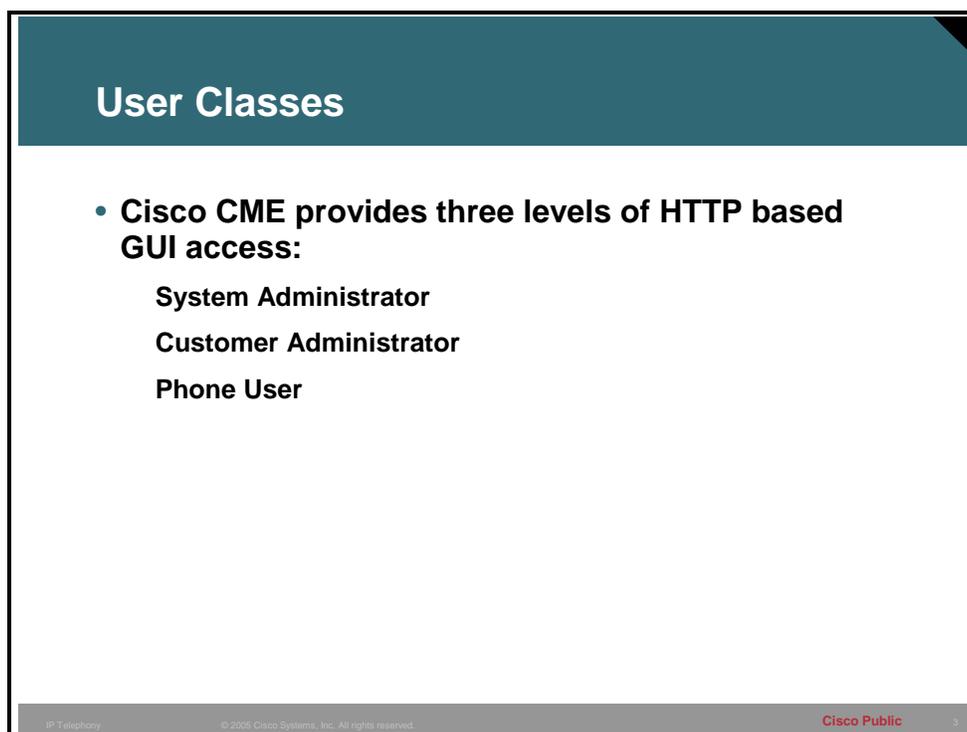


Cisco CME GUI Features

User Classes

This topic describes the three user classes for HTTP based GUI access.



User Classes

- **Cisco CME provides three levels of HTTP based GUI access:**
 - System Administrator**
 - Customer Administrator**
 - Phone User**

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The Cisco CME GUI provides a Web-based interface to manage most system-wide and phone-based features. In particular, the GUI facilitates the routine adds and changes associated with employee turnover, allowing these changes to be performed by non-technical staff.

The GUI provides three levels of access to support the following user classes:

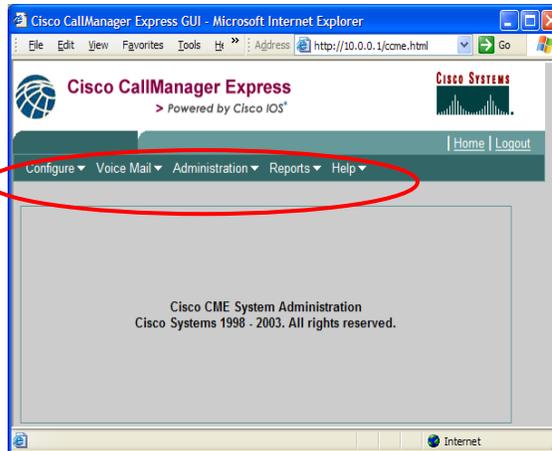
- **System Administrator** - Able to configure all system wide and phone-based features. This person is familiar with Cisco IOS software and VoIP network configuration.
- **Customer Administrator** - Able to perform routine phone adds and changes without having access to system wide features. This person does not have to be trained in Cisco IOS software.
- **Phone User** - Able to program a small set of features on his or her own phone and search the Cisco CME directory.

Note The System Administrator account must initially be configured through the CLI.

User Classes (Cont.)

