Cisco CallManager Express 3.0 Commands: N through Z

This chapter documents commands to configure and maintain Cisco CallManager Express. The commands are presented in alphabetical order. Some commands required for configuring voice may be found in other Cisco IOS command references. Use the Cisco IOS Release 12.3 Master Indexes or search online to find these commands.

For detailed information on how to configure Cisco CallManager Express applications and features, refer to the *Cisco CallManager Express 3.0 System Administration Guide*.

Note Prior to Version 3.0, Cisco CallManager Express was known as Cisco IOS Telephony Services (Cisco ITS).

name (ephone-dn)

To associate a name with a Cisco CallManager Express (Cisco CME) extension (ephone-dn), use the **name** command in ephone-dn configuration mode. To disassociate a name from an extension, use the **no** form of this command.

name *name*

no name

Syntax Description

name	Name of the person associated with this extension (ephone-dn). Name must follow the order specified in the **directory** (telephony-service) command, either **first-name-first** or **last-name-first**.

Defaults

No default behavior or values

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the following platforms: Cisco 2600XM, Cisco 2691, Cisco 3725, and Cisco 3745.

Usage Guidelines

The *username* argument is used to provide caller ID for calls originating from a Cisco CME extension. This command is also used to generate directory information for the local directory that is accessed from the Directories button on a Cisco IP phone.

Examples

The following example configures the username John Smith with the pattern **first-name-first**:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn) name John Smith
```

The following example configures the username Jane Smith with the pattern **last-name-first**:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn) name Smith, Jane
```

Related Commands

Command	Description
directory (telephony-service)	Defines the name order for the local directory of Cisco IP phone users.
ephone-dn	Enters ephone-dn configuration mode.

network-locale

To select a code for a geographically-specific set of tones and cadences on the Cisco IP Phone 7940 and Cisco IP Phone 7960, use the **network-locale** command in telephony-service configuration mode. To disable selection of a code, use the **no** form of this command.

network-locale *locale-code*

no network-locale *locale-code*

Syntax Description

locale-code	The following ISO-3166 codes are valid entries: • **AT**—Austria. • **CA**—Canada. • **CH**—Switzerland. • **DE**—Germany. • **DK**—Denmark. • **ES**—Spain. • **FR**—France. • **GB**—United Kingdom. • **IT**—Italy. • **NL**—Netherlands. • **NO**—Norway. • **PT**—Portugal. • **RU**—Russian Federation. • **SE**—Sweden. • **US**—United States (default).

Defaults

The default country code is **US** (United States).

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

The **show telephony-service tftp-bindings** command displays the locale-specific call-progress tone files that are accessible to IP phones using TFTP.

Examples

The following example sets tones and cadences for France:

```
Router(config)# telephony-service
Router(config-telephony-service)# network-locale FR
```

Related Commands

Command	Description
show telephony-service tftp-bindings	Displays the current configuration files that are accessible to IP phones.
telephony-service	Enters telephony-service configuration mode.

night-service bell (ephone)

To mark an IP phone to receive night-service bell notification when incoming calls are received on ephone-dns that are marked for night service during night-service time periods, use the **night-service bell** command in ephone configuration mode. To remove night-service notification capability from a phone, use the **no** form of this command.

night-service bell

no night-service bell

Syntax Description

This command has no arguments or keywords.

Defaults

A phone is not marked for night-service bell notification.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

When an ephone-dn is marked for night-service treatment using the **night-service bell** (ephone-dn) command, incoming calls that ring during the night-service time period on that ephone-dn send an alert indication to all IP phones that are marked to receive night-service bell notification with this command. The alert notification is in the form of a splash ring (not associated with any of the individual lines on the IP phone) and a visible display of the ephone-dn extension number. The phone user retrieves the call by pressing a PickUp or GPickUp soft key and dialing the appropriate digits.

Night-service periods are defined using the **night-service date** and **night-service day** commands. Night service can be manually disabled or reenabled from a phone with ephone-dns in night-service mode if the **night-service code** command has been set.

Examples

The following example designates the IP phone that is being configured as a phone that will receive night-service bell notification when ephone-dns marked for night service receive incoming calls during a night-service period:

```
Router(config)# ephone 4
Router(config-ephone)# night-service bell
```

Related Commands

Command	Description
ephone	Enters ephone configuration mode.
night-service bell (ephone-dn)	Marks an ephone-dn to send night-service bell notification to designated IP phones during night-service time periods.
night-service code	Defines a code to disable or reenable night service on IP phones.
night-service date	Defines a recurring time period associated with a month and date during which night service is active.
night-service day	Defines a recurring time period associated with a day of the week during which night service is active.

night-service bell (ephone-dn)

To mark an ephone-dn for night-service treatment, use the **night-service bell** command in ephone-dn configuration mode. To remove the night-service treatment from the ephone-dn, use the **no** form of this command.

night-service bell

no night-service bell

Syntax Description

This command has no arguments or keywords.

Defaults

An ephone-dn is not marked for night service.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

When an ephone-dn is marked for night-service treatment using this command, incoming calls that ring during the night-service time period on that ephone-dn send an alert indication to all IP phones that are marked to receive night-service bell notification using the **night-service bell (ephone)** command. The alert notification is in the form of a splash ring (not associated with any of the individual lines on the IP phone) and a visible display of the ephone-dn extension number. The phone user retrieves the call by pressing a PickUp or GPickUp soft key and dialing the appropriate digits.

Night-service periods are defined using the **night-service date** and **night-service day** commands. Night service can be manually disabled or reenabled from a phone with ephone-dns in night-service mode if the **night-service code** command has been set.

Examples

The following example marks an ephone-dn as a line that will ring on IP phones designated to receive night-service bell notification when incoming calls are received on this ephone-dn during night-service periods:

```
Router(config)# ephone-dn 16
Router(config-ephone-dn)# night-service bell
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
night-service bell (ephone)	Marks an IP phone to receive night-service bell notification when incoming calls are received on ephone-dns that are marked for night service during night-service time periods.
night-service code	Defines a code to disable or reenable night service on IP phones.
night-service date	Defines a recurring time period associated with a month and date during which night service is active.
night-service day	Defines a recurring time period associated with a day of the week during which night service is active.

night-service code

To define a code to disable or reenable night service on IP phones, use the **night-service code** command in telephony-service configuration mode. To remove the code, use the **no** form of this command.

night-service code *digit-string*

no night-service code *digit-string*

Syntax Description

digit-string	Digit code that a user enters at an IP phone to disable or reenable night service on all ephone-dns that are marked for night service on that phone. The code must begin with an asterisk (*). The maximum number of characters is 16, including the asterisk.

Defaults

No code is defined.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

When an ephone-dn is marked for night-service treatment using the **night-service bell** (ephone-dn) command, incoming calls that ring during the night-service time period on that ephone-dn send an alert indication to all IP phones that are marked to receive night-service bell notification using the **night-service bell** (ephone) command. The alert notification is in the form of a splash ring (not associated with any of the individual lines on the IP phone) and a visible display of the ephone-dn extension number. The phone user retrieves the call by pressing a PickUp or GPickUp soft key and dialing the appropriate digits.

Night-service periods are defined with the **night-service date** and **night-service day** commands. Night service can be manually disabled or reenabled from a phone with ephone-dns in night-service mode if the **night-service code** command has been set.

Examples

The following example defines a night-service code of *2985:

```
Router(config)# telephony-service
Router(config-telephony-service)# night-service code *2985
```

Related Commands

Command	Description
night-service bell (ephone)	Marks an IP phone to receive night-service bell notification when incoming calls are received on ephone-dns that are marked for night service during night-service time periods.
night-service bell (ephone-dn)	Marks an ephone-dn to send night-service bell notification to designated IP phones during night-service time periods.
night-service date	Defines a recurring time period associated with a month and date during which night service is active.
night-service day	Defines a recurring time period associated with a day of the week during which night service is active.
telephony-service	Enters telephony-service configuration mode.

night-service date

To define a recurring time period associated with a date during which night service is active, use the **night-service date** command in telephony-service configuration mode. To delete the defined time period, use the **no** form of this command.

night-service date *month date start-time stop-time*

no night-service date *month date start-time stop-time*

Syntax Description

month	Abbreviated month. The following abbreviations for month are valid: **jan**, **feb**, **mar**, **apr**, **may**, **jun**, **jul**, **aug**, **sep**, **oct**, **nov**, **dec**.
date	Date of the month. Range is from 1 to 31.
start-time stop-time	Beginning and ending times for night service, in an HH:MM format using a 24-hour clock. The stop time must be greater than the start time. The value 24:00 is not valid. If 00:00 is entered as an stop time, it is changed to 23:59. If 00:00 is entered for both start time and stop time, night service is in effect for the entire 24-hour period on the specified date.

Defaults

No time period based on date is defined for night service.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

After you define night-service periods using this command and the **night-service day** command, use the **night-service bell** (ephone-dn) command to specify the extensions that will ring on other phones and the **night-service bell** (ephone) command to specify the phones on which the extensions will ring during the designated night-service periods.

Examples

The following example defines a night-service time period for the entire day of January 1:

```
Router(config)# telephony-service
Router(config-telephony-service)# night-service date jan 1 00:00 00:00
```

Related Commands

Command	Description
night-service bell (ephone)	Marks an IP phone to receive night-service-bell notification when incoming calls are received on ephone-dns that are marked for night service during night-service time periods.
night-service bell (ephone-dn)	Marks an ephone-dn to send night-service bell notification to designated IP phones during night-service time periods.
night-service code	Defines a code to disable or reenable night service on IP phones.
night-service day	Defines a recurring time period associated with a day of the week during which night service is active.
telephony-service	Enters telephony-service configuration mode.

night-service day

To define a recurring time period associated with a day of the week during which night service is active, use the **night-service day** command in telephony-service configuration mode. To delete the defined time period, use the **no** form of this command.

night-service day *day start-time stop-time*

no night-service day *day start-time stop-time*

Syntax Description

day	Day of the week abbreviation. The following are valid day abbreviations: **sun**, **mon**, **tue**, **wed**, **thu**, **fri**, **sat**.
start-time stop-time	Beginning and ending times for night service, in an HH:MM format using a 24-hour clock. If the stop time is a smaller value than the start time, the stop time occurs on the day following the start time. For example, mon 19:00 07:00 means "from Monday at 7 p.m. until Tuesday at 7 a.m." The value 24:00 is not valid. If 00:00 is entered as an stop time, it is changed to 23:59. If 00:00 is entered for both start time and stop time, night service is in effect for the entire 24-hour period on the specified day.

Defaults

No time period based on day of the week is defined for night service.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

After you define night-service periods using this command and the **night-service date** command, use the **night-service bell** (ephone-dn) command to specify the extensions that will ring on other phones and the **night-service bell** (ephone) command to specify the phones on which the extensions will ring during the designated night-service periods.

Examples

The following example defines a night-service time period from Monday at 7 p.m. to Tuesday at 7 a.m.:

```
Router(config)# telephony-service
Router(config-telephony-service)# night-service day mon 19:00 07:00
```

Related Commands

Command	Description
night-service bell (ephone)	Marks an IP phone to receive night-service bell notification when incoming calls are received on ephone-dns that are marked for night service during night-service time periods.
night-service bell (ephone-dn)	Marks an ephone-dn to send night-service bell notification to designated IP phones during night-service time periods.
night-service code	Defines a code to disable or reenable night service on IP phones.
night-service date	Defines a recurring time period associated with a month and date during which night service is active.
telephony-service	Enters telephony-service configuration mode.

no-reg (ephone-hunt)

To specify that the pilot number for a Cisco CallManager Express (Cisco CME) peer ephone hunt group not register with an H.323 gatekeeper, use the **no-reg** command in ephone-hunt configuration mode. To return to the default, use the **no** form of this command.

no-reg

no no-reg

Syntax Description

This command has no arguments or keywords.

Defaults

The pilot number registers with the H.323 gatekeeper.

Command Modes

Ephone-hunt configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command is valid only for Cisco CME peer ephone hunt groups.

Examples

The following example specifies that the pilot number of peer ephone hunt group 2 not register with the H.323 gatekeeper:

```
Router(config)# ephone-hunt 2 peer
Router(config-ephone-hunt)# no-reg
```

Related Commands

Command	Description
ephone-hunt	Defines an ephone hunt group and enters ephone-hunt configuration mode.
final	Defines the last ephone-dn in an ephone hunt group.
hops	Defines the number of times that a call is redirected to the next ephone-dn in a peer ephone-hunt-group list before proceeding to the final ephone-dn.
list	Defines the ephone-dns that participate in an ephone hunt group.
max-redirect	Changes the current number of allowable redirects in a Cisco CallManager Express system.
pilot	Defines the ephone-dn that is dialed to reach an ephone hunt group.

Command	Description
preference (ephone-hunt)	Sets preference order for the ephone-dn associated with an ephone-hunt-group pilot number.
timeout (ephone-hunt)	Sets the number of seconds after which a call that is not answered is redirected to the next number in the hunt-group list.

number (ephone-dn)

To associate a telephone or extension number with an extension (ephone-dn) in a Cisco CallManager Express (Cisco CME) system, use the **number** command in ephone-dn configuration mode. To disassociate a number from an extension, use the **no** form of this command.

number *number* [**secondary** *number*] [**no-reg** [**both** | **primary**]]

no number

Syntax Description

number	String of up to 16 characters that represents an E.164 telephone number. Normally the string is composed of digits, but the string may contain alphabetic characters when the number is dialed only by the router, as with an intercom number. Secondary numbers can contain wildcards in the string. For details, see "Usage Guidelines."
secondary	(Optional) Associates the number that follows as an additional number for this extension (ephone-dn).
no-reg	(Optional) The E.164 numbers in the dial peer do not register with the gatekeeper. If you do not specify an option (**both** or **primary**) after the **no-reg** keyword, only the secondary number is not registered.
both	(Optional) Both primary and secondary numbers are not registered.
primary	(Optional) Primary number is not registered.

Defaults

No primary or secondary phone number is associated with the ephone-dn.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(15)ZJ	3.0	The ability to use alphabetic characters as part of the number string was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command defines a valid number for an ephone-dn (extension) that is to be assigned to an IP phone. The **secondary** keyword allows you to associate a second telephone number with an ephone-dn so that it can be called by dialing either the main or secondary phone number. The secondary number may contain wildcards; for example, 50.. (the number 50 followed by wildcards).

The **no-reg** keyword causes an E.164 number in the dial peer not to register with the gatekeeper. If you do not specify **both** or **primary** after the **no-reg** keyword, only the secondary number does not register.

A number normally contains only numeric characters, which allow it to be dialed from any telephone keypad. However, in certain cases, such as the numbers for intercom extensions, you want to use numbers that can only be dialed internally from the Cisco CallManager Express router and not from telephone keypads. Intercoms consist of a pair of extensions on different phones that are preprogrammed using the **intercom** command to dial each other. The phone user just presses an intercom button and the actual dialing is done by the router. At the other end, the receiving phone automatically answers the intercom call. Generally you do not want free access to this functionality; that is, you do not want other phone users to be able to dial an intercom number. The **number** command allows you to assign alphabetic characters to the number so that the extension can be dialed by the router for intercom calls but not by unauthorized individuals from other phones.

After you use the **number** command, an ephone-dn is assigned to an ephone using the **button** command. Following the **button** command, the **restart** command must be used to initiate a quick reboot of the phone to which this number is assigned.

Examples

The following example sets 5001 as the primary extension number for a Cisco IP phone and 0 as the secondary number. This configuration allows the telephone number 5001 to act as a regular extension number and also to act as the operator line such that callers who dial 0 are routed to the phone line with extension number 5001.

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001 secondary 0
```

The following example sets 5001 as the primary extension number for a Cisco IP phone and “500.” (the number 500 followed by a decimal point) as the secondary number. This configuration allows any calls to extension numbers from the range 5000 to 5009 to be routed to extension 5001 if the actual extension number dialed cannot be found. For example, IP phones may be active in the system with lines that correspond to 5001, 5002, 5004, 5005, and 5009. A call to 5003 would be unable to locate a phone with extension 5003, so the call would be routed to extension 5001.

```
Router(config-ephone-dn)# number 5001 secondary 500.
```

The following example defines a pair of intercom ephone-dns that are programmed to call each other. The intercom numbers contain alphabetic characters to prevent anyone from dialing them from another phone. Ephone-dn 19 is assigned the number A5511 and is programmed to dial A5522, which belongs to ephone-dn 20. Ephone-dn 20 is programmed to dial A5511. No one else can dial these numbers.

```
Router(config)# ephone-dn 19
Router(config-ephone-dn)# number A5511
Router(config-ephone-dn)# name Intercom
Router(config-ephone-dn)# intercom A5522
Router(config-ephone-dn)# exit
Router(config)# ephone-dn 20
Router(config-ephone-dn)# number A5522
Router(config-ephone-dn)# name Intercom
Router(config-ephone-dn)# intercom A5511
```

Related Commands

Command	Description
button	Associates ephone-dns with individual buttons on Cisco IP phones and specifies ring behavior per button.
ephone-dn	Enters ephone-dn configuration mode.
intercom	Creates an intercom by programming a pair of extensions (ephone-dns) to automatically call and answer each other.
name	Configures a username associated with a directory number.
preference	Sets preference for the attached dial peer for a directory number.
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.

paging (ephone-dn)

To define an extension (ephone-dn) as a paging extension that can be called to broadcast an audio page to a set of Cisco IP phones, use the **paging** command in ephone-dn configuration mode. To disable this feature, use the **no** form of this command.

paging [**ip** *multicast-address* **port** *udp-port-number*]

no paging [**ip**]

Syntax Description

ip *multicast-address*	(Optional) Uses an IP multicast address to multicast voice packets for audio paging; for example, 239.0.1.1. Note that IP phones do not support multicast at 224.x.x.x addresses. Default is that multicast is not used and IP phones are paged individually using IP unicast transmission (up to ten phones).
port *udp-port-number*	(Optional) Uses this UDP port for the multicast. Range is from 2000 to 65535. Default is 2000.

Defaults

No paging number is established.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

To configure a set of phones to receive an audio page, follow these steps:

1. Use the **paging** command in ephone-dn configuration mode to define a number that people can dial to send a page. The following example defines a paging-dn tag (21) and extension number (34455) to dial to send a page.

```
ephone-dn 21
 paging
 number 34455
```

2. Use the **paging-dn** command in ephone configuration mode to assign the same paging-dn-tag that you defined in Step 1 to the all the phones that you want to receive the page. This set of phones is called a paging set. You can have more than one paging set in a Cisco CME system. The following example assigns the paging-dn tag from Step 1 (21) to two phones (3 and 4) so that they will receive audio pages.

```
ephone 3
 paging-dn 21

ephone 4
 paging-dn 21
```

The **paging** command configures an ephone-dn as an extension that people can dial to broadcast audio pages to a specified set of idle Cisco IP phones. The extension associated with this command does not appear on any ephone; it is a "dummy" extension. The dn-tag associated with this extension becomes the paging-dn-tag for this paging set.

When a person dials the number assigned to the dummy extension and speaks into the phone, the audio stream is sent as a page to the paging set (the set of all phones that have been configured with this paging-dn-tag as an argument to the **paging-dn** command). Idle phones in the paging set automatically answer the paging call in one-way speakerphone mode. Paging sets can be joined into a single combined paging group with the **paging group** command.

The optional **ip** keyword and *multicast-address* argument define a paging multicast address for this paging set. If an IP multicast address is not configured, IP phones are paged individually using IP unicast transmission (to a maximum of ten IP phones). The recommended operation is with an IP multicast address. When multiple paging-dn-tags are configured using the **paging** command, each paging-dn-tag should use a unique IP multicast address.

Note IP phones do not support multicast at 224.x.x.x addresses.

