Cisco Unified CME Commands: R

refer target dial-peer

To populate the Refer To portion of a SIP Refer message with the address from the dial peer for the directory number being configured, use the **refer target dial-peer** command in voice register dn configuration mode. To return to the default, use the **no** form of this command.

refer target dial-peer

no refer target

Syntax Description

This command has no arguments or keywords.

Command Default

Call is transferred to the destination as specified in the SIP Refer message.

Command Modes

Voice register dn configuration (config-register-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XW2	Cisco Unified CME 4.2	This command was introduced.
12.4(15)XY	Cisco Unified CME 4.2(1)	This command was introduced.
12.4(15)XZ	Cisco Unified CME 4.3	This command was introduced.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

Use this command in voice register dn configuration mode to specify that the destination address for this directory number be the dial peer. If this command is not configured, Cisco IOS software will transfer the call to the destination in the SIP Refer message and if that destination address is Cisco Unified CME, call SIP will send out and route back to CME before sending to the directory number, creating two extra call legs.

The following partial output from the **show working-configuration** command shows the configuration for three directory numbers. This configuration will populate the Refer To portion of the SIP Refer message with the address from the dial peer for each of the directory numbers.

```
voice register dn  1
 session-server 1
 number 8999
 allow watch
 refer target dial-peer
!
voice register dn  2
 session-server 1
 number 8001
 allow watch
 refer target dial-peer
!
```

```
voice register dn  3
 session-server 1
 number 8101
 allow watch
 refer target dial-peer
```

refer-ood enable

To enable out-of-dialog refer (OOD-R) processing, use the **refer-ood enable** command SIP user-agent configuration mode. To disable OOD-R, use the **no** form of this command.

refer-ood enable [*request-limit*]

no refer-ood enable

Syntax Description

request-limit	(Optional) Maximum number of concurrent incoming OOD-R requests that the router can process. Range: 1 to 500. Default: 500.

Command Default

OOD-R processing is disabled.

Command Modes

SIP UA configuration (config-sip-ua)

Command History

Release	Cisco product	Modification
12.4(11)XJ	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

Out of dialog Refer allows applications to establish calls using the SIP gateway or Cisco Unified CME. The application sets up the call and the user does not dial out from their own phone.

Examples

The following example shows how to enable OOD-R:

```
Router(config)# sip-ua
Router(config-sip-ua)# refer-ood enable
```

Related Commands

	Description
authenticate (voice register global)	Defines the authenticate mode for SIP phones in a Cisco Unified CME or Cisco Unified SRST system.
credential load	Reloads a credential file into flash memory.

	Description
debug voip application	Displays all application debug messages.

reference-pooltype

To inherit the properties from the nearest supported phone model for a Cisco Unified SIP IP phone on Cisco Unified CME, use the **reference-pooltype** command in voice register pooltype mode. To remove the pool-type configuration, use the **no** form of this command.

reference- pooltype phone-type

noreference- pooltype phone-type

Syntax Description

phone-type	Unique number that represents the phone model.

Command Default

There is no reference phone to inherit the properties. This is the only command which has the **no** form as the default form.

Command Modes

Voice Register Pool Configuration (config-register-pool)

Command History

Cisco IOS Release	Cisco Product	Modification
15.3(3)M	Cisco SIP CME 10.0	This command was introduced.

Usage Guidelines

Use this command to inherit the properties from the nearest supported phone model for a Cisco Unified SIP IP phone on Cisco Unified CME.

Examples

The following example shows how to enter voice register pool configuration mode and inherit the properties from the nearest supported phone model SIP phones on a Cisco Unified CME system:

```
Router# configure terminal
Router(config)# voice register pool-type 9900
Router(config--register-pool-type)# reference-pooltype 9971
```

Related Commands

Command	Description
voice register pool-type	Adds a new Cisco Unified SIP IP phone to Cisco Unified CME.

regenerate (ctl-client)

To create a new CTLFile.tlv file after making changes to the CTL client configuration, use the **regenerate** command in CTL-client configuration mode. The **no** form of this command has no effect in the configuration.

regenerate

no regenerate

Syntax Description

This command has no arguments or keywords.

Command Default

A new CTLFile.tlv file is not created until this command is used.

Command Modes

CTL-client configuration (config-ctl-client)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

This command is used with Cisco Unified CME phone authentication.