HTTP://ip_address/ccme.html

System and Customer Administrator Web-based GUI interface



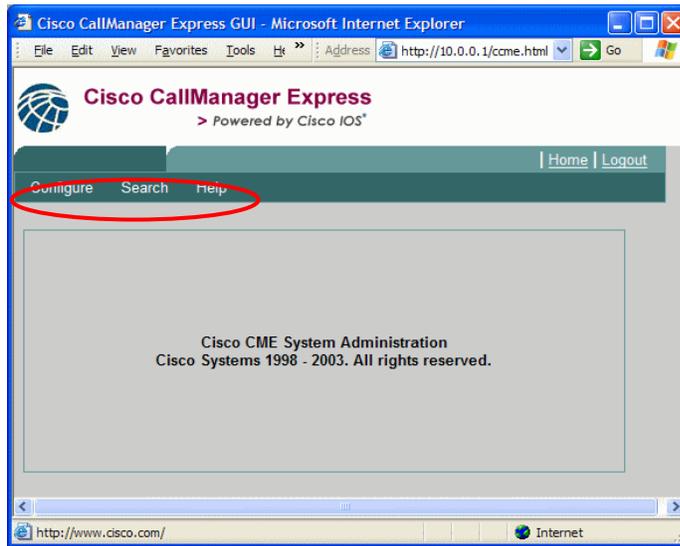
The system administrator and the customer administrator by default will have the same level of access. The customer administrator can be customized to have a subset of the objects in the menus. This will be covered later in the lesson. The objects that will be seen are the following drop down menus:

- **Configure** – Settings dealing with ephones, ephone-dns, and system settings
- **Voice Mail** – Settings dealing with voice mail settings and integrations
- **Administrator** – Where the backup and restore, saving of the changes, and reloading the router can be done
- **Reports** – Where various reports can be run and viewed
- **Help** – Links to versions information and the help file

Note The System Administrator username and password may be changed from System Administrator GUI.

User Classes (Cont.)

Phone User GUI Web interface



The phone user GUI Web interface looks similar to the system and customer administrator GUI Web interfaces. The phone users can make some basic changes to the configuration of their phones, as well look up entries in the Cisco CME directory. The menus visible to the system users will include very limited options under the following drop down menus.

- **Configure** – Where some limited settings about the users associated phone can be made
- **Search** – Where the user can search the directory of Cisco CME
- **Help** – Links to the version information and help file for the users

Cisco CallManager Express GUI Prerequisites

This topic describes the GUI prerequisite tasks to be completed.

Cisco CallManager Express GUI Prerequisites

The following tasks should be completed before the GUI is available

- **Ensure the proper files are in flash on the Cisco CallManager router**
- **Configure and enable the HTTP server on the router**
- **HTTP Server Authentication Method (Optional)**
- **Configure System Administrator Credentials**

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The Cisco CME GUI uses HTTP to transfer information from the Cisco CME router to the PC of an administrator or phone user. The router must be configured as an HTTP server and have the proper Web files in flash locally to serve up to the browser. In addition an initial system administrator username and password must be defined from the router command-line interface (CLI). Customer administrators and phone users can be added from the Cisco CME router using CLI commands or from a PC using GUI Web pages. The GUI Web page functions for Customer Administrators can be restricted and customized with support in Cisco CME for XML cascading style sheets (files with a .css suffix).

Note In order to access the GUI interface, Internet Explorer (IE) 5.5 or greater is required.

Cisco CallManager Express GUI Prerequisites (Cont.)

```
router(config)#
```

```
ip http server
```

- Enables the HTTP server on the router

```
router(config)#
```

```
ip http path flash:
```

- Sets the http server path to the flash memory

```
router(config)#
```

```
ip http authentication {aaa | enable | local | tacacs}
```

- Determines the method type of authentication used by the HTTP Server

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The GUI Web interface files must be installed in flash memory on a Web server that runs locally on the Cisco CME router. The HTTP server on the Cisco CME router is disabled by default. In order to enable it, enter **ip http server** from global configuration mode. While this starts the HTTP service, it does not define where the files are that will be served up by the local routers Web server will reside. To configure the location of the files to be served by the Web server enter the command **ip http path flash:** from global configuration mode. Authentication is set to use the enable password by default. It is recommended that authentication be configured to use AAA or a local username and password pair. The **ip http authentication** command is used to configure the authentication method that is desired.

