



Cisco Unified CME Commands: C

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call application voice aa-hunt

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice aa-hunt** command is replaced by the **param aa-hunt** command. See the **param aa-hunt** command for more information.

To declare a Cisco Unified CME basic automatic call distribution (B-ACD) menu number and associate it with the pilot number of an ephone hunt group, use the **call application voice aa-hunt command** in global configuration mode. To remove the menu number and the ephone hunt group pilot number, use the **no** form of this command.

call application voice *application-name* **aa-hunt** *menu-number* *pilot-number*
no call application voice *application-name* **aa-hunt** *menu-number* *pilot-number*

Syntax Description

<i>menu-number</i>	Number that callers must dial to reach the pilot number of an ephone hunt group. The range is from 1 to 10. The default is 1.
<i>application-name</i>	Application name given to the call queue script in the call application voice command .
<i>pilot-number</i>	Ephone hunt group pilot number.

Command Default

Cisco CME B-ACD menu number 1 is configured, but it has no pilot number.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced with the param aa-hunt command.

Usage Guidelines

This command is used only with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is used only with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD call queue scripts. Up to three menu options are allowed per call queue script. You can use any of the allowable numbers in any order.

The **call application voice aa-hunt** command allows each of the menu options to be associated with the pilot number of an ephone hunt group. The menu options are announced by the en_bacd_options_menu.au audio file, which you can rerecord. When a caller presses a number, the call will go to the pilot number of an ephone hunt group so it can be transferred to one of the ephone hunt group's ephone-dns. It will not go to any other ephone hunt group. The order in which ephone-dns are selected depends on the ephone hunt group's search method, which is configured with the **ephone-hunt** command, and whether an ephone-dn is busy or not.

If only one menu option is configured, callers will hear a greeting and be transferred directly to the pilot number of the corresponding ephone hunt group. They do not have to enter a number.

The highest aa-hunt number will automatically be set to zero (0) for the operator. In the following example, aa-hunt8 supports the menu option of 0 and 8.

```
call application voice queue aa-hunt1 1111
```

```
call application voice queue aa-hunt3 3333
call application voice queue aa-hunt8 8888
```

If a phone user presses 0 or 8, their call be sent to pilot number 3333.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples

The following example associates three menu numbers with three pilot numbers of three ephone hunt groups. Pilot number 1111 is for ephone hunt group 1 (sales); 2222 is for ephone hunt group 2 (customer service); and 3333 is for ephone hunt group 3 (operator). If sales is selected from the AA menu, the call will be transferred to 1111 and sent to ephone hunt group 1's available ephone-dns (2001, 2002, 2003, 2004, 2005, 2006).

```
Router(config)# ephone-hunt 1 peer
Router(config-ephone-hunt)# pilot 1111
Router(config-ephone-hunt)# list 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010
Router(config)# ephone-hunt 2 peer
Router(config-ephone-hunt)# pilot 2222
Router(config-ephone-hunt)# list 2001, 2002, 2003, 2004, 2005, 2006
Router(config)# ephone-hunt 3 peer
Router(config-ephone-hunt)# pilot 3333
Router(config-ephone-hunt)# list 3001, 3002, 3003, 3004
Router(config)# call application voice queue flash:app-b-acd-x.x.x.x.tcl
Router(config)# call application voice queue aa-hunt1 1111
Router(config)# call application voice queue aa-hunt2 2222
Router(config)# call application voice queue aa-hunt3 3333
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice aa-pilot	Associates an ephone hunt group with the Cisco CME basic service's AA script by declaring the group's pilot number.
call application voice welcome-prompt	Assigns an audio file that is used by a Cisco CME B-ACD AA script for the welcome greeting.
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco CME system.
pilot	Defines the ephone-dn that callers dial to reach a Cisco CME ephone hunt group.

call application voice aa-name

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice aa-name** command is not available in Cisco IOS software.

To associate the queue script for Cisco Unified CME basic automatic call distribution (B-ACD) with the Cisco Unified CME B-ACD auto-attendant (AA) script, use the **call application voice aa-name** command in global configuration mode. To remove the queue script and AA script association, use the **no** form of this command.

call application voice *application-name* **aa-name** *aa-script-name*

no call application voice *application-name* **aa-name** *aa-script-name*

Syntax Description

<i>application-name</i>	Application name given to the call queue script in the call application voice command.
<i>aa-script-name</i>	Application name given to the AA script in the call application voice command.

Command Default

No call queue script and AA script association is configured.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced with the param aa-name command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD call queue scripts. Only one AA script can be associated with one call queue script.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples

The following example associates a call queue script with an AA script:

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice queue flash:app-b-acd-x.x.x.x.tcl
Router(config)# call application voice queue aa-name aa
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice service-name	Associates a Cisco CME B-ACD AA script with a Cisco Unified CME B-ACD call queue script.

call application voice aa-pilot

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice aa-pilot** command is replaced by the **param aa-pilot** command. See the **param aa-pilot** command for more information.

To assign a pilot number to the Cisco Unified CME basic automatic call distribution (B-ACD) service, use the **call application voice aa-pilot** command in global configuration mode. To remove the Cisco Unified CME B-ACD pilot number, use the **no** form of this command.

call application voice *application-name* **aa-pilot** *pilot-number*
no call application voice *application-name* **aa-pilot** *pilot-number*

Syntax Description

<i>application-name</i>	Application name given to the auto-attendant (AA) script in the call application voice command.
<i>pilot-number</i>	Pilot number for Cisco CME B-ACD.

Command Default

No Cisco Unified CME B-ACD pilot number is configured.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param aa-pilot command.

Usage Guidelines

This command is used only with with a version of the Cisco CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco CME B-ACD AA scripts. Only one pilot number can be used for each Cisco Unified CME B-ACD service, and the voice ports handling AA must have dial peers that will send calls to the pilot number.

For any configuration changes to take effect, you must reload the Cisco Unified CME B-ACD scripts.

Examples

The following example assigns 8005550100 as the pilot number to the Cisco Unified CME B-ACD service. Included in this example is the dial-peer configuration for the pilot number.

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice aa aa-pilot 8005550100
Router(config)# dial-peer voice 1000 pots
Router(config)# incoming pilot number 8005550100
Router(config)# application aa
Router(config)# direct-inward-dial
Router(config)# port 1/0:23
Router(config)# forward digits-all
Router(config)# call application voice aa aa-pilot 80055501
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
dial-peer voice	Defines a particular dial peer, specifies the method of voice encapsulation, and enters dial-peer configuration mode.
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco Unified CME system.

call application voice call-retry-timer

Effective with Cisco IOS Release 12.3(14)T and later, the **call application call-retry-timer** command is replaced by the **param call-retry-timer** command. See the **param call-retry-timer** command for more information.

To assign the length of time that calls to Cisco Unified CME basic automatic call distribution (B-ACD) must wait before attempting to transfer to an ephone hunt group pilot number, use the **call application voice call-retry-timer command** in global configuration mode. To remove the retry time, use the **no** form of this command.

call application voice *application-name* **call-retry-timer** *seconds*
no call application voice *application-name* **call-retry-timer** *seconds*

Syntax Description

<i>application-name</i>	Application name given to the auto-attendant (AA) script in the call application voice command .
<i>seconds</i>	Number of seconds that a call must wait before attempting to transfer an ephone hunt pilot number or voice-mail pilot number. The range is from 5 to 30 seconds. The default is 15 seconds.

Command Default

The retry interval is 15 seconds.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param call-retry-timer command

Usage Guidelines

This command is used only with with a version of the Cisco CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco CME B-ACD AA scripts. The following sequence of events might occur:

- An outside call comes into a system configured with Cisco CME B-ACD.
- A menu option is selected that attempts to transfer the call to an ephone hunt group pilot number.
- All of the ephone hunt group's ephone-dns are busy.

In that case, the call will wait in a queue for the period of time set by the **call application voice call-retry-timer** command and retry to the pilot number.

For any configuration changes to take effect, you must reload the Cisco Unified CME B-ACD scripts.

Examples

The following example shows a configuration that allows outside calls to Cisco CME B-ACD to retry an ephone hunt group pilot number every 30 seconds. The example shows the configuration for one ephone hunt group, which is presented by Cisco CME B-ACD menu as the sales department and uses a simple configuration. If a caller selects the sales menu option (**phone-hunt 1**) and all of

the ephone-dn configured in the **list** command (1001, 1002, 1003, 1004) are busy, the call will wait 30 seconds and then retry the pilot number (1111) until either an ephone-dn becomes available or a configured amount of time has elapsed (see the **call application voice max-time-call-retry command**).

