Setting Up Cisco Unity Express Software

Set up Cisco Unity Express software after all Cisco CallManager Express and Cisco Unity Express hardware and Cisco CallManager Express software installations are complete. This chapter contains the following information and procedures:

Prerequisites

Before Cisco Unity Express configuration can be started, the Cisco CallManager Express (CME) system must be installed. If you did not or are not performing the Cisco CME installation, contact the installer or other support personnel to ensure that the following procedures are completed:

1. Install all Cisco CME and Cisco Unity Express hardware and verify functionality.
   a. Attach the telephones so that they register with the Cisco CME router.
   b. Verify that the Cisco Unity Express router is configured with a Cisco IOS release that supports the Cisco Unity Express network module (NM) or advanced integration module (AIM). For information on the minimum Cisco IOS release required to support these modules, see the *Release Notes for Cisco Unity Express Release 2.2*.
   c. Install the Cisco Unity Express NM or AIM in the same router where Cisco CME is installed.
   d. For the NM, verify that the Enable LED is lit.

Note We highly recommend attaching an uninterruptible power supply (UPS) to the router that houses the Cisco Unity Express module. Any reliable UPS unit provides continuous power to maintain the operation of the router and the Cisco Unity Express module. Consider the unit's capacity and run time because power consumption differs among Cisco platforms. Ideally, a UPS should include a signaling mechanism that directs the router to shut down Cisco Unity Express properly and then powers off the router.

Cisco IOS Release 12.3(4)T supports automatic switchover to the UPS device if the following configuration is added to the router:

```
line aux 0
privilege level 15
modem Dialin
autocommand service-module service-engine slot/0 shutdown no-confirm
```

where *slot* is the Cisco Unity Express module's slot number.

2. Install and verify Cisco CME software functionality.
   a. You should be able to access the Cisco CME configuration web page.
   b. Verify that the Cisco CME router flash memory has the following files, which control the functionality of the Cisco Unity Express GUI:
      – CiscoLogo.gif
      – Delete.gif
      – Plus.gif
      – Tab.gif
      – admin_user.html
      – admin_user.js
      – dom.js
      – downarrow.gif
      – ephone_admin.html
      – logohome.gif
      – normal_user.html
      – normal_user.js
      – sxiconad.gif
      – telephony_service.html
      – uparrow.gif
      – xml-test.html
      – xml.template
   c. Configure the following path in Cisco CME configuration mode:

      ```
      Router(config)# ip http path flash:
      ```

      Verify the path with the **show running-config** command.

d. Configure IP connectivity between the router and the Cisco Unity Express module. The module has an internal IP address and a default gateway configuration. The router has a service-engine interface with an IP address, which may be unnumbered.

One configuration method uses the **ip unnumbered** command, which allows the Cisco Unity Express module to use a network subnet IP address associated with a specific router egress port, such as FastEthernet0/0. This method requires a static route to the service-engine interface. The router interface associated with the Cisco Unity Express interface must be in an "up" state at all times for communication between the router and module.

In the following example, 10.3.6.128 is the IP address of the Cisco Unity Express module and Service-Engine1/0 is the router slot hosting the Cisco Unity Express module.

```
interface FastEthernet0/0
  ip address 10.3.6.1 255.255.255.0
.
.
.
interface Service-Engine1/0
  ip unnumbered FastEthernet0/0
  service-module ip address 10.3.6.128 255.255.255.0
  service-module ip default-gateway 10.3.6.1
.
.
.
ip route 10.3.6.128 255.255.255.255 Service-Engine1/0
```

If your network uses a VLAN interface with an Etherswitch module, use the example above but replace both instances of "FastEthernet0/0" with "VLAN1."

e. Verify that a SIP dial peer is configured to point to the Cisco Unity Express module, that it specifies G.711 U-law and SIP Notify for DTMF Relay, and that VAD is turned off, for example:

```
dial-peer voice 6000 voip <------ SIP dial peer pointing to Cisco Unity Express
 destination-pattern 6...
 session protocol sipv2
 dtmf-relay sip-notify
 session target ipv4:10.3.6.128 <---- Cisco Unity Express IP address
 codec g711ulaw
 no vad
```

Configure the appropriate number of SIP dial peers to support your dial plan.

f. The FTP server that communicates with Cisco Unity Express must support passive FTP requests. To configure this functionality on the FTP server, refer to the FTP server documentation.

g. Verify that a Cisco CME web administrator is configured with a user ID and password, for example:

```
telephony-service
 .
 .
 .
 web admin system name admin password user1
```

or

```
 web admin system name admin secret 5 encrypted-password
```

Note If you plan to use the Cisco Unity Express graphical user interface (GUI) for configuration purposes, configure an administrator user ID with a password in the Cisco CME interface. You must log in to the GUI as this user. If no administrator user is created in Cisco CME, the administrator cannot proceed with the initialization wizard in the Cisco Unity Express GUI. In Release 2.1, an administrator is created during the installation procedure.

h. Configure the telephones and users. You can create additional users and telephones later using the Cisco Unity Express CLI commands or GUI options. The CLI commands and GUI options create the telephone users in the Cisco CME database; use a synchronization CLI command or GUI option to copy the users and telephones into the Cisco Unity Express database.

