**Example:**

```bash
se-10-0-0-0(config-application)# end
```

Exits application configuration mode.
Configuring System Components

**Configuring and Managing the Auto-Attendant Application**

---

### Examples

The following example illustrates the auto-attendant information from the `show ccn application` output:

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

<table>
<thead>
<tr>
<th>Name</th>
<th>autoattendant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>autoattendant</td>
</tr>
<tr>
<td>Script</td>
<td>aa.aef</td>
</tr>
<tr>
<td>ID number</td>
<td>3</td>
</tr>
<tr>
<td>Enabled</td>
<td>yes</td>
</tr>
<tr>
<td>Maximum number of sessions</td>
<td>8</td>
</tr>
<tr>
<td>busOpenPrompt</td>
<td>AABusinessOpen.wav</td>
</tr>
<tr>
<td>operExtn</td>
<td>1000</td>
</tr>
<tr>
<td>welcomePrompt</td>
<td>AAWelcome.wav</td>
</tr>
<tr>
<td>disconnectAfterMenu</td>
<td>false</td>
</tr>
<tr>
<td>busClosedPrompt</td>
<td>AABusinessClosed.wav</td>
</tr>
<tr>
<td>allowExternalTransfers</td>
<td>false</td>
</tr>
<tr>
<td>holidayPrompt</td>
<td>AAHolidayPrompt.wav</td>
</tr>
<tr>
<td>businessSchedule</td>
<td>systemschedule</td>
</tr>
<tr>
<td>MaxRetry</td>
<td>3</td>
</tr>
<tr>
<td>se-10-0-0-0#</td>
<td></td>
</tr>
</tbody>
</table>

---

### Configuring Auto-Attendant Prompts

Cisco Unity Express supports customized greeting and prompt files. The CUE-NM-EC and CUE-NM support up to 120 prompts; the CUE-AIM supports up to 25 prompts.

Customizing prompts requires the following procedures:

- **Recording an Auto-Attendant Greeting or Prompt File, page 61** (Required)
- **Customizing the Default Auto-Attendant Welcome Prompt, page 61** (Required)
- **Uploading the Auto-Attendant Greeting or Prompt File, page 61** (Required)
- **Downloading an Auto-Attendant Greeting or Prompt File, page 62** (Optional)
- **Renaming an Auto-Attendant Greeting or Prompt File, page 62** (Optional)
- **Deleting an Auto-Attendant Greeting or Prompt File, page 62** (Optional)
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 (about 2 minutes). 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 AvT on the TUI to record the greeting or prompt. Dial the AvT telephone number and select the option to record a greeting. When finished recording, save the file. AvT automatically saves the file in Cisco Unity Express.

The AvT prompt filename has the format UserPrompt_DateTime.wav, for example: UserPrompt_11152003144055.wav. You may want to use CLI commands or GUI options to rename the file with a meaningful name.

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

Uploading the Auto-Attendant Greeting or Prompt File

After recording the .wav greeting or prompt file, upload the file using the `ccn copy url` 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.

Customizing the Default Auto-Attendant Welcome Prompt

The default AA greeting included with the system lasts two seconds and plays the prompt “Welcome to the AutoAttendant.” 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 the “Uploading the Auto-Attendant Greeting or Prompt File” section on page 61.

**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. We recommend you record a short welcome prompt so that callers can access the voicemail system quickly.
Following this welcome prompt, the default script plays the menu announcement listing the menu options for callers. These are not customizable prompts within the default auto-attendant provided with the system. 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.

**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 prompt` command in Cisco Unity Express EXEC mode:

```
ccn copy prompt prompt-filename url ftp://destination-ip-address/prompt-filename
   [language xx_YY] [username name password password]
```

where `prompt-filename` is the file to be copied, `destination-ip-address` is the IP address of the FTP server, `xx_YY` is the language of the prompt file, `name` is the FTP server login ID, and `password` is the FTP server password.

**Example:**
```
se-10-0-0-0# ccn copy prompt AAPrompt2.wav url ftp://10.10.0.123/AAPrompt2.wav
```

**Renaming an Auto-Attendant Greeting or Prompt File**

To rename an auto-attendant greeting or prompt file, use the `ccn rename prompt` command in Cisco Unity Express EXEC mode:

```
ccn rename prompt old-name new-name
```

where `old-name` is the existing filename and `new-name` is the revised name.

**Example:**
```
se-10-0-0-0# ccn rename prompt AMyPrompt.wav AMyPrompt2.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
```

where `prompt-filename` is the file to be deleted.

**Example:**
```
se-10-0-0-0# ccn delete prompt AGreeting.wav
```
Configuring Auto-Attendant Scripts

Cisco Unity Express supports customized script files. The CUE-NM-EC and CUE-NM support up to eight scripts; the CUE-AIM supports up to four scripts.

Customizing scripts involves the following procedures:

- Creating an Auto-Attendant Script File, page 63
- Uploading the Auto-Attendant Script File, page 63
- (Optional) Downloading an Auto-Attendant Script File, page 63
- (Optional) Deleting an Auto-Attendant Script File, page 64

Creating an Auto-Attendant Script File

The auto-attendant script file is created using the script editor program. Refer to the Cisco Unity Express 2.3 Guide to Writing Auto-Attendant Scripts 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 ccn copy command to copy the file 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 url command in Cisco Unity Express EXEC mode:

```
ccn copy url ftp://source-ip-address/script-filename.aef script script-filename.aef [username username password password]
```

Example:
```
se-10-0-0-0# ccn copy url ftp://10.100.10.123/AVTscript.aef script AVTscript.aef
se-10-0-0-0# ccn copy url http://www.server.com/AVTscript.aef script AVTscript.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 script command in Cisco Unity Express EXEC mode:

```
ccn copy script script-filename url ftp://destination-ip-address/script-filename
```

Example:
```
se-10-0-0-0# ccn copy script AVTscript.aef url ftp://10.100.10.123/AVTscript.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 AVTscript.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 AvT applications are configured, the system must be configured to start the voice-mail, auto-attendant, and AvT 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 AvT application.

