



Modifying Cisco Unified IP Phone Options

Last Updated: October 5, 2009

This chapter describes the screen and button features available for Cisco Unified IP phones connected to Cisco Unified Communications Manager Express (Cisco Unified CME).

Finding Feature Information in This Module

Your Cisco Unified CME version may not support all of the features documented in this module. For a list of the versions in which each feature is supported, see the [“Feature Information for Cisco Unified IP Phone Options”](#) section on page 1126.

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Information About Cisco Unified IP Phone Options

To enable IP phone options, you should understand the following concepts:

- [Customized Background Images for Cisco Unified IP Phone 7970, page 1100](#)
- [Fixed Line/Feature Buttons for Cisco Unified IP Phone 7931G, page 1100](#)
- [Header Bar Display, page 1100](#)
- [Phone Labels, page 1101](#)
- [Programmable Vendor Parameters for Phones, page 1101](#)
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Customized Background Images for Cisco Unified IP Phone 7970

The Cisco Unified IP Phone 7970 and 7971 support customized background images on the phone screen. To enable your Cisco Unified IP Phone 7970 or 7971 to display a customized background image, follow the procedure in the technical note at

http://www.cisco.com/en/US/products/sw/voicesw/ps4625/products_tech_note09186a008062495a.shtml

Sample background images are available in the 7970-backgrounds.tar file at <http://www.cisco.com/cgi-bin/tablebuild.pl/ip-iostsp>

Fixed Line/Feature Buttons for Cisco Unified IP Phone 7931G

In Cisco Unified CME 4.0(2) and later versions, you can select from two fixed button-layout formats to assign functionality to certain line buttons on a Cisco Unified IP Phone 7931G to support key system phone behavior. If you do not select a button set, no fixed set of feature/line buttons are defined.

The line button layout for the Cisco Unified IP Phone 7931G is a bottom-up array. Button 1 is at the bottom right of the array and button 24 is at the top left of the array.

Button set 1 includes two predefined feature buttons: button 24 is Menu and button 23 is Headset.

Button set 2 includes four predefined feature buttons: button 24 is Menu; button 23 is Headset; button 22 is Directories; and button 21 is Messages.

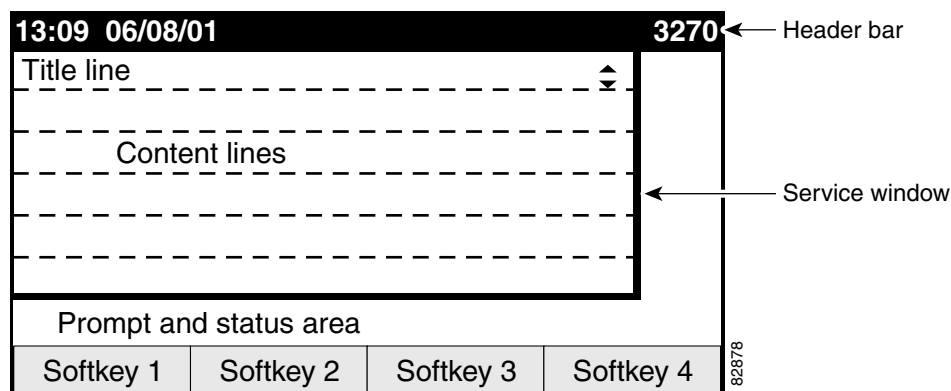
For configuration, see the “[SCCP: Selecting Button Layout for a Cisco Unified IP Phone 7931G](#)” section on page 1104.

Header Bar Display

You can customize the content of an IP phone header bar, which is the top line of the IP phone display.

The IP phone header bar, or top line, of a Cisco Unified IP Phone normally replicates the text that appears next to the first line button. The header bar is shown in [Figure 40](#). The header bar can, however, contain a user-definable message instead of the extension number. For example, the header bar can be used to display a name or the full E.164 number of the phone. If no description is specified, the header bar replicates the extension number that appears next to the first button on the phone.

Figure 40 Cisco Unified IP Phone Display



Phone Labels

Phone labels are configurable text strings that can be displayed instead of extension numbers next to line buttons on a Cisco Unified IP phone. By default, the number that is associated to a directory number, and assigned to a phone, is displayed next to the applicable button. The label feature allows you to enter a meaningful text string for each directory number so that a phone user with multiple lines can select a line by label instead of by phone number, thus eliminating the need to consult in-house phone directories. For configuration information, see the [“SCCP: Creating Labels for Directory Numbers” section on page 1109](#) or the [“SIP: Creating Labels for Directory Numbers” section on page 1110](#).

Programmable Vendor Parameters for Phones

The vendorConfig section of the configuration file contains phone and display parameters that are read and implemented by a phone's firmware when that phone is booted. Only the parameters supported by the currently loaded firmware are available. The number and type of parameters may vary from one firmware version to the next.