Examples

The following example gives the instruction to regenerate the CTL file with the current information.

```
Router(config)# ctl-client
Router(config-ctl-client)# server capf 10.2.2.2 trustpoint capftrust
Router(config-ctl-client)# server cme 10.2.2.3 trustpoint cmetp
Router(config-ctl-client)# server tftp 10.2.2.4 trustpoint tftptp
Router(config-ctl-client)# sast1 trustpoint sast1tp
Router(config-ctl-client)# sast2 trustpoint sast2tp
Router(config-ctl-client)# regenerate
```

register-id

To create an ID for explicitly identifying an external feature server during Register requests, use the **register-id** command in voice register session-server configuration mode. To remove an ID, use the **no** form of this command.

register-id *name*

no register-id *name*

Syntax Description

name	String of up to 30 alphanumeric characters.

Command Default

No identifier is created.

Command Modes

Voice register session-server configuration (config-register-fs)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XW2	Cisco Unified CME 4.2	This command was introduced.
12.4(15)XY	Cisco Unified CME 4.2(1)	This command was introduced.
12.4(15)XZ	Cisco Unified CME 4.3	This command was introduced.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

Use this command to create an ID for identifying a route point during Register requests. Cisco Unified CME challenges and authenticates the initial keepalive Register request and issues a system-wide unique Cisco-referenceID to be included in the response to the Register request from this route point.

Examples

The following partial output shows the configuration of a session manager for an external feature server, including the register ID of CSR1:

```
router# show running-configuration

!
!
voice register session-server 1
 register-id CSR1
 keepalive 360
```

Related Commands

Command	Description
keepalive	Duration for registration after which the registration expires unless the feature server reregisters before the registration expiry.

registrar server (SIP)

To enable SIP registrar functionality, use the **registrar server** command in SIP configuration mode. To disable SIP registrar functionality, use the **no** form of the command.

registrar server [**expires** [**max** *sec*] [**min** *sec*]]

no registrar server

Syntax Description

expires	(Optional) Sets the active time for an incoming registration.
max sec	(Optional) Maximum expires time for a registration, in seconds. The range is from 600 to 86400. The default is 3600.
min sec	(Optional) Minimum expires time for a registration, in seconds. The range is from 60 to 3600. The default is 60.

Command Default

SIP registrar functionality on the Cisco Unified CME router id disabled.

Command Modes

SIP configuration (config-voi-sip)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(15)ZJ	Cisco SIP SRST 3.0	This command was introduced.
12.3(4)T	Cisco SIP SRST 3.0	This command was integrated into Cisco IOS Release 12.3(4)T.
12.4(4)T	Cisco CME 3.4 and Cisco SIP SRST 3.4	This command was added to Cisco CME.

Usage Guidelines

When this command is entered, the router accepts incoming SIP Register messages. If SIP Register message requests are for a shorter expiration time than what is set with this command, the SIP Register message expiration time is used.

This command is mandatory for Cisco Unified SIP SRST or Cisco Unified CME and must be entered before any **voice register pool** or **voice register global** commands are configured.

If the WAN is down and you reboot your Cisco Unified CME or Cisco Unified SIP SRST router, when the router reloads it will have no database of SIP phone registrations. The SIP phones will have to register again,

which could take several minutes, because SIP phones do not use a keepalive functionality. To shorten the time before the phones re-register, the registration expiry can be adjusted with this command. The default expiry is 3600 seconds; an expiry of 600 seconds is recommended.

Examples

The following partial sample output from the **show running-config** command shows that SIP registrar functionality is set:

```
voice service voip
 allow-connections sip-to-sip
 sip
  registrar server expires max 1200 min 300
```

Related Commands

	Description
sip	Enters SIP configuration mode from voice service VoIP configuration mode.
voice register global	Enters voice register global configuration mode in order to set global parameters for all supported Cisco SIP phones in a Cisco Unified CME or Cisco Unified SIP SRST environment.
voice register pool	Enters voice register pool configuration mode for SIP phones.

reset (ephone)

To perform a complete reboot of a single phone associated with a Cisco CallManager Express (Cisco CME) router, use the **reset** command in ephone configuration mode.

reset

Syntax Description

This command has no arguments or keywords.

Command Default

No reset is performed.

Command Modes

Ephone configuration (config-ephone)

Command History

Cisco IOS Release	Cisco Product	Modification
12.1(5)YD	Cisco ITS 1.0	This command was introduced
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T

Usage Guidelines

After you update information for one or more phones associated with a Cisco CME router, the phone or phones must be rebooted. There are two commands to reboot the phones: **reset** and **restart.** The **reset** command performs a "hard" reboot similar to a power-off-power-on sequence. It reboots the phone and contacts the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server to update from their information as well. The **restart** command performs a "soft" reboot by simply rebooting the phone without contacting the DHCP and TFTP servers. The **reset** command takes significantly longer to process than the **restart** command when you are updating multiple phones, but it must be used after updating phone firmware, user locale, network locale, or URL parameters. For simple button, line, or speed-dial changes, you can use the **restart** command.