Cisco Unity Express supports a maximum of 8 SIP triggers for all applications combined. This applies to the CUE-NM-EC, CUE-NM, and the CUE-AIM. See “Advanced Configuration” on page 195 for procedures to configure multiple triggers for an application.

This configuration is required for Cisco Unified CME and Cisco Unified CallManager (SRST mode).

Required Data for This Procedure

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 AvT. 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 the section “Sharing Ports Among Applications and Triggers” on page 52 for guidelines on assigning this value.

SUMMARY STEPS

1. `config t`
2. `ccn trigger sip phonenumbe r 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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>config t</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config)# config t</code>&lt;br&gt;Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td><strong>ccn trigger sip phonenumber number</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config)# ccn trigger sip phonenumber 50150</code>&lt;br&gt;<code>se-10-0-0-0(config)# ccn trigger sip phonenumber 50160</code>&lt;br&gt;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 <code>number</code> value should match one of the patterns configured in the <code>destination-pattern</code> field of the SIP dial peer pointing to Cisco Unity Express.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td><strong>application string</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# application voicemail</code>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# application autoattendant</code>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# application promptmanagement</code>&lt;br&gt;Specifies the name of the application to start when the trigger is entered.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td><strong>enabled</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# enabled</code>&lt;br&gt;Enables the trigger.</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td><strong>maxsessions number</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# maxsessions 3</code>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# maxsessions 6</code>&lt;br&gt;SPECifies the maximum number of callers that the application can handle simultaneously. See “Sharing Ports Among Applications and Triggers” on page 52 for guidelines on assigning this value.</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td><strong>end</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config-trigger)# end</code>&lt;br&gt;Exits trigger configuration mode.</td>
</tr>
<tr>
<td><strong>Step 7</strong></td>
<td><strong>exit</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0(config)# exit</code>&lt;br&gt;Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Step 8</strong></td>
<td><strong>show ccn trigger</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0# show ccn trigger</code>&lt;br&gt;Displays the parameter values for all configured triggers.</td>
</tr>
<tr>
<td><strong>Step 9</strong></td>
<td><strong>copy running-config startup-config</strong>&lt;br&gt;<strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0# copy running-config startup-config</code>&lt;br&gt;Copies the configuration changes to the startup configuration.</td>
</tr>
</tbody>
</table>
Examples

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

```
se-10-0-0-0# config
se-10-0-0-0(config)# ccn trigger sip phonenumbe50150
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)# ccn trigger sip phonenumbe50160
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: 3

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

Configuring JTAPI Triggers for the Applications (Cisco Unified CallManager Only)

After the voice-mail, auto attendant and AvT applications are configured, Cisco Unity Express must be configured to start the voice-mail, auto attendant, and AvT applications when a specific signal, or trigger, is invoked. The trigger is a telephone number. When a caller dials a specified telephone number, Cisco Unity Express starts the voice-mail, auto-attendant, or AvT application.

Cisco Unity Express supports a maximum of 8 SIP triggers and 8 JTAPI triggers for all applications combined. This applies to the CUE-NM-EC, CUE-NM, and the CUE-AIM. See the section “Advanced Configuration” on page 195 for procedures to configure multiple triggers for an application.

This configuration is required only for Cisco Unified CallManager mode (not Cisco SRST mode).

**Required Data for This Procedure**

The following information is required to configure the JTAPI triggers:
Configuring System Components

• Telephone number that invokes the application. The number must not be the same for both voice mail and auto attendant.
• Number of seconds the system must wait for a caller response before it times out and drops the call.
• Language to use for the prompts. Cisco Unity Express supports several languages. Only one can be installed on the system. See the Release Notes for Cisco Unity Express 2.3 for a list of available languages.
• Maximum number of callers that can access the trigger simultaneously. See the “Sharing Ports Among Applications and Triggers” section on page 52 for guidelines on assigning this value.

SUMMARY STEPS

1. config t
2. ccn trigger jtapi phononenumber 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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ccn trigger jtapi phononenumber number</td>
<td>Specifies the telephone number that acts as the trigger to start the application on Cisco Unity Express and enters trigger configuration mode. The number value must match a JTAPI route point configured on Cisco Unified CallManager.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config)# ccn trigger jtapi phononenumber 6700</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> application string</td>
<td>Specifies the name of the application to start when the trigger is entered.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-trigger)# application promptmanagement</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> enabled</td>
<td>Enables the trigger.</td>
</tr>
<tr>
<td><strong>Example:</strong> se-10-0-0-0(config-trigger)# enabled</td>
<td></td>
</tr>
</tbody>
</table>
Examples

The following sample configuration sets two triggers, one for the voice-mail application and one for the auto-attendant application:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# ccn trigger jtapi phononenumber 6500
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 jtapi phononenumber 6700
se-10-0-0-0(config-trigger)# application autoattendant
se-10-0-0-0(config-trigger)# maxsessions 8
se-10-0-0-0(config-trigger)# enabled
se-10-0-0-0(config-trigger)# end
se-10-0-0-0(config)# exit
se-10-0-0-0#
```

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

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

Name: 6500
Type: JTAPI
Application: voicemail
Locale: en_ENU
Idle Timeout: 600
Enabled: yes

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.

Required Data for This Procedure

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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 show ccn trigger</td>
<td>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.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0# show ccn trigger</td>
<td></td>
</tr>
<tr>
<td>Step 2 config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td>Step 3 no ccn trigger sip phonenumber number</td>
<td>Deletes the trigger number.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0(config)# no ccn trigger sip phonenumber 50100</td>
<td></td>
</tr>
</tbody>
</table>
Deleting a SIP Application Trigger

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
```

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 6500
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:                         6700
Type:                         SIP
Application:                  autoattendant
Locale:                       systemDefault
Idle Timeout:                 5000
Enabled:                      yes
Maximum number of sessions:   8
```

### Command or Action

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 4</strong> <code>exit</code></td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Step 5</strong> <code>show ccn trigger</code></td>
<td>Displays the configured triggers.</td>
</tr>
<tr>
<td><strong>Step 6</strong> <code>copy running-config startup-config</code></td>
<td>Copies the configuration changes to the startup configuration.</td>
</tr>
</tbody>
</table>
Deleting a JTAPI Application Trigger
(Cisco Unified CallManager Only)

Use this procedure to delete a JTAPI 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.