The IP phone that downloads the configuration file will implement only those parameters that it can support and ignore configured parameters that it cannot implement. For example, a Cisco Unified IP Phone 7970G does not have a backlit display and cannot implement Backlight parameters regardless of whether they are configured. The following text shows the format of an entry in the configuration file:

```
<vendorConfig>
<parameter-name>parameter-value</parameter-name>
</vendorConfig>
```

For configuration information at the system level, see the [“SCCP: Modifying Vendor Parameters for All Phones” section on page 1117](#). For configuration information for individual phones, see the [“SCCP: Modifying Vendor Parameters For a Specific Phone” section on page 1118](#).

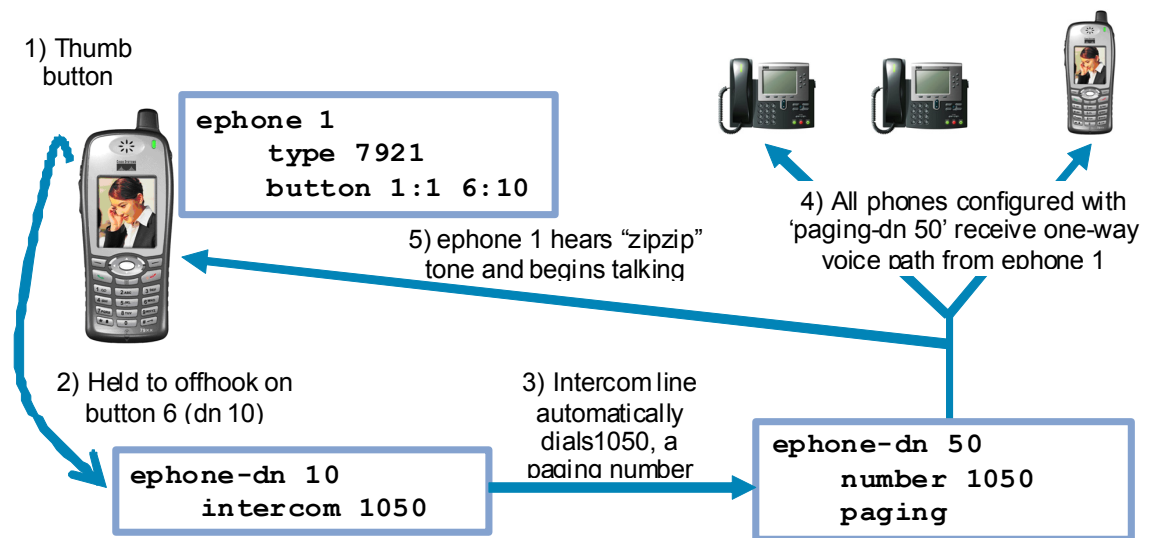
Push-to-Talk

This feature allows one-way Push-to-Talk (PTT) in Cisco Unified CME 7.0 and later versions without requiring an external server to support the functionality. PTT is supported in firmware version 1.0.4 and later versions on Cisco Unified Wireless IP Phone 7921 and 7925 with a thumb button.

In the following figure, button1/DN 1 is configured as the primary line for this phone. Button 6/ DN 10 is configured for PTT and is the line that is triggered by pushing the thumb button on this phone.

- Holding down on the thumb button causes the configured DN on the phone to go off-hook.
- The thumb button utilizes an intercom DN that targets a paging number (1050).
- The targeted paging group (DN 50) can be unicast or multicast or both.
- Users will hear a “zipzip” tone when call path is set up.
- All other keys on the phone are locked during this operation
- Releasing the thumb button ends the call.

Figure 41 PTT Call Flow



For configuration information, see the [“SCCP: Configuring One-Way Push-to-Talk on Cisco Unified Wireless IP Phones”](#) section on page 1120

System Message Display

The System Message Display feature allows you to specify a custom text or display message to appear in the lower part of the display window on display-capable IP phones. If you do not set a custom text or display message, the default message “Cisco Unified CME” is displayed.

When you specify a text message, the number of characters that can be displayed is not fixed because IP phones typically use a proportional (as opposed to fixed-width) font. There is room for approximately 30 alphanumeric characters.

The display message is refreshed with a new message after one of the following events occurs:

- Busy phone goes back on-hook.
- Idle phone receives a keepalive message.
- Phone is restarted.

The file-display feature allows you to specify a file to display on display-capable IP phones when they are not in use. You can use this feature to provide the phone display with a system message that is refreshed at configurable intervals, similar to the way that the text message feature provides a message. The difference between the two is that the system text message feature displays a single line of text at the bottom of the phone display, whereas the system display message feature can use the entire display area and contain graphic images.

URL Provisioning for Feature Buttons

URL provisioning for programmable feature buttons allows you to specify alternative XML files to access using the feature buttons on IP phones.

Certain phones, such as the Cisco Unified IP Phone 7940, 7940G, 7960, and 7960G, have programmable feature buttons that invoke noncall-related services. The four buttons—Services, Directories, Messages, and Information (the i button)—are linked to appropriate feature operations through URLs. The fifth button—Settings—is managed entirely by the phone.