Command	Purpose
<p>ip http server</p> <p>Example: Router(config)#ip http server</p>	<p>Enables the Cisco Web server on the local Cisco CME router</p>
<p>ip http path flash:</p> <p>Example: Router(config)# ip http path flash:</p>	<p>Sets the base HTTP path for HTML files to Flash memory on the router.</p>
<p>ip http authentication {aaa enable local tacacs}</p> <p>Example: Router(config)# ip http authentication aaa</p> <p>This command has no effect for customer administrator and phone users.</p>	<p>Specifies method of authentication to use for the system administrator when accessing the HTTP server. Default is the enable keyword.</p> <ul style="list-style-type: none"> • 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 enable password. This is the default if this command is not used. • local - Uses login user name, password, and privilege level access combination specified in the local system configuration (by the username global configuration command). • tacacs - Uses TACACS (or XTACACS) server.

Cisco CallManager Express GUI Prerequisites (Cont.)

```
router(config)#
```

```
telephony-service
```

- Enters telephony-service configuration mode

```
router(config-telephony-service)#
```

```
web admin system name username {password string / secret  
{0 | 5} string}
```

- Sets a username and password for the GUI system administrator

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To configure the system administrator credentials, from global configuration mode, enter the **telephony-service** command. From the telephony service sub mode enter **web admin system name *username* password *password*** command. This defines an initial username and password for the system administrator to access the GUI. Once you have created this account you can log in to the GUI. While in the GUI as the system administrator, the customer administrator and phone users may be defined. Alternatively, you can continue to use router CLI to create the customer administrator and phone users' credentials.

The password will not be encrypted if the **0** options is used and will be clearly visible in the configuration. If the password is set with the **5** option the password will be shown as a MD5 hash.

Note There is only one system administrator set of credentials.

Command	Purpose
<p>telephony-service</p> <p>Example: Router(config)# telephony-service</p>	<p>Enters telephony-service configuration mode.</p>
<p>web admin system name username {password string secret {0 5} string}</p> <p>Example:</p> <p>Router(config-telephony-service)# web admin system name pwa3 secret 0 wp78pw</p>	<p>Defines a username and password for a system administrator. The default username is Admin. There is no default password.</p> <ul style="list-style-type: none"> • name username – System administrator username. • password string – String to verify system administrator identity. Default is empty string. • secret {0 5} string – Password should be encrypted. The digit specifies state of encryption of the string that follows, as explained here: <ul style="list-style-type: none"> – 0 – Password that follows is not yet encrypted. – 5 – Password that follows is encrypted using MD5.
<p>Note The secret 5 keyword pair is used in the output of show commands when encrypted passwords are displayed and it indicates that the password that follows is encrypted.</p>	

Cisco CallManager Express GUI Prerequisites (Cont.)

```
router(config-telephony-service)#
```

```
dn-webedit
```

- (Optional) Enables the ability to add ephone directory numbers through the CallManager Express GUI

```
router(config-telephony-service)#
```

```
time-webedit
```

- (Optional) Enables the ability to set the system time through the CallManager Express GUI

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By default, ephone-dns can only be created through the CLI of the Cisco CME router. The ability to add ephone-dns through the GUI Web interface can be enabled if desired. To enable this functionality, use the **dn-webedit** command.

Similarly, the ability to set the system time of the Cisco CallManager router in the GUI Web interface, which ultimately sets the time which is displayed on the display of the IP phones, has to be enabled and by default will not be available in the GUI Web interface. To enable the setting of the time in the GUI Web interface, use the **time-webedit** command.

These settings provide a way to allow the non technical administrator to create new ephone-dns and modify the time through the GUI Web-based interface instead of the CLI that the non-technical administrator may not be comfortable in.

Command	Purpose
<p>dn-webedit</p> <p>Example: Router(config-telephony-service)# dn-webedit</p>	<p>(Optional) Enables the ability to add directory numbers through the Web interface. 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.</p>
<p>time-webedit</p> <p>Example: Router(config-telephony-service)# time-webedit</p>	<p>(Optional) Enables the ability to set the phone time for the Cisco CME system through the Web interface.</p> <p>Note Cisco discourages 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.</p>

Accessing the GUI

This topic describes how to access the GUI.