Use the **reset** (ephone) command to perform a complete reboot of an IP phone when you are in ephone configuration mode. This command has the same effect as a **reset** (telephony-service) command that is used to reset a single phone.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example resets the SCCP phone with a phone-tag of 1:

```
Router(config)# ephone 1
Router(config-ephone)# reset
```

Related Commands

	Description
reset (telephony-service)	Performs a complete reboot of one or all phones associated with a Cisco CME router.
restart (ephone)	Performs a fast reboot of a single phone associated with a Cisco CME router.
restart (telephony-service)	Performs a fast reboot of one or all phones associated with a Cisco CME router.

reset (telephony-service)

To perform a complete reboot of one or all phones associated with a Cisco CallManager Express (Cisco CME) router, use the **reset** command in telephony-service configuration mode. To interrupt and cancel a sequential reset cycle, use the **no** form of the command with the **sequence-all** keyword.

reset {**all** [*time-interval*]| **cancel**| *mac-address*| **sequence-all**}

no reset {**all** [*time-interval*]| **cancel**| *mac-address*| **sequence-all**}

Syntax Description

all	Resets all Cisco IP phones served by the Cisco CME router. The router pauses for 15 seconds between the reset starts for each successive phone unless the *time-interval* argument is used to change that value.
time-interval	(Optional) Time interval, in seconds, between each phone reset. Range is from 0 to 60. Default is 15.
cancel	Interrupts a sequential reset cycle that was started with a **reset sequence-all** command.
mac-address	MAC address of a particular Cisco IP phone.
sequence-all	Resets all phones in strict one-at-a-time order by waiting for one phone to reregister before starting the reset for the next phone. The sequencing of resets prevents possible conflicts between phones trying to access TFTP services simultaneously. There is a reset timeout of 4 minutes, after which the router stops waiting for the currently registering phone to complete registration and starts to reset the next phone.

Command Default

No reset is performed.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.1(5)YD	Cisco ITS 1.0	This command was introduced.
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.

Cisco IOS Release	Cisco Product	Modification
12.2(11)YT	Cisco ITS 2.1	The *time-interval* range maximum was increased from 15 to 60 and the default was changed from 0 to 15.
12.2(11)YT1	Cisco ITS 2.1	The **cancel** and **sequence-all** keywords were introduced.
12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

After you update information for one or more phones associated with a Cisco CME router, the phone or phones must be rebooted using either the **reset** command or the **restart** command**.** The **reset** command performs a "hard" reboot similar to a power-off-power-on sequence and contacts the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server for updated information as well. The **restart** command performs a "soft" reboot by simply rebooting the phone without contacting the DHCP and TFTP servers. The **reset** command takes significantly longer to process than the **restart** command when you are updating multiple phones, but it must be used after you make changes to phone firmware, user locale, network locale, or URL parameters. For simple button, line, or speed-dial changes, you can use the **restart** command.

When you use the **reset** command, the default time interval of 15 seconds is recommended so that phone reset operations are staggered in order to avoid all phones attempting to access router system resources at the same time. A shorter interval may be used on systems with only a small number of phones or for cases where a simple reset of the phones is desired that does not result in the phones downloading updates to the phone firmware (using the router's TFTP service).

When you use the **reset sequence-all** command, the router waits for one phone to complete its reset and reregister before starting to reset the next phone. The delay provided by this command prevents multiple phones from attempting to access the TFTP server simultaneously and therefore failing to reset properly. Each reset operation can take several minutes when you use this command. There is a reset timeout of 4 minutes, after which the router stops waiting for the currently registering phone to complete registration and starts to reset the next phone.

If the router configuration is changed so that the eXtensible Markup Language (XML) configuration files for the phones are modified (changes are made to user locale, network locale, or phone firmware), then whenever you use the **reset all** or **restart all** command, the router automatically executes the **reset sequence-all** command instead. The **reset sequence-all** command resets phones one at a time in order to prevent multiple phones from trying to contact the TFTP server simultaneously. This one-at-a-time sequencing can take a long time if there are many phones. To avoid this automatic behavior, use the **reset all** *time-interval* or the **restart all** *time-interval* with an explicit argument that is not equal to the default 15-second time interval; for example, set a time interval of 14 seconds. If a **reset sequence-all** command has been started in error, use the **reset cancel** command to interrupt and cancel the sequence of resets.

The **restart** command allows the system to perform quick phone resets in which only the button template, line information, and speed-dial information is updated. See the documentation for the **restart** command for more information.

