



Cox Business SIP Trunk: Connecting Cisco Unified Communication Manager Express (CME) v12.6 [IOS-XE 16.12.01a] using SIP

June 16, 2020



Table of Contents

Introduction	4
Network Topology.....	5
System Components	6
Hardware Requirements.....	6
Software Requirements	6
Features	6
Features Supported	6
Features Not Supported.....	6
Caveats.....	7
Configuration	8
Cisco Unified Communication Manager Express	8
Cisco IOS Version.....	8
Global Cisco Unified CME Settings.....	10
Codecs.....	10
Dial Peer	11
Configuration Example.....	12
Cisco Unity Connection	22
Cisco Unity Connection Version.....	22
Cisco Unity Connection User Configuration.....	22
Cisco Unity Connection Telephony Integration	24
Port Group	25
Port.....	26
Acronyms	27
Important Information.....	29



Table of Figures

Figure 1 Network Topology.....	5
Figure 2: Cisco Unity Connection Version.....	22
Figure 3: Cisco Unity Connection User Configuration.....	23
Figure 4: Cisco Unity Connection User Configuration (Cont.).....	23
Figure 5: Cisco Unity Connection Telephony Integration	24
Figure 6: Port Group	25
Figure 7: Port Group (Cont.)	26
Figure 8: Port.....	27



Introduction

Service Providers today, such as Cox Business, are offering alternative methods to connect to the PSTN via their IP network. Most of these services utilize SIP as the primary signaling method and a centralized IP to TDM gateway to provide on-net and off-net services.

Cox is a service provider offering that allows connection to the PSTN and may offer the end customer a viable alternative to traditional PSTN connectivity via either analog or T1 lines. A demarcation device between these services and customer owned services is recommended.

- This application note describes how to configure a Cisco Unified Communications Manager Express (Cisco Unified CME) v12.6, Cisco Unity Connection 12.0.1 with connectivity to Cox SIP trunk service. The application note also covers support and configuration example of Cisco Unity Connection (CUC) messaging integrated into the Cisco Unified CME. The deployment model covered in this application note is Customer Premises Equipment (Cisco Unified CME/CUC) to PSTN (Cox). Cox provides inbound and outbound call service.
- Testing was performed in accordance to Cox test plan and all features were verified. Key features verified are: inbound and outbound basic call (including international calls), calling name delivery, calling number and name restriction, CODEC negotiation, intra-site transfers, intra-site conferencing, call hold and resume, call forward (forward all, busy and no answer), leaving and retrieving voicemail (Cisco Unity Connection), Cisco auto-attendant (Cisco Unity Connection), fax using T.38 and G.711.
- Consult your Cisco representative for the correct IOS-XE image and for the specific application and Device Unit License and Feature License requirements for all your Cisco Unified CME.