Each ephone-dn and paging-dn-tag that is used for paging can support a maximum of ten distinct targets (IP addresses and interfaces). A multicast address counts as a single target for each physical interface in use (regardless of the number of phones connected via the interface). Paging using a single IP multicast address that requires output on three different Ethernet interfaces represents use of three counts out of the maximum ten. Each unicast target counts as a single target, such that paging that does not use multicast at all is limited to paging ten phones. For example, ten IP phones paged through multicast on Fast Ethernet interface 0/1.1 plus five IP phones paged through multicast on Fast Ethernet interface 0/1.2 are counted as two targets.

For simultaneous paging to more than one paging ephone-dn, Cisco recommends that you use different IP multicast addresses (not just different port numbers) for paging configuration.

Examples

The following example creates a paging extension number that uses IP multicast paging:

```
Router(config)# ephone-dn 20
Router(config-ephone-dn) number 2000
Router(config-ephone-dn) paging ip 239.0.1.1 port 2000
```

A more complete configuration example follows, in which paging sets 20 and 21 are created. Pages to extension 2000 are multicast to ephones 1 and 2. Pages to extension 2001 are multicast to ephones 3 and 4.

```
ephone-dn 1
 number 2345
```

```
ephone-dn 2
 number 2346

ephone-dn 3
 number 2347

ephone-dn 4
 number 2348

ephone-dn 20
 number 2000
 paging ip 239.0.1.20 port 2000

ephone-dn 21
 number 2001
 paging ip 239.0.1.21 port 2000

ephone 1
 button 1:1
 paging-dn 20

ephone 2
 button 1:2
 paging-dn 20

ephone 3
 button 1:3
 paging-dn 21

ephone 4
 button 1:4
 paging-dn 21
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
paging-dn (ephone)	Assigns audio paging reception capability to a Cisco IP phone.
paging group (ephone-dn)	Combines two or more paging sets into a combined paging group.

paging group (ephone-dn)

To create a combined paging group from two or more previously established paging sets, use the **paging group** command in ephone-dn configuration mode. To remove a paging group, use the **no** form of this command.

paging group *paging-dn-tag, paging-dn-tag...*

no paging group

Syntax Description

paging-dn-tag	Comma-separated list of paging-dn-tags (unique sequence numbers associated with paging ephone-dns) that have previously been associated with the paging extension of a paging set using the **paging-dn** command. You can include up to ten paging-dn-tags separated by commas; for example, 4, 6, 7, 8.

Defaults

Paging is disabled on all Cisco IP phones.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

Use this command to combine previously defined sets of phones associated with individual paging extensions (ephone-dns) into a combined group to enable a single page to be sent to large numbers of phones at once. To remove a paging group, use the **no** form of the command. All paging-dn-tags included in the list must have already been defined as paging-dns using the **paging** command.

The use of paging groups allows phones to participate in a small local paging set (for example, paging to four phones in a company's shipping and receiving department) but also supports company-wide paging when needed (for example, by combining the paging sets for shipping and receiving with the paging sets for accounting, customer support, and sales into a single paging group).

Examples

In the following example, paging sets 20 and 21 are defined and then combined into paging group 22. Paging set 20 has a paging extension of 2000. When someone dials extension 2000 to deliver a page, the page is sent to Cisco IP phones (ephones) 1 and 2. Paging set 21 has a paging extension of 2001. When someone dials extension 2001 to deliver a page, the page is sent to ephones 3 and 4. Paging group 22 combines sets 20 and 21, and when someone dials its paging extension, 2002, the page is sent to all the phones in both sets and to ephone 5, which is directly subscribed to the combined paging group.

```
ephone-dn 20
 number 2000
 paging ip 239.0.1.20 port 2000

ephone-dn 21
 number 2001
 paging ip 239.0.1.21 port 2000

ephone-dn 22
 number 2002
 paging ip 239.0.2.22 port 2000
 paging group 20,21

ephone 1
 button 1:1
 paging-dn 20

ephone 2
 button 1:2
 paging-dn 20

ephone 3
 button 1:3
 paging-dn 21

ephone 4
 button 1:4
 paging-dn 21

ephone 5
 button 1:5
 paging-dn 22
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
paging (ephone-dn)	Creates a paging extension (ephone-dn) that can be called in order to broadcast an audio page to a group of Cisco IP phones.
paging-dn (ephone)	Assigns a paging extension (paging-dn) to a Cisco IP phone.

paging-dn (ephone)

To create a paging extension (paging-dn) to receive audio pages on a Cisco IP phone in a Cisco CallManager Express (Cisco CME) system, use the **paging-dn** command in ephone configuration mode. To disable this feature, use the **no** form of this command.

paging-dn *paging-dn-tag* {**multicast** | **unicast**}

no paging-dn

Syntax Description

paging-dn-tag	Dn-tag of an ephone-dn that was designated as a paging ephone-dn with the **paging** command.
multicast	Uses multicast if available. By default, audio paging is transmitted to the Cisco IP phone using multicast.
unicast	Forces unicast paging for this phone. This keyword indicates that the Cisco IP phone is not capable of receiving audio paging through multicast and requests that all pages to this phone be sent through unicast. **Note** The number of phones supported through unicast is limited to a maximum of ten phones.

Defaults

Paging is disabled on all Cisco IP phones.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

To configure a set of phones to receive an audio page, follow these steps:

1. Use the **paging** command in ephone-dn configuration mode to define a number that people can dial to send a page. The following example defines a paging-dn tag (21) and extension number (34455) to dial to send a page.

```
ephone-dn 21
 paging
 number 34455
```

2. Use the **paging-dn** command in ephone configuration mode to assign the same paging-dn-tag that you defined in Step 1 to the all the phones that you want to receive the page. This set of phones is called a paging set. You can have more than one paging set in a Cisco CME system. The following example assigns the paging-dn tag from Step 1 (21) to two phones (3 and 4) so that they will receive audio pages.

```
ephone 3
 paging-dn 21

ephone 4
 paging-dn 21
```

This command creates a paging extension (paging-dn) associated with an IP phone. Each phone can support only one paging-dn extension. This extension does not occupy a phone button and is therefore not configured on the phone with the **button** command. The paging-dn allows the phone to automatically answer audio pages in one-way speakerphone mode. There is no press-to-answer option as there is with an intercom extension.

The *paging-dn-tag* argument in this command takes the value of the dn-tag of an extension (ephone-dn) that has been made a paging ephone-dn using the **paging** command. This is the extension that callers dial to deliver an audio page. All of the phones that are going to receive the same audio pages are configured with the same *paging-dn-tag*. These phones form a paging set.

An IP phone can belong to only one paging set, but any number of phones can belong to the same paging set using multicast. There can be any number of paging sets in a Cisco CME system, and paging sets can be joined to create a combined paging group using the **paging group** command. For example, you may create separate paging sets for each department (sales, support, shipping) and combine them into a single combined paging group (all departments). Only single-level grouping is supported (no support for groups of groups).

Normal phone calls that are received while an audio page is in progress interrupt the page.

The paging mechanism supports audio distribution using IP multicast, replicated unicast, and a mixture of both (so that multicast is used where possible, and unicast is used with specific phones that cannot be reached through multicast).

Note For unicast paging to all phones, omit the IP multicast address in the ephone-dn configuration. For unicast paging to a specific phone using an ephone-dn configured for multicast, add the **unicast** keyword as part of the **paging-dn** command in ephone configuration mode.

Examples

The following example creates paging number 5001 on ephone-dn 22 and adds ephone 4 as a member of the paging set. Multicast is set for the paging-dn. Note that IP phones do not support multicast at 224.x.x.x addresses.

```
ephone-dn 1
 number 5123

ephone-dn 22
 name Paging Shipping
 number 5001
 paging ip 239.1.1.10 port 2000

ephone 4
 mac-address 0030.94c3.8724
 button 1:1
 paging-dn 22 multicast
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
number	Configures a valid number for the Cisco IP phone.
paging (ephone-dn)	Creates a paging extension (ephone-dn) that can be called in order to broadcast an audio page to a group of Cisco IP phones.
paging group (ephone-dn)	Combines two or more paging sets into a combined paging group.

pattern direct

To configure the dual tone multifrequency (DTMF) digit pattern forwarding necessary to activate the voice-mail system when a user presses the Messages button on an IP phone in a Cisco CallManager Express (Cisco CME) system, use the **pattern direct** command in voice-mail integration configuration mode. To disable DTMF pattern forwarding when a user presses the Messages button on a phone, use the **no** form of this command.

pattern direct *tag1* {**CDN** | **CGN** | **FDN**} [*tag2* {**CDN** | **CGN** | **FDN**}] [*tag3* {**CDN** | **CGN** | **FDN**}] [*last-tag*]

no pattern direct

Syntax Description

tag1	Alphanumeric string of fewer than four DTMF digits in length. The alphanumeric string can consist of a combination of four letters (A, B, C, and D), two symbols (* and #), and ten digits (0 to 9). The tag numbers match numbers defined in the voice-mail system's integration file that immediately precede the number of the called party, the number of the calling party, or a forwarding number.
CDN	Called number (CDN) information is sent to the voice-mail system.
CGN	Calling number (CGN) information is sent to the voice-mail system.
FDN	Forwarding number (FDN) information is sent to the voice-mail system.
tag2, tag3	(Optional) See *tag1*. The router supports a maximum of four tags.
last-tag	(Optional) See *tag1*. This tag indicates the end of the pattern.

Defaults

This feature is disabled.

Command Modes

Voice-mail integration configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced for Cisco IOS Telephony Services on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented for Cisco IOS Telephony Services on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.
12.2(13)T	2.02	This command was implemented in Cisco Survivable Remote Site Telephony, Version 2.02.

Usage Guidelines

The **pattern direct** command is used to configure the sequence of DTMF digits passed to a voice-mail system attached to the router through one or more voice ports. When a call is placed directly from a Cisco IP phone attached to the router, the voice-mail system expects to receive a sequence of DTMF digits at the beginning of the call to identify the user's mailbox, accompanied by a string of digits to indicate that the caller is attempting to access the designated mailbox in order to retrieve messages.

Although it is unlikely that you will use multiple instances of the **CDN**, **CGN**, or **FDN** keywords in a single command line, it is permissible to do so.

Examples

The following example sets the DTMF pattern for a calling number ($CGN) for a direct call to the voice-mail system:

```
Router(config) vm-integration
Router(config-vm-integration) pattern direct 2 CGN *
```

Related Commands

Command	Description
pattern ext-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to a busy extension and the call is forwarded to voice mail.
pattern ext-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension attempts to connect to an extension that does not answer and the call is forwarded to voice mail.
pattern trunk-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail.
pattern trunk-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail.
vm-integration	Enters voice-mail integration configuration mode and enables voice-mail integration with DTMF and an analog voice-mail systems.

pattern ext-to-ext busy

To configure the dual tone multifrequency (DTMF) digit pattern forwarding necessary to activate a voice-mail system after an internal extension attempts to connect to a busy extension and the call is forwarded to voice mail, use the **pattern ext-to-ext busy** command in voice-mail integration configuration mode. To disable the feature, use the **no** form of this command.

pattern ext-to-ext busy *tag1* {**CDN** | **CGN** | **FDN**} [*tag2* {**CDN** | **CGN** | **FDN**}] [*tag3* {**CDN** | **CGN** | **FDN**}] [*last-tag*]

no pattern ext-to-ext busy

Syntax Description

tag1	Alphanumeric string fewer than four DTMF digits in length. The alphanumeric string can consist of a combination of four letters (A, B, C, and D), two symbols (* and #), and ten digits (0 to 9). The tag numbers match the numbers defined in the voice-mail system's integration file, immediately preceding the number of the calling party, the number of the called party, or a forwarding number.
CDN	Called number (CDN) information is sent to the voice-mail system.
CGN	Calling number (CGN) information is sent to the voice-mail system.
FDN	Forwarding number (FDN) information is sent to the voice-mail system.
tag2, tag3	(Optional) See *tag1*. The router supports a maximum of four tags.
last-tag	(Optional) See *tag1*. This tag indicates the end of the pattern.

Defaults

This feature is disabled.

Command Modes

Voice-mail integration configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced for Cisco IOS Telephony Services on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented for Cisco IOS Telephony Services on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.
12.2(13)T	2.02	This command was implemented in Cisco Survivable Remote Site Telephony, Version 2.02.

Usage Guidelines

The **pattern ext-to-ext busy** command is used to configure the sequence of DTMF digits passed to a voice-mail system attached to the router through one or more voice ports. When a call is routed to the voice-mail system by call forward on busy from a Cisco IP phone attached to the router, the voice-mail system expects to receive digits that identify the mailbox associated with the forwarding phone together with digits that identify the extension number of the calling IP phone.

Although it is unlikely that you will use multiple instances of the **CDN**, **CGN**, or **FDN** keywords in a single command line, it is permissible to do so.

Examples

The following example sets the DTMF pattern for a local call forwarded on busy to the voice-mail system:

```
Router(config) vm-integration
Router(config-vm-integration) pattern ext-to-ext busy 7 FDN * CGN *
```

Related Commands

Command	Description
pattern direct	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when the user presses the Messages button on the phone.
pattern ext-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension that does not answer and the call is forwarded to voice mail.
pattern trunk-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail.
pattern trunk-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail.
vm-integration	Enters voice-mail integration configuration mode and enables voice-mail integration with DTMF and an analog voice-mail systems.

pattern ext-to-ext no-answer

To configure the dual tone multifrequency (DTMF) pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to a nonanswering extension and the call is forwarded to voice mail, use the **pattern ext-to-ext no-answer** command in voice-mail integration configuration mode. To disable this feature, use the **no** form of this command.

pattern ext-to-ext no-answer *tag1* {**CDN** | **CGN** | **FDN**} [*tag2* {**CDN** | **CGN** | **FDN**}] [*tag3* {**CDN** | **CGN** | **FDN**}] [*last-tag*]

no pattern ext-to-ext no-answer

Syntax Description

tag1	Alphanumeric string fewer than four DTMF digits in length. The alphanumeric string can consist of a combination of four letters (A, B, C, and D), two symbols (* and #), and ten digits (0 to 9). The tag numbers match the numbers defined in the voice-mail system's integration file and immediately precede the number of the calling party, the number of the called party, or a forwarding number.
CDN	Called number (CDN) information is sent to the voice-mail system.
CGN	Calling number (CGN) information is sent to the voice-mail system.
FDN	Forwarding number (FDN) information is sent to the voice-mail system.
tag2, tag3	(Optional) See *tag1*. The router supports a maximum of four tags.
last-tag	(Optional) See *tag1*. This tag indicates the end of the pattern.

Defaults

This feature is disabled.

Command Modes

Voice-mail integration configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced for Cisco IOS Telephony Services on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented for Cisco IOS Telephony Services on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.
12.2(13)T	2.02	This command was implemented in Cisco Survivable Remote Site Telephony, Version 2.02.

Usage Guidelines

The **pattern ext-to-ext no-answer** command is used to configure the sequence of DTMF digits passed to a voice-mail system attached to the router through one or more voice ports. When a call is routed to the voice-mail system by call forward on no-answer from an IP phone attached to the router, the voice-mail system expects to receive digits that identify the mailbox associated with the forwarding phone together with digits that identify the extension number of the calling IP phone.

Although it is unlikely that you will use multiple instances of the **CDN**, **CGN**, or **FDN** keywords in a single command line, it is permissible to do so.

Examples

The following example sets the DTMF pattern for a local call forwarded on no-answer to the voice-mail system:

```
Router(config) vm-integration
Router(config-vm-integration) pattern ext-to-ext no-answer 5 FDN * CGN *
```

Related Commands

Command	Description
pattern direct	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when the user presses the Messages button on the phone.
pattern ext-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern trunk-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail.
pattern trunk-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail.
vm-integration	Enters voice-mail integration configuration mode and enables voice-mail integration with DTMF and an analog voice-mail systems.

pattern trunk-to-ext busy

To configure the dual tone multifrequency (DTMF) digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail, use the **pattern trunk-to-ext busy** command in voice-mail integration configuration mode. To return to the default, use the **no** form of this command.

pattern trunk-to-ext busy *tag1* {**CDN** | **CGN** | **FDN**} [*tag2* {**CDN** | **CGN** | **FDN**}] [*tag3* {**CDN** | **CGN** | **FDN**}] [*last-tag*]

no pattern trunk-to-ext busy

Syntax Description

tag1	Alphanumeric string fewer than four DTMF digits in length. The alphanumeric string can consist of a combination of four letters (A, B, C, and D), two symbols (* and #), and ten digits (0 to 9). The tag numbers match the numbers defined in the voice-mail system's integration file and immediately precede the number of the calling party, the number of the called party, or a forwarding number.
CDN	Called number (CDN) information is sent to the voice-mail system.
CGN	Calling number (CGN) information is sent to the voice-mail system.
FDN	Forwarding number (FDN) information is sent to the voice-mail system.
tag2, tag3	(Optional) See *tag1*. The router supports a maximum of four tags.
last-tag	(Optional) See *tag1*. This tag indicates the end of the pattern.

Defaults

This feature is disabled by default.

Command Modes

Voice-mail integration configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced for Cisco IOS Telephony Services on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented for Cisco IOS Telephony Services on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.
12.2(13)T	2.02	This command was implemented in Cisco Survivable Remote Site Telephony, Version 2.02.

Usage Guidelines

The **pattern trunk-to-ext busy** command is used to configure the sequence of DTMF digits passed to a voice-mail system attached to the router through one or more voice ports. When a call is routed to the voice-mail system by call forward on busy from an IP phone attached to the router, the voice-mail system expects to receive a sequence of digits identifying the mailbox associated with the forwarding phone together with digits indicating that the call originated from a PSTN or VoIP caller.

Although it is unlikely that you will use multiple instances of the **CDN**, **CGN**, or **FDN** keywords in a single command line, it is permissible to do so.

Examples

The following example sets the DTMF pattern for call forwarding when an external trunk call reaches a busy extension and the call is forwarded to the voice-mail system:

```
Router(config) vm-integration
Router(config-vm-integration) pattern trunk-to-ext busy 6 FDN * CGN *
```

Related Commands

Command	Description
pattern direct	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when the user presses the Messages button on the phone.
pattern ext-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern ext-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern trunk-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail.
vm-integration	Enters voice-mail integration configuration mode and enables voice-mail integration with DTMF and an analog voice-mail systems.

pattern trunk-to-ext no-answer

To configure the dual tone multifrequency (DTMF) digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail, use the **pattern trunk-to-ext no-answer** command in voice-mail integration configuration mode. To disable this feature, use the **no** form of this command.

pattern trunk-to-ext no-answer *tag1* {**CDN** | **CGN** | **FDN**} [*tag2* {**CDN** | **CGN** | **FDN**}] [*tag3* {**CDN** | **CGN** | **FDN**}] [*last-tag*]

no pattern trunk-to-ext no-answer

Syntax Description

tag1	Alphanumeric string fewer than four DTMF digits in length. The alphanumeric string can consist of a combination of four letters (A, B, C, and D), two symbols (* and #), and ten digits (0 to 9). The tag numbers match the numbers defined in the voice-mail system's integration file and immediately precede the number of the calling party, the number of the called party, or a forwarding number.
CDN	Called number (CDN) information is sent to the voice-mail system.
CGN	Calling number (CGN) information is sent to the voice-mail system.
FDN	Forwarding number (FDN) information is sent to the voice-mail system.
tag2, tag3	(Optional) See *tag1*. The router supports a maximum of four tags.
last-tag	(Optional) See *tag1*. This tag indicates the end of the pattern.

Defaults

This feature is disabled.

Command Modes

Voice-mail integration configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced for Cisco IOS Telephony Services on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented for Cisco IOS Telephony Services on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated for Cisco IOS Telephony Services into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.
12.2(13)T	2.02	This command was implemented in Cisco Survivable Remote Site Telephony, Version 2.02.

Usage Guidelines

The **pattern trunk-to-ext no-answer** command is used to configure the sequence of DTMF digits passed to a voice-mail system attached to the router through one or more voice ports. When a call is routed to the voice-mail system by call forward on no-answer from an IP phone attached to the router, the voice-mail system expects to receive digits that identify the mailbox associated with the forwarding phone together with digits that indicate that the call originated from a PSTN or VoIP caller.

Although it is unlikely that you will use multiple instances of the **CDN**, **CGN**, or **FDN** keywords in a single command line, it is permissible to do so.

Examples

The following example sets the DTMF pattern for call forwarding when an external trunk call reaches an unanswered extension and the call is forwarded to a voice-mail system:

```
Router(config) vm-integration
Router(config-vm-integration) pattern trunk-to-ext no-answer 4 FDN * CGN *
```

Related Commands

Command	Description
pattern direct	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when the user presses the Messages button on the phone.
pattern ext-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern ext-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern trunk-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail.
vm-integration	Enters voice-mail integration configuration mode and enables voice-mail integration with DTMF and an analog voice-mail systems.

pickup-group

To assign an extension (ephone-dn) to a Cisco CallManager Express (Cisco CME) call-pickup group, use the **pickup-group** command in ephone-dn configuration mode. To remove the extension from the group, use the **no** form of this command.

pickup-group *number*

no pickup-group

Syntax Description

number	Digit string representing a pickup group number. The string can contain a maximum of 32 digits.

Defaults

An extension does not belong to any pickup group.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command allows administrators to assign an individual ephone-dn to a call-pickup group. Phone users can pick up ringing calls within their own pickup group more easily than calls outside their group.

Each ephone-dn can be assigned to a maximum of one pickup group.

Pickup group numbers may be of varying length, but their leading digits must be unique. For example, you cannot define both pickup group 17 and pickup group 177 in the same Cisco CME system, because a pickup in group 17 will always be triggered before the user can enter the final 7 for group 177. You can, however, define pickup groups 27 and 177 in the same Cisco CME system.

There is no limit to the number of ephone-dns that can be assigned to a single pickup group, and there is no limit to the number of pickup groups that can be defined in a Cisco CME system.

Examples

The following example assigns an ephone-dn to pickup group 25:

```
Router(config)# ephone-dn 4
Router(config-ephone-dn)# pickup-group 25
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.

pilot

To define the ephone-dn that callers dial to reach a Cisco CallManager Express (Cisco CME) ephone hunt group, use the **pilot** command in ephone-hunt configuration mode. To remove the pilot number from the ephone hunt group, use the **no** form of this command.

pilot *number*

no pilot *number*

Syntax Description

number	E.164 number with a maximum length of 27 characters.