Use the following sample ephone-dn and ephone configurations to configure the telephones and users manually:

```
ephone-dn  1 <---- ephone dn configuration for a user
 number 8004
 name User1
 call-forward busy 6900
 call-forward noan 6900 timeout 10
!
!
ephone-dn  20 <---- ephone dn configuration for a group
 number 8801
 name Salesgroup
 call-forward busy 6900
 call-forward noan 6900 timeout 10

ephone  1 <--- ephone configured for the ephone-dn configured above
 username "Salesgroup" password null
 mac-address 0009.B7F7.556A
 button  1:1 2:20 3:21 4:22 5:23
```

i. Configure the message waiting indicator (MWI) on and off extensions. Add the wildcard characters (.) to the DNs to represent the length of a telephone extension number. Cisco Unity Express requires these wildcards when importing the MWI DNs from Cisco CallManager Express during the initialization wizard. If the wildcard characters are not configured in Cisco CallManager Express, the DNs will not appear as available choices in the MWI extension field. For example:

```
ephone-dn  30 <---- ephone-dn configurations for MWI on
 number 8000.... <---- valid MWI DN 4-digit extension
 mwi on
!
!
ephone-dn  31 <---- ephone-dn configurations for MWI off
 number 8001.... <---- valid MWI DN 4-digit extension
 mwi off
!
!
!
```

3. (Optional) If no users were created in the Cisco CME interface, create a list of all users, groups, and their extensions. Having this list eases the task of configuring many users and extensions.

Note Designate a primary extension for each user who will receive voice-mail messages. Cisco Unity Express does not activate the MWI for an E.164 number.

4. (Optional) Create an alternate welcome message for the auto-attendant application. A default welcome message comes with auto attendant. You can create a different message in a .wav file and install it as part of the auto-attendant configuration. See "Recording an Auto-Attendant Greeting or Prompt File" on page 73 for more information.
5. (Optional) Customize the auto-attendant prompt flow to meet your business requirements. See "Configuring Auto-Attendant Scripts" on page 75 for more information.
6. (Required) Record the IP address of the Cisco Unity Express module. Accessing the GUI to configure the system requires this IP address.

Configuring a New Cisco Unity Express Software Package

When you order Cisco Unity Express, Cisco Unity Express software and the purchased license are installed on the module at the factory. Spare modules also ship with the software and license installed.

The following procedures are required to configure a new installation of Cisco Unity Express:

1. Configure the IP addressing between the module and the router. See "Activating IP Connectivity to Cisco Unity Express Software" on page 30.
2. Begin configuring the Cisco Unity Express software. See the section "Configuration Tasks" on page 33.

Activating IP Connectivity to Cisco Unity Express Software

After installing the Cisco Unity Express module, activate the IP communication link between Cisco CallManager Express and the Cisco Unity Express application.

Prerequisites

The following information is required for activating the software:

- Slot and unit numbers of the Cisco Unity Express module on the Cisco IOS router that hosts Cisco Unity Express.
- IP address and subnet mask of the Cisco IOS router that hosts Cisco Unity Express or the unnumbered interface type and number.
- IP address of the Cisco Unity Express module. This IP address must be on the same subnet as the Cisco IOS router that hosts Cisco Unity Express.
- IP address of the default gateway of the Cisco Unity Express router. This IP address must be the same IP address as the Cisco IOS router that hosts Cisco Unity Express.

SUMMARY STEPS

1. **interface Service-Engine** *slot/unit*
2. **ip address** *router-ip-addr subnet-mask*
   or
   ip unnumbered *type number*
3. **service-module ip address** *cue-side-ip-addr subnet-mask*
4. **service-module ip default-gateway** *gw-ip-addr*
5. **exit**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**interface Service-Engine** *slot/unit* **Example:** `Router(config)# interface Service-Engine 2/0`	Enters interface configuration mode.