```
Router(config)# ephone-hunt 1 peer
Router(config-ephone-hunt)# pilot 1111
Router(config-ephone-hunt)# list 1001, 1002, 1003, 1004
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice aa call-retry-timer 30
```

Related Commands

Command	Description
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco Unified CME system.
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice aa-hunt	Declares a Cisco Unified CME B-ACD menu number and associates it with the pilot number of an ephone hunt group.
call application voice aa-pilot	Associates an ephone hunt group with the Cisco Unified CME basic service's AA script by declaring the group's pilot number
call application voice max-time-call-retry	Assigns the maximum length of time for which calls to Cisco Unified CME B-ACD can stay in a call queue.

call application voice dial-by-extension-option

Effective with Cisco IOS Release 12.3(14)T and later, the **call application dial-by-extension-option** command is replaced by the **param dial-by-extension-option** command. See the **param dial-by-extension-option** command for more information.

To enable direct extension access and set the access number for Cisco Unified CME basic automatic call distribution (B-ACD), use the **call application voice dial-by-extension-option** command in global configuration mode. To disable direct dial extension access and remove the access number, use the **no** form of this command.

call application voice *application-name* **dial-by-extension** *number*
no call application voice *application-name* **dial-by-extension** *number*

Syntax Description

<i>application-name</i>	Application name given to the auto-attendant (AA) script in the call application voice command.
<i>number</i>	The single digit that callers press to be able to enter an extension number from the AA menu. The range is from 1 to 10. There is no default.

Command Default

Direct dial access is disabled. No access number is configured.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param dial-by-extension-option command.

Usage Guidelines

This command is used only with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD AA scripts. It enables the `en_bacd_enter_dest.au` audio file. The default announcement says, "Please enter the extension number you want to reach." The **call application voice dial-by-extension-option** command also allows for the configuration of the number that callers must press before they can enter the extension number that they want to call.

Callers who select the extension access option can then dial any extension. If they dial an ephone hunt group ephone-dn or pilot number, their call will not be sent to the ephone hunt-group call queue.

Examples

The following example configures Cisco CME B-ACD to include an option that allows callers to press the number 4 so they can dial an extension number.

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice aa dial-by-extension 4
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.

call application voice drop-through-option

Cisco IOS Release 12.3(14)T and later releases support Cisco Unified CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice drop-through-option** command has been replaced by the **param drop-through-option** command.

call application voice drop-through-prompt

Cisco IOS Release 12.3(14)T and later releases support Cisco Unified CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice drop-through-prompt** command has been replaced by the **param drop-through-prompt** command.

call application voice handoff-string

Cisco IOS Release 12.3(14)T and later releases support Cisco Unified CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice handoff-string** command has been replaced by the **param handoff-string** command.

call application voice max-extension-length

Cisco IOS Release 12.3(14)T and later releases support Cisco Unified CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice max-extension-length** command has been replaced by the **param max-extension-length** command.

call application voice max-time-call-retry

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice max-time-call-retry** command is replaced by the **param max-time-call-retry** command. See the **param max-time-call-retry** command for more information.

To assign the maximum length of time for which calls to Cisco Unified CME basic automatic call distribution (B-ACD) can stay in a call queue, use the **call application voice max-time-call-retry command** in global configuration mode. To remove the maximum length of time, use the **no** form of this command.

call application voice *application-name* **max-time-call-retry** *seconds*
no call application voice *application-name* **max-time-call-retry** *seconds*

Syntax Description

<i>application-name</i>	Application name given to the auto attendant (AA) script in the call application voice command .
<i>seconds</i>	Maximum length of time that the Cisco Unified CME B-ACD AA script can keep redialing an ephone hunt group pilot number. The range is from 0 to 3600 seconds. The default is 600 seconds.

Command Default

The default maximum length of time that calls can stay in a call queue is 600 seconds.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param max-time-call-retry command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD AA scripts. The **call application voice max-time-retry** command allows you set a time limit for the redialing of pilot numbers under the following circumstances:

- An outside call comes into a system configured with Cisco Unified CME B-ACD.
- A menu option is selected that transfers the call to an ephone hunt-group pilot number.
- All of the ephone hunt group's ephone-dns are busy.
- The call is sent to a queue and tries the pilot number at intervals of time set by the **call application voice call-retry-timer** command.

When the time period set by the **call application voice max-call-retry** command expires, one of the following two events will occur:

- If a voice-mail pilot number has been configured in Cisco Unified CME and mail boxes for hunt group pilot numbers have been configured in a voice-mail application, calls will be transferred to voice mail.

- If voice mail has not been configured, a default message will be played that says, “We are unable to take your call at this time. Please try again at a later time. Thank you for calling.”

Examples

In the following example, the length of time for which calls can try to reach ephone hunt group 1 and ephone hunt group 2 is 90 seconds. If a caller selects the AA menu option for either hunt group and all of its ephone-dns configured in the **list** command are busy, the call will keep retrying the ephone hunt group’s pilot number until one of the ephone-dns is available or 90 seconds has elapsed. When 90 seconds elapses, the call will go to voice mail.

```
Router(config)# ephone-hunt 1 peer
Router(config-ephone-hunt)# pilot 1111
Router(config-ephone-hunt)# list 1001, 1002, 1003, 1004
Router(config)# ephone-hunt 2peer
Router(config-ephone-hunt)# pilot 2222
Router(config-ephone-hunt)# list 2001, 2002, 2003, 2004
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.tcl
Router(config)# call application voice aa max-call-retry-timer 90
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice call-retry-timer	Assigns the length of time that calls to Cisco Unified CME B-ACD must wait before attempting to transfer to an ephone hunt-group pilot number or to voice mail.
call application voice max-time-vm-retry	Assigns the maximum number of times that calls to Cisco Unified CME B-ACD can attempt to reach voice mail.
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco Unified CME system.

call application voice max-time-vm-retry

Cisco IOS Release 12.3(14)T and later releases support Cisco Unified CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice max-time-vm-retry** command has been replaced by the **param max-time-vm-retry** command.

call application voice number-of-hunt-grps

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice number-of-hunt-grps** command is replaced by the **param number-of-hunt-grps** command. See the **param number-of-hunt-grps** command for more information.

To declare the maximum number of ephone hunt-group menus supported by Cisco Unified CME basic automatic call distribution (B-ACD), use the **call application voice number-of-hunt-grps** command in global configuration mode. To remove the maximum number of ephone hunt-group menus supported by Cisco CME B-ACD, use the **no** form of this command.

call application voice *application-name* **number-of-hunt-grps** *number*
no call application voice *application-name* **number-of-hunt-grps** *number*

Syntax Description

<i>application-name</i>	Application name given to the auto-attendant (AA) script in the call application voice command.
<i>number</i>	Number of hunt groups used by the Cisco Unified CME B-ACD AA script and call queue script. The range is from 1 to 3. The default is 3.