Network Topology

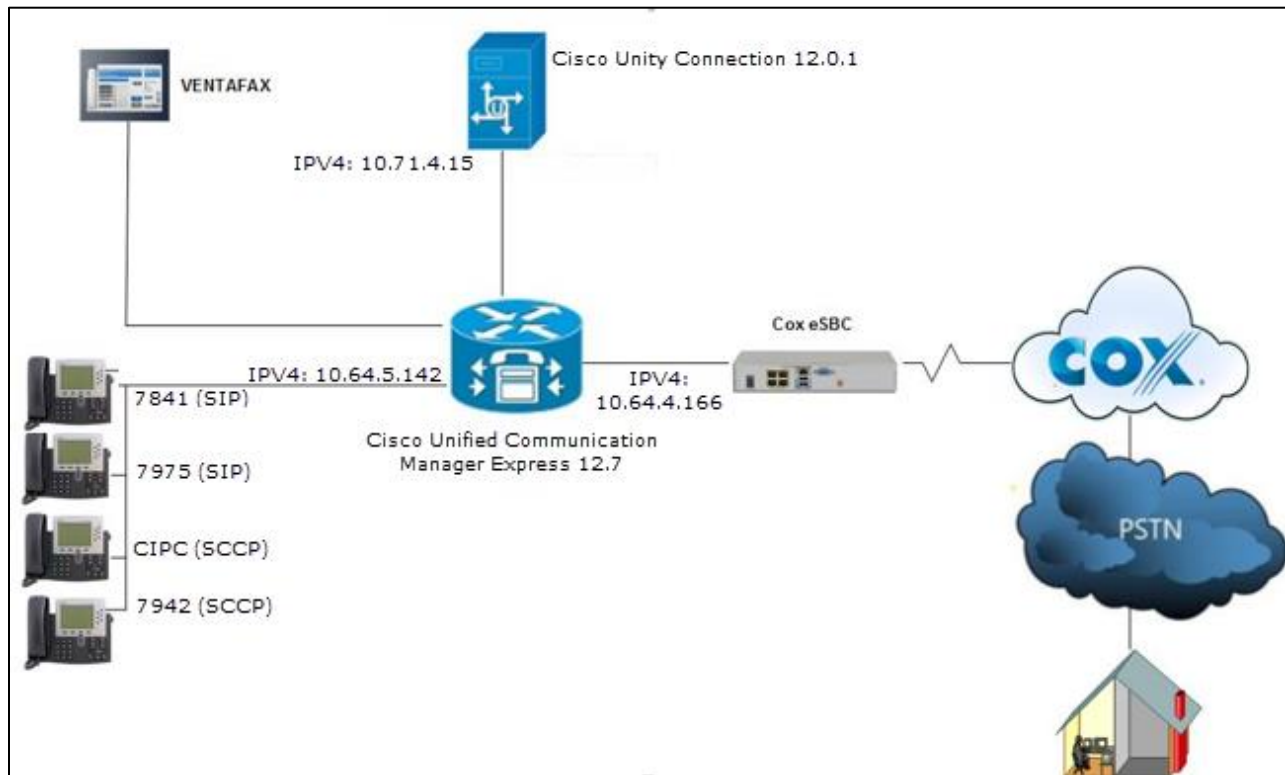


Figure 1 Network Topology

- The network topology includes the Cisco Unified CME, Unity Voicemail system and 4 Cisco Endpoints. Cisco Unified CME has a trunk configured to Cox IP Address. Cox was used as the service provider with SIP trunk to the Cox eSBC LAN IP Address.
- SIP Trunk transport type used between Cisco Unified CME to Cox eSBC is UDP.

Cisco Unified CME Settings:

Setting	Value
Transport from Cisco Unified CME to Cox eSBC	UDP with RTP
Voice Mail Support	YES
Session Refresh	YES



System Components

Hardware Requirements

- Cisco ISR4321
- Cisco IP Phones: 7841, 7975, CIPC and 7942 phones, but any Cisco IP Phone model supporting RFC2833 can be used
- Cisco ISR4321/K9 (1RU) processor with 3743802K/3071K bytes of memory. Processor board ID FLM2201V1AX
- 2 Gigabit Ethernet interfaces and 2 Voice FXS interfaces
- Cisco Unity Connection - VMware - 1 vCPU: Intel(R) Xeon(R) CPU X5675 @ 3.07GHz
- HDD 160 GB, Memory 4096 Mbytes RAM

Software Requirements

- Cisco IOS gateway running Cisco Unified CME 12.6 Version 16.12.01a, RELEASE SOFTWARE (fc2).
Cisco IOS image: "bootflash:isr4300-universalk9.16.12.01a.SPA.bin"
- Cisco Unity Connection version 12.0.1.22900-14

Features

Features Supported

- Incoming and Outgoing off-net calls using G711ulaw
- Call Conference
- Voice Mail support
- Call Hold & Resume with and without MOH
- Unattended and Attended Call Transfer
- Call Forward (all, busy and no answer)
- DTMF (RFC2833)
- Fax (T.38 and g711ulaw pass-through)
- Calling Party Number Presentation and Restriction
- Auto Attendant

Features Not Supported

- G.729 codec
- Blind Call Transfer
- SG3 speed for Fax



Caveats

- None



Configuration

Cisco Unified Communication Manager Express

Cisco IOS Version

```
COXCME#sh version
Cisco IOS XE Software, Version 16.12.01a
Cisco IOS Software [Gibraltar], ISR Software (X86_64_LINUX_IOSD-UNIVERSALK9-
M),
Version 16.12.1a, RELEASE SOFTWARE (fc2)
Technical Support: http://www.cisco.com/techsupport
Copyright (c) 1986-2019 by Cisco Systems, Inc.
Compiled Sun 04-Aug-19 06:12 by mcpre
```

Cisco IOS-XE software, Copyright (c) 2005-2019 by cisco Systems, Inc. All rights reserved. Certain components of Cisco IOS-XE software are licensed under the GNU General Public License ("GPL") Version 2.0. The software code licensed under GPL Version 2.0 is free software that comes with ABSOLUTELY NO WARRANTY. You can redistribute and/or modify such GPL code under the terms of GPL Version 2.0. For more details, see the documentation or "License Notice" file accompanying the IOS-XE software, or the applicable URL provided on the flyer accompanying the IOS-XE software.

ROM: IOS-XE ROMMON

```
COXCME uptime is 2 days, 11 hours, 49 minutes
Uptime for this control processor is 2 days, 11 hours, 51 minutes
System returned to ROM by PowerOn at 06:27:44 UTC Thu May 14 2020
System restarted at 20:55:13 UTC Mon May 18 2020
System image file is "bootflash:isr4300-universalk9.16.12.01a.SPA.bin"
Last reload reason: PowerOn
```

This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at:

<http://www.cisco.com/wwl/export/crypto/tool/stqrg.html>

If you require further assistance please contact us by sending email to export@cisco.com.

Suite License Information for Module:'esg'

© 2020 Cisco Systems, Inc. All rights reserved.