Defaults

No pilot number is defined.

Command Modes

Ephone-hunt configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command is valid only for Cisco CME ephone hunt groups.

The dial-plan pattern can be applied to the pilot number.

Examples

The following example sets the pilot number to 2345 for peer ephone hunt-group number 5:

```
Router(config)# ephone-hunt 5 peer
Router(config-ephone-hunt)# pilot 2345
```

Related Commands

Command	Description
ephone-hunt	Enters ephone-hunt configuration mode to define a Cisco CME ephone hunt group.
final	Defines the last ephone-dn in an ephone hunt group.
hops	Defines the number of times that a call is redirected to the next ephone-dn in a peer ephone-hunt-group list before proceeding to the final ephone-dn.
list	Defines the ephone-dns that participate in an ephone hunt group.
max-redirect	Changes the current number of allowable redirects in a Cisco CME system.
no-reg (ephone-hunt)	Specifies that the pilot number of this ephone hunt group should not register with the H.323 gatekeeper.

Command	Description
preference (ephone-hunt)	Sets preference order for the ephone-dn associated with an ephone-hunt-group pilot number.
timeout (ephone-hunt)	Sets the number of seconds after which a call that is not answered is redirected to the next number in the ephone-hunt-group list.

pin

To set an individual personal identification number (PIN) for an IP phone in a Cisco CallManager Express (Cisco CME) system, use the **pin** command in ephone configuration mode. To remove a PIN, use the **no** form of this command.

pin *number*

no pin

Syntax Description

number	PIN to use to log in to a Cisco IP phone. This is a numeric string from four to eight digits in length.

Defaults

No PIN is set.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The **pin** command allows individual phone users to override call-blocking patterns that are associated with defined time periods. Call-blocking patterns that are in effect at all times (7 days a week, 24 hours a day) cannot be overridden using a PIN.

Call blocking on IP phones is defined in the following way. First, one or more patterns of outgoing digits to be blocked are defined using the **after-hours block pattern** command. Next, one or more time periods during which calls to those patterns are to be blocked are defined using the **after-hours date** or **after-hours day** command or both. By default, all IP phones in a Cisco CME system are restricted if at least one pattern and at least one time period are defined. Individual phones can be completely exempted from call blocking using the **after-hour exempt** command. An individual with a PIN can override call blocking by entering the PIN after pressing the Login soft key to log in to a phone that has been configured for that PIN using the **pin** command.

The PIN functionality applies only to IP phones that have soft keys, such as the Cisco IP Phone 7940 and the Cisco IP Phone 7960.

Examples

The following example sets a PIN for an IP phone:

```
Router(config)# ephone 1
Router(config-ephone)# pin 1000
```

Related Commands

Command	Description
after-hour exempt	Specifies that an IP phone does not have any of its outgoing calls blocked even though call blocking has been defined for a Cisco CME system.
after-hours block pattern	Defines a pattern of digits to be blocked for outgoing calls from IP phones.
after-hours date	Defines a recurring period based on month and date during which outgoing calls that match defined call-block patterns are blocked on IP phones.
after-hours day	Defines a recurring period based on day of the week during which outgoing calls that match defined call-block patterns are blocked on IP phones.
ephone	Enters the Ethernet phone (ephone) configuration mode.
login	Defines when IP phones in a Cisco CME system are logged out automatically.
show ephone login	Displays the login states of all phones.

preference (ephone-dn)

To set dial-peer preference order for an extension (ephone-dn) associated with a Cisco IP phone, use the **preference** command in ephone-dn configuration mode. To reset the preference order to the default, use the **no** form of this command.

preference *preference-order* [**secondary** *secondary-order*]

no preference

Syntax Description

preference-order	Preference order for the primary number associated with an extension (ephone-dn). Range is from 0 to 10, where 0 is the highest preference and 10 is the lowest preference. Default is 0.
secondary *secondary-order*	(Optional) Preference order for the secondary number associated with the ephone-dn. Range is from 0 to 10, where 0 is the highest preference and 10 is the lowest preference. Default is 9.

Defaults

preference-order: 0 (highest preference)
secondary-order: 9

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(15)ZJ	3.0	The **secondary** *secondary-order* keyword-argument pair was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

When you create an ephone-dn for an IP phone in a Cisco CallManager Express (Cisco CME) system, you automatically create a virtual voice port and one to four virtual dial peers to be used by that ephone-dn. This command sets a preference value for the primary and secondary numbers that are associated with the ephone-dn that you are creating. The preference values are passed transparently into the dial peer or dial peers created by the ephone-dn. The preference values allow you to control the selection of a desired dial peer when multiple dial peers are matched on the same destination-pattern (target) number value. In this way, the **preference** command can be used to establish a hunt strategy for incoming calls.

The **huntstop** command can be used to prevent further hunting for a dial-peer match when an ephone-dn is busy or does not answer.

Examples

The following example sets a preference of 2 for the directory number 3000:

```
ephone-dn 1
 number 3000
 preference 2
```

In the following example, the number 1222 under ephone-dn 4 has a higher preference than the number 1222 under ephone-dn 5.

```
ephone-dn 4
 number 1222
 preference 0
!
!
ephone-dn 5
 number 1222
 preference 1
```

The following example shows an ephone-dn with two numbers. The primary number has a higher preference than the secondary number.

```
ephone-dn 6
 number 2233 secondary 2234
 preference 0 secondary 1
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
huntstop	Discontinues call hunting behavior for an extension (ephone-dn) or an extension channel.

preference (ephone-hunt)

To set preference order for the ephone-dn associated with a Cisco CallManager Express (Cisco CME) ephone-hunt-group pilot number, use the **preference** command in ephone-hunt configuration mode. To delete this preference order, use the **no** form of this command.

preference *preference-order*

no preference *preference-order*

Syntax Description

preference-order	Preference order. Range is from 0 to 8, where 0 is the highest preference and 8 is the lowest preference. Default is 0.

Defaults

0 (highest preference)

Command Modes

Ephone-hunt configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command sets a preference value that is used for matching dial peers in a Cisco IP phone virtual dial-peer group. The preference value is associated with a pilot number for a Cisco CME ephone hunt group. The preference value is passed transparently into the dial peer created by the pilot number. Setting the preference enables the desired dial peer to be selected when multiple dial peers within a hunt group are matched for a dial string.

Examples

The following example sets the preference for the pilot number of hunt group 23 to 1:

```
Router(config)# ephone-hunt 23 sequential
Router(config-ephone-hunt)# pilot 2355
Router(config-ephone-hunt)# preference 1
```

Related Commands

Command	Description
ephone-hunt	Defines an ephone hunt group and enters ephone-hunt configuration mode.
final	Defines the last ephone-dn in an ephone hunt group.
hops	Defines the number of times that a call is redirected to the next ephone-dn in a peer ephone-hunt-group list before proceeding to the final ephone-dn.
list	Defines the ephone-dns that participate in an ephone hunt group.
max-redirect	Changes the current number of allowable redirects in an Cisco CME system.

Command	Description
no-reg (ephone-hunt)	Specifies that the pilot number of this ephone hunt group not register with the H.323 gatekeeper.
pilot	Defines the ephone-dn that callers dial to reach an ephone hunt group.
timeout (ephone-hunt)	Sets the number of seconds after which a call that is not answered is redirected to the next number in the ephone-hunt-group list.

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.

Defaults

No default behavior or values

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

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 DHCP server and 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 Cisco IP phone with a phone-tag of 1:

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

Related Commands

Command	Description
ephone	Enters ephone configuration mode.
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 to pauses 15 seconds between the reset start 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.

Defaults

time-interval: 15

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(11)YT	2.1	The *time-interval* range maximum was increased from 15 to 60 and the default was changed from 0 to 15.

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT1	2.1	The **cancel** and **sequence-all** keywords were introduced.
12.2(15)T	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 DHCP server and 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 using the **reset** command, the default time interval of 15 seconds is recommended for an 8- to 10-phone office so that all the phones do not attempt to access TFTP server resources simultaneously. This value should be modified accordingly for larger networks.

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

The **no** form of the 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-service)# reset all
```

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

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

The following example resets all IP phones in sequential, nonoverlapping order:

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

Related Commands

Command	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.

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.

Defaults

No default behavior or values

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT1	2.1	This command was introduced.
12.2(15)T	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

Command	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 (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.

Defaults

time-interval: 15

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT1	2.1	This command was introduced.
12.2(15)T	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** command with the *mac-address* argument or use the **restart** command in ephone configuration mode.

If the router configuration is changed so that the 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 the 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-service)# restart all
```

Related Commands

Command	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.
telephony-service	Enters telephony-service configuration mode.

secondary-dialtone

To activate a secondary dial tone when a Cisco IP phone user dials a defined PSTN access prefix, use the **secondary-dialtone** command in telephony-service configuration mode. To disable the secondary dial tone, use the **no** form of this command.

secondary-dialtone *digit-string*

no secondary-dialtone

Syntax Description

digit-string	String of up to 32 numbers that defines the access prefix.

Defaults

No secondary dial tone is enabled.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The secondary dial tone is turned off when the next number after the digit string is pressed. For example, if 8 were the digit string and a person dialed 8 555-0145, the secondary dial tone would be turned off when the 5 key is pressed.

Examples

The following example enables a secondary dial tone when a Cisco IP phone users press the 9 button to get an outside line:

```
Router(config)# telephony-service
Router(config-telephony-service)# secondary-dialtone 9
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

service local-directory

To enable the availability of the local directory service on IP phones served by the Cisco CallManager Express (Cisco CME) router, use the **service local-directory** command in telephony-service configuration mode. To disable the local directory display on IP phones, use the **no** form of this command.

service local-directory [**authenticate**]

no service local-directory [**authenticate**]

Syntax Description

authenticate	(Optional) Requires authentication for local directory search requests.

Defaults

Local directory service is available on IP phones.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.
12.2(15)ZJ	3.0	The **authenticate** keyword was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CME 3.0, or a later version.

Examples

The following example specifies that the directory service should not be available on the IP phones served by the Cisco CME router:

```
Router(config)# telephony-service
Router(config-telephony-service)# no service local-directory
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

show ephone

To display information about registered Cisco IP phones, use the **show ephone** command in privileged EXEC mode.

show ephone [*mac-address* | *phone-type*]

Syntax Description

mac-address	(Optional) Displays information for the phone with the specified MAC address.
phone-type	(Optional) Displays information for phones of the specified phone type. Valid types are: • **7905**—Cisco IP Phone 7905G. • **7910**—Cisco IP Phone 7910G. • **7914**—Cisco IP Phone 7914 Expansion Module. • **7935**—Cisco IP Conference Station 7935. • **7940**—Cisco IP Phone 7940G. • **7960**—Cisco IP Phone 7960G. • **ata**—Cisco ATA-186 or Cisco ATA-188.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

Significant fields in the output from this command are described in Table 1 on page 182.

The following sample output shows general information for registered phones:

```
Router# show ephone

ephone-1 Mac:0003.E3E7.F627 TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.0.0.2 51671 Telecaster 7940 keepalive 28 max_line 2
button 1: dn 1 number 4444 CM Fallback IDLE
ephone-2 Mac:0030.94C3.F43A TCP socket:[1] activeLine:0 REGISTERED
```

```
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.0.0.3 50094 Telecaster 7960 keepalive 28 max_line 6
button 1: dn 3 number 5555 CM Fallback IDLE
ephone-3 Mac:0003.6B40.99DA TCP socket:[3] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.2.168.200 51879 Telecaster 7960 keepalive 28 max_line 6
button 1: dn 2 number 3333 CM Fallback IDLE
```

The following sample output shows general information for the phone with the MAC address 0003.E3E7.F627:

```
Router# show ephone 0003.E3E7.F627

ephone-1 Mac:0003.E3E7.F627 TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:20.0.0.2 51671 Telecaster 7940 keepalive 28 max_line 2
button 1: dn 1 number 4444 CM Fallback IDLE
Active Call on DN 1:3001 10.0.0.51 31808 to 1.2.159.100 22708
Tx Pkts 452 bytes 41584 Rx Pkts 452 bytes 41584 Lost 0
Jitter 0 Latency 0
```

The following sample output shows information for a phone that has two Cisco IP Phone 7914 Expansion Modules attached. The output shows this module as a subsidiary type in addition to the main 7960 type for the phone itself. Subtype 3 means that one Cisco IP Phone 7914 Expansion Module is attached to the main Cisco IP Phone 7960, and subtype 4 means that two are attached.

```
Router# show ephone 7914

ephone-2 Mac:0007.0EA6.39F8 TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:1.2.205.206 49278 Telecaster 7960  sub=4 keepalive 2723 max_line 34
button 1: dn 21 number 60021 CH1 IDLE
button 2: dn 22 number 60022 CH1 IDLE
button 7: dn 11 number 60011 CH1 IDLE      monitor-ring
button 8: dn 12 number 60012 CH1 IDLE      monitor-ring
button 9: dn 13 number 60013 CH1 IDLE      monitor-ring
button 10: dn 14 number 60014 CH1 IDLE      monitor-ring
button 11: dn 15 number 60015 CH1 IDLE      monitor-ring
button 12: dn 16 number 60016 CH1 IDLE      monitor-ring
button 13: dn 17 number 60017 CH1 IDLE      monitor-ring
button 14: dn 18 number 60018 CH1 IDLE      monitor-ring
button 15: dn 19 number 60019 CH1 IDLE      monitor-ring
button 16: dn 20 number 60020 CH1 IDLE      monitor-ring
button 17: dn 39 number 60039 CH1 IDLE      CH2 IDLE      monitor-ring
button 18: dn 40 number 60040 CH1 IDLE      CH2 IDLE      monitor-ring
button 19: dn 23 number 60023 CH1 IDLE      monitor-ring
button 20: dn 24 number 60024 CH1 IDLE      monitor-ring
button 21: dn 25 number 60025 CH1 IDLE      monitor-ring
button 22: dn 26 number 60026 CH1 IDLE      monitor-ring
button 23: dn 27 number 60027 CH1 IDLE      monitor-ring
button 24: dn 28 number 60028 CH1 IDLE      monitor-ring
button 25: dn 29 number 60029 CH1 IDLE      monitor-ring
button 26: dn 30 number 60030 CH1 IDLE      monitor-ring
button 27: dn 31 number 60031 CH1 IDLE      CH2 IDLE      monitor-ring
button 28: dn 32 number 60032 CH1 IDLE      CH2 IDLE      monitor-ring
button 29: dn 33 number 60033 CH1 IDLE      CH2 IDLE      monitor-ring
button 30: dn 34 number 60034 CH1 IDLE      CH2 IDLE      monitor-ring
button 31: dn 35 number 60035 CH1 IDLE      CH2 IDLE      monitor-ring
button 32: dn 36 number 60036 CH1 IDLE      CH2 IDLE      monitor-ring
button 33: dn 37 number 60037 CH1 IDLE      CH2 IDLE      monitor-ring
button 34: dn 38 number 60038 CH1 IDLE      CH2 IDLE      monitor-ring
```

The following sample output shows a phone that has a paging-dn and has received a page:

```
Router# show ephone 7910

ephone-2 Mac:0087.0E76.B93C TCP socket:[4] activeLine:0 REGISTERED
mediaActive:1 offhook:0 ringing:0 reset:0 reset_sent:0 paging 1 debug:0
IP:10.50.50.20 49231 Telecaster 7910  keepalive 112 max_line 2 dual-line
button 1:dn 3  number 95021 CH1 IDLE
paging-dn 25
```

Table 1 describes significant fields in the output.

Table 1 show ephone Field Descriptions

Field	Description
Active Call	An active call is in progress.
activeLine	Line (button) on the phone that is in use. Zero indicates that no line is in use.
auto-dial *number*	This is an intercom extension that automatically dials *number*.
button *number*: dn *number*	Phone button number and the extension (ephone-dn) dn-tag number associated with that button.
bytes	Total number of voice data bytes sent or received by the phone.
Called Dn, Calling Dn	Ephone-dn tag numbers of the called and calling ephone-dn. Set to -1 if the call is not to or from an ephone-dn, or if there is no active call.
cfa *number*	Call-forward-all to *number* is enabled for this extension.
CH1 CH2	Status of channel 1 and, if this is a dual-line ephone-dn, the status of channel 2.
CM Fallback IDLE	Information derived from the CallManager fallback feature and the state of the ephone-dn, in this case IDLE.
debug	1 indicates that debug for the phone is enabled. 0 indicates that debug is disabled.
DnD	Do Not Disturb is set on this phone.
DP tag	Not used.
ephone-*number*	Unique sequence number that is used to identify this phone during configuration (phone-tag).
IP	Assigned IP address of the Cisco IP phone.
Jitter	Amount of variation (in milliseconds) of the time interval between voice packets received by the Cisco IP phone.
keepalive	Number of keepalive messages received from the Cisco IP phone by the router.
Latency	Estimated playout delay for voice packets received by the Cisco IP phone.
line *number*	Button number on an IP phone. Line 1 is the button nearest the top of the phone.
Lost	Number of voice packets lost, as calculated by the Cisco IP phone, on the basis of examining voice packet time-stamp and sequence numbers during playout.
Mac	MAC address.

Table 1 show ephone Field Descriptions (continued)

Field	Description
Max Conferences	Maximum number of allowable conference calls and number of active conference calls.
max_line *number*	Maximum number of line buttons that can be configured on this phone.
mediaActive	1 indicates that an active conversation is in progress. 0 indicates that no conversation is ongoing.
monitor-ring	This button is set up as a monitor button.
number	Telephone or extension number associated with the Cisco IP phone button and its dn-tag.
offhook	1 indicates that the phone is off-hook. 0 indicates that the phone is on-hook.
overlay	This button contains an overlay set. Use **show ephone overlay** to display the contents of overlay sets.
paging	1 indicates that the phone has received an audio page. 0 indicates that the phone has not received an audio page.
paging-dn	Ephone-dn that is dedicated for receiving audio pages on this phone. The paging-dn number is the number of the paging set to which this phone belongs.
Password	Authentication string that the phone user types when logging in to the web-based Cisco CME GUI.
Port	Port used for TAPI transmissions.
REGISTERED	The Cisco IP phone is active and registered. Alternative states are UNREGISTERED (indicating that the connection to the Cisco IP phone was closed in a normal manner) and DECEASED (indicating that the connection to the Cisco IP phone was closed because of a keepalive timeout).
reset	Pending reset.
reset_sent	Request for reset has been sent to the Cisco IP phone.
ringing	1 indicates that the phone is ringing. 0 indicates that the phone is not ringing.
Rx Pkts	Number of received voice packets.
silent-ring	Silent ring has been set on this button and extension.
socket	TCP socket# used to connect to IP phone.
speed dial *speed-tag*:*digit-string* *label-text*	This button is a speed-dial button, assigned to the speed-dial sequence number *speed-tag*. It dials *digit-string* and displays the text *label-text* next to the button.
sub=3, sub=4	Subtype 3 means that one Cisco IP Phone 7914 Expansion Module is attached to the main Cisco IP Phone 7960, and subtype 4 means that two are attached.
Tag *number*	Dn-tag number, the unique sequence number that identifies an ephone-dn during configuration, followed by the type of ephone-dn it is.
TAPI Client IP Address	IP address of the PC running the TAPI client.

Table 1 show ephone Field Descriptions (continued)

Field	Description
TCP socket	TCP socket number used to communicate with the Cisco IP phone. This can be correlated with the output of various other debug and show commands.
Telecaster *model-number*	Type and model of the Cisco IP phone. This information is received from the phone during its registration with the router.
Tx Pkts	Number of transmitted voice packets.
Username	Username that the phone user types when logging in to the web-based Cisco CME GUI.

Related Commands

Command	Description
show ephone-dn	Displays information about Cisco IP phone extensions (ephone-dns).
show ephone login	Displays the login states of all local IP phones.
show telephony-service	Displays systemwide status and information for a Cisco CallManager Express system.

show ephone-hunt

To display ephone-hunt configuration information, use the **show ephone-hunt** command in privileged EXEC mode.

show ephone-hunt [*tag* | **summary**]

Syntax Description

tag	The hunt-tag number configured with the **ephone-hunt** command. Range is from 1 to 10.
summary	Displays brief information regarding individual extension numbers.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco SRST Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The **show ephone-hunt** and **show ephone-hunt summary** command display peer and sequential configuration information. The **show ephone-hunt** *tag* command outputs data regarding a specific *hunt-tag* configuration created by the **ephone-hunt** command. The **show ephone-hunt** and **show ephone-hunt** command provide expanded information regarding extension (list of numbers) and pilot numbers.

Examples

Table 2 describes significant fields in the output.

The following example provides output from the **show ephone-hunt** command with neither an argument nor a keyword:

```
Router# show ephone-hunt

Group 1
    type: peer
    pilot number: 5000, peer-tag 20031; expanded-number 4085255000, peer-tag 20032
    list of numbers:
        5001, aux-number A5000A000, # peers 2, peer-tag:dn-tag [ 20030:36, 20029:1]
        5002, aux-number A5000A001, # peers 2, peer-tag:dn-tag [ 20034:37, 20033:2]
        5003, aux-number A5000A002, # peers 2, peer-tag:dn-tag [ 20036:38, 20035:3]
        5004, aux-number A5000A003, # peers 2, peer-tag:dn-tag [ 20038:39, 20037:4]
        5005, aux-number A5000A004, # peers 2, peer-tag:dn-tag [ 20040:40, 20039:5]
    final number: 5006
    preference: 0
    timeout: 180
    hops: 2
    E.164 register: yes
Group 2
    type: sequential
    pilot number: 6000, peer-tag 20043
```

```
    list of numbers:
        5005, aux-number A6000A100, # peers 2, peer-tag:dn-tag [ 20042:40, 20041:5]
        5004, aux-number A6000A101, # peers 2, peer-tag:dn-tag [ 20045:39, 20044:4]
        5003, aux-number A6000A102, # peers 2, peer-tag:dn-tag [ 20047:38, 20046:3]
        5002, aux-number A6000A103, # peers 2, peer-tag:dn-tag [ 20049:37, 20048:2]
        5001, aux-number A6000A104, # peers 2, peer-tag:dn-tag [ 20051:36, 20050:1]
    final number: 5007
    preference: 5
    timeout: 3
    E.164 register: no
```

The following example provides output from the **show ephone-hunt** command for a specific *hunt-tag* configured with the **ephone-hunt** command:

```
Router# show ephone-hunt 2
Group 2
    type: sequential
    pilot number: 6000, peer-tag 20043
    list of numbers:
        5005, aux-number A6000A100, # peers 2, peer-tag:dn-tag [ 20042:40, 20041:5]
        5004, aux-number A6000A101, # peers 2, peer-tag:dn-tag [ 20045:39, 20044:4]
        5003, aux-number A6000A102, # peers 2, peer-tag:dn-tag [ 20047:38, 20046:3]
        5002, aux-number A6000A103, # peers 2, peer-tag:dn-tag [ 20049:37, 20048:2]
        5001, aux-number A6000A104, # peers 2, peer-tag:dn-tag [ 20051:36, 20050:1]
    final number: 5007
    preference: 5
    timeout: 3
    E.164 register: no
```

The following example shows a summary output:

```
Router# show ephone-hunt summary
Group 1
    type: peer
    pilot number: 5000
    list of numbers:
       5001
       5002
       5003
       5004
       5005
    final number: 5006
    preference: 0
    timeout: 180
    hops: 2
    E.164 register: yes
Group 2
    type: sequential
    pilot number: 6000
    list of numbers:
       5005
       5004
       5003
       5002
       5001
    final number: 5007
    preference: 5
    timeout: 3
    E.164 register: no
```

Table 2 show ephone-hunt Field Descriptions

Field	Description
aux-number	Auxiliary number used to generate dial-peers for hunt group. This number is generated by the **list** command.
dn-tag	DN sequence number.
E.164 register	Shows whether the pilot number registers with an H.323 gatekeeper.
final number	Last number in the ephone hunt group, after which the call is no longer redirected.
group	The ephone-hunt type. Can be longest idle, peer, sequential.
hops	Number of hops before a call proceeds to the final number.
List of numbers	Numbers of the extensions configured in the **ephone-hunt** command's *hunt-tag* identifier.
peer-tag	Dial-peer sequence number.
pilot number	Number that callers dial to reach the ephone hunt group.
preference	Preference order for the ephone-dn associated with the hunt-group pilot number. Range is from 0 to 10, where 0 is the highest preference and 10 is the lowest preference.
timeout	Number of seconds after which a call that is not answered at one number is redirected to the next number in the hunt-group list.
type	**ephone-hunt** command type. Can be either peer or sequential.

Related Commands

Command	Description
ephone-hunt	Enters ephone-hunt configuration mode to create a hunt group for use in a Cisco CallManager Express system.
final	Define the last extension (ephone-dn) in an ephone hunt group.
hops	Defines the number of times that a call can hop to the next ephone-dn in a peer ephone hunt group before the call proceeds to the final ephone-dn.
list	Creates a list of extensions that are members of a Cisco CallManager Express (CME) ephone hunt group.
no req	Specifies that the pilot number for a Cisco CallManager Express (CME) peer ephone hunt group not register with an H.323 gatekeeper.
pilot	Defines the ephone-dn that callers dial to reach a Cisco CallManager Express (CME) ephone hunt group.
preference	sets preference order for the ephone-dn associated with a Cisco CallManager Express (CME) ephone-hunt-group pilot number.
timeout	Defines the number of seconds after which a call that is not answered is redirected to the next number in a Cisco CallManager Express (CME) ephone-hunt-group list.

show ephone cfa

To display status and information on the registered phones that have call-forward-all set on one or more of their extensions (ephone-dns), use the **show ephone cfa** command in privileged EXEC mode.

show ephone cfa

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone cfa** command.

```
Router# show ephone cfa

ephone-1 Mac:0007.0EA6.353A TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:1.2.205.205 52491 Telecaster 7960  keepalive 14 max_line 6
button 1: dn 11 number 60011 cfa 60022 CH1 IDLE
button 2: dn 17 number 60017 cfa 60021 CH1 IDLE
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone dn

To display phone information for specified dn-tag or for all dn-tags, use the **show ephone dn** command in privileged EXEC mode.

show ephone dn [*dn-tag*]

Syntax Description

dn-tag	(Optional) Unique sequence number that is used during configuration to identify a particular extension (ephone-dn).

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use this command to identify the phone on which a particular dn-tag has been assigned.

Examples

The following is sample output from the **show ephone dn** command.

```
Router# show ephone dn 2

Tag 2, Normal or Intercom dn
  ephone 2, mac-address 000A.3D7C.5323, line 1
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone dnd

To display information on the registered phones that have do-not-disturb set on one or more of their extensions (ephone-dns), use the **show ephone dnd** command in privileged EXEC mode.

show ephone dnd

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone dnd** command.

```
Router# show ephone dnd

ephone-1 Mac:0007.0EA6.353A TCP socket:[1] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:1.2.205.205 52486 Telecaster 7960  keepalive 2729 max_line 6 DnD
button 1: dn 11 number 60011 CH1 IDLE
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone login

To display the login states of all local IP phones, use the **show ephone login** command in privileged EXEC mode.

show ephone login

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The **show ephone login** command displays whether an ephone has a personal identification number (PIN) and whether its owner has logged in.

Examples

The following is sample output from the **show ephone login** command. It shows that a PIN is enabled for ephone 1 and that its owner has not logged in. The other phones do not have PINs associated with them.

```
Router# show ephone login

ephone 1        Pin enabled:TRUE        Logged-in:FALSE
ephone 2        Pin enabled:FALSE
ephone 3        Pin enabled:FALSE
ephone 4        Pin enabled:FALSE
ephone 5        Pin enabled:FALSE
ephone 6        Pin enabled:FALSE
ephone 7        Pin enabled:FALSE
ephone 8        Pin enabled:FALSE
ephone 9        Pin enabled:FALSE
```

Table 3 describes significant fields in this output.

Table 3 show ephone login Field Descriptions

Field	Description
ephone *phone-tag*	Phone identified with its unique phone-tag sequence number.
Pin enabled	True indicates that a PIN has been defined for this phone. False indicates that no PIN has been defined for this phone.
Logged-in	True indicates that a phone user is currently logged in on this phone. False indicates that no phone user is currently logged in on this phone.

Related Commands

Command	Description
login	Defines when IP phones in a Cisco CME system are logged out automatically.
pin	Sets an individual PIN for an IP phone in a Cisco CME system.
show ephone	Displays information about Cisco IP phones (ephones).

show ephone offhook

To display information and packet counts for the phones that are currently off hook, use the **show ephone offhook** command in privileged EXEC mode.

show ephone offhook

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following sample output is displayed when no phone is off hook:

```
Router# show ephone offhook

No ephone in specified type/condition.
```

The following sample output displays information for a phone that is off hook:

```
Router# show ephone offhook

ephone-5 Mac:000A.8A2C.8C6E TCP socket:[20] activeLine:1 REGISTERED
mediaActive:0 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.22.84.71 51228 Telecaster 7960  keepalive 43218 max_line 6
button 1:dn 9  number 59943 CH1 SIEZE     silent-ring
button 2:dn 10 number 59943 CH1 IDLE
button 3:dn 42 number A4400  auto dial A4500 CH1 IDLE
button 4:dn 96 number 69943  auto dial 95259943 CH1 IDLE
button 5:dn 75 number 49943  auto dial 49943 CH1 IDLE
speed dial 1:57514 marketing
Active Call on DN 9 chan 1 :59943 0.0.0.0 0 to 0.0.0.0 2000 via 172.30.151.1
G711Ulaw64k  160 bytes vad
Tx Pkts 0 bytes 0 Rx Pkts 0 bytes 0 Lost 0
Jitter 0 Latency 0 callingDn -1 calledDn -1
Username:user1 Password:newuser
```

The following sample output displays information for a phone that has just completed a call:

```
Router# show ephone offhook

ephone-5 Mac:000A.8A2C.8C6E TCP socket:[20] activeLine:1 REGISTERED
mediaActive:1 offhook:1 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.22.84.71 51228 Telecaster 7960  keepalive 43224 max_line 6
button 1:dn 9  number 59943 CH1 CONNECTED silent-ring
button 2:dn 10 number 59943 CH1 IDLE
button 3:dn 42 number A4400  auto dial A4500 CH1 IDLE
button 4:dn 96 number 69943  auto dial 95259943 CH1 IDLE
button 5:dn 75 number 49943  auto dial 49943 CH1 IDLE
```

```
speed dial 1:57514 marketing
Active Call on DN 9 chan 1 :59943 10.23.84.71 22926 to 172.30.131.129 2000 via
172.30.151.1
G711Ulaw64k  160 bytes no vad
Tx Pkts 0 bytes 0 Rx Pkts 0 bytes 0 Lost 0
Jitter 0 Latency 0 callingDn -1 calledDn -1 (media path callID 19288 srcCallID 1
9289)
Username:user1 Password:newuser
```

Significant fields in the output from this command are described in Table 1 on page 182.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone overlay

To display information for the registered phones that have overlay ephone-dns associated with them, use the **show ephone overlay** in privileged EXEC mode.

show ephone overlay

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone overlay** command.

```
Router# show ephone overlay

ephone-1 Mac:0007.0EA6.353A TCP socket:[1] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:10.2.225.205 52486 Telecaster 7960  keepalive 2771 max_line 6
button 1: dn 11 number 60011 CH1 IDLE      overlay
button 2: dn 17 number 60017 CH1 IDLE      overlay
button 3: dn 24 number 60024 CH1 IDLE      overlay
button 4: dn 30 number 60030 CH1 IDLE      overlay
button 5: dn 36 number 60036 CH1 IDLE      CH2 IDLE      overlay
button 6: dn 39 number 60039 CH1 IDLE      CH2 IDLE      overlay
overlay 1: 11(60011) 12(60012) 13(60013) 14(60014) 15(60015) 16(60016)
overlay 2: 17(60017) 18(60018) 19(60019) 20(60020) 21(60021) 22(60022)
overlay 3: 23(60023) 24(60024) 25(60025) 26(60026) 27(60027) 28(60028)
overlay 4: 29(60029) 30(60030) 31(60031) 32(60032) 33(60033) 34(60034)
overlay 5: 35(60035) 36(60036) 37(60037)
overlay 6: 38(60038) 39(60039) 40(60040)
```

Table 1 on page 182 describes significant fields in this output. Table 4 describes a field that is not in that table.

Table 4 show ephone overlay Field Descriptions

Field	Description
overlay *number*	Displays the contents of an overlay set, including each dn-tag and its associated extension number.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone phone-load

To display information about the phone firmware that is loaded on registered phones, use the **show ephone phone-load** command in privileged EXEC mode.

show ephone phone-load

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone phone-load** command.

```
Router# show ephone phone-load

DeviceName        CurrentPhoneload       PreviousPhoneload      LastReset
=====================================================================
SEP0002B9AFC49F   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP003094C2D0B0   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP000C30F03707   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP003094C2999F   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP000A8A2C8C6E   3.2(2.14)              3.2(2.14)              Initialized
SEP0002B9AFBB4D   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP00075078627F   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP0002FD659E59   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP00024BCCD626   3.2(2.14)                                     CM-closed-TCP
SEP0008215F88C1   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP000C30F0390C   3.2(2.14)              3.2(2.14)              TCP-timeout
SEP003094C30143   3.2(2.14)              3.2(2.14)              TCP-timeout
```

Table 5 describes significant fields in this output.

Table 5 show ephone phone-load Field Descriptions

Field	Description
DeviceName	Device name.
CurrentPhoneLoad	Current phone firmware version.
PreviousPhoneLoad	Phone firmware version before last phone load.
LastReset	Reason for last reset of phone.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone registered

To display the status of registered phones, use the **show ephone registered** command in privileged EXEC mode.

show ephone registered

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone registered** command.

```
Router# show ephone registered

ephone-2 Mac:000A.8A5C.5961 TCP socket:[1] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:192.168.0.50 50349 Telecaster 7940  keepalive 23738 max_line 2
button 1: dn 2  number 91450 CH1 IDLE      CH2 IDLE
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone remote

To display nonlocal phones (phones with no Address Resolution Protocol, or ARP, entry), use the **show ephone remote** command in privileged EXEC mode.

show ephone remote

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Phones without ARP entries are suspected not to be on the local area network (LAN). Use the **show ephone remote** command to identify phones without ARP entries that might have operational issues.

Examples

The following is sample output that identifies ephone 2 as not having an ARP entry:

```
Router# show ephone remote

ephone-2 Mac:0185.047C.993E TCP socket:[4] activeLine:0 REGISTERED
mediaActive:1 offhook:0 ringing:0 reset:0 reset_sent:0 paging 1 debug:0
IP:10.50.50.20 49231 Telecaster 7910  keepalive 112 max_line 2 dual-line
button 1:dn 3  number 95021 CH1 IDLE
paging-dn 25
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone ringing

To display information on phones that are ringing, use the **show ephone ringing** command in privileged EXEC mode.

show ephone ringing

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone ringing** command.

```
Router# show ephone ringing

ephone-1 Mac:0005.5E37.8090 TCP socket:[1] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:1 reset:0 reset_sent:0 paging 0 debug:0
IP:10.50.50.10 49329 Telecaster 7960  keepalive 17602 max_line 6
button 1:dn 1  number 95011 CH1 RINGING   CH2 IDLE
button 2:dn 2  number 95012 CH1 IDLE
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone summary

To display brief information about Cisco IP phones, use the **show ephone summary** command in privileged EXEC mode.

show ephone summary

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

The following sample output displays brief information for phones in a Cisco CallManager Express system:

```
Router# show ephone summary

ephone-1 Mac:0003.E3E7.F627 TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 debug:0
IP:20.0.0.2 Telecaster 7940 keepalive 30 1:1 CM Fallback
ephone-2 Mac:0030.94C3.F43A TCP socket:[1] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 debug:0
IP:20.0.0.3 Telecaster 7960 keepalive 30 1:3 CM Fallback
ephone-3 Mac:0003.6B40.99DA TCP socket:[3] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 debug:0
IP:1.2.168.200 Telecaster 7960 keepalive 30 1:2 CM Fallback
Max Conferences 4 with 0 active
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone tapiclients

To display status of ephone Telephony Application Programming Interface (TAPI) clients, use the **show ephone tapiclients** command in privileged EXEC mode.

show ephone tapiclients

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show ephone tapiclients** command.

```
Router# show ephone tapiclients

ephone-4 Mac:0007.0EA6.39F8 TCP socket:[2] activeLine:0 REGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:192.168.1.18 50291 Telecaster 7960  sub=3 keepalive 728 max_line 20
button 1:dn 6  number 1004 CH1 IDLE      CH2 IDLE
button 2:dn 1  number 1000 CH1 IDLE      shared
button 3:dn 2  number 1000 CH1 IDLE      shared
button 7:dn 3  number 1001 CH1 IDLE      CH2 IDLE      monitor-ring shared
button 8:dn 4  number 1002 CH1 IDLE      CH2 IDLE      monitor-ring shared
button 9:dn 5  number 1003 CH1 IDLE      CH2 IDLE      monitor-ring
button 10:dn 91 number A00  auto dial A01 CH1 IDLE
speed dial 1:2000 PAGE-STAFF
speed dial 2:2001 HUNT-STAFF
paging-dn 90
Username:userB Password:ge30qe
Tapi client information

Username:userB status:REGISTERED Socket :[5]
 Tapi Client IP address: 192.168.1.5  Port:2295
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone telephone-number

To display information for the phone associated with a specified number, use the **show ephone telephone-number** command in privileged EXEC mode.

show ephone telephone-number *number*

Syntax Description

number	Telephone number that is associated with an ephone.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use this command to find the phone on which a particular telephone number appears.

Examples

The following is sample output from the **show ephone telephone-number** command.

