

Enabling the GUI

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This chapter describes the Cisco Unified Communications Manager Express (Cisco Unified CME) graphical user interface (GUI) and explains how to set it up for three different levels of user.

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 Enabling the GUI" section on page 374.

Contents

- Prerequisites for Enabling the GUI, page 359
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Prerequisites for Enabling the GUI

GUI files must be copied into flash memory on the router. For information about files, see "Installing and Upgrading Cisco Unified CME Software" on page 87.

Restrictions for Enabling the GUI

- Cisco Unified CME GUI files are version-specific; GUI files for one version of Cisco Unified CME
 are not compatible with any other version of Cisco Unified CME. If you are downgrading or
 upgrading your Cisco Unified CME version, you must downgrade or upgrade your GUI files. For
 information, see "Installing and Upgrading Cisco Unified CME Software" on page 87.
- To access the GUI, you must use Microsoft Internet Explorer 5.5 or a later version. Other browsers
 are not supported.
- If you use an XML configuration file to create a customer administrator login, the XML file can have a maximum size of 4000 bytes.
- The password of the system administrator cannot be changed through the GUI. Only the password
 of a customer administrator or a phone user can be changed through the GUI.
- If more than 100 phones are configured, choosing to display all phones will result in a long delay before results are shown.

Information About Enabling the GUI

To enable GUI support, you should understand the following concepts:

- · Cisco Unified CME GUI Support, page 360
- AAA Authentication, page 361

Cisco Unified CME GUI Support

The Cisco Unified CME GUI provides a web-based interface to manage most system-level and phone-based features. In particular, the GUI facilitates the routine additions and changes associated with employee turnover, allowing these changes to be performed by nontechnical staff. The GUI provides three levels of access to support the following user classes:

- System administrator—Able to configure all system-level and phone-based features. This person is familiar with Cisco IOS software and VoIP network configuration.
- Customer administrator—Able to perform routine phone additions and changes without having access to system-level features. This person does not have to be familiar with Cisco IOS software.
- Phone user—Able to program a small set of features on his or her own phone and search the Cisco Unified CME directory.

The Cisco Unified CME GUI uses HTTP to transfer information from the router to the PC of an administrator or phone user. The router must be configured as an HTTP server, and an initial system administrator username and password must be defined from the router command-line interface (CLI). Additional accounts for customer administrators and phone users can be added from the Cisco Unified CME router using CLI commands or from a PC using GUI screens.

Cisco Unified CME provides support for eXtensible Markup Language (XML) cascading style sheets (files with a .css suffix) that can be used to customize the browser GUI display.

AAA Authentication

The GUI supports authentication, authorization, and accounting (AAA) authentication for system administrators through a remote server when this capability is enabled with the **ip http authentication** command. If authentication through the server fails, the local router is searched.

Using the **ip http authentication** command prevents unauthorized users from accessing the Cisco Unified CME router. If this command is not used, the *enable* password for the router is the only requirement to authenticate user access to the GUI. Instead, we recommend you use the local or TACACS authentication options, configured as part of a global AAA framework. By explicitly using the **ip http authentication** command, you designate alternative authentication methods, such as by a local login account or by the method that is specified in the AAA configuration on the Cisco Unified CME router. If you select the AAA authentication method, you must also define an authentication method in your AAA configuration.

For information on configuring AAA authentication, see the "Configuring Authentication" chapter of the *Cisco IOS Security Configuration Guide* for your Cisco IOS release.

How to Enable the GUI

This section contains the following procedures:

- Enabling the HTTP Server, page 361 (required)
- Enabling GUI Access for the System Administrator, page 363 (required)
- Accessing the Cisco Unified CME GUI, page 364 (required)
- Creating a Customized XML File for Customer Administrator GUI, page 365 (optional)
- Enabling GUI Access for Customer Administrators, page 366 (optional)
- Enabling GUI Access for Phone Users, page 368 (optional)
- Troubleshooting the Cisco Unified CME GUI, page 369 (optional)

Enabling the HTTP Server

To enable the HTTP server, and specify the path to files for the GUI and a method of user authentication for security, perform the following steps. The HTTP server on a router is disabled by default.