Command Default

Three ephone hunt-group menus are supported by Cisco CME B-ACD.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param number-of-hunt-grps command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD AA scripts. The *number* argument declares the number of ephone hunt groups only. The menu option for direct extension access (see the **call application voice dial-by-extension-option** command) is not included.

Examples

The following example configures a Cisco Unified CME B-ACD call queue script to use three ephone hunt groups and one direct extension access number, making the *number* argument in the **call application voice number-of-hunt-grps** equal to 3. The **ephone-hunt** command is used to configure the three ephone hunt groups. The **call application voice dial-by-extension-option** command is used to enable direct extension access and set the access number to 1.

```
Router(config)# ephone-hunt 1 peer
Router(config-ephone-hunt)# pilot 1111
Router(config-ephone-hunt)# list 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1010
Router(config)# ephone-hunt 2 peer
```

```

Router(config-ephone-hunt)# pilot 2222
Router(config-ephone-hunt)# list 2001, 2002, 2003, 2004, 2005, 2006
Router(config-ephone-hunt)# final 9000
Router(config)# ephone-hunt 3 peer
Router(config-ephone-hunt)# pilot 3333
Router(config-ephone-hunt)# list 3001, 3002, 3003, 3004
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice aa dial-by-extension 1
Router(config)# call application voice aa number-of-hunt-grps 3

```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice dial-by-extension-option	Enables direct extension access and sets the access number for Cisco CME B-ACD.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco CME system.

call application voice queue-len

Effective with Cisco IOS Release 12.3(14)T and later, the **call application queue-len** command is replaced by the **param queue-len** command. See the **param queue-len** command for more information.

To set the maximum number of calls allowed for each ephone hunt group's call queue that is used by Cisco Unified CME basic automatic call distribution (B-ACD), use the **call application voice queue-len** command in global configuration mode. To remove the queue-length setting, use the **no** form of this command.

call application voice *application-name* **queue-len** *number*
no call application voice *application-name* **queue-len** *number*

Command Default

<i>application-name</i>	Application name given to the call queue script in the call application voice command.
<i>number</i>	Number of calls that can be waiting in each ephone hunt group's queue. The range is dependent on your hardware configuration. The range is from 1 to 30. The default is 10.

Command Default

Thirty calls are allowed in each call queue.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param queue-len command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD call queue scripts. The following sequence of events might occur:

- An outside call comes into a system configured with Cisco Unified CME B-ACD.
- A menu option is selected that transfers the call to an ephone hunt-group pilot number.
- All of the ephone hunt group's ephone-dns are busy.

In that case, the call will be sent to a queue for that individual hunt group. The number of calls that each ephone hunt group can hold in its queue is configured by the **call application voice queue-len** command.

In the following configuration example, ephone hunt group 1 supports two ephone-dns; ephone hunt group 2 supports three ephone-dns; and the queue length is 10 for both ephone hunt groups:

```
ephone-hunt 1 peer
  pilot 1111
  list 1001, 1002
ephone-hunt 2 peer
  pilot 2222
  list 2001, 2002, 2003
call application voice queue flash:app-b-acd-x.x.x.x.tcl
call application voice callqueuescriptfilename queue-len 10
```

If ephone hunt group 1's ephone-dns are busy, ten more calls can be made to ephone hunt group 1. During that time, the calls in the queue would periodically retry the pilot numbers (**call application voice max-time-retry-timer** command) and receive secondary greetings (**call application voice second-greeting-time** command). If none of the calls has hung up or connected to an ephone-dn, the eleventh caller would hear the en_bacd_disconnect.au message and a busy signal. The default message is, "We are unable to take your call at this time. Please try again at a later time. Thank you for calling." Includes a four-second pause after the message.

For ephone hunt group 2, three calls can be connected to ephone-dns 2001, 2002, and 2003, and ten calls can be waiting in ephone hunt group 2's queue. If the status remains unchanged, the fourteenth caller hears the disconnect message and a busy signal. But if one of the earlier calls disconnects (either by leaving the queue or by ending a call), the fourteen call enters the queue.

The maximum number of calls allowed in the queues of ephone hunt groups must be based on the number of ports or trunks available. For example, if you had 20 foreign exchange office (FXO) ports and two ephone hunt groups, you could configure a maximum of ten calls per ephone hunt-group queue with the **call application voice queue-len 10** command. You could use the same configuration if you had a single T1 trunk, which supports 23 channels.

Examples

The following example configures a Cisco Unified CME B-ACD call queue script to allow a maximum of 12 calls to wait in each ephone hunt group's calling queue for ephone-dns to become available:

```
Router(config)# call application voice queue flash:app-b-acd-x.x.x.x.tcl
Router(config)# call application voice queue queue-len 12
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice call-retry-timer	Assigns the length of time that calls to Cisco CME B-ACD must wait before attempting to transfer to an ephone hunt-group pilot number or to voice mail.
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco CME system.

call application voice queue-manager-debug

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice queue-manager-debug** command is replaced by the **param queue-manager-debug** command. See the **param aa-hunt** command for more information.

To enable or disable the collection of call queue debug information from Cisco CallManager Express (Cisco CME) basic automatic call distribution (B-ACD), use the **call application voice queue-manager-debug command** in global configuration mode. To remove the current setting, use the **no** form of this command with the keyword that was used in the previous occurrence of the **call application voice queue-manager-debug command**.

call application voice *application-name* **queue-manager-debug** [{0 | 1}]
no call application voice *application-name* **queue-manager-debug** [{0 | 1}]

Syntax Description

<i>application-name</i>	Application name given to the call queue script in the call application voice command.
0	Disables debugging.
1	Enables debugging.

Command Default

The collection of call queue debug information from Cisco CME B-ACD is **disabled**.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param queue-manager-debug command.

Usage Guidelines

This command is used only with with a version of the Cisco CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco CME B-ACD call queue scripts. It enables the collection of data regarding call queue activity. It is used in conjunction with the **debug voip ivr script** command. Both commands must be enabled at the same time.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples

The following example configures a Cisco CME B-ACD call queue script to enable debugging for the collection of data for the **debug voip ivr script** command:

```
Router(config)# call application voice queue flash:app-b-acd-x.x.x.x.tcl
Router(config)# call application voice queue queue-manager-debug 1
```


Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
debug voip ivr script	Display debugging messages for IVR scripts.

call application voice second-greeting-time

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice second-greeting-time** command is replaced by the **param second-greeting-time** command. See the **param second-greeting-time** command for more information.

To set the delay before the second greeting is played after a caller joins a Cisco Unified CME basic automatic call distribution (B-ACD) calling queue and set the interval of time at which the second-greeting message is repeated, use the **call application voice second-greeting-time command** in global configuration mode. To remove the second-greeting time, use the **no** form of this command.

call application voice *application-name* **second-greeting-time** *seconds*

no call application voice *application-name* **second-greeting-time** *seconds*

Syntax Description

<i>application-name</i>	Application name given to the auto-attendant (AA) script in the call application voice command .
<i>seconds</i>	Amount of time that second-greeting message must wait before it can be played. The range is from 30 to 120 seconds. The default is 60 seconds.

Command Default

The second-greeting delay time is 60 seconds.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param second-greeting-time command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD AA scripts. A second greeting is an audio message of up to 15 seconds in length. The default announcement is, "All agents are currently busy assisting other customers. Continue to hold for assistance. Someone will be with you shortly." The second-greeting message is only presented to callers waiting in a CME B-ACD call queue.

The second-greeting time is clocked when the second-greeting message begins, not after it ends. For example, if the second greeting were 15 seconds in length and the configured second-greeting time were 70 seconds, the greeting would begin every 70 seconds, not 85 seconds as if to allow for the 15-second message.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples

The following example configures a Cisco Unified CME B-ACD AA script to allow a second-greeting message to be repeated every 50 seconds as long as a call is in a call queue.

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl  
Router(config)# call application voice AAscriptfilename second-greeting-time 50
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
ephone-dn	Enters ephone-dn configuration mode for the purposes of creating and configuring an extension for a Cisco IP phone line.
ephone-hunt	Enters ephone-hunt configuration mode for the purposes of creating and configuring a hunt group for use in a Cisco CME system.

call application voice service-name

Cisco IOS Release 12.3(14)T and later releases support Cisco CME Basic Automatic Call Distribution (B-ACD) and Auto-Attendant (AA) Tcl scripts version 2.1.0.0 and greater. In these releases, the **call application voice service-name** command has been replaced by the **param service-name** command.

call application voice voice-mail

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice voice-mail** command is replaced by the **param voice-mail** command. See the **param voice-mail** command for more information.

To assign a pilot number for the Cisco Unified CME basic automatic call distribution (B-ACD) service's voice mail, use the **call application voice voice-mail command** in global configuration mode. To remove the voice-mail pilot number, use the **no** form of the command.

call application voice *application-name* **voice-mail** *number*
no call application voice *application-name* **voice-mail** *number*

Syntax Description	<i>application-name</i>	Application name given to the auto attendant (AA) script in the call application voice command .
	<i>number</i>	Pilot number of the voice mail to which calls to Cisco CME B-ACD will be transferred.

Command Default No voice-mail pilot number is configured for Cisco Unified CME B-ACD.

Command Modes Global configuration (config)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
	12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
	12.3(14)T	Cisco CME 3.3	This command was replaced by the param voice-mail command.

Usage Guidelines This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco Unified CME B-ACD AA scripts. Only one pilot number is allowed per Cisco CME B-ACD service. Calls to the service will be sent to this voice mail number.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples The following example configures a Cisco Unified CME B-ACD voice-mail pilot number as 5000.

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
Router(config)# call application voice aa voice-mail 5000
```

Related Commands	Command	Description
	call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.

call application voice welcome-prompt

Effective with Cisco IOS Release 12.3(14)T and later, the **call application voice welcome-prompt** command is replaced by the **param welcome-prompt** command. See the **param welcome-prompt** command for more information.

To assign an audio file that is used by the Cisco Unified CME basic automatic call distribution (B-ACD) auto-attendant (AA) script for the welcome greeting, use the **call application welcome-prompt** command in global configuration mode. To remove the audio file assignment, use the **no** form of this command.

call application voice *application-name* **welcome-prompt** _ *audio-filename*
no call application voice *application-name* **welcome-prompt** _ *audio-filename*

Syntax Description

<i>application-name</i>	Application name given to the AA script in the call application voice command.
<i>_audio-filename</i>	Filename of the welcome greeting to be played when callers first reach the Cisco Unified CME B-ACD, preceded by the underscore (_) character. The filename must not have a language code prefix, such as “en,” for English.

Command Default

The welcome audio file downloaded with Cisco Unified CME B-ACD is used for the welcome prompt.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
12.3(14)T	Cisco CME 3.2.2	This command was integrated into Cisco IOS Release 12.3(14)T.
12.3(14)T	Cisco CME 3.3	This command was replaced by the param welcome-prompt command.

Usage Guidelines

This command is used only with with a version of the Cisco Unified CME B-ACD script that is earlier than 2.1.0.0 and is valid only for the configuration of Cisco CME B-ACD AA scripts. The welcome greeting is the initial AA response to a caller. The default audio file used is en_bacd_welcome.au, which is downloaded with Cisco CME B-ACD and announces, “Thank you for calling,” and includes a two-second pause after the message.

The filename must be preceded by an underscore (_) character. In addition, it must not contain a language-code prefix, such as “en” for English. For example, for en_bacd_welcome.au, you must configure **welcome-prompt _bacd_welcome.au** instead of **welcome-prompt _en_bacd_welcome.au**.

For any configuration changes to take effect, you must reload the Cisco CME B-ACD scripts.

Examples

The following example sets file name en_welcome.au as the welcome greeting for Cisco Unified CME B-ACD:

```
Router(config)# call application voice aa flash:app-b-acd-aa-x.x.x.x.tcl
```

```
Router(config)# call application voice aa welcome-prompt _bacd_welcome_2.au
```

Related Commands

Command	Description
call application voice	Defines a name for a voice application and specifies the location of the Tcl or VoiceXML document to load for this application.
call application voice aa-name	Associates a Cisco CME B-ACD call queue script with a Cisco Unified CME B-ACD AA script
call application voice service-name	Associates a Cisco CME B-ACD AA script with a Cisco Unified CME B-ACD call queue script.

callback (voice emergency response settings)

To route an E911 callback to another number (for example, the company operator) if the callback cannot find the last 911 caller associated to the ELIN, use the **callback** command in voice emergency response settings configuration mode. This command is optional.

callback *number*
no callback

Syntax Description	<i>number</i> Identifier of the E.164 default number to contact if a 911 callback fails.
---------------------------	--

Command Default A callback number is not defined.

Command Modes Voice emergency response settings configuration (cfg-emrgncy-resp-settings)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(15)XY	Cisco Unified CME 4.2(1) Cisco Unified SRST 4.2(1) Cisco Unified SIP SRST 4.2(1)	This command was introduced.
	12.4(20)T	Cisco Unified CME 7.0 Cisco Unified SRST 7.0 Cisco Unified SIP SRST 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines Use this command to specify the default number to contact if a 911 callback cannot find the last 911 caller associated with an ELIN. If no default callback number is configured, and the expiry time is exceeded, the 911 operator may hear a reorder tone or be incorrectly routed.

Examples In this example, the ELIN (4085550101) defined in the voice emergency response settings configuration is used if the 911 caller's IP phone address does not match any of the voice emergency response locations. After the 911 call is placed to the PSAP, the PSAP has 120 minutes to call back 408-555-0101 to reach the 911 caller. If the call history has expired (after 120 minutes), any callback is routed to extension 7500.

```
voice emergency response settings
callback 7500
elin 4085550101
expiry 120
```

Related Commands	Command	Description
	elin	E.164 number used as the default ELIN if no matching ERL to the 911 caller's IP phone address is found.
	expiry	Number of minutes a 911 call is associated to an ELIN in case of a callback from the 911 operator.
	logging	Syslog informational message printed to the console every time an emergency call is made.

Command	Description
voice emergency response settings	Creates a tag for identifying settings for E911 behavior.

caller-id

To specify whether to pass the local caller ID or the original caller ID with calls from an extension in Cisco Unified CME that is using loopback, use the **callerid command** in ephone-dn configuration mode. To return to the default, use the **no** form of this command.

caller-id {local | passthrough}
no caller-id {local | passthrough}

Syntax Description	local	Local caller ID for redirected calls.
	passthrough	Original caller ID. Default.

Command Default Default is **passthrough**.

Command Modes Ephone-dn configuration (config-ephone)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.2(15)ZJ3	Cisco CME 3.0	This command was introduced.
	12.3(4)T	Cisco CME 3.0	This command was integrated into Cisco IOS Release 12.3(4)T.