The feature buttons are provisioned with specific URLs. The URLs link to XML web pages formatted with XML tags that the Cisco Unified IP phone understands and uses. When you press a feature button, the Cisco Unified IP phone uses the configured URL to access the appropriate XML web page for instructions. The web page sends instructions to the Cisco Unified IP phone to display information on the screen for users to navigate. Phone users can select options and enter information by using soft keys and the scroll button.

Operation of these feature buttons is determined by the capabilities of the Cisco Unified IP phone and the content of the specified URL.

In Cisco Unified CME 4.2 and later versions, up to eight URLs can be configured for the Services feature button by using an ephone template to apply the configuration to one or more supported SCCP phones. If you use an ephone template to configure services URLs for one or SCCP phones and you also configure a system-level services URL in telephony-service configuration mode, the value set in telephony-service configuration mode appears first in the list of services displayed when the phone user presses the Services feature button. Cisco Unified CME self-hosted services, such as Extension Mobility, always appears last in the list of options displayed for the Services feature button.

For configuration information, see the [“URLs for Feature Buttons” section on page 1104](#).

How to Configure Cisco Unified IP Phone Options

This section contains the following tasks:

Button Layout for Cisco Unified IP Phone 7931G

- [SCCP: Selecting Button Layout for a Cisco Unified IP Phone 7931G, page 1104](#) (required)

Header Bar Display

- [SCCP: Modifying Header Bar Display, page 1105](#) (required)
- [SIP: Modifying Header Bar Display, page 1107](#) (required)
- [Verifying Header Bar Display, page 1108](#) (optional)
- [Troubleshooting Header Bar Display, page 1108](#) (optional)

Labels for Directory Numbers

- [SCCP: Creating Labels for Directory Numbers, page 1109](#) (required)
- [SIP: Creating Labels for Directory Numbers, page 1110](#) (required)
- [Verifying Labels, page 1111](#) (optional)

System Message Display

- [SCCP: Modifying System Message Display, page 1112](#) (required)
- [Verifying System Message Display, page 1113](#) (optional)
- [Troubleshooting System Message Display, page 1113](#) (optional)

URLs for Feature Buttons

- [SCCP: Provisioning URLs for Feature Buttons, page 1114](#) (required)
- [SIP: Provisioning URLs for Feature Buttons, page 1115](#) (required)
- [Troubleshooting URL Provisioning for Feature Buttons, page 1117](#) (optional)

Programmable VendorConfig Parameters

- [SCCP: Modifying Vendor Parameters for All Phones, page 1117](#) (optional)
- [SCCP: Modifying Vendor Parameters For a Specific Phone, page 1118](#) (optional)
- [Troubleshooting Vendor Parameter Configuration, page 1120](#) (optional)

Push To Talk

- [SCCP: Configuring One-Way Push-to-Talk on Cisco Unified Wireless IP Phones, page 1120](#)

SCCP: Selecting Button Layout for a Cisco Unified IP Phone 7931G

To select a fixed-button layout for a Cisco Unified IP Phone 7931G, perform the following steps.

Prerequisites

Cisco Unified CME 4.0(2) or a later version.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone template** *template-tag*
4. **button-layout set** *phone-type* [1 | 2]
5. **exit**
6. **ephone** *phone-tag*
7. **ephone-template** *template-tag*
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.

	Command or Action	Purpose
Step 3	<code>ephone-template template-tag</code> Example: Router(config)# ephone-template 15	Enters ephone-template configuration mode to create an ephone template.
Step 4	<code>button-layout phone-type {1 2}</code> Example: Router(config-ephone-template)# button-layout 7931 2	Specifies which fixed set of feature buttons appears on a Cisco Unified IP Phone 7931G that uses a template in which this is configured. <ul style="list-style-type: none"> • 1—Includes two predefined feature buttons: button 24 is Menu and button 23 is Headset. • 2—Includes four predefined feature buttons: button 24 is Menu; button 23 is Headset; button 22 is Directories; and button 21 is Messages.
Step 5	<code>exit</code> Example: Router(config-ephone-template)# exit	Exits from this command mode to the next highest mode in the configuration mode hierarchy.
Step 6	<code>ephone phone-tag</code> Example: Router(config)# ephone 1	Enters ephone configuration mode.
Step 7	<code>ephone-template template-tag</code> Example: Router(config-ephone)# ephone-template 15	Applies an ephone template to the ephone that is being configured.
Step 8	<code>end</code> Example: Router(config-ephone)# end	Exits configuration mode and enters privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See [“Generating Configuration Files for Phones” on page 261](#).

SCCP: Modifying Header Bar Display

To modify the phone header bar display, perform the following steps.

Prerequisites

Directory number to be modified is already configured. For configuration information, see [“SCCP: Creating Directory Numbers” on page 158](#).