The **no** form of this command has an effect only when used with the **all** or **sequence-all** keyword, when it interrupts and cancels the sequential resetting of phones.

Examples

The following example resets all IP phones served by the Cisco CME router:

```
Router(config)# telephony-service
Router(config-telephony)# reset all
```

The following example resets the Cisco IP phone with the MAC address CFBA.321B.96FA:

```
Router(config)# telephony-service
Router(config-telephony)# reset CFBA.321B.96FA
```

The following example resets all IP phones in sequential, not-overlapping order:

```
Router(config)# telephony-service
Router(config-telephony)# reset sequence-all
```

Related Commands

	Description
reset (ephone)	Performs a complete reboot of a single phone associated with a Cisco CME router.
restart (ephone)	Performs a fast reboot of a single phone associated with a Cisco CME router.
restart (telephony-service)	Performs a fast reboot of one or all phones associated with a Cisco CME router.
telephony-service	Enters telephony-service configuration mode.

reset (voice logout-profile and voice user-profile)

To perform a complete reboot of all IP phones on which a particular extension-mobility profile is downloaded, use the **reset** command in voice logout-profile configuration mode or voice user-profile configuration mode.

reset

Syntax Description

This command has no arguments or keywords.

Command Default

No reset is performed.

Command Modes

Voice logout-profile configuration (voice-logout-profile) Voice user-profile configuration (voice-user-profile)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XW2	Cisco Unified CME 4.2	This command was introduced.
12.4(15)XY	Cisco Unified CME 4.2(1)	This command was introduced.
12.4(15)XZ	Cisco Unified CME 4.3	This command was introduced.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

Use this command to perform a “hard” reboot similar to a power-off-power-on sequence, which includes downloading updated information from the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server.

Configure this command in voice logout-profile configuration mode after creating or modifying a logout profile for extension mobility.

Configure this command in voice user-profile configuration mode after creating or modifying an individual user’s profile for extension mobility.

This command has a no form, but the no form has no effect.

Examples

The following example shows how to modify a logout profile by adding speed-dial definitions and then reset all IP phones on which this logout profile is downloaded to propagate the modification:

```
Router# configure terminal
Router(config)# voice logout-profile
12
Router(config-user-profile)# speed-dial 1 3001
Router(config-user-profile)# speed-dial 2 3002 blf
Router (config-logout-profile)# reset
Router (config-logout-profile)# exit
```

```
Router(config)#
```

reset (voice register global)

To perform a complete reboot of all SIP phones associated with a Cisco CallManager Express (Cisco CME) router, use the **reset** command in voice register global configuration mode.

reset

Syntax Description

This command has no arguments or keywords.

Command Default

No reset is performed.

Command Modes

Voice register global configuration (config-register-global)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines

After you update information for one or more SIP phones associated with a Cisco CME router, reboot the phones by using the **reset** command. The **reset** command performs a "hard" reboot similar to a power-off-power-on sequence and contacts the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server for updated information as well. Configure the **reset** command after you make changes to phone firmware, user locale, network locale, or URL parameters.

The time interval between each phone reset is 15 seconds, thereby avoiding an attempt by all phones to access router system resources at the same time.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example shows how to reset all SIP phones served by the Cisco CME router:

```
Router(config)# voice register global
Router(config-register-global)# reset
```

Related Commands

	Description
reset (voice register pool)	Performs a complete reboot of a single SIP phone associated with a Cisco CME router.

reset (voice register pool)

To perform a complete reboot of a specific SIP phone associated with a Cisco CallManager Express (Cisco CME) router, use the **reset** command in voice register pool configuration mode. To interrupt a reset cycle, use the **no** form of this command.

reset

no reset

Syntax Description

This command has no arguments or keywords.

Command Default

No reset is performed.

Command Modes

Voice register pool configuration (config-register-pool)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4	This command was introduced.

Usage Guidelines

After you update information for one or more phones associated with a Cisco CME router, the phones must be rebooted by using the **reset** command. The **reset** command performs a "hard" reboot similar to a power-off-power-on sequence and contacts the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server for updated information as well. Configure the **reset** command after you make changes to phone firmware, user locale, network locale, or URL parameters.

Use this command to perform a complete reboot of an individual SIP phone when you are in voice register pool configuration mode. To reset all SIP phones, use the **reset** (voice register global) command.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example shows how to reset SIP phone 1 served by the Cisco CME router:

```
Router(config)# voice register pool 1
Router(config-register-pool)# reset
```

Related Commands

	Description
reset (voice register global)	Performs a complete reboot of all SIP phones associated with a Cisco CME router.

reset (voice-gateway)

To perform a complete reboot of all analog phones associated with the voice gateway and registered to Cisco Unified CME, use the **reset** command in voice-gateway configuration mode.

reset

Syntax Description

This command has no arguments or keywords.