Important notices, privacy statements, and trademarks of Cisco Systems, Inc. can be found on cisco.com



```

-----
Suite                Suite Current      Type                Suite Next reboot
-----
FoundationSuiteK9   None                Smart License      None
securityk9
appxk9

AdvUCSuiteK9        AdvUCSuiteK9       Smart License      AdvUCSuiteK9
uck9
cme-srst
cube

```

Technology Package License Information:

```

-----
Technology           Technology-package  Technology-package
Current              Type                Next reboot
-----
appxk9               appxk9              Smart License      appxk9
uck9                 None                Smart License      None
securityk9           securityk9          Smart License      securityk9
ipbase               ipbasek9            Smart License      ipbasek9

```

The current throughput level is 50000 kbps

cisco ISR4321/K9 (1RU) processor with 3743802K/3071K bytes of memory.
 Processor board ID FLM2201V1AX
 2 Gigabit Ethernet interfaces
 2 Voice FXS interfaces
 32768K bytes of non-volatile configuration memory.
 8388608K bytes of physical memory.
 7057407K bytes of flash memory at bootflash:.
 0K bytes of webUI ODM Files at webui:.

Configuration register is 0x2012

```

COXCME#sh cube status
CUBE-Version : 12.7.0
SW-Version : 16.12.1a, Platform ISR4321/K9

```



Global Cisco Unified CME Settings

In order to enable Cisco Unified CME IP2IP functionality, following command has to be entered:

```
voice service voip
  no ip address trusted authenticate
  mode border-element license capacity 20
  allow-connections sip to sip
  no supplementary-service sip moved-temporarily
  redirect ip2ip
  fax protocol pass-through g711ulaw
  sip
    session refresh
    registrar server expires max 600 min 60
    asserted-id pai
!
```

Explanation

Command	Description
allow-connections sip to sip	Allow IP2IP connections between two SIP call legs
fax protocol	Specifies the fax protocol
asserted-id	Specifies the privacy header in the outgoing SIP requests and response messages

Codecs

G711ulaw codec is used for this testing. Codec preferences used to change according to the test plan description.

```
voice class codec 1
  codec preference 1 g711ulaw
  codec preference 2 g711alaw
  codec preference 3 g722-64
!
```



Dial Peer

Outbound Dial-peer to Cox:

```
dial-peer voice 100 voip
description Outbound Call to Cox
translation-profile outgoing To-10Dig
destination-pattern .T
session protocol sipv2
session target sip-server
session transport udp
voice-class codec 1
dtmf-relay rtp-nte
no vad
!
```

Inbound Dial-peer from Cox:

```
dial-peer voice 101 voip
description inbound from Cox
translation-profile incoming to_ext
session protocol sipv2
session transport udp
incoming called-number 402.....
voice-class codec 1
dtmf-relay rtp-nte
no vad
```



Configuration Example

The following configuration snippet contains a sample configuration of Cisco Unified CME with all parameters mentioned previously.

Cisco Unified CME:

```
COXCME#sh run
```

```
version 16.12
service timestamps debug datetime msec
service timestamps log datetime msec
service call-home
platform qfp utilization monitor load 80
no platform punt-keepalive disable-kernel-core
!
hostname COXCME
!
boot-start-marker
boot system bootflash:isr4300-universalk9.16.12.01a.SPA.bin
boot-end-marker
!
!
vrf definition Mgmt-intf
!
address-family ipv4
exit-address-family
!
address-family ipv6
exit-address-family
!
enable secret 9
$14$mYRH$jxCCJz1tcdpwoE$Pbxxg7R2/qNJYJCA.1zbFo8gPeDZw93ZgDTB4Rso8yI
!
no aaa new-model
```



call-home

! If contact email address in call-home is configured as sch-smart-licensing@cisco.com

! the email address configured in Cisco Smart License Portal will be used as contact email address to send SCH notifications.

contact-email-addr sch-smart-licensing@cisco.com

profile "CiscoTAC-1"

active

destination transport-method http

no destination transport-method email

!

ip name-server 8.8.8.8

login on-success log

subscriber templating

multilink bundle-name authenticated

!

voice service voip

no ip address trusted authenticate

mode border-element license capacity 20

allow-connections sip to sip

no supplementary-service sip moved-temporarily

redirect ip2ip

fax protocol pass-through g711ulaw

sip

session refresh

registrar server expires max 600 min 60

asserted-id pai

!

voice class codec 1

codec preference 1 g711ulaw

codec preference 2 g711alaw

codec preference 3 g722-64

!