Usage Guidelines This command is valid only for ephone-dns that are being used for loopback.

This command with the **local** keyword is applied as follows:

- For transferred calls, caller ID is provided by the original caller-ID information source, such as from a separate loopback-dn that handles inbound calls or from a public switched telephone network interface.
- For forwarded calls, caller ID is provided by the original caller-ID information source or, for local IP phones, is extracted from the redirected information associated with the call.

This command with the **passthrough** keyword is applied as follows:

- For transferred calls, the caller ID is provided by the original caller-ID information that is obtained from the inbound side of the loopback-dn.
- For forwarded calls, the caller ID is provided by the original caller-ID information of the incoming call.

Examples

The following example selects local caller ID for redirected calls:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# loopback-dn 15 forward 4
Router(config-ephone-dn)# caller-id local
Router(config-ephone-dn)# no huntstop
```

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.

caller-id block (ephone-dn and ephone-dn-template)

To specify caller-ID blocking for outbound calls from a specific extension, use the **callerid block** command in ephone-dn or ephone-dn-template configuration mode. To disable caller-ID blocking for outbound calls, use the **no** form of this command.

caller-id block
no caller-id block

Syntax Description

This command has no arguments or keywords.

Command Default

Caller-ID display is not blocked on calls originating from a Cisco Unified IP phone.

Command Modes

Ephone-dn configuration
 Ephone-dn-template configuration

Command History

Cisco IOS Release	Cisco Product	Modification
12.1(5)YD	Cisco ITS 1.0	This command was introduced
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
12.4(9)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

This command sets caller-ID blocking for outbound calls originating from a specific extension (ephone-dn). This command requests the far-end gateway device to block the display of the calling party information for calls received from the ephone-dn that is being configured. This command does not affect the ephone-dn calling party information display for inbound calls received by the ephone-dn.

If you want caller-ID name or number to be available on local calls but not on external calls, use the **clid strip name** command or the **clid strip** command in dial-peer configuration mode to remove caller-ID name or number from calls to VoIP. In this case, do not also use the **caller-id block** command, which blocks caller-ID information on all calls.



Note

This command is not valid for ephone-dns that are being used for loopback.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example shows how to set caller-ID blocking for the directory number 5001:

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

```
Router(config-ephone-dn) # number 5001
Router(config-ephone-dn) # caller-id block
```

The following example uses an ephone-dn template to set caller-ID blocking for the directory number 5001:

```
Router(config) # ephone-dn-template 5
Router(config-ephone-dn-template) # caller-id block
Router(config-ephone-dn-template) # exit
Router(config) # ephone-dn 1
Router(config-ephone-dn) # number 5001
Router(config-ephone-dn) # ephone-dn-template 5
```

Related Commands

Command	Description
clid strip	Prevents display of caller-ID number on calls to VoIP.
clid strip name	Prevents display of caller-ID name on calls to VoIP.
ephone-dn-template (ephone-dn)	Applies ephone-dn template to an ephone dn.

caller-id block (voice register template)



Note Effective with Cisco IOS Release 12.4(11)XJ, the **callerid block (voice register template)** command is not available in Cisco IOS software.

To enable caller-ID blocking for outbound calls from a specific SIP phone, use the **callerid block command** in voice register template configuration mode. To disable caller-ID blocking, use the **no** form of this command.

caller-id block
no caller-id block

Syntax Description This command has no arguments or keywords.

Command Default Caller ID blocking is disabled.

Command Modes Voice register template configuration (config-register-temp)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)T	Cisco CME 3.4	This command was introduced.
	12.4(11)XJ	Cisco Unified CME 4.1	This command was removed.
	12.4(15)T	Cisco Unified CME 4.1	This command was removed in Cisco IOS Release 12.4(15)T.

Usage Guidelines This command sets caller-ID blocking for outbound calls originating from any SIP phone that uses the specified template. This command requests the far-end gateway device to block the display of the calling party information for calls received from the specified SIP phone. This command does not affect the calling party information displayed for inbound calls received by the SIP phone. To apply a template to a SIP phone, use the **template** command in voice register pool configuration mode.

Examples The following example shows how to enable caller-ID blocking in template 1:

```
Router(config)# voice register template 1
Router(config-register-temp)# caller-id block
```

Related Commands	Command	Description
	anonymous block (voice register template)	Enables anonymous call blocking in a SIP phone template.
	template (voice register pool)	Applies a template to a SIP phone.
	voice register template	Enters voice register template configuration mode and defines a template of common parameters for SIP phones.

caller-id block code (telephony-service)

To set a code for a user to dial to block the display of caller ID on selected outgoing calls from Cisco IP phones, use the **caller-id block code** command in telephony-service configuration mode. To remove the code, use the **no** form of this command.

caller-id block code *code-string*
no caller-id block code

Syntax Description	
<i>code-string</i>	Character string to dial to enable blocking of caller ID display on selected outgoing calls. The first character must be an asterisk (*) and the remaining characters must be digits. The string can contain a maximum of 16 characters.

Command Default No caller-ID blocking code is defined.

Command Modes Telephony-service configuration (config-telephony)

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

Usage Guidelines Once the caller-ID blocking code has been defined using this command, phone users should enter the caller-ID blocking code before dialing any call on which they want their caller ID not to display.

Examples The following example sets a caller-ID blocking code of *4321:

```
Router(config)# telephony-service
Router(config-telephony)# caller-id block code *4321
```

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

call-feature-uri

To specify the uniform resource identifier (URI) for soft keys on SIP phones registered to a Cisco Unified CME router, use the **call-feature-uri** command in voice register global configuration mode. To remove a URI association, use the **no** form of this command.

```
call-feature-uri {cfwdall | gpickup | pickup} service-uri
no call-feature-uri cfwdall {cfwdall | gpickup | pickup}
```

Syntax Description

cfwdall	Call Forward All (CfwdAll) soft key.
gpickup	Group Pickup (GPickUp) soft key.
pickup	Local Pickup (PickUp) soft key.
<i>service-uri</i>	URI that is requested when the specified soft key is pressed.

Command Default

No URI is associated with the soft key.

Command Modes

Voice register global configuration (config-register-global)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.
12.4(22)YB	Cisco Unified CME 7.1	The gpickup and pickup keywords were added.
12.4(24)T	Cisco Unified CME 7.1	This command has been integrated into Cisco IOS Release 12.4(24)T.

Usage Guidelines

This command updates the service URI for soft keys in the configuration file that is downloaded from the Cisco Unified CME router to the SIP phones during phone registration.

For Call Forward All, this URI and the call forward number is sent to Cisco Unified CME when a user enables Call Forward All from the phone using the CfwdAll soft key.

After you configure this command, restart the phone by using the **reset** or **restart** command.

This command is not supported on the Cisco Unified IP Phone 7905, 7912, 7940, or 7960.

Examples

The following example shows how to specify the URI for the call forward all soft key:

```
Router(config)# voice register global
Router(config-register-global)# call-feature-uri cfwdall http://10.10.10.11/cfwdall
```


Related Commands

Command	Description
call-forward b2bua all	Enables call forwarding for a SIP back-to-back user agent (B2BUA) so that all incoming calls are forwarded to another extension.
reset (voice register global)	Performs a complete reboot of all SIP phones associated with a Cisco Unified CME router.
reset (voice register pool)	Performs a complete reboot of one phone associated with a Cisco Unified CME router.
restart (voice register)	Performs a fast restart of one or all SIP phones associated with a Cisco Unified CME router.
service directed-pickup	Enables Directed Call Pickup and modifies the function of the Pickup and GPickUp soft keys.

call-forward

To globally apply dialplan-pattern expansion to redirecting numbers for extension numbers associated with SCCP IP phones in Cisco Unified CME, use the **call-forward system** command in telephony-service configuration mode. To disable the **call-forward system** command, use the **no** form of this command.

call-forward system redirecting-expanded
no call-forward system redirecting-expanded

Syntax Description

system	Call forward system parameter.
redirecting-expanded	Expand redirecting extensions to an E.164 number.

Command Default

The redirecting number is not expanded.

Command Modes

Telephony-service configuration (config-telephony)

Command History

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

Usage Guidelines

Use this command to apply dialplan-pattern expansion on a per-system basis to individual nonSIP redirecting numbers, including original called and last reroute numbers, in a Cisco Unified CME system.

When A calls B, and B forwards the call to C; B is the original called number and the last reroute number. If C then forwards or transfers the call to another number, C becomes the original called number and the last reroute number. The dial-plan pattern expansion is applied to both redirecting numbers. Once the number is expanded, it remains expanded during the entire call instance.

The dial-plan pattern to be matched must be configured using the **dialplan-pattern** command.

Examples

The following example shows how to create a dialplan-pattern for expanding calling numbers to an E.164 number and to also apply the expansion globally to redirecting numbers.

```
Router(config)# voice register global
Router(config-register-global)# dialplan-pattern 1 5105550... extension-length 5
Router(config-register-global)# call-forward system redirecting-expanded
```

Related Commands

Command	Description
dialplan-pattern	Create global prefix for expanding extension numbers of forward-to and transfer-to targets.
show telephony-service dial-peer	Displays dial peer information for extensions in a Cisco Unified CME system.

call-forward (voice register)

To globally apply dialplan-pattern expansion to redirecting numbers for extension numbers associated with SIP IP phones in Cisco Unified CME, use the **call-forward system** command in voice register global configuration mode. To disable the **call-forward system** command, use the **no** form of this command.

call-forward system redirecting-expanded
no call-forward system redirecting-expanded

Syntax Description	system	Call forward system parameter.
	redirecting-expanded	Redirecting extension is to be expanded to an E.164 number.

Command Default The redirecting number is not expanded.

Command Modes Voice register global configuration (config-register-global)

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

Usage Guidelines Use this command to apply dialplan-pattern expansion on a per-system basis to individual SIP redirecting numbers, including original called and last reroute numbers, in Cisco Unified CME.

When A calls B, and B forwards the call to C; B is the original called number and the last reroute number. If C then forwards or transfers the call to another number, C becomes the original called number and the last reroute number. The dial-plan pattern expansion is applied to both redirecting numbers. Once the number is expanded, it remains expanded during the entire call instance.

This command supports call forward using B2BUA only.

The dial-plan pattern to be matched must be configured using the **dialplan-pattern** command.

Examples

The following example shows how to create a dialplan-pattern for expanding calling numbers of SIP phones to an E.164 number and to also apply the expansion globally to SIP redirecting numbers.

```
Router(config)# voice register global
Router(config-register-global)# dialplan-pattern 1 5105550... extension-length 5
Router(config-register-global)# call-forward system redirecting-expanded
```

Related Commands	Command	Description
	dialplan-pattern (voice register)	Create global prefix for expanding extension numbers of forward-to and transfer-to targets if the target is an extension on a SIP phone.
	show voice register dial-peer	Displays dial peer information for extensions in a Cisco Unified CME system.

call-forward all

To configure call forwarding so that all incoming calls to a directory number are forwarded to another directory number, use the **callforward all** command in ephone-dn or ephone-dn-template configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward all *directory-number*
no call-forward all

Syntax Description	<i>directorynumber</i>	Directory number to which calls are forwarded. Represents a fully qualified E.164 number.
---------------------------	------------------------	---

Command Default Call forwarding for all calls is not set.

Command Modes Ephone-dn configuration (config-ephone-dn)
 Ephone-dn-template configuration (config-ephone-dn-template)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.1(5)YD	Cisco ITS 1.0	This command was introduced.
	12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
	12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
	12.4(9)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines The call forwarding mechanism applies to the individual directory number and cannot be configured for individual Cisco Unified IP phones.



Note The **callforward all** command takes precedence over the **call-forward busy** and **call-forward noan** commands.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example shows how to set call forwarding of all calls on directory number 5001 to directory number 5005. All incoming calls destined for extension 5001 are forwarded to another Cisco IP phone with the extension number 5005:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# call-forward
all 5005
```

The following example uses an ephone-dn template to forward all calls for extension 5001 to extension 5005.

```
Router(config)# ephone-dn-template 3
Router(config-ephone-dn-template)# call-forward all 5005
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# ephone-dn-template 3
```

Related Commands

Command	Description
callforward busy	Configures call forwarding to another number when a Cisco Unified IP phone is busy.
callforward noan	Configures call forwarding to another number when no answer is received from a Cisco Unified IP phone.
ephonedn-template (ephone-dn)	Applies template to ephone-dn.

call-forward b2bua all

To enable call forwarding for a Session Initiation Protocol (SIP) back-to-back user agent (B2BUA) so that all incoming calls are forwarded to another extension, use the **callforward b2bua all command** in voice register dn or voice register pool configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward b2bua all *directory-number*
no call-forward b2bua all

Syntax Description

<i>directorynumber</i>	Telephone number to which calls are forwarded. Represents a fully qualified E.164 number. Maximum length of the telephone number is 32.
------------------------	---

Command Default

Feature is disabled.

Command Modes

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

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was introduced.
12.4(11)XJ	Cisco Unified CME 4.1	This command was removed from voice register pool configuration mode for Cisco Unified CME only.
12.4(15)T	Cisco Unified CME 4.1	Command with modifications was integrated into Cisco IOS release 12.4(15)T.

Usage Guidelines

This command in voice register dn configuration mode applies the call forward mechanism to a individual SIP extension in Cisco Unified CME or Cisco Unified SIP SRST. This command in voice register pool configuration mode is for Cisco Unified SIP SRST only and applies to SIP IP phones on which the extension appears.

If this command is configured in both the voice register dn and voice register pool configuration modes, the configuration under voice register dn takes precedence.

We recommend that you do not use this command to configure a SIP extension or SIP IP phone that is a member of a hunt group. If this command is configured for a member of a hunt group, remove the phone from any hunt group to which it is assigned to avoid forwarding calls to all phones in the hunt group.

The **call-forward b2bua all** command takes precedence over the **call-forward b2bua busy** and **call-forward b2bua noan** commands.



Note

This command in voice register dn configuration mode is not commonly used for Cisco Unified SIP SRST.

Examples

Cisco Unified CME and Cisco Unified SIP SRST

The following example shows how to forward all incoming calls to extension 5001 on directory number 4, to extension 5005.

```
Router(config)# voice register dn 4
Router(config-register-dn) # number 5001
Router(config-register-dn) # call-forward b2bua all 5005
```

Cisco Unified SIP SRST

The following example shows how to forward all incoming calls for extension 5001 on pool number 4, to extension 5005.

```
Router(config)# voice register pool 4
Router(config-register-pool) # number 5001
Router(config-register-pool) # call-forward b2bua all 5005
```

Related Commands

Command	Description
call-forward b2bua busy	Enables call forwarding for a SIP B2BUA so that incoming calls to a busy extension are forwarded to another extension.
call-forward b2bua mailbox	Controls the specific voice-mail box selected in a voice-mail system at the end of a call forwarding exchange.
call-forward b2bua noan	Enables call forwarding for a SIP B2BUA so that incoming calls to an extension that does not answer after a configured amount of time are forwarded to another extension.
call-waiting (voice register pool)	Enables call waiting on a SIP phone.

call-forward b2bua busy

To enable call forwarding for a Session Initiation Protocol (SIP) back-to-back user agent (B2BUA) so that incoming calls to a busy extension are forwarded to another extension, use the **callforward b2bua busy** command in voice register dn or voice register pool configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward b2bua busy *directory-number*
no call-forward b2bua busy

Syntax Description	<i>directorynumber</i>	Telephone number to which calls are forwarded. Represents a fully qualified E.164 number. Maximum length of the telephone number is 32.
---------------------------	------------------------	---

Command Default Feature is disabled.