Command Default

No reset is performed.

Command Modes

Voice-gateway configuration (config-voice-gateway)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(22)YB	Cisco Unified CME 7.1	This command was introduced.
12.4(24)T	Cisco Unified CME 7.1	This command was integrated into Cisco IOS Release 12.4(24)T.

Usage Guidelines

After you update information for one or more analog phones associated with the voice gateway, reboot the phones by using the **reset** command. The **reset** command performs a "hard" reboot similar to a power-off-power-on sequence and contacts the Dynamic Host Configuration Protocol (DHCP) server and the TFTP server for updated information. Use the **reset** command after you make changes to phone firmware, user or network locales, or URL parameters.

The time interval between each phone reset is 15 seconds, to avoid an attempt by all phones to access system resources at the same time.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example shows how to reset all analog phones associated with the voice gateway:

```
Router(config)# voice-gateway system 1
Router(config-voice-gateway)# reset
```

Related Commands

Command	Description
restart (voice-gateway)	Performs a fast restart of all analog endpoints associated with the voice gateway.

reset tapi

To reset the connection between a Telephony Application Programmer's Interface (TAPI) application and a particular SCCP phone in Cisco Unified CME, use the **reset tapi** command in ephone configuration mode.

reset tapi

Syntax Description

This command has no arguments or keywords.

Command Default

No reset of the connection between the TAPI application and the router is performed.

Command Modes

Ephone configuration (config-ephone)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(20)YA	Cisco Unified CME 7.0(1)	This command was introduced.
12.4(22)T	Cisco Unified CME 7.0(1)	This command was integrated into Cisco IOS Release 12.4(22)T.

Usage Guidelines

This command in ephone configuration mode resets the connection between a TAPI application and a particular SCCP phone. This command does not reset the Ethernet phone.

To disassociate and reestablish the connection without using this command, you must reboot the router.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example shows how to reset the connection between a TAPI application and the SCCP phone associated with the ephone-tag of 1:

```
Router(config)# ephone 1
Router(config-ephone)# reset tapi
```

restart (ephone)

To perform a fast reboot of an IP phone associated with a Cisco CallManager Express (Cisco CME) router, use the **restart** command in ephone configuration mode. To cancel the reboot, use the **no** form of this command.

restart

no restart

Syntax Description

This command has no arguments or keywords.

Command Default

No restart is performed.

Command Modes

Ephone configuration (config-ephone)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(11)YT1	Cisco ITS 2.1	This command was introduced.
12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

This command causes the system to perform a fast phone reboot in which only the button template, lines, and speed-dial numbers are updated on the phone. For updates related to phone firmware, user locale, network locale, or URL parameters, use the **reset** command**.** The **restart** command is much faster than the **reset** command because the phone does not need to access the DHCP or TFTP server.

To restart all phones in a Cisco CME system for quick changes to buttons, lines, and speed-dial numbers, use the **restart** command in telephony-service configuration mode.

This command has a **no** form, but the **no** form has no effect.

Examples

The following example restarts the phone with phone-tag 1:

```
Router(config)# ephone 1
Router(config-ephone)# restart
```

Related Commands

	Description
reset (ephone)	Performs a complete reboot of a Cisco IP phone associated with a Cisco CME router.

	Description
reset (telephony-service)	Performs a complete reboot of one or all phones associated with a Cisco CME router.
restart (telephony-service)	Performs a fast reboot of one or all phones associated with a Cisco CME router.

restart (telephony-service)

To perform a fast reboot of one or all phones associated with a Cisco CallManager Express (Cisco CME) router, use the **restart** command in telephony-service configuration mode. To cancel the reboot, use the **no** form of this command.

restart {**all** [*time-interval*]| *mac-address*}

no restart {**all** [*time-interval*]| *mac-address*}

Syntax Description

all	Restarts all phones associated with the Cisco CME router.
time-interval	(Optional) Time between each phone restart, in seconds. Range is from 0 to 60. Default is 15.
mac-address	MAC address of the phone to be restarted.

Command Default

Time-interval is 15 seconds.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(11)YT1	Cisco ITS 2.1	This command was introduced.
12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

This command causes the system to perform a fast phone reset in which only the button template, lines, and speed-dial numbers are updated on the phone. For updates related to phone firmware, user locale, network locale, or URL parameters, use the **reset** command.

Use the **restart** command to reboot IP phones after quick changes to buttons, lines, and speed-dial numbers. This command is much faster than the **reset** command because the phone does not access the DHCP or TFTP server.