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone-dn** *dn-tag*
4. **description** *display-text*
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	ephone-dn <i>dn-tag</i> Example: Router(config)# ephone-dn 55	Enters ephone-dn configuration mode.
Step 4	description <i>display-text</i> Example: Router(config-ephone-dn)# description 408-555-0134	Defines a description for the header bar of a display-capable IP phone on which this ephone-dn appears as the first line. <ul style="list-style-type: none"> • <i>display-text</i>—Alphanumeric character string, up to 40 characters. String is truncated to 14 characters in the display.
Step 5	end Example: Router(config-ephone)# end	Returns to privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See [“Generating Configuration Files for Phones” on page 261](#).

SIP: Modifying Header Bar Display

To modify the phone header bar display on supported SIP phones, perform the following steps.

Prerequisites

- Cisco CME 3.4 or a later version.

Restrictions

- This feature is supported only on Cisco Unified IP Phone 7940, 7940G, 7960, and 7960G.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice register pool** *pool-tag*
4. **description** *string*
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	voice register pool <i>pool-tag</i> Example: Router(config)# voice register pool 3	Enters voice register pool configuration mode to set phone-specific parameters for a SIP phone in Cisco Unified CME.
Step 4	description <i>string</i> Example: Router(config-register-pool)# description 408-555-0100	Defines a customized description that appears in the header bar of supported Cisco Unified IP phones <ul style="list-style-type: none"> • Truncated to 14 characters in the display. • If string contains spaces, enclose the string in quotation marks.
Step 5	end Example: Router(config-register-pool)# end	Exits configuration mode and enters privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“SIP: Generating Configuration Profiles for SIP Phones” on page 265](#).

Verifying Header Bar Display

- Step 1** Use the **show running-config** command to verify your configuration. Descriptions for directory numbers are listed in the ephone-dn and voice-register dn portions of the output.

```
Router# show running-config

ephone-dn 1 dual-line
number 150 secondary 151
description 555-0150
call-forward busy 160
call-forward noan 160 timeout 10
huntstop channel
no huntstop
!
!
!
voice-register dn 1
number 1101
description 555-0101
```

Troubleshooting Header Bar Display

- Step 1** **show telephony-service ephone**

Use this command to ensure that the ephone-dn to which you applied the description appears on the first button on the ephone. In the example below, ephone-dn 22 has the description in the phone display header bar.

```
Router# show telephony-service ephone

ephone-dn 22
number 2149
description 408-555-0149

ephone 34
mac-address 0030.94C3.F96A
button 1:22 2:23 3:24
speed-dial 1 5004
speed-dial 2 5001
```

SCCP: Creating Labels for Directory Numbers

To create a label to display in place of the number next to a line button, perform the following steps.

Prerequisites

Directory number for which the label is to be created is already configured. For configuration information, see [“SCCP: Creating Directory Numbers” on page 158](#).

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **ephone-dn *dn-tag***
4. **label *label-string***
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	ephone-dn <i>dn-tag</i> Example: Router(config)# ephone-dn 1	Enters ephone-dn configuration mode. <ul style="list-style-type: none"> • <i>dn-tag</i>—Unique sequence number that identifies the ephone-dn to which the label is to be associated.
Step 4	label <i>label-string</i> Example: Router(config-ephone-dn)# label user1	Creates a custom label that is displayed on the phone next to the line button that is associated with this ephone-dn. The custom label replaces the default label, which is the number that was assigned to this ephone-dn. <ul style="list-style-type: none"> • <i>label-string</i>—String of up to 30 alphanumeric characters that provides the label text.
Step 5	end Example: Router(config-ephone)# end	Returns to privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“Generating Configuration Files for Phones” on page 261](#).

SIP: Creating Labels for Directory Numbers

To create label to be displayed in place of a directory number for a SIP phone, intercom line, voice port, or a message-waiting indicator (MWI), perform the following steps for each label to be created.

Prerequisites

- Cisco CME 3.4 or a later version.
- Directory number for which the label is to be created is already configured and must already have a number assigned by using the **number (voice register dn)** command. For configuration information, see [“SIP: Creating Directory Numbers” on page 168](#).

Restrictions

- Only one label is permitted per directory number.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice register dn** *dn-tag*
4. **label** *string*
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	voice register dn <i>dn-tag</i> Example: Router(config-register-global)# voice register dn 17	Enters voice register dn configuration mode to define a directory number for a SIP phone, intercom line, voice port, or a message-waiting indicator (MWI).

	Command or Action	Purpose
Step 4	number <i>number</i> Example: Router(config-register-dn)# number 7001	Defines a valid number for a directory number.
Step 5	label <i>string</i> Example: Router(config-register-dn)# label user01	Creates a text identifier, instead of a phone-number display, for a directory number that appears on a SIP phone console.
Step 6	end Example: Router(config-register-dn)# end	Exits configuration mode and enters privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the “[SIP: Generating Configuration Profiles for SIP Phones](#)” on [page 265](#).