Accessing the GUI

The GUI in CallManager Express is Web-based

- Use IE 6.0 or greater
- Use the URL
 - Hyperlink: http://router_ipaddr/ccme.html
- Enter either system admin, customer admin or phone user credentials when prompted

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To access the Administrative Web site to make changes use the URL http://router_ipaddr/ccme.html in your IE 5.5 browser. When prompted for credentials, use the administrative credentials previously defined in the CLI. Based on the credentials presented to the Cisco CME router, the router will display the appropriate Web page for either the system administrator, customer administrator or a phone user.

Configuring Administrative User Classes

This topic describes how to configure a customer administrator.

Configuring Administrative User Classes

To configure a customer administrator with a subset of the system administrator access, two steps must be taken:

- **Create and load a custom XML configuration file**
- **Define the customer administrator credentials**

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In the Cisco CME system there is a system administrator that has full control of the system. It may be desirable to create another custom level of access to the system by configuring what is known as a customer administrator. This customer administrator can have a subset of the full level of access enjoyed by the default system administrator. The end result will be the existence of two levels of administrators one with full access and the customer administrator with some defined subset of full access.

Creating and defining the level of access for the customer administrator to log in to the GUI Cisco CME interface is a two-step process. The first step is to create the XML file that will define the level of access to objects in the Cisco CallManager GUI Web interface. The second step is to create the user credentials that will be used by the customer administrator. This may be done by either using the CLI or the system administrator GUI Web interface.

Configuring Administrative User Classes (Cont.)

Creating and loading an XML configuration file is a five step process

- **Step 1 - Open a copy of the xml.template file in a text editor**
- **Step 2 - Edit the file with desired changes to access**
- **Step 3 - Save the file with a desired name**
- **Step 4 - Upload to flash on the CallManager Express router via TFTP or FTP**
- **Step 5 - Load the template from flash to the RAM on the CallManager Express router**

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The xml.template file is included in both the .tar and .zip that Cisco CME was installed with. First open the xml.template file with a text editor. Then delete either the “Hide” word or “Show” word, as well as the pipe symbol and the brackets, leaving only “Hide” or “Show” remaining whichever level of access is desired for that object. Save the file with a name that has significance and an .xml extension. This file will then need to be uploaded to the flash of the Cisco CME router. Finally the file will be loaded into RAM from flash.

Step	Action	Notes
1.	Open a copy of the xml.template file	The xml.template file is included in both the tar and the zip file that the Cisco CME files came in
2.	Modify the xml file	Leave only the “Hide” or “Show” word, whichever action is desired, deleting the other word and any brackets or pipe symbols
3.	Save the file with the desired name Example: CustomerAdmin.xml	The name of the file can be anything desired as long as it is a known value
4.	Upload the xml file to flash memory on the Cisco CME router copy ftp flash	TFTP or FTP can be used to move the new xml file to flash memory
5.	Load the template from flash to RAM on the Cisco CME router web customize load filename	This command will be executed if saved to the startup-config at boot up

Example

Changing a line in the xml.template file that controls the ability to add a new phone in Cisco CME GUI Web interface.

“<AddPhone> **[Hide | Show]** </AddPhone>” becomes “<AddPhone> **Hide** </AddPhone>” and would prevent the Customer Administrator from adding a phone through the Web-based interface.

Configuring Administrative User Classes (Cont.) – Demonstration

- Step 1 – Copy of xml.template in text editor

```
<Presentation>
  <MainMenu>
    <!-- Take Higher Precedence over CLI "dn-web-edit" -->
    <AddExtension> [Hide | Show] </AddExtension>
    <DeleteExtension> [Hide | Show] </DeleteExtension>
    <AddPhone> [Hide | Show] </AddPhone>
    <DeletePhone> [Hide | Show] </DeletePhone>
  </MainMenu>

  <Extension>
    <!--Control both view and change, and possible add or delete-->
    <SequenceNumber> [Hide | Show] </SequenceNumber>
    <Type> [Hide | Show] </Type>
    <Huntstop> [Hide | Show] </Huntstop>
    <Preference> [Hide | Show] </Preference>
    <HoldAlert> [Hide | Show] </HoldAlert>
    <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>
  ...