Command Modes Voice register dn configuration (config-register-dn)
 Voice register pool configuration (config-register-pool)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was introduced.
	12.4(11)XJ	Cisco Unified CME 4.1	This command was removed from voice register pool configuration mode for Cisco Unified CME only.
	12.4(15)T	Cisco Unified CME 4.1	This command with modifications was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines This command in voice register dn configuration mode applies the call forward mechanism to a individual SIP extension in Cisco Unified CME or Cisco Unified SIP SRST that is off-hook. This command in voice register pool configuration mode is for Cisco Unified SIP SRST only and applies to SIP IP phones on which the extension appears.

In Cisco Unified CME, call forward busy is also invoked when a call arrives for a destination that is configured but unregistered. A destination is considered to be configured if its number is listed under the voice register dn configuration.

If this command is configured in both voice register dn and voice register pool configuration modes, the configuration under voice register dn takes precedence.

We recommend that you do not use this command to configure a SIP extension or SIP IP phone that is a member of a hunt group. If this command is configured for a member of a hunt group, remove the phone from any hunt group to which it is assigned to avoid forwarding calls to all phones in the hunt group.

The **call-forward b2bua all** command takes precedence over the **call-forward b2bua busy** and **call-forward b2bua noan** commands.



Note This command in voice register dn configuration mode is not commonly used for Cisco Unified SIP SRST.

Cisco Unified CME and Cisco Unified SIP SRST

The following example shows how to forward all incoming calls to extension 5001 on directory number 4 to extension 5005 when extension 5001 is busy.

```
Router(config)# voice register dn 4
Router(config-register-dn)# number 5001
Router(config-register-dn)# call-forward b2bua busy 5005
```

Cisco Unified SIP SRST

The following example shows how to forward calls from extension 5001 in pool 4 to extension 5005 when extension 5001 is busy.

```
Router(config)# voice register pool 4
Router(config-register-pool)# number 5001
Router(config-register-pool)# call-forward b2bua busy 5005
```

Related Commands

Command	Description
call-forward b2bua all	Enables call forwarding for a SIP B2BUA so that all incoming calls are forwarded to another extension.
call-forward b2bua mailbox	Controls the specific voice-mail box selected in a voice-mail system at the end of a call forwarding exchange.
call-forward b2bua noan	Enables call forwarding for a SIP B2BUA so that incoming calls to an extension that does not answer after a configured amount of time are forwarded to another extension.
call-waiting (voice register pool)	Enables call waiting on a SIP phone.

call-forward b2bua mailbox

To control the specific voice-mail box selected in a voice-mail system at the end of a call forwarding exchange, use the **callforward b2bua mailbox command** in voice register dn or voice register pool configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward b2bua mailbox *directory-number*
no call-forward b2bua mailbox

Syntax Description

<i>directorynumber</i>	Telephone number to which calls are forwarded when the forwarded destination is busy or does not answer. Represents a fully qualified E.164 number. Maximum length of the telephone number is 32.
------------------------	---

Command Default

Feature is disabled.

Command Modes

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

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was introduced.
12.4(11)XJ	Cisco Unified CME 4.1	This command was removed from voice register pool configuration mode for Cisco Unified CME only.
12.4(15)T	Cisco Unified CME 4.1	This command with modifications was integrated into Cisco IOS Release 12.4(15)T

Usage Guidelines

This command is used to denote the voice-mail box to use at the end of a chain of call forwards to busy or no answer destinations. It can be used to forward calls to a voice-mail box that has a different number than the forwarding extension, such as a shared voice-mail box.

This command in voice register dn configuration mode applies the call forward mechanism to a individual SIP extension in Cisco Unified CME or Cisco Unified SIP SRST. This command in voice register pool configuration mode is for Cisco Unified SIP SRST only and applies to SIP IP phones on which the extension appears.

If this command is configured in both the voice register dn and voice register pool configuration modes, the configuration under voice register dn takes precedence.

We recommend that you do not use this command to configure a SIP extension or SIP IP phone that is a member of a hunt group. If this command is configured for a member of a hunt group, remove the phone from any hunt group to which it is assigned to avoid forwarding calls to all phones in the hunt group.

This command is used in conjunction with the **call-forward b2bua all**, **call-forward b2bua busy**, and **call-forward b2bua noan** commands.



Note This command in voice register dn configuration mode is not commonly used for Cisco Unified SIP SRST.

Cisco Unified CME and Cisco Unified SIP SRST

The following example shows how to forward all incoming calls to extension 5005 if an incoming call is forwarded to extension 5001, and extension 5001 is busy or does not answer.

```
Router(config)# voice register dn 4
Router(config-register-dn)# number 5001
Router(config-register-dn)# call-forward b2bua mailbox 5005
```

Cisco Unified SIP SRST

The following example shows how to forward calls to extension 5005 if an incoming call is forwarded to extension 5001 on pool number 4, and extension 5001 is busy or does not answer.

```
Router(config)# voice register pool 4
Router(config-register-pool)# number 5001
Router(config-register-pool)# call-forward b2bua mailbox 5005
```

Related Commands

Command	Description
call-forward b2bua all	Enables call forwarding for a SIP B2BUA so that all incoming calls are forwarded to another extension.
call-forward b2bua busy	Enables call forwarding for a SIP B2BUA so that incoming calls to a busy extension are forwarded to another extension.
call-forward b2bua noan	Enables call forwarding for a SIP B2BUA so that incoming calls to an extension that does not answer after a configured amount of time are forwarded to another extension.
call-forward b2bua unreachable	Enables call forwarding for a SIP B2BUA so that incoming calls to an extension that is not registered in Cisco Unified CME are forwarded to another extension.
call-waiting (voice register pool)	Enables call waiting on a SIP phone.
number (voice register dn)	Associates an extension number with a voice register dn.
voice register dn	Enters voice register dn configuration mode to define an extension for a SIP phone line.
voice register pool	Enters voice register pool configuration mode for SIP phones.

call-forward b2bua night-service

To automatically forward calls to another number during night-service hours, use the **call-forward b2bua night-service** command in voice register dn configuration mode. To remove the code, use the **no** form of this command.

call-forward b2bua night-service *target-number*
no call-forward b2bua night-service

Syntax Description

<i>target-number</i>	Phone number to which calls are forwarded.
----------------------	--

Command Default

Calls are not forwarded during night-service hours.

Command Modes

Voice register dn configuration: (config-register-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
15.6(3)M 16.3.1	Cisco Unified CME 11.5	This command was introduced.

Usage Guidelines

You need to configure the **night-service bell** command under voice register dn. Night-service hours are defined using the **night-service date** and **night-service day** commands.