```
Router# show ephone telephone-number 91400

DP tag: 0, primary
Tag 1, Normal or Intercom dn
  ephone 1, mac-address 000A.0E51.19F0, line 1
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone unregistered

To display information about unregistered phones, use the **show ephone unregistered** command in privileged EXEC mode.

show ephone unregistered

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

There are two ways that an ephone can become unregistered. The first way is when an ephone is listed in the running configuration but no physical device has registered for that ephone. The second way is when an unknown device has registered at some time since the last router reboot but has since unregistered.

Examples

The following is sample output from the **show ephone unregistered** command.

```
Router# show ephone unregistered

ephone-1 Mac:0007.0E81.10F0 TCP socket:[-1] activeLine:0 UNREGISTERED
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0
IP:0.0.0.0 0 Unknown 0  keepalive 0 max_line 0
```

Table 1 on page 182 describes significant fields in this output.

Related Commands

Command	Description
show ephone	Displays information about Cisco IP phones (ephones).

show ephone-dn

To display status and information or call statistics for one or all extensions (ephone-dns) in a Cisco CallManager Express (Cisco CME) system, use the **show ephone-dn** command in privileged EXEC mode.

show ephone-dn [*dn-tag*] [**statistics**]

Syntax Description

dn-tag	(Optional) Unique sequence number for an extension (ephone-dn) that is used for identification during configuration. Range is from 1 to 24.
statistics	(Optional) Displays voice quality statistics on calls for a specified extension or for all extensions.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(15)ZJ1	3.0	The **statistics** keyword was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

Table 6 on page 208 describes significant fields in the output from this command.

The following sample output displays status and information for all ephone-dns:

```
Router# show ephone-dn

50/0/1 CH1 DOWN

EFXS 50/0/1 Slot is 50, Sub-unit is 0, Port is 1
 Type of VoicePort is EFXS
 Operation State is UP
 Administrative State is UP
 No Interface Down Failure
 Description is not set
 Noise Regeneration is enabled
 Non Linear Processing is enabled
 Non Linear Mute is disabled
```

```
 Non Linear Threshold is -21 dB
 Music On Hold Threshold is Set to -38 dBm
 In Gain is Set to 0 dB
 Out Attenuation is Set to 0 dB
 Echo Cancellation is enabled
 Echo Cancellation NLP mute is disabled
 Echo Cancellation NLP threshold is -21 dB
 Echo Cancel Coverage is set to 8 ms
 Playout-delay Mode is set to adaptive
 Playout-delay Nominal is set to 60 ms
 Playout-delay Maximum is set to 200 ms
 Playout-delay Minimum mode is set to default, value 40 ms
 Playout-delay Fax is set to 300 ms
 Connection Mode is normal
 Connection Number is not set
 Initial Time Out is set to 10 s
 Interdigit Time Out is set to 10 s
 Call Disconnect Time Out is set to 60 s
 Ringing Time Out is set to 180 s
 Wait Release Time Out is set to 30 s
 Companding Type is u-law
 Region Tone is set for US
 Station name None, Station number 91400

 Caller ID Info Follows:
 Standard BELLCORE
 Translation profile (Incoming):
 Translation profile (Outgoing):

 Digit Duration Timing is set to 100 ms

50/0/2 CH1 IDLE      CH2 IDLE

EFXS 50/0/2 Slot is 50, Sub-unit is 0, Port is 2
 Type of VoicePort is EFXS
 Operation State is DORMANT
 Administrative State is UP
 No Interface Down Failure
 Description is not set
 Noise Regeneration is enabled
 Non Linear Processing is enabled
 Non Linear Mute is disabled
 Non Linear Threshold is -21 dB
 Music On Hold Threshold is Set to -38 dBm
 In Gain is Set to 0 dB
 Out Attenuation is Set to 0 dB
 Echo Cancellation is enabled
 Echo Cancellation NLP mute is disabled
 Echo Cancellation NLP threshold is -21 dB
 Echo Cancel Coverage is set to 8 ms
 Playout-delay Mode is set to adaptive
 Playout-delay Nominal is set to 60 ms
 Playout-delay Maximum is set to 200 ms
 Playout-delay Minimum mode is set to default, value 40 ms
 Playout-delay Fax is set to 300 ms
 Connection Mode is normal
 Connection Number is not set
 Initial Time Out is set to 10 s
 Interdigit Time Out is set to 10 s
 Call Disconnect Time Out is set to 60 s
 Ringing Time Out is set to 180 s
 Wait Release Time Out is set to 30 s
 Companding Type is u-law
 Region Tone is set for US
```

```
 Station name None, Station number 91450

 Caller ID Info Follows:
 Standard BELLCORE
 Translation profile (Incoming):
 Translation profile (Outgoing):
 Digit Duration Timing is set to 100 ms
```

The following sample output displays voice quality statistics for the ephone-dn with dn-tag 2:

```
Router# show ephone-dn 2 statistics

DN 2 chan 1 incoming 0 answered 0 outgoing 2 answered 0 busy 0
Far-end disconnect at: connect 0 alert 0 hold 0 ring 0
Last 64 far-end disconnect cause codes
28 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
local phone on-hook

DN 2 chan 1 (91450) voice quality statistics for last call
Call Ref 2 called  calling
Total Tx Pkts 0 bytes 0 Rx Pkts 0 bytes 0 Lost 0
Final Jitter 0 Latency 0 Lost 0
Signal Level to phone 0 (-78 dB) peak 0 (-78 dB)
Packets counted by router 0
```

Table 6 on page 208 describes significant fields in the output from this command.

The following sample output displays statistics for all extensions (ephone-dns) in the Cisco CME system. There are two ephone-dns (DN1 and DN3) in this example.

```
Router# show ephone-dn statistics

Total Calls 103
Stats may appear to be inconsistent for conference or shared line cases

DN 1 chan 1 incoming 36 answered 21 outgoing 60 answered 30 busy 6
Far-end disconnect at:connect 29 alert 18 hold 7 ring 15
Last 64 far-end disconnect cause codes
17 17 17 17 17 17 16 16 16 16 16 16 16 16 16 16
16 16 16 16 65 16 65 65 65 65 16 65 65 65 16 16
16 16 16 16 16 16 16 16 16 16 16 16 16 65 47 65
47 47 16 16 16 16 16 16 16 16 16 16 16 16 16 16
local phone on-hook

DN 1 chan 1 (95011) voice quality statistics for last call
Call Ref 103 called 91500 calling 95011
Total Tx Pkts 0 bytes 0 Rx Pkts 0 bytes 0 Lost 0
Final Jitter 30 Latency 0 Lost 0
Signal Level to phone 0 (-78 dB) peak 0 (-78 dB)
Packets counted by router 0

DN 1 chan 2 incoming 0 answered 0 outgoing 1 answered 0 busy 0
Far-end disconnect at:connect 0 alert 0 hold 0 ring 0
Last 64 far-end disconnect cause codes
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
local phone on-hook
```

```
DN 1 chan 2 (95011) voice quality statistics for last call
Call Ref 86 called  calling
Total Tx Pkts 0 bytes 0 Rx Pkts 0 bytes 0 Lost 0
Final Jitter 0 Latency 0 Lost 0
Signal Level to phone 0 (-78 dB) peak 0 (-78 dB)
Packets counted by router 0

DN 3 chan 1 incoming 0 answered 0 outgoing 1 answered 1 busy 0
Far-end disconnect at:connect 0 alert 0 hold 0 ring 0
Last 64 far-end disconnect cause codes
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

DN 3 chan 1 (95021) voice quality statistics for current call
Call Ref 102 called 94011 calling 95021
Current Tx Pkts 241 bytes 3133 Rx Pkts 3304 bytes 515023 Lost 0
Jitter 30 Latency 0
Worst Jitter 30 Worst Latency 0
Signal Level to phone 201 (-39 dB) peak 5628 (-12 dB)
Packets counted by router 3305
```

Table 6 describes significant fields in the output from this command.

Table 6 show ephone-dn Field Descriptions

Field	Description
Administrative State	Administrative (configured) state of the voice port.
alert	The number of calls that were disconnected by the far-end device when the local IP phone was in the call alerting state (for example, because the far-end phone rang but was not answered and the far-end system decided to drop the call rather than let the phone ring for too long).
answered (incoming)	The number of incoming calls that were actually answered (the phone goes off hook when ringing).
answered (outgoing)	The number of outgoing call attempts that were answered by the far-end.
busy	The number of outgoing call attempts that got a busy response.
Call Disconnect Time Out	Not applicable to the Cisco IP phone.
called, calling	Extension numbers of called and calling parties.
Caller ID Info Follows	Information about the caller ID.
Call Ref	A unique per-call identifier used by the SCCP protocol. The Call Ref values are assigned sequentially within the Cisco CME–SCCP interface, so this value also indicates the total number of SCCP calls since the router was last rebooted.
chan	Channel number of an ephone-dn.
CODEC	Codec type.
Companding Type	Not applicable to the Cisco IP phone.
connect	The number of calls that were disconnected by the far-end device when the local IP phone was in the call connected state.
Connection Mode	Not applicable to the Cisco IP phone.

Table 6 show ephone-dn Field Descriptions (continued)

Field	Description
Connection Number	Not applicable to the Cisco IP phone.
Description	Not applicable to the Cisco IP phone.
Digit Duration Timing	Not applicable to the Cisco IP phone.
DN STATE	Ephone-dn dn-tag number and state of the phone line associated with an extension.
Echo Cancellation...	Not applicable to the Cisco IP phone.
Echo Cancel Coverage	Not applicable to the Cisco IP phone.
EFXS	Voice port type.
Far-end disconnect at...	See connect, alert, hold, and ring.
Final Jitter	The final voice packet receive jitter reported by the IP phone at the end of the call.
hold	The number of calls that were disconnected by the far-end device when the local IP phone was in the call hold state (for example, if the caller was left on hold for too long and got tired of waiting).
incoming	The number of incoming calls presented (the phone rings).
In Gain	Not applicable to the Cisco IP phone.
Initial Time Out	Amount of time the system waits for an initial input digit from the caller.
Interdigit Time Out	Amount of time the system waits for a subsequent input digit from the caller.
Last 64 far-end disconnect cause codes	See Table 7 on page 210.
Latency	The final voice packet receive latency reported by the IP phone at the end of the call.
Lost	Number of lost packets.
Music On Hold Threshold	Not applicable to the Cisco IP phone.
No Interface Down Failure	State of the interface.
Noise Regeneration	Not applicable to the Cisco IP phone.
Non Linear...	Not applicable to the Cisco IP phone.
Operation State	Operational state of the voice port.
Out Attenuation	Not applicable to the Cisco IP phone.
outgoing	The number of outgoing call attempts.
Playout-delay Maximum	Not applicable to the Cisco IP phone.
Playout-delay...	Not applicable to the Cisco IP phone.
Port	Port number for the interface associated with the voice interface card.
Region Tone	Not applicable to the Cisco IP phone.

Table 6 show ephone-dn Field Descriptions (continued)

Field	Description
ring	The number of calls that were disconnected by the far-end device when the local IP phone was in the ringing state (for example, if the call was not answered and the caller hung up).
Ringing Time Out	Duration, in seconds, for which ringing to continue if a call is not answered. Set with the **timeouts ringing** command.
Rx Pkts, bytes	Number of packets and bytes received during the current or last call.
Signal Level to phone, peak	For G.711 calls only, this parameter indicates the most recent voice signal level in the voice IP packets sent from the router to the IP phone. This parameter is only valid for VoIP or PSTN G.711 calls to the IP phones. This parameter is not valid for calls between local IP phones, or calls that use codecs other than G.711. The peak field indicates the peak signal level seen during the entire call.
Slot	Slot used in the voice interface card for this port.
Station name	Station name.
Station number	Station number.
Sub-unit	Subunit used in the voice interface card for this port.
Tx Pkts, bytes	Number of packets and bytes transmitted during the current call or last call.
Type of VoicePort	Voice port type.
VAD	Voice activity detection.
Voice card specific info	Information specific to the voice card.
VPM STATE	State indication for the VPM software component.
VTSP STATE	State indication for the VTSP software component.
Wait Release Time Out	Time that a voice port stays in the call-failure state while the router sends a busy tone, reorder tone, or out-of-service tone to the port.

Table 7 lists the PSTN cause codes that can be sent as an ISDN cause information element (IE) and the corresponding SIP event for each. These are the far-end disconnect cause codes listed in the output for the **show ephone-dn statistics** command.

Table 7 PSTN Cause Code to SIP Event Mappings

PSTN Cause Code	Description	SIP Event
1	Unallocated number	410 Gone
3	No route to destination	404 Not found
16	Normal call clearing	BYE
17	User busy	486 Busy here
18	No user responding	480 Temporarily unavailable
19	No answer from the user	
21	Call rejected	603 Decline

Table 7 PSTN Cause Code to SIP Event Mappings (continued)

PSTN Cause Code	Description	SIP Event
22	Number changed	302 Moved temporarily
27	Destination out of order	404 Not found
28	Address incomplete	484 Address incomplete
29	Facility rejected	501 Not implemented
31	Normal unspecified	404 Not found
34	No circuit available	503 Service unavailable
38	Network out of order	
41	Temporary failure	
42	Switching equipment congestion	
44	Requested channel not available	
47	Resource unavailable	
55	Incoming class barred within CUG	603 Decline
57	Bearer capability not authorized	501 Not implemented
58	Bearer capability not presently available	
63	Service or option unavailable	503 Service unavailable
65	Bearer cap not implemented	501 Not implemented
79	Service or option not implemented	
87	User not member of CUG	603 Decline
88	Incompatible destination	400 Bad request
95	Invalid message	
102	Recover on timer expiry	408 Request timeout
111	Protocol error	400 Bad request
127	Interworking unspecified	500 Internal server error
Any code other than those listed above		500 Internal server error

Related Commands

Command	Description
show ephone-dn callback	Displays information about pending callbacks in a Cisco CME system.
show ephone-dn loopback	Displays information about loopback ephone-dns that have been created in a Cisco CME system.
show ephone-dn summary	Displays brief information for ephone-dns in a Cisco CME system.

show ephone-dn callback

To display information about pending callbacks in a Cisco CallManager Express (Cisco CME) system, use the **show ephone-dn callback** command in privileged EXEC mode.

show ephone-dn callback

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following sample output shows a callback placed by ephone-dn 1 against ephone-dn 3. Ephone-dn 3 has its channel 1 on hold and has just seized dial tone on its channel 2.

```
Router# show ephone-dn callback

DN 3 (95021) CallBack pending to DN 1 (95021) for ephone-1 age 7 seconds
State for DN 3 is CH1 HOLD      CH2 SIEZE
```

The following sample output shows a callback placed by ephone-dn 1 against ephone-dn 3. Ephone-dn 3 has a call in progress on channel 1.

```
Router# show ephone-dn callback

DN 3 (95021) CallBack pending to DN 1 (95021) for ephone-1 age 8 seconds
State for DN 3 is CH1 CONNECTED
```

Significant fields in the output from this command are described in Table 8.

Table 8 show ephone-dn callback Field Descriptions

Field	Description
DN 3 (95021) CallBack pending to DN 1 (95021)	Callback originator is the extension with the dn-tag 1 (in this example), and the callback has been placed on the extension with the dn-tag 3 and the number 95021.
age	Number of seconds since the callback was placed.
State for DN 3 is CH1... CH2...	Call states for channel 1 and channel 2, if any, of the extension that the callback is for.

Related Commands

Command	Description
show ephone-dn	Displays status and information or call statistics for one ephone-dn or all ephone-dns in a Cisco CME system.

show ephone-dn loopback

To display information about loopback ephone-dns that have been created in a Cisco CallManager Express (Cisco CME) system, use the **show ephone-dn loopback** command in privileged EXEC mode.

show ephone-dn loopback

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

The following example displays information for a loopback using ephone-dn 21 and ephone-dn 22:

```
Router# show ephone-dn loopback

LOOPBACK DN status (min 21, max 22):
DN 21 51...  Loopback to DN 22 CH1 IDLE
CallingDn -1 CalledDn -1 Called   Calling   G711Ulaw64k
Strip NONE, Forward 2, prefix 10 retry 10 Media 0.0.0.0 0
callID 0 srcCallID 0 ssrc 0 vector 0
DN 22 11...  Loopback to DN 21 CH1 IDLE
CallingDn -1 CalledDn -1 Called   Calling   G711Ulaw64k
Strip NONE, Forward 2, prefix 50 retry 10 Media 0.0.0.0 0
callID 0 srcCallID 0 ssrc 0 vector 0
```

Significant fields in the output from this command are described in Table 9, in alphabetical order.

Table 9 show ephone-dn loopback Field Descriptions

Field	Description
Called, Calling	Called number and calling number when there is a call present.
CalledDn, CallingDn	Ephone-dn tag numbers of the called and calling ephone-dn. Set to -1 if the call is not to or from an ephone-dn, or if there is no active call.
callID	Internal call reference. This usage is the same as in other Cisco IOS voice gateway commands.

Table 9 show ephone-dn loopback Field Descriptions (continued)

Field	Description
DN	Ephone-dn tag (sequence number).
Forward	Number of digits in the original called number to forward to the other ephone-dn in the loopback-dn pair.
G711...	G711Ulaw64k indicates G.711 codec, mu-law, 64000-bit stream. G711alaw64k indicates G.711 codec, a-law, 64000-bit stream.
Loopback to ...	Indicates the opposite ephone-dn in the loopback pair and the status of that ephone-dn.
Media	IP destination address, if any, for any voice packets that are passing through the loopback DN
min, max	Lowest and highest dn-tag numbers of ephone-dns that are configured as loopback-dns.
prefix	Digit string to add to the beginning of forwarded called numbers.
retry	Number of seconds to wait before retrying the loopback target when busy.
srcCallID	Internal call reference for the destination.
ssrc	RTP synchronization source (SSRC) of the most recent RTP packet.
Strip	Number of leading digits to strip before forwarding to the other extension in the loopback-dn pair.
vector	The following values describe the media path for voice packets that pass through the loopback-dn: • 0—No media path or not a loopback-dn path (inactive). • 1—Normal path. Loopback-dn has identified the final media destination as a local IP phone. The media IP address field shows a valid, non-zero value. • 2—Hairpin. Media packets are routed back through paired loopback-dns. The final destination is not known. For example, this can be a VoIP-to-VoIP call path by a loopback-dn. • 3—Hairpin. The final destination is an ephone-dn in a special mode such as paging. • 4—Loopback-dn chain has been detected, in which two loopback-dn pairs have been connected together. • 5—Loopback-dn chain has been detected in which more than two loopback-dn pairs are connected in series.