```

This is an example of the xml.template that comes with Cisco CME 3.1. Notice the **[Hide | Show]**. This needs to be edited to leave only the desired action.

Configuring Administrative User Classes (Cont.) – Demonstration

- Step 2 - xml.template in text editor

```

<Presentation>
  <MainMenu>
    <AddExtension> Hide </AddExtension>
    <DeleteExtension> Hide </DeleteExtension>
    <AddPhone> Show </AddPhone>
    <DeletePhone> Show </DeletePhone>
  </MainMenu>

  <Extension>
    <SequenceNumber> Hide </SequenceNumber>
    <Type> Hide </Type>
    <Huntstop> Hide </Huntstop>
    <Preference> Hide </Preference>
    <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> Hide </PGroup>
  </Extension>
...

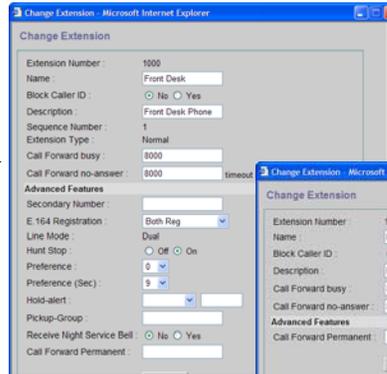
```

This example XML file shows the proper syntax for an XML file. Notice that this XML file would allow the customer administrator to add and delete a phone but not an extension. Once the desired changes to access have been made, save the file (step 3) and put it on an ftp or tftp server that the Cisco CME router can communicate with. Next in step 4, use the **copy ftp flash** or **copy tftp flash** command to move the file to flash on the Cisco CME router. The last step is step 5 and uses the command **web customize load filename** from telephony service mode to load the file into RAM on the Cisco CME router. Any syntax errors that exist in this step will cause the process to fail, which will then cause the Cisco CME router to output a syslog message.

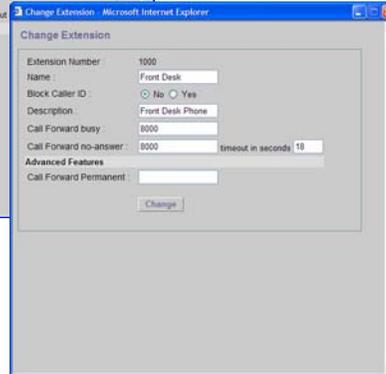
Command	Purpose
web customize load filename Example: Router(config-telephony-service)# web customize load myxmlfile.xml	Used to load and parse an eXtensible Markup Language (XML) file in router Flash memory to customize a Cisco CME GUI for a customer administrator.

Configuring Administrative User Classes (Cont.) – Demonstration Results

Default system Administrator access →



Modified XML Template applied →



This slide shows the results of the previous XML configuration file. The difference in access to the GUI Web interface is a direct result of the <Extensions> section in the previous slide.

Configuring Administrative User Classes (Cont.)

Define the custom administrator credentials in one of two ways:

- **Through the System Administrator GUI**
- **From the CLI of the CallManager Express**

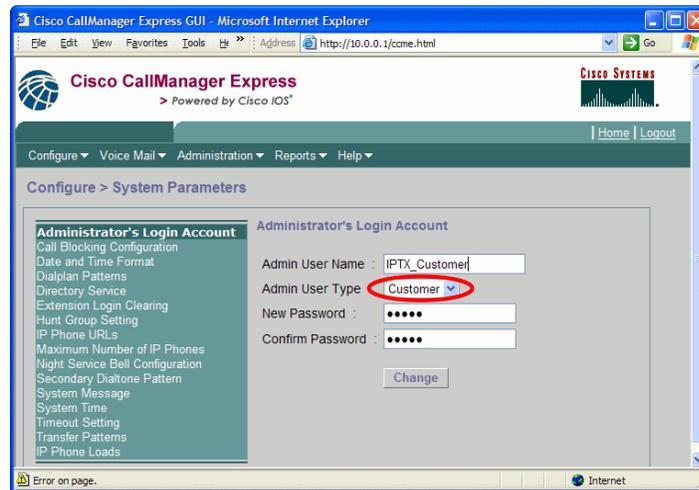
Defining the Custom Administrator Credentials

After the XML file is configured and loaded into RAM, the system administrator can set up the credentials for the customer administrator. There are two different ways to achieve this. The first is through the system administrator Web pages, and the second is from the CLI.