voice class sip-profiles 10



```
request INVITE sip-header Privacy add "Privacy:id"
!
voice class sip-profiles 11
  request INVITE sip-header Diversion add "Diversion:
<sip:6329@10.64.5.142>;privacy=off;reason=unconditional;screen=no"
!
voice register global
  mode cme
  source-address 10.64.5.142 port 2000
  max-dn 20
  max-pool 10
  load 7942 SIP42.9-2-1S
  load 7841 sip78xx.12-0-1-11
  mwi stutter
  tftp-path flash:
  file text
  create profile sync 0013901297582157
  auto-register
!
!
voice register dn 1
  number 6329
  name CoxUser1
  mwi
!
voice register dn 2
  number 6374
  name CoxUser2
!
!
voice register pool 1
  busy-trigger-per-button 1
  id mac 0008.3031.F49B
```



```
type 7975
number 1 dn 1
voice-class codec 1
username 6329 password 1234
call-forward b2bua all 7777
!
voice register pool 2
  busy-trigger-per-button 2
  id mac 2C86.D276.FCC2
  type 7841
  number 1 dn 2
  voice-class codec 1
  username 6374 password 1234
!
!
voice translation-rule 1
  rule 1 /\(^8...\)/ /402932\1/
  rule 2 /\(^6...\)/ /402401\1/
!
voice translation-rule 2
  rule 1 /402932\(...)\/ /\1/
  rule 2 /402401\(...)\/ /\1/
!
!
voice translation-profile To-10Dig
  translate calling 1
!
voice translation-profile to_ext
  translate called 2
!
voice-card 0/1
  no watchdog
!
```



```
voice-card 0/4
  no watchdog
!
no license feature hseck9
license udi pid ISR4321/K9 sn FD021422BVW
license accept end user agreement
license boot suite AdvUCSuiteK9
license boot level appxk9
license boot level securityk9
memory free low-watermark processor 67123
!
diagnostic bootup level minimal
!
spanning-tree extend system-id

et-analytics
!
redundancy
  mode none
!
interface GigabitEthernet0/0/0
  ip address 10.64.5.142 255.255.0.0
  negotiation auto
!
interface GigabitEthernet0/0/1
  ip address 192.65.x.x 255.255.0.0
  shutdown
  negotiation auto
!
interface Service-Engine0/1/0
  no ip address
!
interface Service-Engine0/4/0
```




```
!  
interface GigabitEthernet0  
  vrf forwarding Mgmt-intf  
  ip address 10.1.1.58 255.255.255.0  
  negotiation auto  
!  
ip forward-protocol nd  
no ip http server  
ip http secure-server  
ip tftp source-interface GigabitEthernet0/0/0  
ip route 0.0.0.0 0.0.0.0 10.64.1.1  
ip route 172.16.0.0 255.255.0.0 10.64.1.1  
ip route 172.17.0.0 255.255.0.0 10.64.1.1  
!  
tftp-server flash:kern2.78xx.12-0-1-11.sbn  
tftp-server flash:kern78xx.12-0-1-11.sbn  
tftp-server flash:rootfs2.78xx.12-0-1-11.sbn  
tftp-server flash:rootfs78xx.12-0-1-11.sbn  
tftp-server flash:sboot2.78xx.12-0-1-11.sbn  
tftp-server flash:sboot78xx.12-0-1-11.sbn  
tftp-server flash:sip78xx.12-0-1-11.loads  
tftp-server flash:apps42.9-2-1TH1-13.sbn  
tftp-server flash:cnu42.9-2-1TH1-13.sbn  
tftp-server flash:cvm42sip.9-2-1TH1-13.sbn  
tftp-server flash:dsp42.9-2-1TH1-13.sbn  
tftp-server flash:jar42sip.9-2-1TH1-13.sbn  
tftp-server flash:SIP42.9-2-1S.loads  
tftp-server flash:term42.default.loads  
tftp-server flash:term62.default.loads  
tftp-server flash:music-on-hold.wav  
!  
control-plane  
!
```



```
voice-port 0/1/0
  cptone IN
  station-id number 4024016374
  caller-id enable
!
voice-port 0/1/1
  cptone IN
  station-id number 4029328367
  caller-id enable
!
mgcp behavior rsip-range tgcp-only
mgcp behavior comedia-role none
mgcp behavior comedia-check-media-src disable
mgcp behavior comedia-sdp-force disable
!
mgcp profile default
!
telephony-service
  no privacy
  conference transfer-pattern
  max-ephones 20
  max-dn 20
  ip source-address 10.64.5.142 port 2000
  time-zone 39
  voicemail 7777
  max-conferences 8 gain -6
  call-forward pattern .T
  moh enable-g711 "flash:music-on-hold.wav"
  transfer-system full-consult
  transfer-pattern .T
  create cnf-files version-stamp 7960 May 19 2020 12:02:00
!
!
```



```
dial-peer voice 100 voip
description Outbound Call to Cox
translation-profile outgoing To-10Dig
destination-pattern .T
session protocol sipv2
session target sip-server
session transport udp
voice-class codec 1
dtmf-relay rtp-nte
no vad
```

!

```
dial-peer voice 101 voip
description inbound from Cox
translation-profile incoming to_ext
session protocol sipv2
session transport udp
incoming called-number 402.....
voice-class codec 1
dtmf-relay rtp-nte
no vad
```

!

```
dial-peer voice 102 voip
description towards CUC
destination-pattern 7777
session protocol sipv2
session target ipv4:10.71.4.15:5060
session transport udp
voice-class codec 1
voice-class sip profiles 11
dtmf-relay rtp-nte
no vad
```

!

```
dial-peer voice 103 pots
```



```
preference 2
service session
destination-pattern 8367
no digit-strip
port 0/1/1
!
dial-peer voice 104 pots
preference 2
service session
destination-pattern 6374
no digit-strip
port 0/1/0
!
sip-ua
credentials number 402506**** username 402506**** password 7
022E3D0E093F2D116F443F2F5C realm cox
authentication username 402506**** password 7 022E3D0E093F2D116F443F2F5C
realm cox
mwi-server ipv4:10.71.4.15 expires 3600 port 5060 transport udp unsolicited
registrar ipv4:10.64.4.166 expires 3600
sip-server ipv4:10.64.4.166:5060
!
ephone-dn 1 dual-line
number 6459
label 6459
!
ephone-dn 2 octo-line
number 6476
label 6476
caller-id block
!
ephone 1
device-security-mode none
mac-address CCAF.78D2.3E6D
```



```
username "6459" password 1234
type CIPC
button 1:1
!
ephone 2
privacy on
device-security-mode none
mac-address 0CD9.9690.038C
username "6476" password 1234
type 7942
button 1:2
!
line con 0
stopbits 1
line aux 0
stopbits 1
line vty 0 4
exec-timeout 0 0
password *****
login
!
ntp server 10.10.10.5
!
end

COXCME#
```