SUMMARY STEPS

- 1. enable
- 2. configure terminal
- 3. ip http server
- 4. ip http path flash:
- 5. ip http authentication {aaa | enable | local | tacacs}
- 6. exit

	Command or Action	Purpose
Step 1	enable	Enables privileged EXEC mode.
	Evample	• Enter your password if prompted.
	Example: Router> enable	
Step 2	configure terminal	Enters global configuration mode.
	Example: Router# configure terminal	
Step 3	ip http server	Enables the HTTP server on the Cisco Unified CME router.
	<pre>Example: Router(config)# ip http server</pre>	
Step 4	ip http path flash:	Sets the location of the HTML files used by the HTTP web server to flash memory on the router.
	<pre>Example: Router(config)# ip http path flash:</pre>	
Step 5	<pre>ip http authentication {aaa enable local tacacs}</pre>	Specifies the method of authentication for the HTTP server. Default is the enable keyword.
	<pre>Example: Router(config)# ip http authentication aaa</pre>	aaa—Indicates that the authentication method used for the AAA login service should be used for authentication. The AAA login service method is specified by the aaa authentication login command.
		• enable —Uses the <i>enable</i> password. This is the default if this command is not used.
		• local—Uses login username, password, and privilege level access combination specified in the local system configuration (by the username command).
		• tacacs—Uses TACACS (or XTACACS) server.
Step 6	exit	Returns to privileged EXEC mode.
	<pre>Example: Router(config)# exit</pre>	

Enabling GUI Access for the System Administrator

To define an initial username and password for a system administrator to access the GUI and enable the GUI to be used to set the time and to add directory listings, perform the following steps.

SUMMARY STEPS

- 1. enable
- 2. configure terminal
- 3. telephony-service
- 4. web admin system name username {password string | secret {0 | 5} string}
- 5. dn-webedit
- 6. time-webedit
- 7. end

	Command or Action	Purpose
Step 1	enable	Enables privileged EXEC mode.
		Enter your password if prompted.
	Example:	
	Router> enable	
Step 2	configure terminal	Enters global configuration mode.
	Example: Router# configure terminal	
Step 3	telephony-service	Enters telephony-service configuration mode.
	Example: Router(config)# telephony-service	
Step 4	<pre>web admin system name username {password string secret {0 5} string}</pre>	Defines username and password for a system administrator.
	Example:	name username—System administrator username. Default is Admin.
	Router(config-telephony)# web admin system name pwa3 secret 0 wp78pw	• password <i>string</i> —String to verify system administrator's identity. Default is empty string.
		• secret {0 5} string—Digit specifies state of encryption of the string that follows:
		- 0—Password that follows is not encrypted.
		 5—Password that follows is encrypted using Message Digest 5 (MD5).
		Note The secret 5 keyword pair is used in the output of show commands when encrypted passwords are displayed. It indicates that the password that follows is encrypted.

	Command or Action	Purpose	
Step 5	dn-webedit	(Optional) Enables the ability to add directory numbers through the web interface.	
	<pre>Example: Router(config-telephony)# dn-webedit</pre>	The no form of this command disables the ability to create IP phone extension telephone numbers. That ability could disrupt the network wide management of telephone numbers.	
		If this command is not used, the ability to create directory numbers is disabled by default.	
Step 6	time-webedit	(Optional) Enables the ability to set the phone time for the Cisco Unified CME system through the web	
	Example:	interface.	
	Router(config-telephony)# time-webedit	Note We do not recommend this method for setting network time. The router should be set up to automatically synchronize its router clock from a network-based clock source using Network Time Protocol (NTP). In the rare case that a network NTP clock source is not available, the time-webedit command can be used to allow manual setting and resetting of the router clock through the GUI.	
Step 7	end	Returns to privileged EXEC mode.	
	<pre>Example: Router(config-telephony)# end</pre>		

Accessing the Cisco Unified CME GUI

To access the Cisco Unified CME router through the GUI to make configuration changes, perform the following steps.

Restrictions

The Cisco Unified CME GUI requires Microsoft Internet Explorer 5.5 or a later version. Other browsers are not supported.

DETAILED STEPS

Step 1 Go to the following URL:

http://router_ipaddress/ccme.html

where *router_ipaddress* is the IP address of your Cisco Unified CME router. For example, if the IP address of your Cisco Unified CME router is 10.10.10.176, enter the following:

http://10.10.10.176/ccme.html

Step 2 Enter your username and password at the login screen.

The Cisco Unified CME system evaluates your privilege level and presents the appropriate window. Note that users with Cisco IOS software privilege level 15 also have system-administrator-level privileges in the Cisco Unified CME GUI after being authenticated locally or remotely through AAA. The **ip http authentication** command that is configured on the Cisco Unified CME router determines where authentication occurs.

