



Prerequisites for Installing Cisco Unity Express Virtual

This section describes the prerequisites for installing the Cisco Unity Express Virtual on your system and contains the following sections:

- [Prerequisites for Cisco Unified Communications Manager Express, on page 1](#)
- [Prerequisites for Cisco Unified Communications Manager , on page 3](#)

Prerequisites for Cisco Unified Communications Manager Express



Note This section applies to a new installation of Cisco Unity Express Virtual.

If you are using Cisco Unified Communications Manager Express (Cisco Unified CME) with your Cisco Unity Express Virtual system, Cisco Unified CME must be installed before you configure Cisco Unity Express Virtual. If you did not perform the Cisco Unified CME installation, contact the designated installer to ensure that the following procedures are completed:

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- Step 1** Verify that the version of Cisco Unified CME is compatible with Cisco Unity Express Virtual. See the [Cisco Unity Express Compatibility Matrix](#).
- Step 2** Install all Cisco Unified CME and Cisco Unity Express Virtual hardware and verify functionality.
- a) Attach the IP Phones so that they register with the Cisco Unified CME router. Configure the IP Phones and subscribers and save them to the Cisco Unified CME database. The Cisco Unity Express Virtual initialization wizard allows you to copy this data to the Cisco Unity Express Virtual database. You can create more subscribers and IP Phones later using the Cisco Unity Express Virtual CLI commands or GUI options.
- Use the following sample voice register dn and voice register pool configurations to configure the IP Phones and subscribers manually:

```
voice register dn 24
  number 8124
  shared-line max-calls 6
!
```

```
voice register pool 124
  id mac 0017.E033.0284
  type 7965
  number 1 dn 24
!
```

- b) Verify that Cisco Unity Express Virtual will be installed and configured on a router that supports the hardware modules that you are using.

Step 3 Install and verify Cisco Unified CME software functionality.

Depending on the version of Cisco Unified CME, you can perform some configuration using the Cisco Unified CME graphical user interface. If the version of Cisco Unified CME does not support the GUI, see [Cisco Unified Communications Manager Express Administrator Guide](#). If your version of Cisco Unified CME supports the GUI, proceed with the following steps:

Note Cisco Unified CME does not support SIP phones via the GUI.

- a) Verify that you have web connectivity to the Cisco Unified CME configuration web page. For example, <http://cisco-unified-cme-router-ipaddress/ccme.html>.
- b) Verify that the Cisco Unified CME router flash memory has the following files, which control the functionality of the Cisco Unity Express Virtual 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

See [Download Software](#) for downloading Cisco Unified CME files.

- c) Configure the following path in Cisco Unified CME configuration mode:

Example:

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

- d) Verify the path with the **show running-config** command.
- e) Verify that a SIP dial peer is configured to point to the Cisco Unity Express Virtual module, that it specifies G.711 u-law and SIP Notify for DTMF Relay, and that VAD is turned off. This step is required to have an incoming call directed to Cisco Unity Express Virtual. The following is an example configuration:

```
dial-peer voice 6000 voip ! SIP dial peer pointing to Cisco Unity Express Virtual
  destination-pattern 6...
  session protocol sipv2
  dtmf-relay sip-notify
  session target ipv4:172.16.0.1 ! Cisco Unity Express Virtual IP address
  codec g711ulaw
  no vad
```

- f) Configure the appropriate number of SIP dial peers to support your dial plan.
- g) Verify that a Cisco Unified CME web administrator is configured with a username and password, for example:

```
voice register global
.
.
.
web admin system name admin password user1
```

OR

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

- Step 4** The FTP server that communicates with Cisco Unity Express Virtual must support passive FTP requests. To configure this functionality on the FTP server, see your *FTP server* documentation.
- Step 5** (Optional) If no subscribers were created in the Cisco Unified CME interface, create a list of all subscribers, groups, and their extensions to simplify the task of configuring many subscribers and extensions.

Prerequisites for Cisco Unified Communications Manager

If you are using Cisco Unified Communications Manager with the Cisco Unity Express Virtual system, Cisco Unified Communications Manager must be installed before the Cisco Unity Express Virtual configuration can be started.

If you did not perform the Cisco Unified Communications Manager installation, contact the designated installer to ensure that the following procedures are completed:

- Step 1** Verify that the version of Cisco Unified Communications Manager is compatible with Cisco Unity Express Virtual. See [Cisco Unity Express Compatibility Matrix](#).
- Step 2** Install all Cisco Unified Communications Manager and Cisco Unity Express Virtual hardware and verify functionality. See [Cisco Unity Express Documentation](#) for the hardware installation documentation for your module.
 - a) Attach the telephones so that they register with the Cisco Unified Communications Manager server.
 - b) On the Cisco Unified Communications Manager, configure up to 32 CTI ports for a Cisco Unity Express Virtual system with a Cisco UCS E-Series module. You can configure up to 20 ports for the Cisco 4000 Series Integrated Services Routers configured with Kernel Virtual Machine Service Containers. Use the Cisco Unified Communications

Manager option **Device > Phones > Add new Phone**. These ports will be used by the Cisco Unity Express Virtual applications (voice mail, auto attendant, and Administration through Telephone [AvT]) to terminate calls.

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

- c) Configure at least two Cisco Unified Communications Manager route points on Cisco Unified Communications Manager using **Device > CTI Route Point**. The Cisco Unity Express Virtual voicemail application uses one route point, and the auto attendant application uses one route point. If you plan to use the Cisco Unity Express Virtual AvT, configure a third route point on Cisco Unified Communications Manager. You need as many route points as the number of call-in numbers on Cisco Unity Express Virtual.

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

- d) Create a Cisco Unified Communications Manager JTAPI user by choosing **User > Add new user**. 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 Virtual voice mailbox. It is a placeholder for Cisco Unity Express Virtual to establish a connection with Cisco Unified Communications Manager.) Verify that the Enable CTI Application Use check box is checked for this JTAPI user. Verify that the JTAPI user is able to perform Standard CTI Enable by selecting the appropriate option or group on the Unified Communications Manager.
- e) Verify that the AXL service is active. To do this, go to the Cisco Unified Communications Manager serviceability website, click **Tools > Service Activation**. Look for Cisco AXL Web service.
- f) For efficient call processing, configure access lists on the default router of Cisco Unity Express Virtual 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 172.16.0.1 255.255.0.0
  service-policy output jtapi
  clockrate 256000
  no cdp enable

access-list 100 permit udp host 172.16.0.1 any range 16383 32727
access-list 110 permit tcp host 172.16.0.1 any eq 2748
```

where 172.16.0.1 is the IP address of the module that contains Cisco Unity Express Virtual software. 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.
```

- Step 3** The FTP server that communicates with Cisco Unity Express Virtual must support passive FTP requests. To configure this functionality on the FTP server, see your *FTP server* documentation.
- Step 4** (Optional) If no subscribers were created in the Cisco Unified Communications Manager interface, create a list of all subscribers, groups, and their extensions to simplify the task of configuring many subscribers and extensions.
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