Cisco Unity Connection

Cisco Unity Connection Version

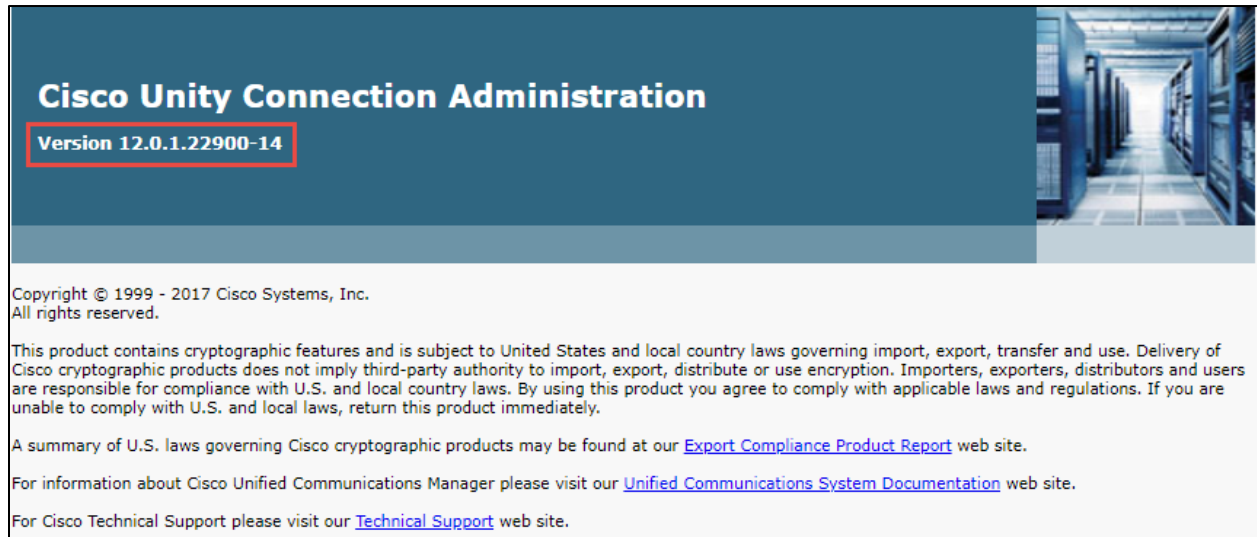


Figure 2: Cisco Unity Connection Version

Cisco Unity Connection User Configuration

Navigation: Cisco Unity Connection → Users → Users

- Set Alias= **6329** is used for this example
- Set First Name = **cisco** is used to identify this User
- Set Last Name = **cisco** is used for this example
- Set Display Name = **6329** is used in this example
- Set SMTP Address = **6329** is used in this example
- Set Extension = **6329** is used in this example
- Set Phone System = **Cox_CME** is used in this example



Cisco Unity Connection Administration
For Cisco Unified Communications Solutions

Navigation: Cisco Unity Connection Administration | admin | Search Documentation

Cisco Unity Connection

- Users
- Import Users
- Synch Users
- Class of Service
 - Class of Service
 - Class of Service Membership
- Templates
 - User Templates
 - Call Handler Templates
 - Contact Templates
 - Notification Templates
- Contacts
 - Contacts
- Distribution Lists
 - System Distribution Lists
- Call Management
 - System Call Handlers
 - Directory Handlers
 - Interview Handlers
 - Custom Recordings
 - Call Routing
- Message Storage
 - Mailbox Stores

Name

Alias* 6329

First Name cisco

Last Name cisco

Display Name 6329

SMTP Address 6329 @unity-unity2.lab.tekvizion.com

Initials

Title

Employee ID

LDAP Integration Status

Integrate with LDAP Directory

Do Not Integrate with LDAP Directory

Phone

Extension* 6329

Cross-Server Transfer Extension or URI

Outgoing Fax Number

Outgoing Fax Server --- Not Selected ---

Partition unity-unity2 Partition

Search Scope unity-unity2 Search Space

Phone System Cox_CME

Figure 3: Cisco Unity Connection User Configuration

- All other values are set to default

Cisco Unity Connection Administration
For Cisco Unified Communications Solutions

Navigation: Cisco Unity Connection Administration | administrator | Search Documentation | About | Sign On