- Step 3 After you login and are authenticated, the system displays one of the following home pages, based on your user level:
 - The system administrator home page.
 - The customer administrator sees a reduced version of the options available on the system administrator page, according to the XML configuration file that the system administrator created.
 - The phone user home page.

After you log in successfully, online help is available from the Help menu.

Creating a Customized XML File for Customer Administrator GUI

The XML configuration file specifies the parameters and features that are available to customer administrators and the parameters and features that are restricted. The file follows a template named xml.template, which conforms to the Cisco XML Document Type Definition (DTD), as documented in *Cisco IP Phone Services Application Development Notes*. This template is one of the Cisco Unified CME files that you download from the Cisco Software Center during installation.

To edit and load the XML configuration file, perform the following steps.

SUMMARY STEPS

- 1. Copy the XML template and open it in any text editor.
- 2. Edit the XML template.
- 3. Copy the file to a TFTP or FTP server that can be accessed by the Cisco Unified CME router.
- 4. Copy your file to flash memory on the Cisco Unified CME router.
- 5. Load the XML file from router flash memory.

- Step 1 Copy the XML template that you downloaded from the Cisco Software Center and open it in any text editor (see the "XML Configuration File Template: Example" section on page 370). Give the file a name that is meaningful to you and that uses "xml" as its suffix. For example, you could name the file "custadm.xml."
- Step 2 Edit the XML template. Within the template, each line that starts with a title enclosed in angle brackets describes an XML object and matches an entity name in the Cisco CME GUI. For example, "<AddExtension>" refers to the Add Extension capability, and "<Type>" refers to the Type field on the Add Extension window. For each object in the template, you have a choice of actions. Your choices appear within brackets; for example, "[Hide | Show]" indicates that you have a choice between whether this object is hidden or visible when a customer administrator logs in to the GUI. Delete the action that you do not want and the vertical bar and brackets around the actions.

For example, to hide the Sequence Number field, change the following text in the template file:

```
<SequenceNumber> [Hide | Show] </SequenceNumber>
```

to the following text in your configuration file:

```
<SequenceNumber> Hide </SequenceNumber>
```

Edit every line in the template until you have changed each choice in brackets to a single action and you have removed the vertical bars and brackets. A sample XML file is shown in the "XML Configuration File: Example" section on page 371.

- Step 3 Copy the file to a TFTP or FTP server that can be accessed by the Cisco Unified CME router.
- Step 4 Copy your file to flash memory on the Cisco Unified CME router.

```
Router# copy tftp flash
```

Step 5 Load the XML file from router flash memory.

```
Router(config)# telephony-service
Router(config-telephony)# web customize load filename
Router(config-telephony)# exit
```

Enabling GUI Access for Customer Administrators

Perform one of the following procedures to enable GUI access for a customer administrator, depending on the method you want to use:

- Using the Cisco Unified CME GUI to Define a Customer Administrator Account, page 366
- Using the Cisco IOS CLI to Define a Customer Administrator Account, page 367

Prerequisites

- Enable a system administrator account for GUI access. See the "Enabling GUI Access for the System Administrator" section on page 363.
- Create the XML configuration file for the customer administrator GUI. See the "Creating a Customized XML File for Customer Administrator GUI" section on page 365.
- Reload the XML file using the web customize load command if you have made changes to the
 customer administrator GUI.

Using the Cisco Unified CME GUI to Define a Customer Administrator Account

To allow the system administrator to use the GUI to create a customer administrator account, perform the following steps.

DETAILED STEPS

- Step 1 From the Configure System Parameters menu, choose Administrator's Login Account.
- Step 2 Complete the Admin User Name (username), Admin User Type (Customer), and New Password fields for the user that you are defining as a customer administrator. Type the password again to confirm it.
- Step 3 Click Change for your changes to become effective.

Using the Cisco IOS CLI to Define a Customer Administrator Account

To allow the system administrator to create a customer administrator account by using the Cisco IOS CLI, perform the following steps.

SUMMARY STEPS

- 1. enable
- 2. configure terminal
- 3. telephony-service
- 4. web admin customer name username password string
- 5. end

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

	Command or Action	Purpose
Step 4	web admin customer name username password string Example:	Defines a username and password for a customer administrator. The default username is Customer. There is no default password.
	Router(config-telephony)# web admin customer name user44 password pw10293847	 name username—Username of customer administrator. password string—String to verify customer administrator identity.
Step 5	end	Returns to privileged EXEC mode.
	<pre>Example: Router(config-telephony)# end</pre>	

Enabling GUI Access for Phone Users

Perform one of the following procedures to enable GUI access for a phone user, depending on the method you want to use:

- Using the Cisco Unified CME GUI to Define a Phone User Account, page 368
- Using the Cisco IOS CLI to Define a Phone User Account, page 369

Prerequisites

• Enable a system administrator account for GUI access. See the "Enabling GUI Access for the System Administrator" section on page 363.