Verifying Labels

- Step 1** Use the **show running-config** command to verify your configuration. Descriptions for directory numbers are listed in the ephone-dn and voice-register dn portions of the output.

```
Router# show running-config

ephone-dn 1 dual-line
number 150 secondary 151
label MyLine
call-forward busy 160
call-forward noan 160 timeout 10
huntstop channel
no huntstop
!
!
!
voice-register dn 1
number 1101
label MyLine
```

SCCP: Modifying System Message Display

To modify the system message display on phone screen, perform the following steps.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **telephony-service**
4. **system message** *text-message*
5. **url idle** *url* **idle-timeout** *seconds*
6. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	telephony-service Example: Router(config)#	Enters telephony-service configuration mode.
Step 4	system message <i>text-message</i> Example: Router(config-telephony)# system message ABC Company	Defines a text message to display when a phone is idle. <ul style="list-style-type: none"> • <i>text-message</i>—Alphanumeric string to display. Display uses proportional-width font, so the number of characters that are displayed varies based on the width of the characters that are used. The maximum number of displayed characters is approximately 30.
Step 5	url idle <i>url</i> idle-timeout <i>seconds</i> Example: Router(config-telephony)# url idle http://www.abcwrecking.com/public/logo idle-timeout 35	Defines the location of a file to display on phones that are not in use and specifies the interval between refreshes of the display, in seconds. <ul style="list-style-type: none"> • <i>url</i>—Any URL that conforms to RFC 2396. • <i>seconds</i>—Time interval between display refreshes, in seconds. Range is 0 to 300.
Step 6	end Example: Router(config-telephony)# end	Returns to privileged EXEC mode.

What to Do Next

After configuring the `url idle` command, you must reset phones. See [“SCCP: Using the reset Command” on page 273](#).

Verifying System Message Display

- Step 1** Use the `show running-config` command to verify your configuration. System message display is listed in the telephony-service portion of the output.

```
Router# show running-config

telephony-service
fxo hook-flash
load 7960-7940 P00307020300
load 7914 S00104000100
max-ephones 100
max-dn 500
ip source-address 10.153.13.121 port 2000
max-redirect 20
timeouts ringing 100
system message XYZ Company
voicemail 7189
max-conferences 8 gain -6
call-forward pattern .T
moh flash:music-on-hold.au
multicast moh 239.10.10.1 port 2000
web admin system name server1 password server1
dn-webedit
time-webedit
transfer-system full-consult
transfer-pattern 92.....
transfer-pattern 91.....
transfer-pattern 93.....
transfer-pattern 94.....
transfer-pattern 95.....
transfer-pattern 96.....
transfer-pattern 97.....
transfer-pattern 98.....
transfer-pattern 99.....
transfer-pattern .T
secondary-dialtone 9
create cnf-files version-stamp Jan 01 2002 00:00:00
```

Troubleshooting System Message Display

- Step 1** Ensure that the HTTP server is enabled.

SCCP: Provisioning URLs for Feature Buttons

To customize URLs for feature buttons in the Sep*.conf.xml configuration file for SCCP IP phones, perform the following steps.

Restrictions

- Operation of these services is determined by the Cisco Unified IP phone capabilities and the content of the specified URL.
- Provisioning a URL to access help screens using the i or ? buttons on a phone is not supported.
- Provisioning the directory URL to select an external directory resource disables the Cisco Unified CME local directory service.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **telephony-service**
4. **url { directories | information | messages | services } url**
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	telephony-service Example: Router(config)#	Enters telephony-service configuration mode.

	Command or Action	Purpose
Step 4	<pre>url {directories information messages services} url</pre> <p>Example: Router(config-telephony)# url directories http://10.4.212.4/localdirectory</p>	<p>Provisions URLs for the four programmable feature buttons (Directories, Information, Messages, and Services) on a supported Cisco Unified IP phone.</p> <ul style="list-style-type: none"> To use a Cisco Unified Communications Manager directory as an external directory source, you must list the MAC addresses of the phones in Cisco Unified Communications Manager and reset the phones from Cisco Unified Communications Manager. You do not need to assign ephone-dns to the phones for the phones to register with Cisco Unified Communications Manager. The url services command is also available in ephone-template configuration mode. If you use an ephone template to provision the Services feature button on one or more SCCP phones and you configure the url services command in telephony-service configuration mode, the value set in telephony-service configuration mode appears first in the list of options displayed when the phone user presses the Services feature button.
Step 5	<pre>end</pre> <p>Example: Router(config-telephony)# end</p>	<p>Returns to privileged EXEC mode.</p>

What to Do Next

If you want to create an ephone template to provision multiple URLs for the Services feature button on supported individual SCCP phones, see [“Creating Templates” on page 1127](#).

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See [“Generating Configuration Files for Phones” on page 261](#).

SIP: Provisioning URLs for Feature Buttons

To customize URLs for feature buttons in the SEPDEFAULT.cnf configuration profile for SIP IP phones, perform the following steps.

Prerequisites

- Cisco CME 3.4 or a later version.

Restrictions

- Operation of these services is determined by the Cisco Unified IP phone capabilities and the content of the specified URL.
- Provisioning a URL is supported only for Services and Directories feature buttons on SIP phones.
- Programmable Directories and Services feature buttons are supported only on the Cisco Unified IP Phone 7960, 7960G, 7940, and 7940G.