Configuring Administrative User Classes (Cont.)

To add a Customer Admin

- Add a username
- Select Customer from the Admin type
- Set the password



Defining the Custom Administrator Credentials in the GUI

This slide shows the creation of the Customer Administrator by the System Administrator. Access to this page is through the “Configure” drop-down menu, then selecting System Parameters.

The end result will be that there will now be a system administrator and a customer administrator.

Note Only one set of customer administrator credentials may be defined. Any subsequent changes will simply overwrite the initial configuration.

Configuring Administrative User Classes (Cont.)

```
router(config)#
```

```
telephony-service
```

- Enters telephony-service configuration mode

```
router(config-telephony-service)#
```

```
web admin customer name username password string
```

- Sets a username and password for the GUI customer administrator

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Defining the Custom Administrator Credentials in the CLI

To create the customer administrator from the CLI first enter the **telephony-service** command from global configuration mode. Then, enter the **web admin customer name *username* password *password*** command to create the credentials to be used by the customer administrator.

Note Only one set of customer administrator credentials may be defined. Any subsequent changes will simply overwrite the initial configuration.

Command	Purpose
telephony-service Example: Router(config)# telephony-service	Enters telephony-service configuration mode.
web admin customer name username {password string secret {0 5} string} Example: Router(config-telephony-service)# web admin customer name user44 password w10293847	Defines a username and password for a customer administrator. The default username is Customer. There is no default password. <ul style="list-style-type: none"> • name username—Username of customer administrator. • password string—String to verify customer administrator

Configuring Administrative User Classes (Cont.)

Two ways to define phone users:

- Through the System Administrator GUI
- From the CLI of the CallManager Express

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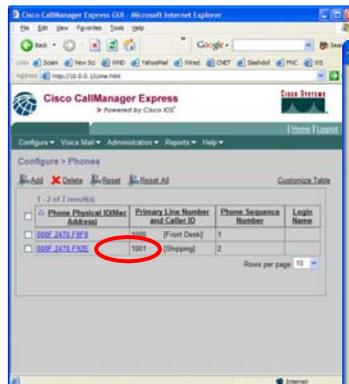
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Like the customer administrator, phone users can also be configured from either the GUI or the CLI. One set of credentials may be defined per phone.

Configuring Administrative User Classes (Cont.)



Select the phone of the user, then set credentials on the phone

Speed Dial Information

Note: The number of speed dial that will display on your phone depends on the type of phone, and the number of lines configured.

Speed Dial 1: _____ Label: _____

Speed Dial 2: _____ Label: _____

Speed Dial 3: _____ Label: _____

Speed Dial 4: _____ Label: _____

Speed Dial 5: _____ Label: _____

Login Account

Login Username: Student2

Password: _____

Re-enter Password: _____

Change

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To set phone user credentials from the phone user Web pages, go to the “Configure” drop-down menu and select “Phones.” Either add a new phone or change an existing phone by selecting it. Scroll to the bottom of the page and in the “Login Account” area, define the user and password. Select the “Change” button to commit the changes.

Configuring Administrative User Classes (Cont.)

```
router(config)#
```

```
ephone phone tag
```

- Enters telephony-service configuration mode

```
router(config-ephone)#
```

```
username username password password
```

- Sets a username and password for the GUI phone user

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To configure the phone user credentials for a phone, enter the ephone sub configuration mode by entering the **ephone *phone tag*** from global configuration mode. Then enter the **username *username password password*** command. This will be used by the phone users to log into the GUI Web interface and for any TAPI lite connections.

Note The password will be shown in clear text in the router configuration.

Command	Purpose
ephone <i>phone tag</i> Example: Router(config)# ephone 44	Enters ephone configuration mode to register Cisco IP phones.
username <i>username password password</i> Example: Router(config-ephone)# username prx password pk59wq .	Assigns a phone user login account name and password. This allows individual phone users to log in to the Cisco CME router through a Web interface to change a limited number of personal settings.