Related Commands

Command	Description
loopback-dn	Creates a virtual loopback voice port (loopback-dn) to establish a demarcation point for VoIP voice calls and supplementary services.
show ephone-dn	Displays status and information or call statistics for one ephone-dn or all ephone-dns in a Cisco CME system.

show ephone-dn summary

To display brief information about Cisco IP phone extensions (ephone-dns), use the **show ephone-dn summary** command in privileged EXEC mode.

show ephone-dn summary

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

Significant fields in the output from this command are described in Table 10, in alphabetical order.

```
Router# show ephone-dn summary

PORT DN STATE CODEC VAD VTSP STATE VPM STATE
======== ========== ======== === ==================== =========
50/0/1 DOWN - - - EFXS_ONHOOK
50/0/2 DOWN - - - EFXS_ONHOOK
50/0/3 DOWN - - - EFXS_ONHOOK
50/0/4 INVALID - - - EFXS_INIT
50/0/5 INVALID - - - EFXS_INIT
50/0/6 INVALID - - - EFXS_INIT
```

Table 10 show ephone-dn summary Field Descriptions

Field	Description
CODEC	Type of codec.
DN STATE	Status of the ephone-dn.
EFXS	Voice port type.
PORT	Port number (virtual) for this interface. The number that follows the last slash in the port number is the ephone-dn tag. For example, if the port number is 50/0/1, the dn-tag is 1.

Table 10 show ephone-dn summary Field Descriptions (continued)

Field	Description
VAD	Voice activity detection status.
VPM STATE	State indication for the voice port module (VPM) software component.
VTSP STATE	State indication for the voice telephony service provider (VTSP) software component.

Related Commands

Command	Description
show ephone-dn	Displays status and information or call statistics for one ephone-dn or all ephone-dns in a Cisco CME system.

show fb-its-log

To display information about the Cisco CallManager Express (Cisco CME) XML API configuration, statistics on XML API queries, and the XML API event logs, use the **show fb-its-log** command in privileged EXEC mode.

show fb-its-log [**summary**]

Syntax Description

summary	(Optional) Displays only the XML API configuration and the statistics for queries and logs, and not the logs themselves.

Command Modes

Privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following is sample output from the **show fb-its-log summary** command:

```
Router# show fb-its-log summary

IP Keyswitch Logs:(21:11:30 UTC Wed Jul 1 2003)
  ---- Current Period ---
    extension events:4
    device events: 3
    overwrites:0
    missed:0
    deleted:0
 ---- History ------
    overwrites:0
    missed:0
    deleted:8
---- Threads ----
    max xml threads:2
    current thread:0
    read in process:FALSE
```

Table 11 on page 219 describes the significant fields in this output.

The following is sample output from the **show fb-its-log** command:

```
Router# show fb-its-log

IP Keyswitch Logs:(21:11:30 UTC Wed Jul 1 2003)
  ---- Current Period ---
    extension events:4
    device events: 3
    overwrites:0
    missed:0
    deleted:0
```

```
 ---- History ------
    overwrites:0
    missed:0
    deleted:8
---- Threads ----
    max xml threads:2
    cuttent thread:0
    read in process:FALSE

1  Time:21:11:06 UTC Wed Jul 1 2003
    Event:DN 1[2001] goes down
2  Time:21:11:06 UTC Wed Jul 1 2003
    Event:DN 2[2003] goes down
3  Time:21:11:06 UTC Wed Jul 1 2003
    Event:IP Phone 1[SEP003094C3F96A] unregistered
4  Time:21:11:06 UTC Wed Jul 1 2003
    Event:IP Phone 1[SEP003094C3F96A] unregistered
5  Time:21:11:54 UTC Wed Jul 2003
    Event:IP Phone 1[SEP003094C3F96A] registered
6  Time:21:11:57 UTC Wed Jul 2003
    Event:DN 1[2001] goes up
7  Time:21:11:57 UTC Wed Jul 2003
    Event:DN 2[2003] goes up
```

Table 11 describes the significant fields in this output.

Table 11 show fb-its-log Field Descriptions

Field	Description
Current Period	The time between the last retain-timer-triggered cleanup to the next cleanup.
extension events	Events related to extensions that have been captured in the internal buffer.
device events	Events related to devices that have been captured in the internal buffer.
overwrites	Events that are written over previously recorded events in the buffer. Overwrites occur when the internal buffer size is too small; new events overwrite old ones. The internal buffer size is set using the **max-size** keyword in the **log table** command.
missed	Events that happen too quickly for the system to record.
deleted	Events removed from the internal buffer.
History	Information since the last system restart.
Threads	Current number of threads configured in the system.
max xml threads	Maximum number of concurrent XML threads allowed.
current thread	XML API query thread.
read in process	TRUE indicates that the xml-test.html file is being read now. FALSE indicates that the file is not being read.
UTC	Coordinated Universal Time, which is used by the system clock on the Cisco CME router.

Related Commands

Command	Description
log table	Sets the maximum size of the table used to capture phone events used for the Cisco CME XML API.

show telephony-service admin

To display information about the Cisco CallManager Express (Cisco CME) system administrator, use the **show telephony-service admin** command in user EXEC or privileged EXEC mode.

show telephony-service admin

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC and privileged EXEC

Command History

Cisco IOS Release	Cisco CME Release	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.

Examples

The following is sample output from this command:

```
Router# show telephony-service admin

admin_username Admin
admin_password word
edit DN through Web: enabled.
edit TIME through Web: enabled.
```

Table 12 describes the significant fields in this output.

Table 12 show telephony-service admin Field Descriptions

Field	Description
admin_username	Username of system administrator.
admin_password	Password of system administrator.
edit DN through Web	Whether editing of extensions through the GUI has been enabled using the **dn-webedit** command.
edit TIME through Web	Whether changing the router time through the GUI has been enabled using the **time-webedit** command.

Related Commands

Command	Description
dn-webedit	Enables adding of extensions (ephone-dns) through the web interface.
time-webedit	Enables setting of time through the web interface.

show telephony-service all

To display detailed configuration for phones, voice ports, and dial peers in a Cisco CallManager Express (Cisco CME) system, use the **show telephony-service all** command in user EXEC or privileged EXEC mode.

show telephony-service all

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC and privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

The following is sample output from this command:

```
Router# show telephony-service all

CONFIG
======
ip source-address 10.0.0.1 port 2000
max-ephones 24
max-dn 24
dialplan-pattern 1 408734....
voicemail 11111
transfer-pattern 510734....
keepalive 30


ephone-dn 1
number 5001
huntstop

ephone-dn 2
number 5002
huntstop
call-forward noan 5001 timeout 8
```

```
ephone-dn 3
number 5003
huntstop


ephone 1
mac-address 0030.94C3.37CB
type 0
button  1:1
speed-dial 1 5002
speed-dial 2 5003
cos 0
!
ephone 2
mac-address 0030.94C3.F96A
type 0
button  1:2 2:3 3:4
speed-dial 1 5004
speed-dial 2 5001
cos 0
!


voice-port 50/0/1
 station-id number 5001
!
voice-port 50/0/2
 station-id number 5002
 timeout ringing 8
!

dial-peer voice 20025 pots
 destination-pattern 5001
 huntstop
 port 50/0/1

dial-peer voice 20026 pots
 destination-pattern 5002
 huntstop
 call-forward noan 5001
 port 50/0/2

dial-peer voice 20027 pots
 destination-pattern 5003
 huntstop
 port 50/0/3
```

Table 13 describes significant fields in this output, in alphabetical order.

Table 13 show telephony-service all Field Descriptions

Field	Description
button	Button on the Cisco IP phone.
call-forward noan	Call forward no answer is set.
cos	Not applicable; unused.
destination-pattern	Destination pattern (telephone number) configured for this dial peer.
dial-peer voice	Voice dial peer.

Table 13 show telephony-service all Field Descriptions (continued)

Field	Description
dialplan-pattern	Dial-plan pattern is set to expand the abbreviated extension numbers to fully qualified E.164 numbers.
ephone	Cisco IP phone.
ephone-dn	Cisco IP phone directory number.
huntstop	Huntstop is set.
ip source-address	IP address used by Cisco IP phones to register with the router for service.
keepalive	IP phone keepalive period, in seconds.
mac-address	MAC address.
max-dn	Maximum directory numbers.
max-ephones	Maximum numbers of Cisco IP phones.
number	Cisco IP phone number.
port	TCP port number used by Cisco IP phones to communicate with the router.
pots	POTS dial peer set.
speed-dial	Speed-dial is set.
station-id number	Number used for caller ID purposes when calls are made using the line.
timeout	Timeout is set.
timeout ringing	Maximum amount of time that the phone is allowed to ring before the call is disconnected.
transfer-pattern	Transfer pattern is set to allow transfer of calls to a specified number.
type	Not applicable; unused.
voicemail	A voice-mail (speed-dial) number is set.
voice-port	(Virtual) voice port designator.

Related Commands

Command	Description
show telephony-service dial-peer	Displays dial peers for extensions in a Cisco CME system.
show telephony-service voice-port	Displays virtual voice-port configuration for extensions in a Cisco CME system.

show telephony-service dial-peer

To display dial peer information for extensions in a Cisco CallManager Express (Cisco CME) system, use the **show telephony-service dial-peer** command in user EXEC or privileged EXEC mode.

show telephony-service dial-peer

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC and privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

The dial peers cannot be edited manually. To change values associated with dial peers, use the **ephone-dn** command.

Examples

The following is sample output from this command:

```
Router# show telephony-service dial-peer

dial-peer voice 20025 pots
 destination-pattern 5001
 huntstop
 port 50/0/1

dial-peer voice 20026 pots
 destination-pattern 5002
 huntstop
 call-forward noan 5001
 port 50/0/2

dial-peer voice 20027 pots
 destination-pattern 5003
 huntstop
 port 50/0/3
```

```
dial-peer voice 20028 pots
 destination-pattern 5004
 huntstop
 port 50/0/4
```

Table 14 describes significant fields in this output, in alphabetical order.

Table 14 show telephony-service dial-peer Field Descriptions

Field	Description
call-forward noan	Call forward no answer is set.
destination-pattern	Destination pattern (telephone number) configured for this dial peer.
dial-peer voice	Voice dial peer.
huntstop	Huntstop is set.
port	(Virtual) voice port designator.
pots	POTS dial peer set.

Related Commands

Command	Description
ephone	Enters ephone configuration mode.
ephone-dn	Enters ephone-dn configuration mode.
show telephony-service all	Displays detailed configuration for a Cisco CME system.
show telephony-service ephone-dn	Displays information for extensions (ephone-dns) in a Cisco CME system.
show telephony-service voice-port	Displays virtual voice-port configuration of extensions in a Cisco CME system.

show telephony-service directory-entry

To display the entries made using the **directory entry** command, use the **show telephony-service directory-entry** command in user EXEC or privileged EXEC mode.

show telephony-service directory-entry

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC and privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

This command lists directory entries that are made using the **directory entry** command but does not list entries that are made using the **name** and **number** commands in ephone-dn configuration mode.

Examples

The following is sample output from this command:

```
Router# show telephony-service directory-entry

directory entry 1 4085550123 name Smith, John
```

Table 15 describes significant fields in this output, in alphabetical order.

Table 15 show telephony-service directory-entry Field Descriptions

Field	Description
directory entry	*directory-tag* (1 in the example) is the sequence number, or unique identifier, for this directory entry. *number* (4085550123 in the example) is the telephone number or extension for the directory entry.
name	Name that appears in the directory associated with the number.

Related Commands

Command	Description
directory entry	Adds an entry to a local phone directory that can be displayed on IP phones.
show telephony-service all	Displays detailed configuration of a Cisco CME system.
show telephony-service ephone-dn	Displays information for extensions (ephone-dns) in a Cisco CME system.

show telephony-service ephone

To display configuration for the Cisco IP phones, use the **show telephony-service ephone** command in user EXEC or privileged EXEC mode.

show telephony-service ephone

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC or privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

The following is sample output from this command:

```
Router# show telephony-service ephone

ephone 1
mac-address 0030.94C3.37CB
type 0
button  1:1
speed-dial 1 5002
speed-dial 2 5003
cos 0
!
ephone 2
mac-address 0030.94C3.F96A
type 0
button  1:2 2:3 3:4
speed-dial 1 5004
speed-dial 2 5001
cos 0
!
```

Table 16 on page 229 describes significant fields in this output.

Table 16 show telephony-service ephone Field Descriptions

Field	Description
button	Button number on IP phone, separator to denote ring characteristics (colon, or :, is a normal ring), and ephone-dn tag.
cos	Not applicable; unused.
ephone	Cisco IP phone.
mac-address	MAC address of the Cisco IP phone.
type	Not applicable; unused.
speed-dial	Speed-tag (unique identifier) and the number that is programmed for that speed-tag.

Related Commands

Command	Description
show telephony-service all	Displays detailed configuration for a Cisco CME system.
show telephony-service dial-peer	Displays dial-peer information for extensions in a Cisco CME system.
show telephony-service ephone-dn	Displays information for extensions (ephone-dns) in a Cisco CME system.
show telephony-service voice-port	Displays configurations for virtual voice ports in a Cisco CME system.

show telephony-service ephone-dn

To display information about extensions (ephone-dns) in a Cisco CallManager Express (Cisco CME) system, use the **show telephony-service ephone-dn** command in user EXEC or privileged EXEC mode.

show telephony-service ephone-dn

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC or privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Examples

The following is sample output from this command:

```
Router# show telephony-service ephone-dn

ephone-dn 1
number 5001
huntstop

ephone-dn 2
number 5002
huntstop
call-forward noan 5001 timeout 8

ephone-dn 3
number 5003
huntstop

ephone-dn 4
number 5004
huntstop
```

Table 17 describes significant fields in this output, in alphabetical order.

Table 17 show telephony-service ephone-dn Field Descriptions

Field	Description
call-forward noan	Call forwarding is set to no answer. Other available options are call-forward busy and call-forward all.
ephone-dn	Cisco IP phone directory number.
huntstop	Huntstop is set.
number	Cisco IP phone number.
timeout	Timeout setting for call forwarding when an extension does not answer.

Related Commands

Command	Description
show telephony-service all	Displays the detailed configuration of all the Cisco IP phones.
show telephony-service dial-peer	Displays dial peer information for extensions (ephone-dns) in a Cisco CME system.
show telephony-service voice-port	Displays configurations for virtual voice ports in a Cisco CME system.

show telephony-service tftp-bindings

To display the current configuration files accessible to IP phones, use the **show telephony-service tftp-bindings** command in user EXEC or privileged EXEC mode.

show telephony-service tftp-bindings

Syntax Description

This command has no arguments or keywords.

Command Modes

User or privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

This command provides a list of configuration files that are accessible to IP phones using TFTP, including the dictionary, language, and tone configuration files that are associated with the ISO-3166 codes that have been selected using the **user-locale** and **network-locale** commands.

Examples

The following is sample output from the **show telephony-service tftp-bindings** command when the ISO-3166 code for Germany has been selected for both language and tones:

```
Router(config)# show telephony-service tftp-bindings

tftp-server system:/its/SEPDEFAULT.cnf
tftp-server system:/its/SEPDEFAULT.cnf alias SEPDefault.cnf
tftp-server system:/its/XMLDefault.cnf.xml alias XMLDefault.cnf.xml
tftp-server system:/its/ATADefault.cnf.xml
tftp-server system:/its/XMLDefault7960.cnf.xml alias SEP00036B54BB15.cnf.xml
tftp-server system:/its/germany/7960-font.xml alias German_Germany/7960-font.xml
tftp-server system:/its/germany/7960-dictionary.xml alias
German_Germany/7960-dictionary.xml
tftp-server system:/its/germany/7960-kate.xml alias German_Germany/7960-kate.xml
tftp-server system:/its/germany/SCCP-dictionary.xml alias
German_Germany/SCCP-dictionary.xml
tftp-server system:/its/germany/7960-tones.xml alias Germany/7960-tones.xml
```

Related Commands

Command	Description
network-locale	Sets the definition of the tones and cadences on the Cisco IP Phone 7940 and Cisco IP Phone 7960 for a specific geographic area.
user-locale	Sets language for displays on the Cisco IP Phone 7940 and Cisco IP Phone 7960.

show telephony-service voice-port

To display configurations of virtual voice ports in a Cisco CallManager Express (Cisco CME) system, use the **show telephony-service voice-port** command in user EXEC or privileged EXEC mode.

show telephony-service voice-port

Syntax Description

This command has no arguments or keywords.

Command Modes

User EXEC or privileged EXEC

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

This command displays virtual voice-port configurations for a Cisco CME system. Each ephone-dn corresponds to a virtual voice port. For example, the ephone-dn with dn-tag 7 corresponds to virtual voice port 50/0/7. The virtual voice port provides the telephone line associated with the Cisco IP phone extension (ephone-dn).

Examples

The following is sample output from this command:

```
Router# show telephony-service voice-port

voice-port 50/0/1
 station-id number 5001
!
voice-port 50/0/2
 station-id number 5002
 timeout ringing 8
!
voice-port 50/0/3
 station-id number 5003
!
voice-port 50/0/4
 station-id number 5004
!
```

Table 18 on page 234 describes significant fields in this output, in alphabetical order.

Table 18 show telephony-service voice-port Field Descriptions

Field	Description
station-id number	Phone number used for caller ID purposes for calls made from this voice port.
timeout ringing	Maximum amount of time that a phone is allowed to ring before the call is disconnected.
voice-port	Virtual voice port.

Related Commands

Command	Description
show telephony-service all	Displays the detailed configuration of all the Cisco IP phones.
show telephony-service dial-peer	Displays dial-peer information for extensions in a Cisco CME system.
show telephony-service ephone-dn	Displays information for extensions (ephone-dns) in a Cisco CME system.

speed-dial

To create speed-dial definitions for a Cisco IP phone or analog phone that uses an analog telephone adaptor (ATA) in a Cisco CallManager Express (Cisco CME) system, use the **speed-dial** command in ephone configuration mode. To disable a speed-dial definition, use the **no** form of this command.

speed-dial *speed-tag digit-string* [**label** *label-text*]

no speed-dial *speed-tag*

Syntax Description

speed-tag	Unique sequence number that identifies a speed-dial definition during configuration tasks. Range is from 1 to 34.
digit-string	Digits to be dialed when the speed-dial button is pressed on an IP phone or the digits to be dialed when the associated code is entered from an analog phone with an ATA device. For IP phones, if the first character of this string is the plus sign (+), this speed-dial number is locked and cannot be changed at the phone. If the only character in this string is a pound sign (#), a user-programmable speed-dial button with no speed-dial number attached is defined.
label *label-text*	(Optional) String that contains identifying text to be displayed next to the speed-dial button. Enclose the string in quotation marks if the string contains a space.

Defaults

No speed-dial definitions are created.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	The number of speed-dial definitions that can be created was increased from 4 to 34. The ability to program speed-dial numbers at the phone and the ability to lock speed-dial numbers were introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The *speed-tag* argument in this command is a unique identifier for a speed-dial definition on the phone that is being configured. On Cisco IP phones, speed-dial definitions are assigned to available extension buttons that have not been assigned to extensions. Speed-dial definitions are assigned in the order of their identifier numbers.

For example, if you define speed-dial 1, it is assigned to the first phone button that is available after the buttons that are assigned to extensions. If you used two buttons for extensions on a phone, speed-dial 1 is assigned to the third physical button on the phone. When you define speed-dial 2, it is assigned to the fourth physical button on the phone.

For IP phones, speed-dial numbers can be assigned by the administrator using the *digit-string* argument and can be locked if the *digit-string* argument begins with a plus sign (+). Locked numbers cannot be changed at the phone. Speed-dial instances without speed-dial numbers (those defined with only a pound sign) and speed-dial instances with unlocked *digit-string* arguments can be changed by users at their IP phones.

If more speed-dial definitions are created than are supported by the IP phone setup, the extra speed-dial configurations are ignored.

Changes made to speed-dial buttons are saved in the router NVRAM configuration after a timer-based delay.