Cisco Unity Connection

- Import Users
- Synch Users
- Class of Service
 - Class of Service
 - Class of Service Membership
- Templates
 - User Templates
 - Call Handler Templates
 - Contact Templates
 - Notification Templates
- Contacts
 - Contacts
- Distribution Lists
 - System Distribution Lists
- Call Management
 - System Call Handlers
 - Directory Handlers
 - Interview Handlers
 - Custom Recordings
 - Call Routing
- Message Storage
 - Mailbox Stores
 - Mailbox Stores Membership
 - Mailbox Quotas
 - Message Aging
- Networking
 - Legacy Links
 - Branch Management

Class of Service Voice Mail User COS

Active Schedule Weekdays View

Set for Self-enrollment at Next Sign-In

List in Directory

Send Non-Delivery Receipts on Failed Message Delivery

Skip PIN When Calling From a Known Extension

Use Short Calendar Caching Poll Interval

Recorded Name Play/Record

Location

Address

Building

City

State

Postal Code

Country United States

Use System Default Time Zone

Time Zone (GMT-06:00) America/Chicago

Language Use System Default Language

English(United States)

Department

Manager

Figure 4: Cisco Unity Connection User Configuration (Cont.)



Cisco Unity Connection Telephony Integration

Navigation: Telephony Integrations → Phone system

- Set Phone System Name = **Cox_CME** is used for this example

The screenshot displays the Cisco Unity Connection Administration web interface. The left-hand navigation pane shows a tree structure with 'Telephony Integrations' expanded and 'Phone System' selected. The main content area is titled 'Phone System' and contains several configuration sections:

- Phone System:** The 'Phone System Name*' field is populated with 'Cox_CME'. Below it is an unchecked checkbox for 'Default TRAP Phone System'.
- Message Waiting Indicators:** Includes three unchecked checkboxes: 'Send Message Counts', 'Use Same Port for Enabling and Disabling MWIs', and 'Force All MWIs Off for this Phone System'. A 'Run' button is present next to the text 'Synchronize All MWIs on This Phone System'.
- Call Loop Detection by Using DTMF:** Includes an unchecked checkbox for 'Enable for Supervised Transfers' and a checked checkbox for 'Enable for Forwarded Message Notification Calls (by Using DTMF)'. Below these are a 'DTMF Tone To Use' dropdown menu set to 'A' and a 'Guard Time' field set to '2500' milliseconds.
- Call Loop Detection by Using Extension:** Includes a checked checkbox for 'Enable for Forwarded Message Notification Calls (by Using Extension)'.
- Phone View Settings:** Includes an unchecked checkbox for 'Enable Phone View' and two empty text input fields for 'CTI Phone Access Username' and 'CTI Phone Access Password'.
- Outgoing Call Restrictions:** Includes three radio button options: 'Enable outgoing calls' (selected), 'Disable all outgoing calls immediately', and 'Disable all outgoing calls between'. Below are 'Beginning Time' and 'Ending Time' fields, each with dropdown menus for hour, minute, and AM/PM.

At the bottom of the configuration area, there are 'Save', 'Delete', 'Previous', and 'Next' buttons. A note at the very bottom states: 'Fields marked with an asterisk (*) are required.'

Figure 5: Cisco Unity Connection Telephony Integration



Port Group

Navigation: Telephony Integration → Port Group

- Set Display Name = **Cox_CME-1** is used for this example
- Check **Register with SIP server**

The screenshot shows the Cisco Unity Connection Administration web interface. The left sidebar is expanded to 'Telephony Integrations' > 'Port Group'. The main content area is titled 'Port Group' and contains the following configuration fields:

- Display Name***: Cox_CME-1
- Integration Method**: SIP
- Reset Status**: Reset Not Required (with a Reset button)
- Session Initiation Protocol (SIP) Settings**:
 - Register with SIP Server
 - Authenticate with SIP Server
 - Authentication Username: [text input]
 - Authentication Password: [text input]
 - Contact Line Name: [text input]
 - SIP Security Profile: 5060
 - SIP Transport Protocol: UDP
- Advertised Codec Settings**:
 - Change Advertising button
 - Table with columns: Display Name, Packet Size

Display Name	Packet Size
G.711 mu-law	20
G.729	20

 - Change Advertising button
- Message Waiting Indicator Settings**:
 - Enable Message Waiting Indicators
 - Delay between Requests: 0 milliseconds
 - Maximum Concurrent Requests: 0
 - Retries After Successful Attempt: 0
 - Retry Interval After Successful Attempt: 5 milliseconds
- Buttons: Save, Delete, Previous, Next
- Footnote: Fields marked with an asterisk (*) are required.

