



# Setting Up Cisco Unity Express Software

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

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  - [Configuring a New Cisco Unity Express Software Package, page 24](#)
    - [Activating IP Connectivity to Cisco Unity Express Software, page 24](#)
    - [EXEC and Configuration Modes, page 26](#)
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## Prerequisites

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

1. (Required) Install all Cisco CallManager and Cisco Unity Express hardware and verify functionality.
  - a. Attach the telephones so that they register with the Cisco CallManager server.
  - b. Verify that the Cisco CallManager server is configured with Cisco IOS Release 12.3(4)T or a later release to support a network module (NM) configuration or with Cisco IOS Release 12.3(7)T or a later release to support an advanced integration module (AIM) configuration.
  - c. 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. (Required) Install and verify Cisco CallManager software functionality.
  - a. You should be able to access the Cisco CallManager configuration web page.
  - b. To configure the **ip unnumbered** command on the service-engine interface, use the Cisco IOS software commands on the router to create a static route to the Cisco Unity Express module, for example:

```
ip route 10.3.6.128 255.255.255.255 Service-Engine1/0
```

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

- c. For the NM, configure eight CTI ports on Cisco CallManager. For the AIM, configure four CTI ports on Cisco CallManager. Use the Cisco CallManager option **Device > Phones > Add new Phone**. These ports will be assigned to the Cisco Unity Express applications (voice mail, auto attendant, and greeting management system [GMS]) to terminate calls.



**Note** Do not configure extra CTI ports on Cisco CallManager. Doing so will impact the scalability of your Cisco CallManager and will limit the number of other devices Cisco CallManager can support.

- d. Configure at least two route points on Cisco CallManager using the **Device > CTI Route Point** option. The Cisco Unity Express voice-mail application uses one route point, and the auto-attendant application uses the other route point. If you plan to use the Cisco Unity Express GMS, configure a third route point on Cisco CallManager.



**Note** Do not configure extra route points on Cisco CallManager. Doing so will impact the scalability of your Cisco CallManager and will limit the number of other devices that Cisco CallManager can support.

- e. Create a Cisco CallManager JTAPI user using the **User > Add new user** option. Use the **Device Association** option to associate the CTI ports and route points with this JTAPI user. (The JTAPI user is not assigned a Cisco Unity Express voice mailbox. It is a placeholder for Cisco Unity Express to establish a connection with Cisco CallManager.) Verify that the Enable CTI Application use box is checked for this JTAPI user.
  - f. During the Cisco Unity Express software installation, create the Cisco Unity Express administrator user ID and password and specify the IP addresses for the DNS server and NTP server. This user ID and password is needed to log in to the initialization wizard.
  - g. For efficient call processing, configure access lists on the Cisco Unity Express router to prioritize JTAPI traffic. For example:

```

class-map match-all jtapi
match access-group 110
class-map match-all voice
match access-group 100

```

```
policy-map jtapi
  class jtapi
    set dscp cs3
    bandwidth 20
  class voice
    set dscp af31
    priority 320
  class class-default
    fair-queue

interface Serial0/1
  ip address 192.168.10.0 255.255.255.0
  service-policy output jtapi
  clockrate 256000
  no cdp enable

access-list 100 permit udp host 10.3.6.128 any range 16383 32727
access-list 110 permit tcp host 10.3.6.128 any eq 2748
```

where 10.3.6.128 is the IP address of the module that contains Cisco Unity Express.

The output from the **show policy-map interface** command should indicate that the marked packets number is increasing. For example:

```
Match: access-group 110
QoS Set
  dscp cs3
  Packets marked 334 <-----This number should increase.
```

3. (Required) 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.
4. (Optional) If no users were created in the Cisco CallManager interface, create a list of all users, groups, and their extensions. Having this list eases the task of configuring many users and extensions.
5. (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 68](#) for more information.
6. (Optional) Customize the auto-attendant prompt sequence to meet your business requirements. See [“Configuring Auto-Attendant Scripts” on page 69](#) for more information.
7. (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 (CUE), 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 CUE.

1. Configure the IP addressing between the module and the router. See [“Activating IP Connectivity to Cisco Unity Express Software” on page 24](#).
2. Begin configuring the Cisco Unity Express software. See the section [“Configuration Tasks” on page 29](#).

## Activating IP Connectivity to Cisco Unity Express Software

After installing the Cisco Unity Express module, activate the IP communication link between Cisco CallManager 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**  */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	<code>interface Service-Engine slot/unit</code>  <b>Example:</b>	Enters interface configuration mode.
Step 2	<code>ip address router-ip-addr subnet-mask</code>  <code>ip unnumbered type number</code>  <b>Example:</b>  or  <b>Example:</b> 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 <i>type</i> and <i>number</i> for the Cisco IOS router hosting Cisco Unity Express.
Step 3	<code>service-module ip address cue-side-ip-addr subnet-mask</code>  <b>Example:</b> Router(config-if)# 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	<code>service-module ip default-gateway gw-ip-addr</code>  <b>Example:</b> Router(config-if)# service-module ip default-gateway 172.16.231.195	Specifies the IP address the Cisco IOS router that hosts Cisco Unity Express.
Step 5	<b>Example:</b> 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
                 ip address 10.0.0.9 255.0.0.0
                 service-module ip address 10.0.0.10 255.0.0.0
                 service-module ip default-gateway 10.0.100.10
                 exit
```

## What to Do Next

After configuring the connectivity to the Cisco Unity Express module, enter the Cisco Unity Express command environment and start configuring the applications. See [“Entering the Command Environment”](#) on page 26.

## 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 [“Prerequisites”](#) on page 21 and [“Activating IP Connectivity to Cisco Unity Express Software”](#) on page 24 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. `ip-address`
3. Enter the user ID and password of the router.
4. `slot port`
- 5.

## 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	<b>Example:</b> 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.
Step 4	<b>Example:</b> Router# service-module service-engine 1/0 session	Enters the Cisco Unity Express command environment using the module located in <i>slot</i> and <i>port</i> . The prompt changes to “se” with the IP address of the Cisco Unity Express module.  If the message “Trying <i>ip-address slot/port</i> ... Connection refused by remote host  <i>slot/port</i>
Step 5	<b>Example:</b> se-10-0-0-0# enable	

## What to Do Next

Review the section [“Configuration Tasks” on page 29](#).

## Exiting the Command Environment

When you need to leave the CUE command environment and return to the router command environment, follow the steps below.

### SUMMARY STEPS

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

se-10-0-0-0(config)# exit se-10-0-0-0#	
<b>CTRL-SHIFT-6 x</b>	
se-10-0-0-0# CTRL-SHIFT-6 x Router#	<b>EXIT</b>