Analog phone users who use a Cisco ATA-186 or Cisco ATA-188 to connect to Cisco CME systems use a different method to access speed-dial numbers. Instead of pressing a speed-dial button, phone users with ATA devices press the asterisk (star) key and a *speed-tag* number (speed-dial identifier) to dial a speed-dial number. For instance, a phone user with a Cisco ATA-186 would press *1 to dial the number that has been programmed as speed-dial 1 on that ephone. Phones with ATA devices are limited to a maximum of nine speed-dial numbers that must be programmed by the system administrator. The numbers cannot be programmed from the phone. With phones that use ATA devices, system administrators must be sure to tell phone users when speed-dial numbers have been programmed for their phones.

This command must be followed by a quick reboot of the phone using the **restart** command.

Examples

The following example sets speed-dial button 2 to dial the head office at extension 5001 and locks the setting so that the phone user cannot change it at the phone:

```
Router(config)# ephone 23
Router(config-ephone)# speed-dial 2 +5001 label "Head Office"
```

Related Commands

Command	Description
ephone	Enters ephone configuration mode.

Command	Description
restart (ephone)	Performs a fast reboot of a single IP phone in a Cisco CME system.
restart (telephony-service)	Performs a fast reboot of one or all phones in a Cisco CME system.

system message

To set a text message for display on idle Cisco IP Phone 7940s and Cisco IP Phone 7960s in a Cisco CallManager Express (Cisco CME) system, use the **system message** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

system message *text-message*

no system message

Syntax Description

text-message	Alphanumeric string of up to approximately 30 characters to display when the phone is idle.

Defaults

The message “Cisco CallManager Express” is displayed.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The number of characters that can be displayed is not fixed because IP phones typically use a proportional (as opposed to a fixed-width) font. There is room for approximately 30 alphanumeric characters.

The display message is refreshed with a new message after any of the following events occurs:

- A busy phone goes back on-hook.
- An idle phone receives a keepalive message.
- A phone is restarted.

Examples

The following example sets the message “ABC Company” to display instead of “Cisco CallManager Express” on idle Cisco IP Phone 7940s and Cisco IP Phone 7960s:

```
Router(config)# telephony-service
Router(config-telephony-service)# system message ABC Company
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

telephony-service

To enter telephony-service configuration mode to configure a Cisco CallManager Express (Cisco CME) system, use the **telephony-service** command in global configuration mode. To remove an existing Cisco CME configuration, use the **no** form of this command.

telephony-service [**setup**]

no telephony-service

Syntax Description

setup	(Optional) Uses the Cisco CME setup tool for interactive creation of a Cisco CME system configuration.

Defaults

No Cisco CME configuration is present.

Command Modes

Global configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(15)ZJ	3.0	The **setup** keyword was added.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

The **telephony-service** command is used to enter telephony-service configuration mode. Use telephony-service configuration mode to set systemwide parameters in a Cisco CME system.

The **setup** keyword starts the Cisco CME setup tool, which presents a question-and-answer dialog to gather information that is used to automatically configure a Cisco CME system. When you do not use the **setup** keyword, telephony-service configuration submode is opened and you can manually configure the Cisco CME system using command-line interface (CLI) commands.

The **setup** CLI keyword is not stored in the router NVRAM.

If you attempt to use the **setup** option for a system that already has a nonempty telephony-service configuration, the command is rejected. To use the **setup** option after an existing telephony-service configuration has been created, first remove the existing configuration using the **no telephony-service** command.

Table 19 on page 240 shows a sample dialog with the Cisco CME setup tool and explains possible responses to the Cisco CME setup tool prompts.

Table 19 Cisco CME Setup Tool Dialog Prompts

Cisco CME Setup Tool Prompt	Description

`Do you want to setup DHCP service for your IP phones? [yes/no]:`
 	
If you respond yes, you see the following prompts:
`IP network for telephony-service DHCP Pool:`
`Subnet mask for DHCP network :`
`TFTP Server IP address (Option 150) :`
`Default Router for DHCP Pool :`
	• **Yes** configures the Cisco CME router to act as a DHCP server, automatically providing IP addresses to your IP phones and provisioning the default gateway and TFTP IP addresses to be used by the phones. This method creates a single pool of IP addresses. If you need a pool for non-IP phones or if the Cisco CME router cannot act as the DHCP router, answer no and manually define the DHCP server as described in the appropriate version-specific Cisco CallManager Express documentation.
	• **No** indicates that you have already configured DHCP or static IP addresses for the IP phones.

`Do you want to start telephony-service setup? [yes/no]:`	• **Yes** starts the Cisco CME setup for phones. • **No** terminates the Cisco CME setup tool.

`Enter the IP source address for Cisco CallManager Express:`
 	
`Enter the Skinny Port for Cisco CallManager Express: [2000]:`
	IP address on which the router provides Cisco CME services, usually the default gateway for the IP subnet that you are using for the IP phones, and the port for Skinny Client Control Protocol (SCCP) messages.

`How many IP phones do you want to configure : [0]:`	Enter the maximum number of IP phones that this Cisco CME system will support. This number can be increased later, to the maximum allowed for this version and your router. **Note** The Cisco CME setup tool associates one number with each newly registering phone. If you want additional numbers on a phone, manually add them later.
`Do you want dual-line extensions assigned to phones? [yes for dual-line / no for single-line]:`	• **Yes**—Each newly registering IP phones is assigned a single number that is associated with a single phone button. The system generates a dual-line ephone-dn entry for each ephone-dn. • **No**—IP phones are linked directly to one or more PSTN trunk lines. Using keyswitch mode requires manual configuration in addition to using the Cisco CME setup tool. The system generates two ephone-dn entries for each ephone-dn, and they are both assigned to a single phone.

Table 19 Cisco CME Setup Tool Dialog Prompts (continued)

Cisco CME Setup Tool Prompt	Description

`What language do you want on IP phones?`
`0 English`
`1 French`
`2 German`
`3 Russian`
`4 Spanish`
`5 Italian`
`6 Dutch`
`7 Norwegian`
`8 Portuguese`
`9 Danish`
`10 Swedish`
`[0]:`
	Language for IP phone displays, selected from the list. The default is 0, English.

`Which Call Progress tone set do you want on IP phones :`
`0 United States`
`1 France`
`2 Germany`
`3 Russia`
`4 Spain`
`5 Italy`
`6 Netherlands`
`7 Norway`
`8 Portugal`
`9 UK`
`10 Denmark`
`11 Switzerland`
`12 Sweden`
`13 Austria`
`14 Canada`
`[0]:`
	Locale for the tone set used to indicate call status or progress, selected from the list. The default is 0, United States.

`What is the first extension number you want to configure :[0]:`	Lowest number to use for extension numbers. Each additional extension that is created receives a number that is incremented by one. Extension numbers must be compatible with your telephone number plan and with PSTN numbering requirements if you use Direct Inward Dialing (DID) service.
`Do you have Direct-Inward-Dial service for all your phones? [yes/no]:`	• **Yes** if you have trunk access to public telephone service by ISDN or VoIP for all extension numbers. The system creates an appropriate dial plan. • **No** if you have simple analog phone lines only (for example, FXO interfaces) or if you have trunk access for some lines but not all lines.
If you answer yes to the previous question, you see the following prompt: `Enter the full E.164 number for the first phone:`	Complete ten-digit telephone number, including area code, that corresponds to the first extension number.

Table 19 Cisco CME Setup Tool Dialog Prompts (continued)

Cisco CME Setup Tool Prompt	Description
`Do you want to forward calls to a voice message service? [yes/no]:`	• **Yes** to forward calls to a single voice message service number when an IP phone is busy or does not answer. All phone extensions forward their calls to the same voice message service pilot number. • **No** to not forward calls to a single voice message service number. Answer **no** if you do not have a voice message system or if you want to customize call forwarding behavior for each extension.
If you answer yes to the previous question, you see the following prompt: `Enter the extension or pilot number of the voice message service:`	Voice message service pilot number. This step can be ignored during the setup dialog and manually configured later.
`Call forward No Answer Timeout: [18]:`	Timeout, in seconds, after which to forward calls to voice mail if they are not answered. Default is 18.
`Do you wish to change any of the above information? [yes/no]:`	• **Yes** starts the dialog over again without implementing any of the answers that you previously gave. • **No** starts the automatic configuration process.

Examples

The following example enters telephony-service configuration mode for manual setup of a Cisco CME system and defines the maximum number of phones for that system as 12:

```
Router(config)# telephony-service
Router(config-telephony-service)# max-ephones 12
```

The following example starts the Cisco CME setup tool:

```
Router(config)# telephony-service setup
```

time-format

To select a 12-hour clock or a 24-hour clock for the time display format on Cisco IP phones in a Cisco CallManager Express (Cisco CME) system, use the **time-format** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

time-format {**12** | **24**}

no time-format

Syntax Description

12	Selects a 12-hour clock. This is the default.
24	Selects a 24-hour clock.

Defaults

12

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.

Examples

The following example selects a 24-hour clock for the time display on Cisco IP phones:

```
Router(config)# telephony-service
Router(config-telephony-service)# time-format 24
```

Related Commands

Command	Description
date-format	Selects a format to display the date on Cisco IP phones.
telephony-service	Enters telephony-service configuration mode.

timeout (ephone-hunt)

To define the number of seconds after which a call that is not answered is redirected to the next number in a Cisco CallManager Express (Cisco CME) ephone-hunt-group list, use the **timeout** command in ephone-hunt configuration mode. To return to the default timeout, use the **no** form of this command.

timeout *seconds*

no timeout *seconds*

Syntax Description

seconds	Number of seconds. Range is from 3 to 60000. Default is 180.

Defaults

180 seconds

Command Modes

Ephone-hunt configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following example defines a no-answer timeout of 10 seconds for hunt group 25:

```
Router(config)# ephone-hunt 25 sequential
Router(config-ephone-hunt)# timeout 10
```

Related Commands

Command	Description
ephone-hunt	Defines an ephone hunt group and enters ephone-hunt configuration mode.
final	Defines the last ephone-dn in an ephone hunt group.
hops	Defines the number of times that a call is redirected to the next ephone-dn in a peer ephone-hunt-group list before proceeding to the final ephone-dn.
list	Defines the ephone-dns that participate in an ephone hunt group.
max-redirect	Changes the current number of allowable redirects in a Cisco CME system.
no-reg (ephone-hunt)	Specifies that the pilot number of this ephone hunt group should not register with the H.323 gatekeeper.
pilot	Defines the ephone-dn that callers dial to reach an ephone hunt group.
preference (ephone-hunt)	Sets preference order for the ephone-dn associated with an ephone-hunt-group pilot number.

timeouts busy

To set the amount of time after which a call is disconnected from a busy signal, use the **timeouts busy** command in telephony-service configuration mode. To return to the default value, use the **no** form of this command.

timeouts busy *seconds*

no timeouts busy

Syntax Description

seconds	Number of seconds after connection before a call is disconnected from a busy signal. Range is from 0 to 30 seconds. Default is 10.

Defaults

10 seconds

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(8)T	2.0	This command was introduced.

Examples

The following example sets a busy timeout of 10 seconds:

```
Router(config)# telephony-service
Router(config-telephony-service)# timeouts busy 10
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

timeouts interdigit (telephony-service)

To set the interdigit timeout value for all Cisco IP phones in a Cisco CallManager Express (Cisco CME) system, use the **timeouts interdigit** command in telephony-service configuration mode. To return to the default value, use the **no** form of this command.

timeouts interdigit *seconds*

no timeouts interdigit

Syntax Description

seconds	Interdigit timeout duration for Cisco IP phones, in seconds. Range is from 2 to 120. Default is 10.

Defaults

10 seconds

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XB	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

The interdigit timeout timer is activated when the caller enters a digit and is restarted each time the caller enters subsequent digits until the destination address is identified. This command specifies how long, in seconds, the system waits after a caller enters an initial digit or a subsequent digit of a dialed string. If the configured timeout value is exceeded before the destination address is identified, a tone sounds and the call is terminated. The default is 10 seconds.

To disable the timeouts interdigit timer, set the *seconds* value to zero.

Examples

The following example sets the interdigit timeout value to 5 seconds for all Cisco IP phones:

```
Router(config)# telephony-service
Router(config-telephony-service)# timeouts interdigit 5
```

In this example, the 5 seconds also provides the elapsed time after which an incompletely dialed number times out. For example, if you dial nine digits (408555013) instead of the required ten digits (4085550134), you hear a busy tone after 5 “timeout” seconds.

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.
timeouts interdigit (voice-port)	Configures the interdigit timeout value for a specified voice port.

timeouts ringing (telephony-service)

To set the timeout value for ringing in a Cisco CallManager Express (Cisco CME) system, use the **timeouts ringing** command in telephony-service configuration mode. To reset the timeout value to the default value, use the **no** form of this command.

timeouts ringing *seconds*

no timeouts ringing

Syntax Description

seconds	Duration, in seconds, for which the Cisco CME system allows ringing to continue if a call is not answered. Range is from 5 to 60000. Default is 180.

Defaults

180 seconds

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following example allows incoming calls to ring for 600 seconds:

```
Router(config)# telephony-service
Router(config-telephony-service)# timeouts ringing 600
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

time-webedit (telephony-service)

To enable the system administrator to set time on the Cisco CallManager Express (Cisco CME) router through the web interface, use the **time-webedit** command in telephony-service configuration mode. To disable this feature, use the **no** form of this command.

time-webedit

no time-webedit

Syntax Description

This command has no arguments or keywords.

Defaults

Time-setting through the web interface is disabled.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

The **time-webedit** command allows a local administrator of the Cisco CME router to change and set time through the web-based graphical user interface (GUI).

Note Cisco discourages this method for setting network time. The router should be set up to automatically synchronize its router clock from a network-based clock source using Network Time Protocol (NTP). In the rare case that a network NTP clock source is not available, the **time-webedit** command can be used to allow manual setting and resetting of the router clock through the Cisco CME GUI.

Examples

The following example enables web editing of time:

```
Router(config)# telephony-service
Router(config-telephony-service)# time-webedit
```

Related Commands

Command	Description
dn-webedit	Enables adding of directory numbers through a web interface.
telephony-service	Enters telephony-service configuration mode.

transfer-mode

To specify the type of call transfer for an individual IP phone extension that uses the ITU-T H.450.2 standard, use the **transfer-mode** command in ephone-dn configuration mode. To remove this specification, use the **no** form of this command.

transfer-mode {**blind** | **consult**}

no transfer-mode

Syntax Description

blind	Transfers calls without consultation using a single phone line.
consult	Transfers calls with consultation using a second phone line, if available.

Defaults

The ephone-dn uses the transfer-system value that was set systemwide.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

This command specifies the type of call transfer for an individual Cisco IP phone extension that is using the ITU-T H.450.2 protocol. It allows you to override the system default **transfer-system** setting (full-consult or full-blind) for that extension.

Call transfers that useH.450.2 can be blind or consultative. A blind transfer is one in which the transferring phone connects the caller to a destination extension before ringback begins. A consultative transfer is one in which the transferring party either connects the caller to a ringing phone (ringback heard) or speaks with the third party before connecting the caller to the third party.

You can specify blind or consultative transfer on a systemwide basis by using the **transfer-system** command. The systemwide setting can then be overridden for individual phone extensions by using the **transfer-mode** command. For example, in a Cisco CallManager Express (Cisco CME) network that is set up for consultative transfer, a specific extension with an auto-attendant that automatically transfers incoming calls to specific extension numbers can be set to use blind transfer, because auto-attendants do not use consultative transfer.

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

Examples

The following example sets blind mode for call transfers from extension 21354:

```
Router(config)# ephone-dn 21354
Router(config-ephone-dn)# transfer-mode blind
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode to set extension numbers and parameters for individual Cisco IP phone lines.
transfer-system	Specifies the call transfer method for all Cisco CME extensions that use the ITU-T H.450.2 standard.

transfer-pattern (telephony-service)

To allow transfer of telephone calls from Cisco IP phones to phones other than Cisco IP phones, use the **transfer-pattern** command in telephony-service configuration mode. To disable these transfers, use the **no** form of this command.

transfer-pattern *transfer-pattern* [**blind**]

no transfer-pattern

Syntax Description

transfer-pattern	String of digits for permitted call transfers. Wildcards are allowed. A maximum of 32 transfer patterns can be entered, using a separate command for each one.
blind	(Optional) When H.450.2 consultative call transfer is used, forces transfers that match the pattern to be executed as blind transfers. Overrides settings made using the **transfer-system** and **transfer-mode** commands.

Defaults

Transfer of calls is enabled only to local Cisco IP phones.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.
12.2(15)T	2.1	The **blind** keyword was added.

Usage Guidelines

This command allows you to transfer calls to “other” phones—that is, to non-IP phones and phones outside of your network. A call is then established between the transferred party and the new recipient. By default, all Cisco IP phone extension numbers are allowed as transfer targets.

The **blind** keyword is valid only for systems that use Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version and applies only to consultative transfers made using the H.450.2 standard. The **blind** keyword forces calls that are transferred to numbers that match the transfer pattern to be executed as blind or full-blind transfers, overriding any settings made using the **transfer-system** and **transfer-mode** commands.

When defining transfers to non-local numbers, it is important to note that transfer-pattern digit matching is performed before translation-rule operations. Therefore, you should specify in this command the digits actually entered by phone users before they are translated. For more information, see the "Translation Rules" section in Chapter 3, "Setting Up Phones in a Cisco CME System" in the *Cisco CallManager Express 3.0 System Administration Guide*.

Examples

The following example sets a transfer pattern:

```
Router(config)# telephony-service
Router(config-telephony-service)# transfer-pattern 55501..
```

A maximum of 32 transfer patterns can be entered. In this example, 55501.. (the two periods are wildcards) permits transfers to any number in the range 555-0100 to 555-0199.

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.
transfer-mode	Specifies the type of call transfer for an individual IP phone extension number that uses the ITU-T H.450.2 standard.
transfer-system	Specifies the call transfer method for all Cisco CME extensions that use the ITU-T H.450.2 standard.

transfer-system

To specify the call transfer method for IP phone extensions that use the ITU-T H.450.2 standard, use the **transfer-system** command in telephony-service configuration mode. To disable the call transfer method, use the **no** form of this command.

transfer-system {**blind** | **full-blind** | **full-consult** | **local-consult**}

no transfer-system

Syntax Description

blind	Transfers calls without consultation using a single phone line and the Cisco proprietary method. This is the default.
full-blind	Transfers calls without consultation using H.450.2 standard methods.
full-consult	Transfers calls using H.450.2 with consultation using the second phone line if available, or the calls fall back to **full-blind** if the second line is unavailable.
local-consult	Transfers calls with local consultation using the second phone line if available, or the calls fall back to **blind** for nonlocal consultation or transfer target. This mode is intended for use primarily in Voice over Frame Relay (VoFR) networks, because the Cisco VoFR call transfer protocol does not support an end-to-end transfer-with-consultation mechanism.

Defaults

blind

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

Call transfers that use the H.450.2 standard can be blind or consultative. A blind transfer is one in which the transferring extension connects the caller to a destination extension before ringback begins. A consultative transfer is one in which the transferring party either connects the caller to a ringing phone (ringback heard) or speaks with the third party before connecting the caller to the third party. When H.450.2 call transfer is selected using the **full-blind** or **full-consult** keyword, the router must be configured with a Tool Command Language (Tcl) script that supports the H.450.2 protocol. The Tcl script is loaded on the router using the **call application voice** command.

You can specify blind or consultative transfer on a systemwide basis using the **transfer-system** command. The systemwide setting can then be overridden for individual extensions using the **transfer-mode** command. For example, in a system that is set up for consultative transfer, a specific extension with an auto-attendant that automatically transfers incoming calls to specific extension numbers can be set to use blind transfer, because auto-attendants do not use consultative transfer.