Required Data for This Procedure

The trigger number is required to delete a trigger.

SUMMARY STEPS

1. show ccn trigger
2. config t
3. no ccn trigger jtapi phonenumber number
4. exit
5. show ccn trigger
6. copy running-config startup-config

DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 show ccn trigger</td>
<td>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.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0# show ccn trigger</td>
<td></td>
</tr>
<tr>
<td>Step 2 config t</td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0# config t</td>
<td></td>
</tr>
<tr>
<td>Step 3 no ccn trigger jtapi phonenumber number</td>
<td>Deletes the trigger number.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0(config)# no ccn trigger jtapi phonenumber 5000</td>
<td></td>
</tr>
<tr>
<td>Step 4 exit</td>
<td>Exits configuration mode.</td>
</tr>
<tr>
<td>Example: se-10-0-0-0(config)# exit</td>
<td></td>
</tr>
</tbody>
</table>
### Command or Action

<table>
<thead>
<tr>
<th>Command</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 5</strong>&lt;br&gt;<code>show ccn trigger</code></td>
<td>Displays the configured triggers.</td>
</tr>
<tr>
<td><strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0# show ccn trigger</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong>&lt;br&gt;<code>copy running-config startup-config</code></td>
<td>Copies the configuration changes to the startup configuration.</td>
</tr>
<tr>
<td><strong>Example:</strong>&lt;br&gt;<code>se-10-0-0-0# copy running-config startup-config</code></td>
<td></td>
</tr>
</tbody>
</table>

### Examples

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

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

Name:                         6500
Type: JTAPI
Application:                  voicemail
Locale:                       en_ENU
Idle Timeout:                 600
Enabled:                      yes
Maximum number of sessions:   4

Name:                         6700
Type: JTAPI
Application:                  autoattendant
Locale:                       en_ENU
Idle Timeout:                 600
Enabled:                      yes
Maximum number of sessions:   8
```

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 jtapi phonenumber 6500
se-10-0-0-0(config)# exit
```

Now the output for `show ccn trigger` might look similar to the following:

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

Name:                         6700
Type: JTAPI
Application:                  autoattendant
Locale:                       en_ENU
Idle Timeout:                 600
Enabled:                      yes
Maximum number of sessions:   8
```
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 following default applications that shipped with Cisco Unity Express cannot be deleted:

- voicemail
- autoattendant
- ciscomwiapplication
- promptmgmt (the AvT application)
- msgnotification

Required Data for This Procedure

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
## Deleting an Application

**DETAILED STEPS**

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

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/mbxLogout.jsp
uri: http://localhost/voicemail/vxmlscripts/login.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

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:

```plaintext
se-10-0-0-0# config t
se-10-0-0-0(config)# no ccn trigger sip phonenum 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 the following:

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

<table>
<thead>
<tr>
<th>Name:</th>
<th>voicemail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>voicemail</td>
</tr>
<tr>
<td>Script:</td>
<td>voicebrowser.aef</td>
</tr>
<tr>
<td>ID number:</td>
<td>1</td>
</tr>
<tr>
<td>Enabled:</td>
<td>yes</td>
</tr>
<tr>
<td>Maximum number of sessions:</td>
<td>8</td>
</tr>
<tr>
<td>logoutUri:</td>
<td><a href="http://localhost/voicemail/vxmlscripts/mboxLogout.jsp">http://localhost/voicemail/vxmlscripts/mboxLogout.jsp</a></td>
</tr>
<tr>
<td>bxmlLogout.jsp:</td>
<td></td>
</tr>
<tr>
<td>login.vxml:</td>
<td><a href="http://localhost/voicemail/vxmlscripts/login.vxml">http://localhost/voicemail/vxmlscripts/login.vxml</a></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name:</th>
<th>autoattendant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description:</td>
<td>autoattendant</td>
</tr>
<tr>
<td>Script:</td>
<td>aa.aef</td>
</tr>
<tr>
<td>ID number:</td>
<td>2</td>
</tr>
<tr>
<td>Enabled:</td>
<td>yes</td>
</tr>
<tr>
<td>Maximum number of sessions:</td>
<td>8</td>
</tr>
<tr>
<td>MaxRetry:</td>
<td>3</td>
</tr>
<tr>
<td>operExtn:</td>
<td>0</td>
</tr>
<tr>
<td>welcomePrompt:</td>
<td>AAWelcome.wav</td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Name:</th>
<th>6500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type:</td>
<td>SIP</td>
</tr>
<tr>
<td>Application:</td>
<td>voicemail</td>
</tr>
<tr>
<td>Locale:</td>
<td>systemDefault</td>
</tr>
<tr>
<td>Idle Timeout:</td>
<td>5000</td>
</tr>
<tr>
<td>Enabled:</td>
<td>yes</td>
</tr>
<tr>
<td>Maximum number of sessions:</td>
<td>3</td>
</tr>
</tbody>
</table>