- Provisioning the directory URL to select an external directory resource disables the Cisco Unified CME local directory service.

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **voice register global**
4. **url {directory | service} url**
5. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	voice register global Example: Router(config)#	Enters telephony-service configuration mode.
Step 4	url {directory service} url Example: Router(config-register-global)# url directory http://10.0.0.11/localdirectory Router(config-register-global)# url service http://10.0.0.4/CCMUser/123456/urltest.html	Associates a URL with the programmable feature buttons on SIP phones.
Step 5	end Example: Router(config-register-global)# end	Returns to privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“SIP: Generating Configuration Profiles for SIP Phones” on page 265](#).

Troubleshooting URL Provisioning for Feature Buttons

- Step 1** Ensure the HTTP server is enabled and that there is communication between the Cisco Unified CME router and the server.

SCCP: Modifying Vendor Parameters for All Phones

To configure programmable phone and display parameters in the vendorConfig section of the SepDefault.conf.xml configuration file for all phones, perform the following steps.

Restrictions

- Only the parameters supported by the currently loaded firmware are available.
- The number and type of parameters may vary from one firmware version to the next.
- Only those parameters that are supported by a Cisco Unified IP phone and firmware version are implemented. Parameters that are not supported are ignored.

SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `telephony-service`
4. `service phone parameter-name parameter-value`
5. `end`

DETAILED STEPS

	Command or Action	Purpose
Step 1	<code>enable</code> Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	<code>configure terminal</code> Example: Router# configure terminal	Enters global configuration mode.
Step 3	<code>telephony-service</code> Example: Router(config)# telephony-service	Enters telephony-service configuration mode.

	Command or Action	Purpose
Step 4	<p>service phone <i>parameter-name parameter-value</i></p> <p>Example: Router(config-telephony)# service phone daysBacklightNotActive 1,2,3,4,5,6,7 Router(config-telephony)# service phone backlightOnTime 07:30 Router(config-telephony)# service phone backlightOnDuration 10:00 Router(config-telephony)# service phone backlightIdleTimeout 00.01</p>	<p>Sets display and phone functionality for all IP phones that support the configured parameters and to which this template is applied.</p> <ul style="list-style-type: none"> The parameter name is word and case-sensitive. See the Cisco Unified CME Command Reference for a list of parameters. This command can also be configured in ephone-template configuration mode and applied to one or more phones.
Step 5	<p>end</p> <p>Example: Router(config-telephony)# end</p>	<p>Returns to privileged EXEC mode.</p>

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“Generating Configuration Files for Phones”](#) on page 261.

SCCP: Modifying Vendor Parameters For a Specific Phone

To configure parameters in the vendorConfig section of the Sep*.conf.xml configuration file for an individual SCCP phone, perform the following steps.

Restrictions

- Cisco Unified CME 4.0 or a later version.
- System must be configured to for per-phone configuration files. For configuration information, see [“SCCP: Defining Per-Phone Configuration Files and Alternate Location”](#) on page 119.
- Only the parameters supported by the currently loaded firmware are available.
- The number and type of parameters may vary from one firmware version to the next.
- Only those parameters that are supported by a Cisco Unified IP phone and firmware version are implemented. Parameters that are not supported are ignored.

SUMMARY STEPS

- enable**
- configure terminal**
- ephone template** *template-tag*
- service phone** *parameter-name parameter-value*
- exit**
- ephone** *phone-tag*

7. **ephone-template** *template-tag*
8. **end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> • Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	ephone-template <i>template-tag</i> Example: Router (config)# ephone-template 15	Enters ephone-template configuration mode to create an ephone template.
Step 4	service phone <i>parameter-name parameter-value</i> Example: Router(config-ephone-template)# service phone daysBacklightNotActive 1,2,3,4,5,6,7 Router(config-ephone-template)# service phone backlightOnTime 07:30 Router(config-ephone-template)# service phone backlightOnDuration 10:00 Router(config-ephone-template)# service phone backlightIdleTimeout 00.01	Sets parameters for all IP phones that support the configured functionality and to which this template is applied. <ul style="list-style-type: none"> • The parameter name is word and case-sensitive. See the Cisco Unified CME Command Reference for a list of parameters. • This command can also be configured in telephony-service configuration mode. For individual phones, the template configuration for this command overrides the system-level configuration for this command.
Step 5	exit Example: Router(config-ephone-template)# exit	Exits from this command mode to the next highest mode in the configuration mode hierarchy.
Step 6	ephone <i>phone-tag</i> Example: Router(config)# ephone 1	Enters ephone configuration mode.
Step 7	ephone-template <i>template-tag</i> Example: Router(config-ephone)# ephone-template 15	Applies an ephone template to the ephone that is being configured.
Step 8	end Example: Router(config-ephone)# end	Exits configuration mode and enters privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“Generating Configuration Files for Phones” on page 261](#).