Examples

The following example sets full consultation as the call transfer method:

```
Router(config)# telephony-service
Router(config-telephony-service)# transfer-system full-consult
```

Related Commands

Command	Description
call application voice	Defines an application, indicates the location of the corresponding Tcl files that implement the application, and loads the selected Tcl script.
telephony-service	Enters telephony-service configuration mode.
transfer-mode	Specifies the type of call transfer for an individual IP phone extension that uses the H.450.2 standard.

translate (ephone-dn)

To apply a translation rule in order to manipulate the digits that are dialed by users of Cisco IP phones, use the **translate** command in ephone-dn configuration mode. To disable the translation rule, use the **no** form of this command.

translate {**called** | **calling**} *translation-rule-tag*

no translate {**called** | **calling**}

Syntax Description

called	Translate the called number.
calling	Translate the calling number.
translation-rule-tag	Unique sequence number by which the rule set is referenced. This number is arbitrarily chosen. Range is from 1 to 2147483647. There is no default value.

Defaults

No translation rule is applied.

Command Modes

Ephone-dn configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

This command allows you to select a preconfigured translation rule to modify the number dialed by a specific extension (Cisco IP phone destination number, or ephone-dn). A translation rule is a general-purpose digit-manipulation mechanism that performs operations such as automatically adding telephone area and prefix codes to dialed numbers. The translation rules are applied to the voice ports created by the ephone-dn. The **called** keyword translates the called number, and the **calling** keyword translates the calling number.

The translation rule mechanism inserts a delay into the dialing process when digits are entered that do not explicitly match any of the defined translation rules. This delay is set by the interdigit timeout. The translation-rule mechanism uses the delay to ensure that it has acquired all of the digits from the phone user before making a final decision that there is no translation-rule match available (and therefore no translation operation to perform). To avoid this delay, it is recommended that you include a dummy

translation rule to act as a pass-through rule for digit strings that do not require translation. For example, a rule like "^5 5" that maps a leading 5 digit into a 5 would be used to prevent the translation rule delay being applied to local extension numbers that started with a 5.

Note For this command to take effect, appropriate translation rules must have been created at the VoIP configuration level. Use the **show voice translation-rule** command to view the translation rules that you have defined. Refer to the "Translation Rules" section in the "Dial Peer Features and Configuration" chapter of *Dial Peer Configuration on Voice Gateway Routers*.

Examples

The following example applies translation rule 20 to numbers called by extension 46839:

```
Router(config)# translation-rule 20
Router(config-translate)# rule 0 1234 2345 abbreviated
Router(config-translate)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 46839
Router(config-ephone-dn)# translate called 20
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode.
rule	Defines a translation rule.
translation-rule	Creates a translation identifier and enters translation-rule configuration mode.

type (ephone)

To define a phone type or to define one or two add-on phone modules for a Cisco IP phone, use the **type** command in ephone configuration mode. To remove a definition, use the **no** form of this command.

type *phone-type* [**addon 1** *module-type* [**2** *module-type*]]

no type *phone-type* [**addon 1** *module-type* [**2** *module-type*]]

Syntax Description

phone-type	Type of IP phone that is being defined or the type of IP phone to which a module is being added. Valid entries are: • **7902**—Cisco IP Phone 7902G. • **7905**—Cisco IP Phone 7905G. • **7910**—Cisco IP Phone 7910G. • **7912**—Cisco IP Phone 7912G. • **7935**—Cisco IP Conference Station 7935. • **7940**—Cisco IP Phone 7940G. • **7960**—Cisco IP Phone 7960G. • **ata**—Cisco ATA-186 or Cisco ATA-188. **Note** The only phones that accept an add-on module are the Cisco IP Phone 7940 and the Cisco IP Phone 7960.
addon 1 *module-type*	(Optional) Tells the router that a module is being added to this IP phone and the type of module. The valid entry for *module-type* follows: • **7914**—Cisco IP Phone 7914 Expansion Module.
2 *module-type*	(Optional) Tells the router that a second module is being added to this IP phone and the type of module. The valid entry for *module-type* follows: • **7914**—Cisco IP Phone 7914 Expansion Module.

Defaults

No phone type or add-on module is defined.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.
12.2(15)ZJ	3.0	The following keywords were added to this command: **7902**, **7905**, and **7912**.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

The following guidelines apply to this command:

- This command is required for a Cisco ATA-186 or Cisco ATA-188.
- This command with the **addon** keyword is required for a Cisco IP Phone 7940 or Cisco IP Phone 7960 with a Cisco IP Phone 7914 Expansion Module.
- This command is optional for all other phone types, because their phone types are detected automatically.

The only types of phones that accept add-on modules are the Cisco IP Phone 7940 and the Cisco IP Phone 7960.

This command must be followed by a phone reboot using the **reset** command.

Examples

The following example defines the IP phone with phone-tag 10 as a Cisco IP Phone 7960 with two attached Cisco IP Phone 7914 Expansion Modules:

```
Router(config)# ephone 10
Router(config-ephone)# type 7960 addon 1 7914 2 7914
```

The following example defines the IP phone with phone-tag 4 as a Cisco ATA device:

```
Router(config)# ephone 4
Router(config-ephone)# mac 1234.87655.234
Router(config-ephone)# type ata
```

Related Commands

Command	Description
ephone	Enters ephone configuration mode to register Cisco IP phones.
reset (ephone)	Performs a complete reboot of one 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.

url (telephony-service)

To provision uniform resource locators (URLs) for Cisco IP phones connected to the Cisco CallManager Express router, use the **url** command in telephony-service configuration mode. To remove a URL association, use the **no** form of this command.

url {**authentication** | **directories** | **information** | **messages** | **proxy-server** | **services**} *url*

no url {**authentication** | **directories** | **information** | **messages** | **proxy-server** | **services**}

Syntax Description

authentication	Uses the information at the specified URL to validate requests made to the phone web server.
directories	Uses the information at the specified URL for the Directories button display.
information	Uses the information at the specified URL for the Information button display. This button may be labeled “i” or “?.”
messages	Uses the information at the specified URL for the Messages button display.
proxy-server	Specifies the host and port used to enable proxy HTTP requests for access to nonlocal host addresses from the phone HTTP client.
services	Uses the information at the specified URL for the Services button display.
url	URL as defined in RFC 2396.

Defaults

The router automatically uses the local directory service.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

The Cisco IP Phone 7940 and Cisco IP Phone 7960 can support four URLs in association with the four programmable feature buttons on those IP phones: Directories, Information, Messages, and Services. The fifth button, Settings, is managed entirely by the phone. Operation of these services is determined by the Cisco IP phone capabilities and the content of the referenced URL.

The purpose of the **url** command is to provision the URLs through the configuration file supplied by the Cisco CallManager Express router to the Cisco IP phones during phone registration.

You can disable the local directory by specifying the string none instead of a URL with the **directories** keyword, as shown in the following example:

```
Router(config-telephony-service)# url directories none
```

Note Provisioning of the directory URL to select an external directory resource disables Cisco CallManager Express local directory service.

This command must be followed by a complete phone reboot using the **reset** command.

Examples

The following example provisions the Information, Directories, and Services buttons:

```
Router(config)# telephony-service
Router(config-telephony-service)# url information
http://1.4.212.4/CCMUser/GetTelecasterHelpText.asp
Router(config-telephony-service)# url directories http://1.4.212.11/localdirectory
Router(config-telephony-service)# url services
http://1.4.212.4/CCMUser/123456/urltest.html
```

The Messages button is configured by the **voicemail** command. This button acts like a speed-dial key to retrieve messages from a specified telephone number.

Related Commands

Command	Description
reset (ephone)	Performs a complete reboot of one 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.
telephony-service	Enters telephony-service configuration mode.
voicemail	Defines the telephone number that is speed-dialed when the Messages button on a Cisco IP phone is pressed.

url idle

To specify a file to display on an IP phone that is not in use, use the **url idle** command in telephony-service configuration mode. To disable display of the file, use the **no** form of this command.

url idle *url* **idle-timeout** *seconds*

no url idle

Syntax Description

url	Uniform resource locator as defined in RFC 2396.
idle-timeout *seconds*	Time interval between display refreshes, in seconds. Range is from 0 to 300.

Defaults

No file is specified for display on idle phones.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco Call Manager Express 3.0, or a later version.

The file that is displayed must be encoded in XML using the Cisco XML DTD. For more information about Cisco DTD formats, refer to *Cisco IP Phone Services Application Development Notes*.

This command must be followed by a complete phone reboot using the **reset** command.

Examples

The following example specifies that the file logo.xml should be displayed on IP phones when they are not being used and that the display should be refreshed every 12 seconds:

```
Router(config)# telephony-service
Router(config-telephony-service)# url idle http://mycompany.com/files/logo.xml
idle-timeout 12
```

Related Commands

Command	Description
reset (ephone)	Performs a complete reboot of one 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.
telephony-service	Enters telephony-service configuration mode.

user-locale

To set the language for displays on the Cisco IP Phone 7940 and Cisco IP Phone 7960, use the **user-locale** command in telephony-service configuration mode. To disable the selected setting, use the **no** form of this command.

user-locale *language-code*

no user-locale *language-code*

Syntax Description

language-code	The following ISO-3166 codes are valid entries: • **DE**—German • **DK**—Danish • **ES**—Spanish • **FR**—French • **IT**—Italian • **NL**—Dutch • **NO**—Norwegian • **PT**—Portuguese • **RU**—Russian • **SE**—Swedish • **US**—United States

Defaults

The default code is **US** (United States).

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.
12.2(15)ZJ	3.0	The following keywords were added: **DK**, **NL**, **NO**, **PT**, **RU**, and **SE**.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

The **show telephony-service tftp-bindings** command displays the locale that has been set using this command. This locale is currently associated with the dictionary and language files.

This command must be followed by a complete phone reboot using the **reset** command.

Examples

The following example sets the IP phone display language to French:

```
Router(config)# telephony-service
Router(config-telephony-service)# user-locale FR
```

Related Commands

Command	Description
reset (ephone)	Performs a complete reboot of one 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.
show telephony-service tftp-bindings	Displays the current configuration files that are accessible to IP phones.
telephony-service	Enters telephony-service configuration mode.

username (ephone)

To assign a Cisco CallManager Express (Cisco CME) login account username and password to a phone user so that the user can log in to a web-based graphical user interface (GUI), use the **username** command in ephone configuration mode. To disable a username and password, use the **no** form of this command.

username *username* [**password** *password*]

no username *username*

Syntax Description

username	Username of the local Cisco IP phone user. Default is Admin.
password *password*	(Optional) Enables a password for the Cisco IP phone user.

Defaults

The default username for the administrator is Admin.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

The login account allows a phone user to access a web-based GUI to view information and change some personal settings for the phone user's own phone only. A login account is also required for users of Telephony Application Programming Interface (TAPI)-aware PC applications, which can register with the Cisco CME router and exercise remote-control operation of Cisco IP phones.

Note This configuration can be completed only by the local system administrator of the Cisco CME router.

Examples

The following example shows how to set the username and password:

```
Router(config)# ephone 1
Router(config-ephone)# username smith password 9golf
```

Related Commands

Command	Description
ephone	Enters ephone configuration mode.

vm-device-id (ephone)

To define a voice-messaging identification string, use the **vm-device-id** command in ephone configuration mode. To disable this feature, use the **no** form of this command.

vm-device-id *id-string*

no vm-device-id

Syntax Description

id-string	Voice-messaging device port identification (ID) string; for example, CiscoUM-VI1 for the first port and CiscoUM-VI2 for the second port. Note that the first two characters after the hyphen are the uppercase letters V and I.

Defaults

No voice-mail identification string is defined.

Command Modes

Ephone configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 360 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

Use this command to define a voice-messaging device ID string. A voice-messaging port registers with a device ID instead of a MAC address. To distinguish among different voice-messaging ports, the value of the voice-messaging device ID is used. The voice-messaging device ID is configured to a Cisco IP phone port, which maps to a corresponding voice-messaging port.

Examples

The following example shows how to set the voice-messaging device ID to CiscoUM-VI1:

```
Router(config) ephone 1
Router(config-ephone) vm-device-id CiscoUM-VI1
```

Related Commands

Command	Description
voicemail (telephony-service)	Configures the telephone number that is speed-dialed when the Messages button on a Cisco IP phone is pressed.

vm-integration

To enter voice-mail integration configuration mode and enable voice-mail integration with dual tone multifrequency (DTMF) and analog voice-mail systems, use the **vm-integration** command in global configuration mode. To disable voice-mail integration, use the **no** form of this command.

vm-integration

no vm-integration

Syntax Description

This command has no arguments or keywords.

Defaults

No voice-mail integration is defined.

Command Modes

Global configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(2)XT	2.0	This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was integrated into Cisco IOS Release 12.2(11)T and implemented on the Cisco 1760.

Usage Guidelines

The **vm-integration** command is used to enter voice-mail integration configuration mode. Use voice-mail integration configuration mode to integrate a Cisco CME system with an analog voice-mail system.

Examples

The following example shows how to enter the voice-mail integration configuration mode:

```
Router(config) vm-integration
Router(config-vm-integration) pattern direct 2 CGN *
```

Related Commands

Command	Description
pattern direct	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when a user presses the Messages button on a phone.
pattern ext-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension reaches a busy extension and the call is forwarded to voice mail.
pattern ext-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an internal extension fails to connect to an extension and the call is forwarded to voice mail.
pattern trunk-to-ext busy	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system once an external trunk call reaches a busy extension and the call is forwarded to voice mail.
pattern trunk-to-ext no-answer	Configures the DTMF digit pattern forwarding necessary to activate the voice-mail system when an external trunk call reaches an unanswered extension and the call is forwarded to voice mail.

voicemail (telephony-service)

To define the telephone number that is speed-dialed when the Messages button on a Cisco IP phone is pressed, use the **voicemail** command in telephony-service configuration mode. To disable the Messages button, use the **no** form of this command.

voicemail *phone-number*

no voicemail

Syntax Description

phone-number	Phone number that is configured as a speed-dial number for retrieving messages.

Defaults

No phone number is configured, and the Messages button is disabled.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.1(5)YD	1.0	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420 series.
12.2(2)XT	2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	2.0	This command was integrated into Cisco IOS Release 12.2(8)T and implemented on the Cisco 3725 and Cisco 3745.
12.2(8)T1	2.0	This command was implemented on the Cisco 2600XM and Cisco 2691.
12.2(11)T	2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

This command configures the telephone number that is speed-dialed when the Messages button on a Cisco IP phone is pressed. The same telephone number is configured for voice messaging for all Cisco IP phones connected to the router.

Examples

The following example sets the phone number 914085550100 as the speed-dial number that is dialed to retrieve messages when the Messages button is pressed:

```
Router(config)# telephony-service
Router(config-telephony-service)# voicemail 914085550100
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.
vm-device-id (ephone)	Defines the voice-mail ID string.

web admin customer

To define a username and password for a Cisco CallManager Express (Cisco CME) customer administrator, use the **web admin customer** command in telephony-service configuration mode. To disable a customer administrator login, use the **no** form of this command.

web admin customer name *username* {**password** *string* | **secret** {**0** | **5**} *string*}

no web admin customer

Syntax Description

name *username*	Defines the username for the customer administrator. The default is Customer.
password *string*	Defines a character string for login authentication, which will be stored in the running configuration as plain text. The default is no password.
secret {**0** | **5**} *string*	Defines a character string for login authentication, which will be stored in the running configuration as encrypted using MD5. The digit 0 or 5 specifies whether the displayed string that follows is encrypted: • **0**—Password that follows is not encrypted. • **5**—Password that follows is encrypted.

Defaults

A customer administrator named Customer with no password is defined.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

Examples

The following example defines a customer administrator named user22 whose password is pw567890:

```
Router(config)# telephony-service
Router(config-telephony-service)# web admin customer name user22 password pw567890
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.
web customize load	Loads and parses an XML file in router Flash memory to customize a GUI for a customer administrator.

web admin system

To define a username and password for a Cisco CallManager Express (Cisco CME) system administrator, use the **web admin system** command in telephony-service configuration mode. To disable a system administrator login, use the **no** form of this command.

web admin system name *username* {**password** *string* | **secret** {**0** | **5**} *string*}

no web admin system

Syntax Description

name *username*	Defines a login name for the system administrator. The default name is Admin.
password *string*	Defines a character string for login authentication, which will be stored in the running configuration as plain text. The default is no password.
secret {**0** | **5**} *string*	Defines a character string for login authentication, which will be stored in the running configuration as encrypted using MD5. The digit 0 or 5 specifies whether the displayed string that follows is encrypted: • **0**—Password that follows is not encrypted. • **5**—Password that follows is encrypted.

Defaults

A system administrator named Admin with no password is defined.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

Use the **secret 0** keyword pair when entering a plain-text password string. This keyword pair instructs the system to encrypt the system administrator password with MD5. An encrypted version of the string is saved in the running configuration, as shown in the following example. The digit 5 that appears after the **secret** keyword in the running configuration indicates that the password that follows is shown in its encrypted version.

```
web admin system name jsmith secret 5 $1$TCyK$OU/NSQ/VtAU2ibHdi8Uau
```

Examples

The following example establishes a system administrator named user1 whose password will be encrypted in the running configuration:

```
Router(config)# telephony-service
Router(config-telephony-service)# web admin system name user1 secret 0 pw234567
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

web customize load

To load and parse an eXtensible Markup Language (XML) file in router Flash memory to customize a Cisco CallManager Express GUI for a customer administrator, use the **web customize load** command in telephony-service configuration mode. To disable the customized GUI and use the system administrator GUI for the customer administrator, use the **no** form of this command.

web customize load *filename*

no web customize load

Syntax Description

filename	Name of the XML file in router Flash memory that defines the customer administrator GUI.

Defaults

The standard system administrator GUI is used.

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(11)YT	2.1	This command was introduced.
12.2(15)T	2.1	This command was integrated into Cisco IOS Release 12.2(15)T.

Usage Guidelines

Use this command with Cisco IOS Telephony Services V2.1, Cisco CallManager Express 3.0, or a later version.

Examples

The following example specifies a file named cust_admin_gui.xml as the file that defines the GUI for Cisco CME customer administrators:

```
Router(config)# telephony-service
Router(config-telephony-service)# web customize load cust_admin_gui.xml
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

xmlschema

To specify the URL for a Cisco CallManager Express (Cisco CME) XML API schema, use the **xmlschema** command in telephony-service configuration mode. To set the URL for the XML API schema to the default, use the **no** form of this command.

xmlschema *schema-url*

no xmlschema

Syntax Description

schema-url	Local or remote URL as defined in RFC 2396.

Defaults

srst-its.xsd

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following example specifies a URL for an XML API schema:

```
Router(config)# telephony-service
Router(config-telephony-service)# xmlschema http://server2.example.com/schema/schema1.xsd
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

xmltest

To specify that the HTTP payload in XML API queries be interpreted as having form format, use the **xmltest** command in telephony-service configuration mode. To specify that the HTTP payload should be interpreted as plain text (no form) format, use the **no** form of this command.

xmltest

no xmltest

Syntax Description

This command has no arguments or keywords.

Defaults

Plain text (no form) format

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following example specifies that the HTTP payload in XML API queries be interpreted as having form format:

```
Router(config)# telephony-service
Router(config-telephony-service)# xmltest
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.

xmlthread

To set the maximum number of Cisco CallManager Express (Cisco CME) XML API queries, use the **xmlthread** command in telephony-service configuration mode. To set the maximum number of queries to the default, use the **no** form of this command.

xmlthread *number*

no xmlthread

Syntax Description

number	Maximum number of XML API queries. Range is from 1 to 5. Default is 2.

Defaults

number: 2

Command Modes

Telephony-service configuration

Command History

Cisco IOS Release	Cisco CME Version	Modification
12.2(15)ZJ	3.0	This command was introduced.
12.3(4)T	3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Examples

The following example sets the maximum number of XML API queries to 5:

```
Router(config)# telephony-service
Router(config-telephony-service)# xmlthread 5
```

Related Commands

Command	Description
telephony-service	Enters telephony-service configuration mode.