Name: 6700
Type: SIP
Application: autoattendant
Locale: systemDefault
Idle Timeout: 5000
Enabled: yes
Maximum number of sessions: 8
```
Configuring System-Wide Voice-Mail Parameters

The following system-wide parameters are configurable for all voice mailboxes.

- **Capacity**—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.

- **Mandatory message expiry**—Enabling this feature forces all subscribers to delete voice-mail messages when the messages expire. Subscribers will not have the option to keep the messages. Mandatory message expiry is disabled by default.

  After mandatory message expiry is enabled on the system, the TUI does not allow expired messages to be saved or resaved.

  The message expiration is calculated using the message delivery time, not the last time the message was saved.

  Forwarding messages to oneself is not allowed.

  Use the `voicemail message mandatory-expiry` command or the **Defaults > Voice Mail** GUI option to enable mandatory message expiry.

- **Expiration time**—Number of days a message is kept in the mailbox. When the subscriber logs in to the voice mailbox, the subscriber hears a message listing all the expired messages. If the mandatory message expiry feature is disabled, the subscriber can save, skip, or delete each message. The factory default value is 30 days.

- **Language**—Language used for voice-mail prompts. See Release Notes for Cisco Unity Express 2.3 for a list of the available languages. The default value is determined by the language package installed, and cannot be changed using the CLI commands.

- **Mailbox size**—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**—Maximum number of seconds for any one stored message in a mailbox. The factory default is 60 seconds.

- **Recording time**—Maximum amount of time for a subscriber’s recorded mailbox greeting. Valid values are 10 to 3600 seconds. The default is 900 seconds.

- **Operator extension**—Extension of the voice-mail operator.

**Caution**

The voice-mail telephone number and the voice-mail operator’s telephone number must not be the same. If they are, a subscriber who tries 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.

- **Caller ID information**—Permits playing caller ID information for an incoming voice message. The default is not to play the information.

- **Broadcast expiration time**—Length of time in days that a broadcast message is stored on the system.

  See “Configuring Broadcast Messages” on page 146 for more information on configuring broadcast messages.

- **Broadcast message recording time**—Length is seconds of a broadcast message. Valid values are 10 to 3600 seconds. See “Configuring Broadcast Messages” on page 146 for more information on configuring broadcast messages.
• Broadcast message MWI status—Enables the MWI lights to turn on when an extension receives a broadcast message. The default is disabled. See “Examples” on page 241 for more information on broadcast message MWI status.

• Voicemail caller recording prompt—Enables playing of a prompt to a caller to record a message after the receiver’s greeting is played. The prompt message is “Record your message at the tone. When you are finished, hang up or press # for more options.” The default is to play the prompt.

• Mailbox selection—Mailbox in which an incoming voice message is stored. The options are original called number (OCN) or the last redirected number (LRD). LRD is the default option.

For example, suppose caller A calls subscriber B’s extension, which forwards the call to subscriber C, who does not answer the phone. The call goes to voice mail. Subscriber B’s extension is the OCN and subscriber C’s extension is the LRD. If the system is configured with the OCN option, the system stores the message in subscriber B’s mailbox. If the system is configured with the LRD option, the system stores the message in subscriber C’s mailbox.

**Note**
The mailbox selection option does not work if you select:

— The OCN option on a Cisco Unified CME system that networks two Cisco Unity Express modules.
— The OCN option on a Cisco Unified CallManager system that networks two Cisco Unity Express modules that do not have a configured voice-mail profile.
— The LRD option on a Cisco Unified CallManager system that networks two Cisco Unity Express modules.

The **Defaults > Voice Mail** GUI option also configures mailbox selection.

• Voice Mail Box Mask (Cisco Unified CallManager Only)

Cisco Unity Express 2.3 uses the voice mail box mask feature supported by Cisco Unified CallManager. Currently, only Cisco Unified CallManager 4.2 supports this feature.

No configuration is required on Cisco Unity Express to use this feature.

If the voice mail box mask is configured on the Cisco Unified CallManager, Cisco Unified CallManager applies the mask to the number before sending it to Cisco Unity Express. Cisco Unity Express uses this number to find the correct mailbox for the incoming redirected call.

For example, suppose a call comes in for the directory number 7510 and is redirected to Cisco Unity Express voice mail.

– If Cisco Unified CallManager does not have voice mail box mask configured, Cisco Unity Express tries to find a mailbox for 7510.

– If Cisco Unified CallManager has voice mail box mask configured, such as 222555XXXX, Cisco Unified CallManager sends the number 2225557510 to Cisco Unity Express, which tries to find a mailbox for 2225557510.

See “Configuring Mailboxes” on page 114 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 message mandatory-expiry`
4. `voicemail default {broadcast expiration time days | expiration time days | language xx_YY | mailboxsize mailboxsize-seconds | messagesize messagesize-seconds}`

5. `voicemail operator telephone tel-number`

6. `voicemail recording time seconds`

7. `voicemail callerid`

8. `voicemail conversation caller recording-prompt`

9. `voicemail mailbox-selection {last-redirect | original-called}`

10. `exit`

11. `copy running-config startup-config`

12. `show voicemail limits`

**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Enters configuration mode.</td>
</tr>
<tr>
<td><code>config t</code></td>
<td></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td><code>se-10-0-0-0# config t</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Sets the <code>time</code> value as the system-wide maximum storage space in minutes allowed for all configured mailboxes.</td>
</tr>
<tr>
<td><code>voicemail capacity time minutes</code></td>
<td></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td><code>se-10-0-0-0(config)# voicemail capacity time 3000</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Enables mandatory message expiry.</td>
</tr>
<tr>
<td><code>voicemail message mandatory-expiry</code></td>
<td></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td><code>se-10-0-0-0# voicemail message mandatory-expiry</code></td>
<td></td>
</tr>
</tbody>
</table>
### Configuring System-Wide Voice-Mail Parameters

**Step 4**

```
voicemail default | broadcast expiration time days | expiration time days | language xx_YY | mailboxsize mailboxsize-seconds | messagesize messagesize-seconds
```

Assigns default values for new individual or general delivery mailboxes. Later these values can be configured to other values for specific mailboxes.

- **broadcast expiration time days**—Sets the number of days for which a broadcast message can be saved on the system.
- **expiration days**—Sets the number of days for which a message can be stored in a mailbox before the voice-mail system deletes it.
- **language**—Specifies the default language used for voice-mail prompts on the local Cisco Unity Express system. Cisco Unity Express supports one language installed on the system at a time. The value for this command is determined by the installed language package and cannot be changed. See the [Release Notes for Cisco Unity Express 2.3](#) for a list of available languages.
- **mailboxsize mailboxsize-seconds**—Sets the maximum number of seconds for storing messages in a mailbox.
- **messagesize messagesize-seconds**—Sets the maximum number of seconds for a caller’s message stored in a mailbox.

#### Example:

```
se-10-0-0-0(config)# voicemail default broadcast expiration time 15
se-10-0-0-0(config)# voicemail default expiration time 30
se-10-0-0-0(config)# voicemail default language en_ENU
se-10-0-0-0(config)# voicemail default mailboxsize 300
se-10-0-0-0(config)# voicemail default messagesize 120
```

**Step 5**

```
voicemail operator telephone tel-number
```

Assigns the `tel_number` 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.

#### Example:

```
se-10-0-0-0(config)# voicemail operator telephone 9000
```

**Step 6**

```
voicemail recording time seconds
```

Assigns the `time` value in seconds as the maximum recording time for any greeting or message in the voice-mail system. Valid values are 10 to 3600 seconds. The default value is 900 seconds.

#### Example:

```
se-10-0-0-0(config)# voicemail recording time 300
```

**Step 7**

```
voicemail callerid
```

Enables playing caller ID information for incoming voice messages.

#### Example:

```
se-10-0-0-0(config)# voicemail callerid
```

**Step 8**

```
voicemail conversation caller recording-prompt
```

Enables playing the prompt to a caller to record a message after the tone. Use the `no` form of the command to disable playing the prompt.

#### Example:

```
se-10-0-0-0(config)# voicemail conversation caller recording-prompt
```
### Command or Action

**Step 9**

`voicemail mailbox-selection (last-redirect | original-called)`

**Example:**

```bash
se-10-0-0-0# voicemail mailbox-selection last-redirect
```

**Purpose**

Specifies the mailbox in which a forwarded call’s message is stored.

- **last-redirect**—The system stores the message in the mailbox belonging to the extension that received the call from the original called party.
- **original-called**—The system stores the message in the mailbox belonging to the extension that was originally called.

**Note**

The mailbox selection option does not work if you select:
- The OCN option on a Cisco Unified CME system that networks two Cisco Unity Express modules.
- The OCN option on a Cisco Unified CallManager system that networks two Cisco Unity Express modules that do not have a configured voice-mail profile.
- The LRD option on a Cisco Unified CallManager system that networks two Cisco Unity Express modules.

**Step 10**

`exit`

**Example:**

```bash
se-10-0-0-0(config)# exit
```

**Purpose**

Exits configuration mode.

**Step 11**

`copy running-config startup-config`

**Example:**

```bash
se-10-0-0-0# copy running-config startup-config
```

**Purpose**

Copies the configuration changes to the startup configuration.

**Step 12**

`show voicemail limits`

**Example:**

```bash
se-10-0-0-0# show voicemail limits
```

**Purpose**

Displays system-wide voice-mail parameter values.

### Example

The following example sets voicemail parameters.

```bash
se-10-0-0-0# config t
se-10-0-0-0(config)# voicemail capacity time 3000
se-10-0-0-0(config)# voicemail message mandatory-expiry
se-10-0-0-0(config)# voicemail default broadcast message expiration time 10
se-10-0-0-0(config)# voicemail default expiration time 15
se-10-0-0-0(config)# voicemail default language en_ENU
se-10-0-0-0(config)# voicemail mailboxsize 360
se-10-0-0-0(config)# voicemail messagesize 120
se-10-0-0-0(config)# voicemail operator telephone 8000
se-10-0-0-0(config)# voicemail recording time 180
```
Configuring System Components

Configuring Password and PIN Parameters

Cisco Unity Express supports the configuration of the password and personal identification number (PIN) parameters described in the following sections:

- Configuring Password and PIN Length and Expiry Time, page 82
- Displaying Password and PIN System Settings, page 84

Configuring Password and PIN Length and Expiry Time

Cisco Unity Express supports configuring the following two attributes of password and PIN:

- Minimum password and PIN length

  To support enhanced security procedures, Cisco Unity Express has made the password and PIN length configurable. The administrator can configure the length to a value greater than or equal to 3 alphanumeric characters. This is a system-wide value, so that all subscribers must have passwords and PINs of at least that many characters. Use the GUI Defaults > User option or the procedure described below to configure this length.

  The password length does not have to equal the PIN length.

  The default length is 3 alphanumeric characters. The maximum password length is 32 alphanumeric characters. The maximum PIN length is 16 alphanumeric characters.

  To set the password or PIN length to the system default values, use the no or default form of the commands.
If the minimum password or PIN length is increased, existing passwords and PINs that do not conform to the new limit will automatically expire. The subscriber must reset the password at the next log in to the GUI and must reset the PIN at the next log in to the TUI.

- Password and PIN expiry time

Cisco Unity Express permits the administrator to configure the password and PIN expiry time on a system-wide basis. The expiry time is the time, in days, for which the password and PIN are valid. When this time is reached, the subscriber must enter a new password or PIN.

If this option is not configured, passwords and PINs do not expire.

Use the GUI **Defaults > User** option or the procedure described below to configure this time.

The password expiry time does not have to equal the PIN expiry time.

The valid range is 3 to 365 days.

To set the password or PIN expiry time to the system default values, use the **no** or **default** form of the commands.

**SUMMARY STEPS**

- config t
- security password length min *password-length*
- security pin length min *pin-length*
- security password expiry days *password-days*
- security pin expiry days *pin-days*
- exit

**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>config t</td>
</tr>
<tr>
<td>Example:</td>
<td>se-10-0-0-0# config t se-10-0-0-0(config)#</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>security password length min <em>password-length</em></td>
</tr>
<tr>
<td>Example:</td>
<td>se-10-0-0-0(config)# security password length min 5</td>
</tr>
</tbody>
</table>

Specifies the length of all subscribers’ passwords. The default minimum value is 3; the maximum value is 32.

To set the minimum password length to the system default, use the **no** or **default** form of this command.
Configuring Password and PIN Parameters

Examples

The following example sets the password length to 6 characters, the PIN length to 5 characters, the password expiry time to 60 days, and the PIN expiry time to 45 days.