To restart a single phone, use the **restart c**ommand with the *mac-address* argument or use the **restart** command in ephone configuration mode.

If the router configuration is changed so that the eXtensible Markup Language (XML) configuration files for the phones are modified (changes are made to user locale, network locale, or phone firmware), then whenever you use the **reset all** or **restart all** command, the router automatically executes the **reset sequence-all** command

instead. The **reset sequence-all** command resets phones one at a time in order to prevent multiple phones trying to contact the TFTP server simultaneously. This one-at-a-time sequencing can take a long time if there are many phones. To avoid this automatic behavior, use the **reset all** *time-interval* command or the **restart all** *time-interval* command with an explicit argument that is not equal to the default 15-second time interval; for example, set a time interval of 14 seconds. If a **reset sequence-all** command has been started in error, use the **reset cancel** command to interrupt and cancel the sequence of resets.

The **no** form of this command has an effect only when used with the **all** keyword, when it interrupts and cancels the sequential restarting of phones.

Examples

The following example performs a quick restart of all phones in a Cisco CME system:

```
Router(config)# telephony-service
Router(config-telephony)# restart all
```

Related Commands

	Description
reset (ephone)	Performs a complete reboot of a Cisco IP phone associated with a Cisco CME router.
reset (telephony-service)	Performs a complete reboot of one or all phones associated with a Cisco CME router.
restart (ephone)	Performs a fast reboot of a single phone associated with a Cisco CME router.

restart (voice register)

To perform a fast reset of one or all SIP phones associated with a Cisco Unified CME router, use the **restart** command in voice register global or voice register pool configuration mode. To cancel the reboot, use the **no** form of this command.

restart

no restart

Syntax Description

This command has no arguments or keywords.

Command Default

SIP phones are not restarted.

Command Modes

Voice register global configuration (config-register-global) Voice register pool configuration (config-register-pool)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

This command causes the system to perform a fast phone reset in which only the button template, lines, and speed-dial numbers are updated on the phone. For updates related to phone firmware, user locale, network locale, or URL parameters, use the **reset** command.

Use this command to reboot SIP phones after quick changes to buttons, lines, and speed-dial numbers. This command is much faster than the **reset** command because the phone does not access the DHCP or TFTP server.

To restart a single SIP phone, use the **restart** command in voice register pool configuration mode. To restart all SIP phones in a Cisco Unified CME system, use the **restart** command in voice register global configuration mode.

This command has a **no** form, however the **no** form has no effect.

Note This command requires firmware load 8-0-2-14 or later versions; it is not supported in older SIP phone loads. To support this command on SIP phones using older firmware, you must upgrade all your phone firmware.

Examples

The following example performs a quick restart of all SIP phones in a Cisco Unified CME system:

```
Router(config)# voice register global
Router(config-register-global)# restart
```

The following example performs a quick restart of SIP phone 10:

```
Router(config)# voice register pool 10
Router(config-register-pool)# restart
```

Related Commands

	Description
reset (voice register pool)	Performs a complete reboot of a single SIP phone associated with a Cisco Unified CME router.
reset (voice register global)	Performs a complete reboot of all SIP phones associated with a Cisco Unified CME router.

restart (voice-gateway)

To perform a fast restart of all analog phones associated with the voice gateway and registered to Cisco Unified CME, use the **restart** command in voice-gateway configuration mode.

restart

Syntax Description

This command has no arguments or keywords.

Command Default

Analog phones are not restarted.

Command Modes

Voice-gateway configuration (config-voice-gateway)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(22)YB	Cisco Unified CME 7.1	This command was introduced.
12.4(24)T	Cisco Unified CME 7.1	This command was integrated into Cisco IOS Release 12.4(24)T.

Usage Guidelines

This command initiates a quick phone restart in which only the buttons, lines, and speed-dial numbers are updated on the phone. For updates related to phone firmware, user and network locales, or URL parameters, use the **reset** command.

Use this command to reboot all analog phones on the voice gateway after simple configuration changes to buttons, lines, and speed-dial numbers. This command is faster than the **reset** command because the phone does not access the DHCP server.

This command has a **no** form, although the **no** form has no effect.

Examples

The following example shows how to perform a quick restart of all analog phones:

```
Router(config)# voice-gateway system 1
Router(config-voice-gateway)# restart
```

Related Commands

Command	Description
reset (voice-gateway)	Performs a complete reboot of all analog endpoints associated with the voice gateway.

ring (ephone-dn)

To set the ring pattern for all incoming calls to an ephone-dn, use the **ring** command in ephone-dn configuration mode. To return to the standard ring pattern, use the **no** form of this command.

ring {**external**| **feature**| **internal**} [**primary**| **secondary**]

no ring

Syntax Description

external	External ring pattern is used for all incoming calls.
feature	Feature ring pattern is used for all incoming calls.
internal	Internal ring pattern is used for all incoming calls.
primary	(Optional) Ring pattern is used on primary number only.
secondary	(Optional) Ring pattern is used on secondary number only.