Using the Cisco Unified CME GUI to Define a Phone User Account

To create a phone user account by using the Cisco Unified CME GUI, perform the following steps.

- Step 1 From the Configure Phones menu, choose **Add Phone** to add GUI access for a user with a new phone or **Change Phone** to add GUI access for a user with an existing phone. The Add Phone screen or the Change Phone screen displays.
- Step 2 Enter a username and password in the **Login Account** area of the screen. If you are adding a new phone, complete the other fields as appropriate.
- Step 3 Click Change for your edits to become effective.

Using the Cisco IOS CLI to Define a Phone User Account

To create a GUI account for a phone user by using the Cisco IOS CLI, perform the following steps.

SUMMARY STEPS

- 1. enable
- 2. configure terminal
- 3. ephone phone-tag
- 4. username username password password
- 5 end

DETAILED STEPS

	Command or Action	Purpose
Step 1	enable	Enables privileged EXEC mode.
		• Enter your password if prompted.
	Example:	
	Router> enable	
Step 2	configure terminal	Enters global configuration mode.
	Example:	
	Router# configure terminal	
Step 3	ephone phone-tag	Enters ephone configuration mode.
	Example:	
	Router(config)# ephone 2	
Step 4	username username password password	Assigns a phone user login account name and password.
	Example:	This allows the phone user to log in to the
	Router(config-ephone)# username prx password pk59wq	Cisco Unified CME GUI to change a limited number of personal settings.
Step 5	end	Returns to privileged EXEC mode.
	Example:	
	Router(config-ephone)# end	

Troubleshooting the Cisco Unified CME GUI

If you are having trouble starting the Cisco Unified CME GUI, try the following actions:

- **Step 1** Verify you are using Microsoft Internet Explorer 5.5 or a later version. No other browser is supported.
- Step 2 Clear your browser cache or history.

Step 3 Verify that the GUI files in router flash memory are the correct version for the version of Cisco Unified CME that you have. Compare the filenames in flash memory with the list in the Cisco Unified CME software archive that you downloaded. Compare the sizes of files in flash memory with the sizes of the files in the tar archive called cme-3.2.0-gui.tar (or a later version of the file) to ensure that you have the most recent files installed in flash memory. The latest version can be downloaded from the Cisco Unified CME Software Download website at http://www.cisco.com/cgi-bin/tablebuild.pl/ip-iostsp.

Configuration Examples for Enabling the GUI

This section contains the following examples:

- HTTP and Account Configuration: Example, page 370
- XML Configuration File Template: Example, page 370
- XML Configuration File: Example, page 371

HTTP and Account Configuration: Example

The following example sets up the HTTP server and creates a system administrator account for pwa3, a customer administrator account for user44, and a user account for prx.

```
ip http server
ip http path flash:
ip http authentication aaa

telephony-service
  web admin system name pwa3 secret 0 wp78pw
  web admin customer name user44 password pw10293847
  dn-webedit
  time-webedit
ephone 25
  username prx password pswd
```