```
se-10-0-0-0# config t
se-10-0-0-0(config)# security password length min 6
se-10-0-0-0(config)# security pin length min 5
se-10-0-0-0(config)# security password expiry days 60
se-10-0-0-0(config)# security pin expiry days 45
se-10-0-0-0(config)# exit
```

Displaying Password and PIN System Settings

Use the following Cisco Unity Express EXEC mode command to display the password and PIN settings:

```
show security detail
```

The command output may look similar to the following:

```
se-10-0-0-0# show security detail
```
Password Expires:         true
Password Age:             60 days
Password Length (min):    5
Password Length (max):    32
PIN Expires:              true
PIN Age:                  45 days
PIN Length (min):         4
PIN Length (max):         16

The following example shows the values when password expiration and the PIN length are reset to the system default values:

se-10-0-0-0# show security detail
Password Expires:         false
Password Length (min):    3
Password Length (max):    32
PIN Expires:              false
PIN Length (min):         3
PIN Length (max):         16

Configuring a Holiday List
Cisco Unity Express permits configuration of a holiday list that causes the auto attendant (AA) to play a customizable greeting to callers when the company is closed for a holiday. The following sections describe the configuration process:

- Overview of Holiday Lists, page 85
- Using the Holiday Lists, page 86
- Configuring a Holiday List, page 86
- Displaying the Holiday List, page 86
- Deleting Holidays from the List, page 88

Overview of Holiday Lists

- Cisco Unity Express supports up to three holiday lists: the previous year, the current year, and the next year. If a year has no configured entries, the system treats that year as having no holidays.
  For example, if the current year is 2005 and you have not configured entries for 2004 (the previous year), the system treats 2004 as having zero (0) holidays. You may configure holidays for 2005 and 2006 (the next year) but not for 2007.
- The list can contain a maximum of 26 holidays per year.
- No default holiday list is available in the system.
- The administrator can delete entries from a previous year list but cannot add or modify that list in any other way.
- The system automatically deletes the previous year list at the beginning of the new calendar year. For example, the system will delete the 2004 holiday list on January 1, 2006.
- To configure the holiday list for the current year and next year, use the graphical user interface (GUI) **Voice Mail > Holiday Settings** option or the command-line interface (CLI) commands described in this section.
To copy holidays from one year to the next, use the GUI option **Copy all to next year** under **Voice Mail > Holiday Settings**.

### Using the Holiday Lists

The Cisco Unity Express Editor provides a step “Is Holiday” that checks the holidays configured on the system to determine whether the specified day is a holiday or not. The step takes as input the day to check against the holiday list. See the *Cisco Unity Express 2.3 Guide to Writing Auto-Attendant Scripts* for more information on steps.

The default auto-attendant script uses this step to check the holiday lists. When a caller reaches the AA, the AA plays the welcome prompt and checks if the current day is a holiday. If it is a holiday, the AA plays the holiday prompt to the caller. This prompt (AAHolidayPrompt.wav) is “We are closed today. Please call back later.”

You can customize this prompt by recording a more meaningful message, such as “We are closed today for a holiday. If this is an emergency, please call 1-222-555-0150 for assistance. Otherwise, please call back later.”

After a new prompt is uploaded to Cisco Unity Express, use the GUI options or CLI commands to configure AA to use the new prompt. See “Configuring Auto-Attendant Scripts” on page 63 for details on how to set AA script parameters.

Custom AA scripts can use this step in a similar manner.

### Configuring a Holiday List

Use the following command in Cisco Unity Express configuration mode to configure a holiday list:

```
calendar holiday date yyyy mm dd [description holiday-description]
```

where *yyyy* is the 4-digit year, *mm* is the 2-digit month, *dd* is the 2-digit day, and *holiday-description* is an optional description of the holiday. If the description is more than one word, enclose the text in double quotes (“ ”).

The valid values for *yyyy* are the current year or the next year. An error message appears if the year or date is out of range.

**Example:**
```
se-10-0-0-0# config t
se-10-0-0-0(config)# calendar holiday date 2005 05 30 description “Memorial Day”
se-10-0-0-0(config)# exit
se-10-0-0-0#
```

### Displaying the Holiday List

Several CLI commands are available in the Cisco Unity Express EXEC mode for displaying the holiday list.

### Displaying All Holiday Lists

The following command displays all the holiday lists configured on the system:
show calendar holiday [all]

This command displays the date and description for all holidays for all years. The output for this command may appear similar to the following:

```
se-10-0-0-0-0# show calendar holiday

******************************
 Year: 2004
******************************
 September 04 Labor Day
 November 25 Thanksgiving

******************************
 Year: 2005
******************************
 July 04 July 4th
 September 05 Labor Day
 November 24 Thanksgiving
 December 25 Christmas
```

Displaying Holiday Lists for a Specific Year

The following command displays the holidays configured for a specific year:

```
show calendar holiday year yyyy
```

where `yyyy` is the 4-digit year. This command displays the date and description for all holidays configured for the specified year. If no holidays are configured for that year, the message “No holidays found for the specified year” appears. The output for this command may appear similar to the following:

```
se-10-0-0-0-0# show calendar holiday year 2005

******************************
 Year: 2005
******************************
 July 04 July 4th
 September 05 Labor Day
 November 24 Thanksgiving
 December 25 Christmas
```

Displaying Holiday Lists for a Specific Month

The following command displays the holidays configured for a specific month in a specified year:

```
show calendar holiday year yyyy month mm
```

where `yyyy` is the 4-digit year and `mm` is the 2-digit month. This command displays the date and description for all holidays configured for the specified month in the specified year. If no holidays are configured for that month, the message “No holidays found for the specified month” appears.

The output for this command may appear similar to the following:

```
se-10-0-0-0# show calendar holiday year 2005 month 12

******************************
 Year: 2005
******************************
 December 25 Christmas
```
Deleting Holidays from the List

Several CLI commands are available in the Cisco Unity Express configuration mode for deleting holidays from the list.

Deleting a Specific Holiday from the Holiday List

The following command deletes a specific holiday:

```plaintext
Caution
Use this command with caution because this operation is irreversible. Do not press the “Enter” key after the year; doing so deletes the holiday list for the entire year.

no calendar holiday date yyyy mm dd
```

where `yyyy` is the 4-digit year, `mm` is the 2-digit month, and `dd` is the 2-digit day.

Example:
```plaintext
se-10-0-0-0# config t
se-10-0-0-0(config)# no calendar holiday date 2004 11 25
se-10-0-0-0(config)# end
```

Deleting Holidays from a Specific Month

```plaintext
Caution
Use this command with caution because this operation is irreversible and may cause loss of holiday configuration for the entire month.
```

The following command deletes the holidays configured for a specific month in a specified year:

```plaintext
no calendar holiday year yyyy month mm
```

where `yyyy` is the 4-digit year and `mm` is the 2-digit month.

Example:
```plaintext
se-10-0-0-0# config t
se-10-0-0-0(config)# no calendar holiday year 2004 month 09
se-10-0-0-0(config)# end
```

Deleting Holidays for a Specific Year

```plaintext
Caution
Use this command with caution because this operation is irreversible and may cause loss of holiday configuration for the entire year.
```

The following command deletes all the holidays configured for a specific year:

```plaintext
no calendar holiday year yyyy
```

where `yyyy` is the 4-digit year.
Configuring Business Hours

Cisco Unity Express provides support for business hour schedules that specify the hours when the business is open or closed during the week.

The following sections describe this feature, its configuration, and how to use this feature in the auto-attendant application:

- Overview of Business-Hours Schedules, page 89
- Using the Business-Hours Schedule, page 89
- Creating a Business-Hours Schedule, page 90
- Modifying Business Schedules, page 92
- Displaying Business-Hours Schedules, page 94
- Deleting a Business Schedule, page 95

Overview of Business-Hours Schedules

You can configure up to 4 weekly business-hours schedules. Each day is divided into 48 half-hour time slots. Each of these time slots can be configured to specify whether the company is open or closed during that time. Use the graphical user interface (GUI) Voice Mail > Business Hours Settings option or the command-line interface (CLI) commands described in this section to configure these slots.

The Cisco Unity Express system ships with one default schedule called “systemschoedule.” This schedule treats the business as open 24 hours per day, 7 days per week. Use the GUI Voice Mail > Business Hours Settings option or CLI commands to modify or delete this default schedule. This schedule counts towards the maximum limit of 4.

Using the Business-Hours Schedule

The Cisco Unity Express Editor provides a step “Business Hours” that checks whether the business is open or closed during a specified time slot. The step requires a time slot to check and any business-hours schedule configured on the system. See the Cisco Unity Express 2.3 Guide to Writing Auto-Attendant Scripts for more information about steps.

The default AA uses this step to access the business-hours schedule. When a caller reaches the AA, the AA plays the welcome prompt and checks if the current day is a holiday. If it is a holiday, the AA plays the holiday greeting to the caller and does not check the business-hours schedule.

If the current day is not a holiday, the system checks if the business is open at the time the call is received. If so, the business open prompt (AABusinessOpen.wav) plays. If the business is closed, the system plays the business closed prompt. (AABusinessClosed.wav).
You can customize these two prompts by recording more meaningful messages. Use the GUI Voice Mail > Prompts option or the CLI commands to upload the customer prompts. Alternatively, you can record these prompts using the Administration Via Telephone (AvT) system. See “Configuring Auto-Attendant Scripts” on page 63 for details on setting up AA script parameters.

After uploading or recording these custom prompts, use the GUI Voice Mail > Auto Attendants option or the CLI commands to associate the new prompts with the AA. See “Configuring Auto-Attendant Scripts” on page 63 for details on setting up AA script parameters.

Creating a Business-Hours Schedule

Follow this procedure to create a business-hours schedule.

Data Required for This Procedure

The following information is required to configure a business-hours schedule:

- Schedule name
  
The maximum length of the name is 31 alphanumeric characters, including uppercase letters A through Z, lowercase letters a through z, digits 0 through 9, underscore (_), and dash (-). The first character of the name must be a letter.

  If a schedule with this name does not exist, the system will create it. The default schedule is open, 24 hours per day, 7 days per week.

  If the schedule already exists, any changes will modify the schedule. If the maximum number of schedules exists and you request another one, the system displays an error message.

- Day of the week
- Starting and ending clock times when the business is open and when the business is closed

SUMMARY STEPS

1. config t
2. calendar biz-schedule schedule-name
3. closed day day-of-week from hh:mm to hh:mm
4. open day day-of-week from hh:mm to hh:mm
5. end
6. exit
### DETAILED STEPS

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td><strong>config t</strong>&lt;br&gt;Enters configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0# config t&lt;br&gt;se-10-0-0-0(config)#</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td><strong>calendar biz-schedule schedule-name</strong>&lt;br&gt;Specifies the name for the business-hours schedule and enters business configuration mode. The name must be one word. If a schedule with this name does not exist, the system creates it. If the schedule already exists, any changes modify the schedule. If the maximum number of schedules exists, the system displays an error message.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0(config)# calendar biz-schedule normal_hours</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td><strong>closed day day-of-week from hh:mm to hh:mm</strong>&lt;br&gt;Enter the day of the week and the times when the business is closed for that day. Valid values for <em>day-of-week</em> are 1 to 7, where 1 represents Sunday, 2 is Monday, 3 is Tuesday, 4 is Wednesday, 5 is Thursday, 6 is Friday, and 7 is Saturday. Use the 24-hour clock format for <em>hh</em>. Valid <em>mm</em> values are 00 and 30 only.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0(config-business)# closed day 2 from 00:00 to 08:30&lt;br&gt;se-10-0-0-0(config-business)# closed day 2 from 17:30 to 24:00</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td><strong>open day day-of-week from hh:mm to hh:mm</strong>&lt;br&gt;Enter the day of the week and the times when the business is open for that day. Valid values for <em>day-of-week</em> are 1 to 7, where 1 represents Sunday. Use the 24-hour clock format for <em>hh</em>. Valid <em>mm</em> values are 00 and 30 only.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0(config-business)# open day 2 from 08:30 to 17:30</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Repeat Steps 3 and 4 for each day of the week that needs business hours scheduled.</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td><strong>end</strong>&lt;br&gt;Exits business configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0(config-business)# end&lt;br&gt;se-10-0-0-0(config)#</td>
</tr>
<tr>
<td><strong>Step 7</strong></td>
<td><strong>exit</strong>&lt;br&gt;Exits configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>se-10-0-0-0(config)# exit&lt;br&gt;se-10-0-0-0#</td>
</tr>
</tbody>
</table>
Examples

The following example configures a new business schedule:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# calendar biz-schedule normal
Adding new schedule
se-10-0-0-0(config-business)# closed day 1 from 00:00 to 24:00
se-10-0-0-0(config-business)# closed day 2 from 00:00 to 08:30
se-10-0-0-0(config-business)# closed day 2 from 17:30 to 24:00
se-10-0-0-0(config-business)# closed day 3 from 00:00 to 08:30
se-10-0-0-0(config-business)# closed day 3 from 17:30 to 24:00
se-10-0-0-0(config-business)# closed day 4 from 00:00 to 08:30
se-10-0-0-0(config-business)# closed day 4 from 17:30 to 24:00
se-10-0-0-0(config-business)# closed day 5 from 00:00 to 08:30
se-10-0-0-0(config-business)# closed day 5 from 20:00 to 24:00
se-10-0-0-0(config-business)# closed day 6 from 00:00 to 08:30
se-10-0-0-0(config-business)# closed day 6 from 18:00 to 24:00
se-10-0-0-0(config-business)# closed day 7 from 00:00 to 09:00
se-10-0-0-0(config-business)# closed day 7 from 13:00 to 24:00
se-10-0-0-0(config-business)# end
se-10-0-0-0(config)# exit
```