Step 2	**ip address** *router-ipaddr subnet-mask*
	
	Example:
	`Router(config-if)# ip address 172.16.231.195 255.255.0.0`
	
	or
	`Router(config-if)# ip unnumbered type number`
	
	Example:
	`Router(config-if)# ip unnumbered FastEthernet 0/0`
		Specifies the IP address and subnet mask of the Cisco IOS router hosting Cisco Unity Express.
		
		Specifies the interface *type* and *number* for the Cisco IOS router hosting Cisco Unity Express.

Step 3	**service-module ip address** *cue-side-ipaddr subnet-mask* **Example:** `Router(config)# service-module ip address 172.16.231.190 255.255.0.0`	Specifies the IP address of the Cisco Unity Express module interface. This IP address must be on the same subnet as the Cisco IOS router that hosts Cisco Unity Express.
Step 4	**service-module ip default-gateway** *gw-ipaddr* **Example:** `Router(config)# service-module ip default-gateway 172.16.231.195`	Specifies the IP address the Cisco IOS router that hosts Cisco Unity Express.
Step 5	**exit** **Example:** `Router(config-if)# exit`	Exits interface configuration mode.

Examples

The following example illustrates the IP connectivity activation procedure:

```
Router(config)# interface Service-Engine 1/0
Router(config-if)# ip address 10.0.0.9 255.0.0.0
Router(config-if)# service-module ip address 10.0.0.10 255.0.0.0
Router(config-if)# service-module ip default-gateway 10.0.100.10
Router(config-if)# exit
```

What to Do Next

After configuring connectivity to the Cisco Unity Express module, enter the Cisco Unity Express command environment and start configuring the applications. See the section "Entering the Command Environment" on page 32.

EXEC and Configuration Modes

The Cisco Unity Express command modes, EXEC and configuration, operate similarly to the EXEC and configuration modes for Cisco IOS CLI commands, however, Cisco Unity Express EXEC mode permits some parameters to be configured or modified, which are not allowed in Cisco IOS EXEC mode. This Cisco Unity Express capability saves the configured parameters to flash memory so that the system has some minimum information available if a catastrophic failure, such as a disk crash, occurs. The description for each command in this guide indicates the command mode.

Entering the Command Environment

After the Cisco Unity Express software is installed and active, use this procedure to enter the command environment.

Prerequisites

For a new Cisco Unity Express software installation, see the section "Prerequisites" section on page 25 and the section "Activating IP Connectivity to Cisco Unity Express Software" section on page 30 before beginning this procedure.

The following information is required to enter the command environment:

- IP address of the router that contains the Cisco Unity Express module
- Username and password to log in to the router
- Slot number of the module

SUMMARY STEPS

1. Open a Telnet session.
2. **telnet** *ip-address*
3. Enter the user ID and password of the router.
4. **service-module service-engine** *slot*/*port* **session**
5. **enable**

DETAILED STEPS

	Command or Action	Purpose
Step 1	Open a Telnet session.	Use a DOS window, a secure shell, or a software emulation tool such as Reflection.
Step 2	**telnet** *ip-address* **Example:** `C:\>telnet 172.16.231.195`	Specifies the IP address of the Cisco CallManager router.
Step 3	`Username:` `Password:`	Enter your user ID and password for the router.

	Command or Action	Purpose
Step 4	**service-module service-engine** *slot*/*port* **session** **Example:** `Router# service-module service-engine 1/0 session`	Enters the Cisco Unity Express command environment using the module located in *slot* and *port*. The prompt changes to "se" with the IP address of the Cisco Unity Express module. If the message "`Trying ip-address slot/port ... Connection refused by remote host` appears, enter the command **service-module service-engine** *slot*/*port* **session clear** and try Step 4 again.
Step 5	`se-10-0-0-0# enable` **Example:** `se-10-0-0-0# enable`	Enters Cisco Unity Express EXEC mode. You are ready to begin the configuration tasks.

What to Do Next

Review the section "Configuration Tasks" on page 33.

Displaying Cisco Unity Express Hardware and Software Versions

To display the versions and serial numbers of the installed Cisco Unity Express hardware components, use the **show version** command.

To display the versions of the installed Cisco Unity Express software components, use the **show software versions** command.

Exiting the Command Environment

To exit the Cisco Unity Express Release 2.1 command environment, follow these steps:

1. Return to the Cisco Unity Express EXEC mode.
2. Press the **CTRL**-**SHIFT**-**6** keys simultaneously, followed by a lowercase **x**.

Note In Cisco IOS Release 12.3(11)T or above, use the **EXIT** command instead.

The router prompt appears.