Command Default

Standard ring pattern is used.

Command Modes

Ephone-dn configuration (config-ephone-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

This command allows you to select one of the three ring styles supported by SCCP—internal, external, or feature ring. The ring pattern is used for all types of incoming calls to this directory number, on all phones on which the directory number appears. If the phone is already in use, an incoming call is presented as a call-waiting call and uses the distinctive call-waiting beep.

If the **primary** or **secondary** keyword is used, the distinctive ring is used only if the incoming called number matches the primary number or secondary number defined for the ephone-dn. If there is no secondary number defined for the ephone-dn, the **secondary** keyword has no effect.

By default, Cisco Unified CME uses the internal ring pattern for calls between local IP phones and uses the external ring pattern for all other types of calls.

You can associate the feature ring pattern with a specific button on a phone by using the **button f** command. This command assigns the ring pattern to the button on the phone so that different phones that share the same directory number can use a different ring style.

Examples

The following example sets external ringing for all incoming calls on extension 2389.

```
ephone-dn 24
 number 2389
 ring external
```

Related Commands

	Description
button	Associates ephone-dns with individual buttons on an IP phone and specifies line type or ring behavior.

route-code

To enable phone users to dial a route code to specify special routing for a call, use the **route-code** command in voice MLPP configuration mode. To reset to the default, use the **no** form of this command.

route-code

no route-code

Syntax Description

This command has no arguments or keywords.

Command Default

Route code is disabled.

Command Modes

Voice MLPP configuration (config-voice-mlpp)

Command History

Cisco IOS Release	Cisco Product	Modification
15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.

Usage Guidelines

This command enables users to specify special routing for an MLPP call by dialing a route code. The route code is a two-digit number beginning with 1.

Examples

The following example shows how to enable users to dial a route code:

```
Router(config)# voice mlpp
Router(config-voice-mlpp)# route-code
```

Related Commands

Command	Description
access-digit	Defines the access digit that phone users dial to request a precedence call.
mlpp preemption	Enables preemption capability on an SCCP phone or analog FXS port.
service-digit	Enables phone users to dial a service digit to request off-net services.

rule (voice translation-rule)

To define a translation rule, use the **rule** command in voice translation-rule configuration mode. To delete the translation rule, use the **no** form of this command.

Match and Replace Rule

rule*precedence /match-pattern/ /replace-pattern/***[type** *{match-type replace-type}***[plan***{match-type replace-type}***]]**

no rule *precedence*

Reject Rule

rule*predence***reject***precedence /match-pattern/ /replace-pattern//match-pattern/***[type** *{match-type***[plan***{match-type r***]]**

no rule *precedence*

Syntax Description

precedence	Priority of the translation rule. Range is from 1 to 15.
/*match-pattern*/	Stream editor (SED) expression used to match incoming call information. The slash '/' is a delimiter in the pattern.
/*replace-pattern*/	SED expression used to replace the match pattern in the call information. The slash '/' is a delimiter in the pattern.

type *match-type replace-type*	(Optional) Number type of the call. Valid values for the *match-type* argument are as follows: • **abbreviated—**Abbreviated representation of the complete number as supported by this network. • **any—**Any type of called number. • **international—**Number called to reach a subscriber in another country. • **national—**Number called to reach a subscriber in the same country, but outside the local network. • **network—**Administrative or service number specific to the serving network. • **reserved—**Reserved for extension.**subscriber—**Number called to reach a subscriber in the same local network. • **unknown—**Number of a type that is unknown by the network. Valid values for the *replace-type* argument are as follows: • **abbreviated—**Abbreviated representation of the complete number as supported by this network. • **international—**Number called to reach a subscriber in another country. • **national—**Number called to reach a subscriber in the same country, but outside the local network.
type *match-type replace-type* (continued)	• **network—**Administrative or service number specific to the serving network. • **reserved—**Reserved for extension. • **subscriber—**Number called to reach a subscriber in the same local network. • **unknown—**Number of a type that is unknown by the network.

plan *match-type replace-type*	(Optional) Numbering plan of the call. Valid values for the *match-type* argument are as follows: • **any—**Any type of dialed number. • **data** • **ermes** • **isdn** • **national—**Number called to reach a subscriber in the same country, but outside the local network. • **private** • **reserved—**Reserved for extension. • **telex** • **unknown—**Number of a type that is unknown by the network. Valid values for the *replace-type* argument are as follows: • **data** • **ermes** • **isdn** • **national—**Number called to reach a subscriber in the same country, but outside the local network. • **private** • **reserved—**Reserved for extension. • **telex** • **unknown—**Number of a type that is unknown by the network.
reject	The match pattern of a translation rule is used for call-reject purposes.