Modifying Business Schedules

Starting from Cisco Unity Express configuration mode, use the following command to access a business-hours schedule for modification:

```
calendar biz-schedule schedule-name
```

where `schedule-name` is the name of the business schedule to modify. If a schedule with the specified business name does not exist, the system creates it.

The following example accesses the existing “normal” business schedule:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# calendar biz-schedule normal
Modifying existing schedule
se-10-0-0-0(config-business)# open day 1 from 09:00 to 12:00
se-10-0-0-0(config-business)# end
se-10-0-0-0(config)# exit
```

Only the hours specified using these commands are affected. The other time slots in the business-hours schedule are not modified.

Changing the Status of Open or Closed Hours

To modify an existing schedule, specify the open and closed hours for each day as needed.

Changing an Open Slot to a Closed Slot

Use either of the following configuration mode commands to change an open slot to a closed slot:

```
no open day day-of-week from hh:mm to hh:mm
```

```
closed day day-of-week from hh:mm to hh:mm
```
where *day-of-week* is the numeric day of the week (1 equals Sunday), *hh* are hours in the 24-hour clock format, and *mm* are minutes, either 00 or 30.

For example, if Monday is open from 09:00 to 17:00, then *no open day 2 from 09:00 to 10:00* or *closed day 2 from 09:00 to 10:00* closes Monday 9:00 a.m. to 10:00 a.m.

### Changing a Closed Slot to an Open Slot

Use either of the following commands to change a closed slot to an open slot:

- `no closed day day-of-week from hh:mm to hh:mm`
- `open day day-of-week from hh:mm to hh:mm`

where *day-of-week* is the numeric day of the week (1 equals Sunday), *hh* are hours in the 24-hour clock format, and *mm* are minutes, either 00 or 30.

For example, if Monday is closed from 00:00 to 10:00, then *no closed day 2 from 09:00 to 10:00* or *open day 2 from 09:00 to 10:00* opens the Monday time slot 9:00 a.m. to 10:00 a.m.

### Examples

The following output shows the “normal” business schedule:

```
se-10-0-0-0# show calendar biz-schedule normal

***************************
Schedule: normal
Day                  Open Hours
-------------------------------
Sunday               None
Monday               08:30 to 17:30
Tuesday              08:30 to 17:30
Wednesday            08:30 to 17:30
Thursday             08:30 to 20:00
Friday               08:30 to 18:00
Saturday             09:00 to 13:00
```

The following commands modify the “normal” business hours by closing Monday hours from 8:30 to 9:30 and opening Saturday hours from 1:00 p.m. to 2:00 p.m.:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# calendar biz-schedule normal
se-10-0-0-0(config-business)# no open day 2 from 08:30 to 09:30
se-10-0-0-0(config-business)# no closed day 7 from 13:00 to 14:00
se-10-0-0-0(config-business)# end
se-10-0-0-0(config)# exit
```

The following output shows the changed schedule:

```
se-10-0-0-0# show calendar biz-schedule normal

***************************
Schedule: normal
Day                  Open Hours
-------------------------------
Sunday               None
Monday               09:30 to 17:30
Tuesday              08:30 to 17:30
Wednesday            08:30 to 17:30
Thursday             08:30 to 20:00
Friday               08:30 to 18:00
```
Displaying Business-Hours Schedules

Several CLI commands are available in the Cisco Unity Express EXEC mode for displaying the business-hours schedules.

Displaying a Specific Schedule

The following command displays a specific business schedule:

```
show calendar biz-schedule schedule-name
```

where `schedule-name` is the name of the schedule. This command displays each day of the week and the open hours. The output for this command may appear similar to the following.

```
se-10-0-0-0# show calendar biz-schedule normal

**************************
Schedule: normal
Day                Open Hours
---------------------
Sunday              None
Monday              08:30 to 17:30
Tuesday             08:30 to 17:30
Wednesday           08:30 to 17:30
Thursday            08:30 to 20:00
Friday              08:30 to 18:00
Saturday            09:00 to 13:00
```

Displaying All Businesses Schedules

The following command displays all the configured business schedules in the system:

```
show calendar biz-schedule [all]
```

This command displays the open hours for each day of the week for each schedule. The output for this command may appear similar to the following:

```
sse-10-0-0-0# show calendar biz-schedule

**************************
Schedule: systemschedule
Day                Open Hours
---------------------
Sunday              Open all day
Monday              Open all day
Tuesday             Open all day
Wednesday           Open all day
Thursday            Open all day
Friday              Open all day
Saturday            Open all day

**************************
Schedule: normal
Day                Open Hours
---------------------
Sunday              None
```
Deleting a Business Schedule

The following configuration mode command deletes a specified business schedule:

```
no calendar biz-schedule schedule-name
```

where `schedule-name` is the name of the business schedule to delete.

If you delete the business schedule associated with the auto attendant application, the system assumes your business is open 24 hours a day, 7 days a week.

The following example deletes the “normal” business schedule:

```
se-10-0-0-0# config t
se-10-0-0-0(config)# no calendar biz-schedule normal
se-10-0-0-0(config)# exit
se-10-0-0-0#
```