XML Configuration File Template: Example

```
<TranslationRules> [Hide | Show] </TranslationRules>
     <Paging> [Hide | Show] </paging>
     <Intercom> [Hide | Show] </Intercom>
     <MWI> [Hide | Show] </MWI>
     <MoH> [Hide | Show] </MoH>
     <LBDN> [Hide | Show] </LBDN>
     <DualLine> [Hide | Show] </DualLine>
     <Reg> [Hide | Show] </Reg>
     <PGroup> [Hide | Show] </PGroup>
  </Extension>
  <Phone>
     <!-- control both view and change, and possible add and delete --->
     <SequenceNumber> [Hide | Show] </SequenceNumber>
 <System>
    <!-- Control View Only -->
     <PhoneURL> [Hide | Show] 
     <PhoneLoad> [Hide | Show]/PhoneLoad>
     <CallHistory> [Hide | Show] </CallHistory>
    <MWIServer> [Hide | Show] </MWIServer>
    <!-- Control Either View and Change or Change Only -->
    <TransferPattern attr=[Both | Change]> [Hide | Show] /TransferPattern>
    <VoiceMailNumber attr=[Both | Change]> [Hide | Show] </VoiceMailNumber>
    <MaxNumberPhone attr=[Both | Change]> [Hide | Show] /MaxNumberPhone>
     <DialplanPattern attr=[Both | Change]> [Hide | Show] </DialplanPattern>
     <SecDialTone attr=[Both | Change]> [Hide | Show] </SecDialTone>
     <Timeouts attr=[Both | Change]> [Hide | Show] </Timeouts>
     <CIDBlock attr=[Both | Change]> [Hide | Show] </CIDBlock>
    <HuntGroup attr=[Both | Change]> [Hide | Show] 
    <NightSerBell attr=[Both | Change]> [Hide | Show] </NightSerBell>
    <!-- Control Change Only -->
    <!-- Take Higher Precedence over CLI "time-web-edit" -->
     <Time> [Hide | Show] </Time>
   </System>
  <Function>
     <AddLineToPhone> [No | Yes] </AddLineToPhone>
    <DeleteLineFromPhone> [No | Yes] </DeleteLineFromPhone>
    <NewDnDpCheck> [No | Yes] </NewDnDpCheck>
     <MaxLinePerPhone> [1-6] </MaxLinePerPhone>
   </Function>
</Presentation>
```

XML Configuration File: Example

```
<HoldAlert> Hide </HoldAlert>
    <TranslationRule> Hide </TranslationRule>
    <Paging> Show </Paging>
    <Intercom> Hide </Intercom>
    <MWI> Hide </MWI>
    <MoH> Hide </MoH>
    <LBDN> Hide </LBDN>
    <DualLine> Hide </DualLine>
    <Reg> Hide </Reg>
    <PGroup> Show </PGroup>
 </Extension>
 <Phone>
    <SequenceNumber> Hide </SequenceNumber>
 <System>
    <PhoneURL> Hide </PhoneURL>
    <PhoneLoad> Hide </PhoneLoad>
    <CallHistory> Hide </CallHistory>
    <MWIServer> Hide </MWIServer>
    <TransferPattern attr=Both> Hide </TransferPattern>
    <VoiceMailNumber attr=Both> Hide </VoiceMailNumber>
    <MaxNumberPhone attr=Both> Hide </MaxNumberPhone>
    <DialplanPattern attr=Change> Hide </DialplanPattern>
    <SecDialTone attr=Both> Hide </SecDialTone>
    <Timeouts attr=Both> Hide </Timeouts>
    <CIDBlock attr=Both> Hide </CIDBlock>
    <HuntGroup attr=Change> Hide </HuntGroup>
    <NightSerBell attr=Change> Hide </NightSerBell>
    <Time> Hide </Time>
 </System>
 <Function>
    <AddLineToPhone> No </AddLineToPhone>
    <DeleteLineFromPhone> No </DeleteLineFromPhone>
    <MaxLinePerPhone> 4 </MaxLinePerPhone>
 </Function>
</Presentation>
```

Additional References

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

Related Documents

Related Topic	Document Title
Cisco Unified CME configuration	Cisco Unified CME Command Reference
	Cisco Unified CME Documentation Roadmap
Cisco IOS commands	Cisco IOS Voice Command Reference
	Cisco IOS Security Command Reference
	Cisco IOS Software Releases 12.4T Command References

Related Topic	Document Title
Cisco IOS configuration	Cisco IOS Voice Configuration Library
	Cisco IOS Security Configuration Guide
	Cisco IOS Software Releases 12.4T Configuration Guides
Phone documentation for Cisco Unified CME	Quick Reference Cards
	• User Guides

Technical Assistance

Description	Link
The Cisco Support website provides extensive online	http://www.cisco.com/techsupport
resources, including documentation and tools for	
troubleshooting and resolving technical issues with	
Cisco products and technologies. Access to most tools	
on the Cisco Support website requires a Cisco.com user	
ID and password. If you have a valid service contract	
but do not have a user ID or password, you can register	
on Cisco.com.	

Feature Information for Enabling the GUI

Table 21 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/products/sw/voicesw/ps4625/products_documentation_roadmap09186a0 080189132.html.

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.



The following table 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 21 Feature Information for Enabling the GUI

Feature Name	Cisco Unified CME Version	Feature Information
Cisco Unified CME GUI	2.0	The Cisco Unified CME GUI was introduced.