Figure 6: Port Group

Navigation: Telephony Integration → Port Group → Edit → Servers

- Set IPv4 Address or Host Name = **10.64.5.142**, Cisco unified CME's IP address is used for this example
- Set Port = **5060**
- Click on **Save**

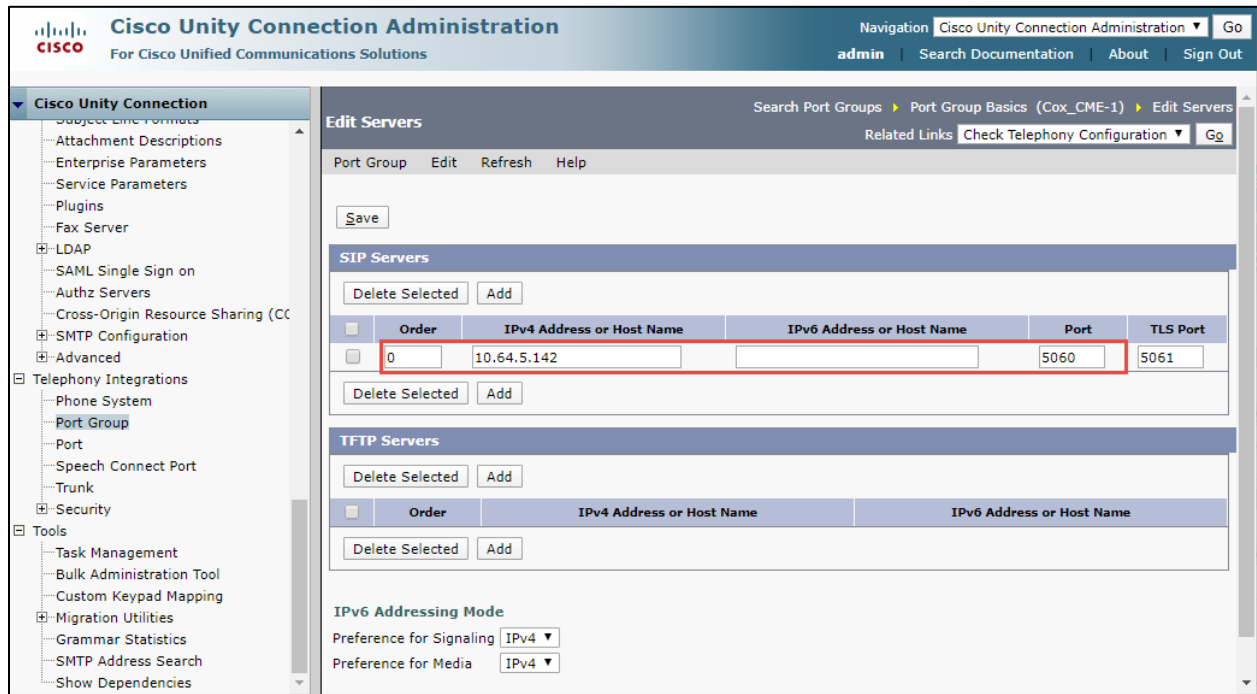
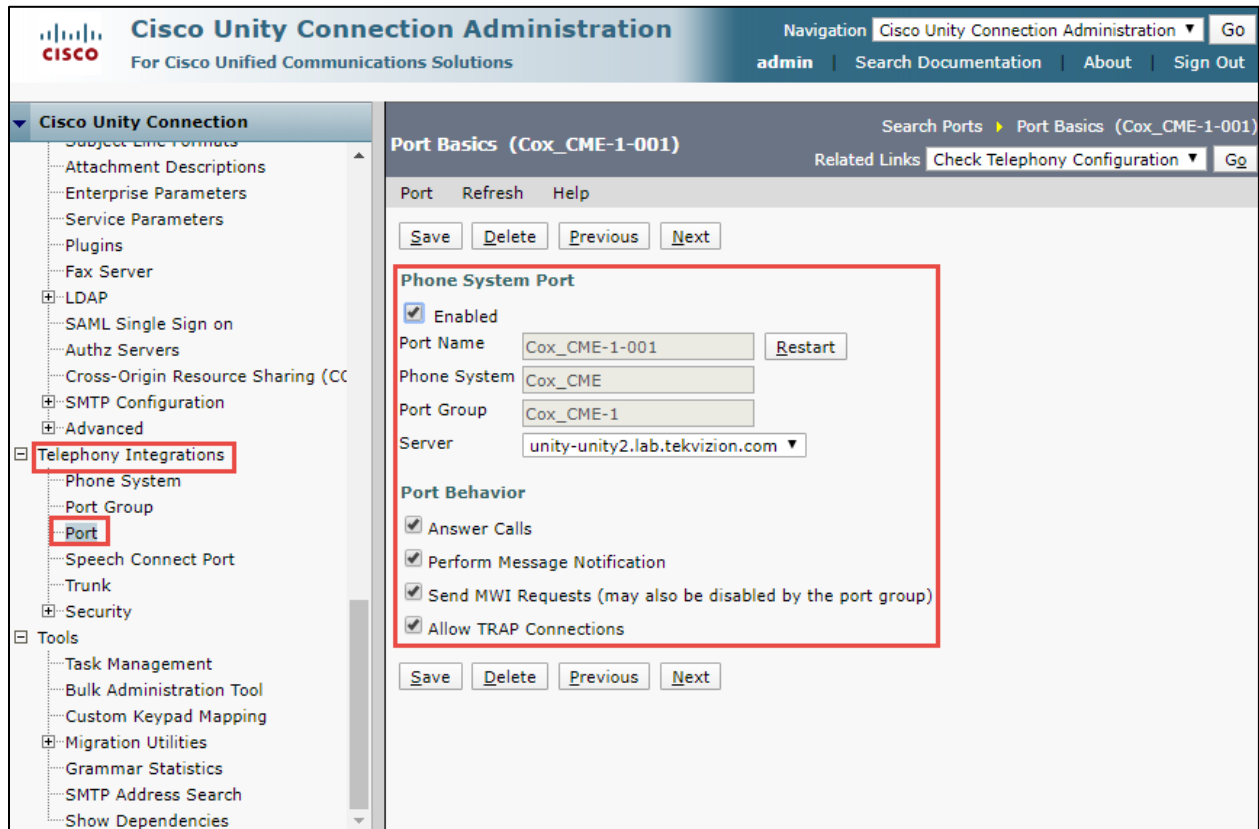


Figure 7: Port Group (Cont.)