Command Default No default behavior or values

Command Modes Voice translation-rule configuration

Command History

Release	Modification
12.2(11)T	This command was introduced with a new syntax in voice-translation-rule configuration mode.
15.1(4)M	This command was introduced with an increase in the maximum value of the precidence variable from 15 to 100.

Usage Guidelin

Note Use this command in conjunction after the **voice translation-rule** command. An earlier version of this command uses the same name but is used after the **translation-rule** command and has a slightly different command syntax. In the older version, you cannot use the square brackets when you are entering command syntax. They appear in the syntax only to indicate optional parameters, but are not accepted as delimiters in actual command entries. In the newer version, you can use the square brackets as delimiters. Going forward, we recommend that you use this newer version to define rules for call matching. Eventually, the **translation-rule** command will not be supported.

A translation rule applies to a calling party number (automatic number identification [ANI]) or a called party number (dialed number identification service [DNIS]) for incoming, outgoing, and redirected calls within Cisco H.323 voice-enabled gateways.

Number translation occurs several times during the call routing process. In both the originating and terminating gateways, the incoming call is translated before an inbound dial peer is matched, before an outbound dial peer is matched, and before a call request is set up. Your dial plan should account for these translation steps when translation rules are defined.

The below table shows examples of match patterns, input strings, and result strings for the rule (voice translation-rule) command.

Table 1: Match Patterns, Input Strings and Result Strings

Match Pattern	Replacement Pattern	Input String	Result String	Description
/^.*/	//	4085550100		Any string to null string.
//	//	4085550100	4085550100	Match any string but no replacement. Use this to manipulate the call plan or call type.
/\(^...\)456\(...\)/	/\1555\2/	4084560177	4085550177	Match from the middle of the input string.

Match Pattern	Replacement Pattern	Input String	Result String	Description
/\(.*\)0120/	/\10155/	4081110120	4081110155	Match from the end of the input string.
/^1#\(.*\)/	/\1/	1#2345	2345	Replace match string with null string.
/^408...\(8333\)/	/555\1/	4087770100	5550100	Match multiple patterns.
/1234/	/00&00/	5550100	55500010000	Match the substring.
/1234/	/00\000/	5550100	55500010000	Match the substring (same as &).

The software verifies that a replacement pattern is in a valid E.164 format that can include the permitted special characters. If the format is not valid, the expression is treated as an unrecognized command.

The number type and calling plan are optional parameters for matching a call. If either parameter is defined, the call is checked against the match pattern and the selected type or plan value. If the call matches all the conditions, the call is accepted for additional processing, such as number translation.

Several rules may be grouped together into a translation rule, which gives a name to the rule set. A translation rule may contain up to 15 rules. All calls that refer to this translation rule are translated against this set of criteria.

The precedence value of each rule may be used in a different order than that in which they were typed into the set. Each rule's precedence value specifies the priority order in which the rules are to be used. For example, rule 3 may be entered before rule 1, but the software uses rule 1 before rule 3.

The software supports up to 128 translation rules. A translation profile collects and identifies a set of these translation rules for translating called, calling, and redirected numbers. A translation profile is referenced by trunk groups, source IP groups, voice ports, dial peers, and interfaces for handling call translation.

Examples

The following example applies a translation rule. If a called number starts with 5550105 or 70105, translation rule 21 uses the rule command to forward the number to 14085550105 instead.

```
Router(config)# voice translation-rule 21
 Router(cfg-translation-rule)# rule 1 /^5550105/ /14085550105/
 Router(cfg-translation-rule)# rule 2 /^70105/ /14085550105/
```

In the next example, if a called number is either 14085550105 or 014085550105, after the execution of translation rule 345, the forwarding digits are 50105. If the match type is configured and the type is not "unknown," dial-peer matching is required to match the input string numbering type.

```
Router(config)# voice translation-rule 345
 Router(cfg-translation-rule)# rule 1 /^14085550105/ /50105/ plan any national
 Router(cfg-translation-rule)# rule 2 /^014085550105/ /50105/ plan any national
```

Related Commands

Command	Description
show voice translation-rule	Displays the parameters of a translation rule.
voice translation-rule	Initiates the voice translation-rule definition.