Troubleshooting Vendor Parameter Configuration

-
- Step 1** Ensure that the templates have been properly applied to the phones.
 - Step 2** Ensure that you use the `create cnf-files` command to regenerate configuration files and reset the phones after you apply the templates.
 - Step 3** Use the `show telephony-service tftp-bindings` command to display the configuration files that are associated with individual phones

```
Router# show telephony-service tftp-binding

tftp-server system:/its/SEPDEFAULT.cnf
tftp-server system:/its/SEPDEFAULT.cnf alias SEPDefault.cnf
tftp-server system:/its/XMLDefault.cnf.xml alias XMLDefault.cnf.xml
tftp-server system:/its/ATADefault.cnf.xml
tftp-server system:/its/XMLDefault7960.cnf.xml alias SEP00036B54BB15.cnf.xml
tftp-server system:/its/germany/7960-font.xml alias German_Germany/7960-font.xml
tftp-server system:/its/germany/7960-dictionary.xml alias
German_Germany/7960-dictionary.xml
tftp-server system:/its/germany/7960-kate.xml alias German_Germany/7960-kate.xml
tftp-server system:/its/germany/SCCP-dictionary.xml alias
German_Germany/SCCP-dictionary.xml
tftp-server system:/its/germany/7960-tones.xml alias Germany/7960-tones.xml
```

- Step 4** Use the `debug tftp events` command to verify that the phone is accessing the file when you reboot the phone.
-

SCCP: Configuring One-Way Push-to-Talk on Cisco Unified Wireless IP Phones

To associate a phone button with the thumb button on a wireless phone for one-way Push-to-Talk (PTT) functionality in Cisco Unified CME, perform the following steps.

Prerequisites

- Cisco Unified CME 7.0 or a later version.
- Cisco phone firmware version 1.0.4 or a later version.
- System must be configured to for per-phone configuration files. For configuration information, see [“SCCP: Defining Per-Phone Configuration Files and Alternate Location” on page 119](#).
- Phone button to be associated with the thumb button must be configured with an intercom DN that targets a paging number. For configuration information, see [“Configuring Intercom Lines” on page 915](#).
- Paging group to be dialed by the intercom line must be configured. Targeted paging group can be unicast or multicast or both. For configuration information, see [“Configuring Paging” on page 989](#).

Restrictions

- Supported on Cisco Unified Wireless IP Phone 7921 and 7925 only.

SUMMARY STEPS

- enable**
- configure terminal**
- ephone template** *template-tag*
- service phone thumbButton1 PTTH** *button_number*
- exit**
- ephone** *phone-tag*
- ephone-template** *template-tag*
- end**

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable Example: Router> enable	Enables privileged EXEC mode. <ul style="list-style-type: none"> Enter your password if prompted.
Step 2	configure terminal Example: Router# configure terminal	Enters global configuration mode.
Step 3	ephone-template <i>template-tag</i> Example: Router (config)# ephone-template 12	Enters ephone-template configuration mode to create an ephone template.
Step 4	service phone thumbButton1 PTTH <i>button_number</i> Example: Router(config-ephone-template)# service phone thumbButton1 PTTH6	Specifies which button is to go off hook when user presses the thumb button. <ul style="list-style-type: none"> <i>button_number</i>—Button on phone that is configured with an intercom dn that targets a paging number. Range is 1 to 6. There are no spaces in the PTTH and <i>button_number</i> keyword/argument combination. This command can also be configured in telephony-service configuration mode. For individual phones, the template configuration for this command overrides the system-level configuration for this command.

	Command or Action	Purpose
Step 5	exit Example: Router(config-ephone-template)# exit	Exits from this command mode to the next highest mode in the configuration mode hierarchy.
Step 6	ephone <i>phone-tag</i> Example: Router(config)# ephone 1	Enters ephone configuration mode.
Step 7	ephone-template <i>template-tag</i> Example: Router(config-ephone)# ephone-template 12	Applies an ephone template to the ephone that is being configured.
Step 8	end Example: Router(config-ephone)# end	Exits configuration mode and enters privileged EXEC mode.

What to Do Next

If you are done modifying parameters for phones in Cisco Unified CME, generate a new configuration file and restart the phones. See the [“Generating Configuration Files for Phones”](#) on page 261.

Configuration Examples for Cisco Unified IP Phone Options

This section contains the following examples:

- [Text Labels for Ephone-dns: Example, page 1123](#)
- [Phone Header Bar Display: Example, page 1123](#)
- [System Text Message Display: Example, page 1123](#)
- [System File Display: Example, page 1123](#)
- [URL Provisioning for Directories, Services, and Messages Buttons: Example, page 1123](#)
- [Programmable VendorConfig Parameters: Example, page 1124](#)
- [Push-to-Talk \(PTT\) on Cisco Unified Wireless IP Phones in Cisco Unified CME: Example, page 1124](#)

Text Labels for Ephone-dns: Example

The following example creates text labels for two ephone-dns:

```
ephone-dn 1
 number 2001
 label Sales

ephone-dn 2
 number 2002
 label Engineering
```

Phone Header Bar Display: Example

The following example provides the full E.164 number for a phone line in the phone header bar:

```
ephone-dn 55
 number 2149
 description 408-555-0149

ephone-dn 56
 number 2150

ephone 12
 button 1:55 2:56
```