Port

Navigation: Telephony Integration → Port

- Set Port Name = **Cox_CME-1-001** is used for this example
- Set Phone System = **Cox_CME**
- Set Port Group = **Cox_CME-1**
- Set Server = **unity-unity2.lab.tekvizion.com** is used for this example



The screenshot displays the Cisco Unity Connection Administration web interface. The left-hand navigation pane shows a tree structure under 'Cisco Unity Connection', with 'Telephony Integrations' and 'Port' highlighted with red boxes. The main content area is titled 'Port Basics (Cox_CME-1-001)'. It features a 'Phone System Port' section with the following configuration:

- Enabled
- Port Name: Cox_CME-1-001 (with a Restart button)
- Phone System: Cox_CME
- Port Group: Cox_CME-1
- Server: unity-unity2.lab.tekvizion.com

Below this is the 'Port Behavior' section with the following checked options:

- Answer Calls
- Perform Message Notification
- Send MWI Requests (may also be disabled by the port group)
- Allow TRAP Connections

Buttons for Save, Delete, Previous, and Next are present at the top and bottom of the configuration area.

Figure 8: Port

Acronyms



Acronym	Definitions
CME	Communications Manager Express
CPE	Customer Premise Equipment
CUC	Cisco Unity Connection
DTMF	Dual Tone Multi-Frequency
eSBC	Enterprise Session Border Controller
HA	High Availability
PSTN	Public Switched Telephone Network
SCCP	Skinny Client Control Protocol
SG3	Super Group 3
SIP	Session Initiation Protocol
SP	Service Provider



Important Information

THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS. IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES

Corporate Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-
1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 526-4100

European Headquarters

CiscoSystems
International BV
Haarlerbergpark
Haarlerbergweg 13-19
1101 CH Amsterdam
The Netherlands
[www-
europe.cisco.com](http://www-europe.cisco.com)
Tel: 31 0 20 357 1000
Fax: 31 0 20 357 1100

Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-
1706
USA
www.cisco.com
Tel: 408 526-7660
Fax: 408 527-0883

AsiaPacific Headquarters

Cisco Systems, Inc.
Capital Tower
168 Robinson Road
#22-01 to #29-01
Singapore 068912
www.cisco.com
Tel: +65 317 7777
Fax: +65 317 7799



Cisco Systems has more than 200 offices in the following countries and regions. Addresses, phone numbers, and fax numbers are listed on the Cisco Web site at <http://www.cisco.com/go/offices>.

Argentina • Australia • Austria • Belgium • Brazil • Bulgaria • Canada • Chile • China PRC • Colombia • Costa Rica • Croatia • Czech Republic • Denmark • Dubai, UAE • Finland • France • Germany • Greece • Hong Kong SAR • Hungary • India • Indonesia • Ireland • Israel • Italy • Japan • Korea • Luxembourg • Malaysia • Mexico • The Netherlands • New Zealand • Norway • Peru • Philippines • Poland • Portugal • Puerto Rico • Romania • Russia • Saudi Arabia • Scotland • Singapore • Slovakia • Slovenia • South Africa • Spain • Sweden • Switzerland • Taiwan • Thailand • Turkey Ukraine • United Kingdom • United States • Venezuela • Vietnam • Zimbabwe

© 2016 Cisco Systems, Inc. All rights reserved.

CCENT, Cisco Lumin, Cisco Nexus, the Cisco logo and the Cisco Square Bridge logo are trademarks of Cisco Systems, Inc.; Changing the Way We Work, Live, Play, and Learn is a service mark of Cisco Systems, Inc.; and Access Registrar, Aironet, BPX, Catalyst, CCDA, CCDP, CCVP, CCIE, CCIP, CCNA, CCNP, CCSP, Cisco, the Cisco Certified Internetwork Expert logo, Cisco IOS, Cisco Press, Cisco Systems, Cisco Systems Capital, the Cisco Systems logo, Cisco Unity, EtherFast, EtherSwitch, Fast Step, Follow Me Browsing, FormShare, GigaDrive, HomeLink, Internet Quotient, IOS, iPhone, iQ Expertise, the iQ logo, iQ Net Readiness Scorecard, iQuick Study, LightStream, Linksys, Meeting Place, MGX, Networking Academy, Network Registrar, Packet, PIX, ProConnect, ScriptShare, SMARTnet, StackWise, The Fastest Way to Increase Your Internet Quotient, and TransPath are registered trademarks of Cisco Systems, Inc. and/or its affiliates in the United States and certain other countries.

All other trademarks mentioned in this document or Website are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (0705R)

Printed in the USA