System Text Message Display: Example

The following example specifies text that should display on IP phones when they are not in use:

```
telephony-service
 system message ABC Company
```

System File Display: Example

The following example specifies that a file called logo.htm should be displayed on IP phones when they are not in use:

```
telephony-service
 url idle http://www.abcwrecking.com/public/logo.htm idle-timeout 35
```

URL Provisioning for Directories, Services, and Messages Buttons: Example

The following example provisions the Directories, Services, and Messages buttons.

```
telephony-service
 url directories http://10.4.212.4/localdirectory
 url services http://10.4.212.4/CCMUser/123456/urltest.html
 url messages http://10.4.212.4/Voicemail/MessageSummary.asp
```

Programmable VendorConfig Parameters: Example

The following partial output shows a template in which programmable parameters for phone and display functionality have been configured by using the **service phone** command.

```
ephone-template 1
  button-layout 7931 1
  service phone daysBacklightNotActive 1,2,3,4,5,6,7
  service phone backlightOnTime 07:30
  service phone backlightOnDuration 10:00
  service phone backlightIdleTimeout 00.01
```

In the following example, the PC port is disabled on phones 26 and 27. All other phones have the PC port enabled.

```
ephone-template 8
  service phone pcPort 1
  !
  !
ephone 26
  mac-address 1111.1111.1001
  ephone-template 8
  type 7960
  button 1:26
  !
  !
ephone 27
  mac-address 1111.2222.2002
  ephone-template 8
  type 7960
  button 1:27
```

Push-to-Talk (PTT) on Cisco Unified Wireless IP Phones in Cisco Unified CME: Example

The following partial output shows a template in which one-way PTT is configured by using the **service phone thumbButton1** command.

```
ephone-template 12
  service phone thumbButton1 PTTH6
  !
  !
ephone-dn 10
  intercom 1050
ephone-dn 50
  number 1050
  paging
  !
  !
ephone 1
  type 7921
  button 1:1 6:10
  !
  !
ephone 2
  button 1:2
  paging-dn 50
ephone 3
  button 1:3
  paging-dn 50
```

```
ephone 4
  button 1:1
  paging-dn 50
```

Additional References

The following sections provide references related to Cisco Unified CME features.

Related Documents

Related Topic	Document Title
Cisco Unified CME configuration	<ul style="list-style-type: none"> Cisco Unified CME Command Reference Cisco Unified CME Documentation Roadmap
Cisco IOS commands	<ul style="list-style-type: none"> Cisco IOS Voice Command Reference Cisco IOS Software Releases 12.4T Command References
Cisco IOS configuration	<ul style="list-style-type: none"> Cisco IOS Voice Configuration Library Cisco IOS Software Releases 12.4T Configuration Guides
Phone documentation for Cisco Unified CME	<ul style="list-style-type: none"> User Documentation for Cisco Unified IP Phones

Technical Assistance

Description	Link
<p>The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies.</p> <p>To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds.</p> <p>Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.</p>	http://www.cisco.com/techsupport

Feature Information for Cisco Unified IP Phone Options

Table 51 lists the features in this module and enhancements to the features by version.

To determine the correct Cisco IOS release to support a specific Cisco Unified CME version, see the *Cisco Unified CME and Cisco IOS Software Version Compatibility Matrix* at http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/requirements/guide/33matrix.htm.

Use Cisco Feature Navigator to find information about platform support and software image support. Cisco Feature Navigator enables you to determine which Cisco IOS software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.


Note

Table 51 lists the Cisco Unified CME version that introduced support for a given feature. Unless noted otherwise, subsequent versions of Cisco Unified CME software also support that feature.

Table 51 Feature Information for Cisco Unified IP Phone Options

Feature Name	Cisco Unified CME Version	Feature Information
Fixed Line/Feature Buttons	4.0(2)	Provides two preconfigured fixed sets of feature buttons for provisioning a Cisco Unified IP Phone 7931G.
Header Bar Display	3.4	Added support for modifying header bar display on SIP phones.
	2.01	Phone header bar display is introduced.
Labels for Directory Numbers	3.4	Added support for label display on SIP phones.
	3.0	Ephone-dn labels were introduced.
Programmable Vendor Parameters	4.0	Added support for configuring programmable phone and display functionality at a phone level for SCCP phones.
	3.4	Added support for configuring programmable phone and display functionality for SIP phones.
	3.2.1	Added support for programmable phone and display functionality in vendorConfig portion of configuration file. Implementation of configuration is firmware version dependent.
System Message Display	3.0	System message display on idle phones using text messages was introduced.
	2.1	System message display on idle phones using HTML files was introduced.
URL Provisioning for Feature Buttons	4.2	Added support for configuring an ephone template to provision multiple URLs for the Services feature button phones.
	3.4	Added support for provisioning customized URLs for programmable feature buttons on supported SIP phones.
	2.0	Provisioning customized URLs for programmable feature buttons was introduced.