A voice register dn can have all other types of call forwarding defined at the same time: all-calls, no-answer, busy, and night-service. Each type of call forwarding can have a different forwarding destination defined in its target-number argument. If more than one type of call forwarding is in effect (is active) at one time, the precedence order for evaluating the different types is as follows:

- call forward night-service (only during night service hours)
- call forward all
- call forward busy and call forward no answer

Examples

The following example defines a call forward night-service configuration under voice register dn :

```
Router(config)# voice register dn tag
Router(config-register-dn)# call-forward b2bua night-service
```

Related Commands

	Description
night-service date	Defines a recurring time period associated with a month and day 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.

call-forward b2bua noan

To enable call forwarding for a Session Initiation Protocol (SIP) back-to-back user agent (B2BUA) so that incoming calls to an extension that does not answer after a configured amount of time are forwarded to another extension, use the **callforward b2bua noan command** in voice register dn or voice register pool configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward b2bua noan *directory-number* **timeout** *seconds*
no call-forward b2bua noan

Syntax Description

<i>directorynumber</i>	Telephone number to which calls are forwarded. Represents a fully qualified E.164 number. Maximum length of the telephone number is 32.
timeout <i>seconds</i>	Number of seconds that a call can ring with no answer before the call is forwarded to another extension. Range is 3 to 60000. Default is 20.

Command Default

Feature is disabled.

Command Modes

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

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was introduced.
12.4(11)XJ	Cisco Unified CME 4.1	This command was removed from voice register pool configuration mode for Cisco Unified CME only.
12.4(15)T	Cisco Unified CME 4.1	This command with modifications was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

This command in voice register dn configuration mode applies the call forward mechanism to a individual SIP extension in Cisco Unified CME or Cisco Unified SIP SRST that remains unanswered after a specified length of time. This command in voice register pool configuration mode is for Cisco Unified SIP SRST only and applies to SIP IP phones on which the extension appears.

If this command is configured in both the voice register dn and voice register pool configuration modes, the configuration under voice register dn takes precedence.

We recommend that you do not use this command to configure a SIP extension or SIP IP phone that is a member of a hunt group. If this command is configured for a member of a hunt group, remove the phone from any hunt group to which it is assigned to avoid forwarding calls to all phones in the hunt group.

The **call-forward b2bua all** command takes precedence over the **call-forward b2bua busy** and **call-forward b2bua noan** commands.



Note

This command in voice register dn configuration mode is not commonly used for Cisco Unified SIP SRST.

Cisco Unified CME and Cisco Unified SIP SRST

The following example shows how to forward calls to extension 5005 when extension 5001 is unanswered. The timeout before the call is forwarded to extension 5005 is 10 seconds.

```
Router(config)# voice register pool 4
Router(config-register-pool)# number 5001
Router(config-register-pool)# call-forward b2bua noan 5005 timeout 10
```

Cisco Unified SIP SRST

The following example shows how to forward calls to extension 5005 when extension 5001 on pool number 4 is unanswered. The timeout before the call is forwarded to extension 5005 is 10 seconds.

```
Router(config)# voice register pool 4
Router(config-register-pool)# number 5001
Router(config-register-pool)# call-forward b2bua noan 5005 timeout 10
```

Related Commands

Command	Description
call-forward b2bua all	Enables call forwarding for a SIP B2BUA so that all incoming calls are forwarded to another extension.
call-forward b2bua busy	Enables call forwarding for a SIP B2BUA so that incoming calls to a busy extension are forwarded to another extension.
call-forward b2bua mailbox	Controls the specific voice-mail box selected in a voice-mail system at the end of a call forwarding exchange.
call-waiting (voice register pool)	Enables call waiting on a SIP phone.

call-forward b2bua unreachable



Note Effective with Cisco IOS Release 12.4(11)XJ, the **callforward b2bua unreachable** command is not available in Cisco IOS software.

To forward calls to a phone that is not registered to Cisco Unified CME, use the **callforward b2bua unreachable command** in voice register dn or voice register pool configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward b2bua unreachable *directory-number*
no call-forward b2bua unreachable

Syntax Description	<i>directorynumber</i> Telephone number to which calls are forwarded. Represents a fully qualified E.164 number.
---------------------------	--

Command Default Feature is disabled

Command Modes Voice register dn configuration (config-register-dn)
 Voice register pool configuration (config-register-pool)

Command History	Cisco IOS Release	Version	Modification
	12.4(4)T	Cisco CME 3.4	This command was introduced.
	12.4(11)XJ	Cisco Unified CME 4.1	This command was removed.
	12.4(15)T	Cisco Unified CME 4.1	This command was removed in Cisco IOS Release 12.4(15)T.

Usage Guidelines Call forward unreachable is triggered when a call arrives for a destination that is configured but unregistered with Cisco CME. A destination is considered to be configured if its number is listed under the voice register pool or voice register dn configurations.

If call forward unreachable is not configured for a pool or directory number (DN) register, any calls that match the numbers in that pool or DN register will use call forward busy instead.

We recommend that you do not use this command with hunt groups. If the command is used, consider removing the phone from any assigned hunt groups, unless you want to forward calls to all phones in the hunt group.

Examples

The following example shows how to forward calls to extension 5005 when extension 5001 on directory number 4 is unreachable, either because it is unplugged or the network between the Cisco router and the extension is nonfunctional. The timeout before the call is forwarded to extension 5005 is 10 seconds.

```
Router(config)# voice register pool 4
Router(config-register-dn)# number 5001
Router(config-register-dn)# call-forward b2bua unreachable 5005 timeout 10
```

Related Commands

Command	Description
call-forward b2bua all (voice register dn and voice register pool)	Enables call forwarding for a SIP B2BUA so that all incoming calls are forwarded to another extension.
call-forward b2bua busy (voice register dn and voice register pool)	Enables call forwarding for a SIP B2BUA so that incoming calls to a busy extension are forwarded to another extension.
call-forward b2bua mailbox (voice register dn and voice register pool)	Controls the specific voice-mail box selected in a voice-mail system at the end of a call forwarding exchange.
call-forward b2bua noan (voice register dn and voice register pool)	Enables call forwarding for a SIP B2BUA so that incoming calls to an extension that does not answer after a configured amount of time are forwarded to another extension.
call-waiting (voice register pool)	Enables call waiting on a SIP phone.
number (voice register dn)	Associates an extension number with a voice register dn.

call-forward busy

To configure call forwarding so that incoming calls to a busy extension (ephone-dn) are forwarded to another extension, use the **callforward busy command** in ephone - dn or ephone-dn-template configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward busy *target-number* [{**primary** | **secondary**}] [**dialplan-pattern**]
no call-forward busy

Syntax Description	
<i>target-number</i>	Phone number to which calls are forwarded.
primary	(Optional) Call forwarding is selectively applied only to the dial peer created for the primary number for this ephone-dn.
secondary	(Optional) Call forwarding is selectively applied only to the dial peer created for the secondary number for this ephone-dn.
dialplan-pattern	(Optional) Call forwarding is selectively applied only to dial peers created for this ephone-dn by the dial-plan pattern.

Command Default Call forwarding for a busy extension is not enabled.

Command Modes Ephone-dn configuration (config-dn-ephone)
 Ephone-dn-template configuration (config-ephone-dn-template)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.1(5)YD	Cisco ITS 1.0	This command was introduced.
	12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
	12.4(4)XC	Cisco Unified CME 4.0	The primary , secondary , and dialplan-pattern keywords were added, and this command was made available in ephone-dn-template configuration mode.
	12.4(11)T	Cisco Unified CME 4.0	This command with the primary , secondary , and dialplan-pattern keywords added, and this command in ephone-dn-template configuration mode was integrated into Cisco IOS 12.4(11)T.

Usage Guidelines The call forwarding mechanism is applied to an individual extension (ephone-dn) and is not applied to the phone on which the extension appears.

Normally, call forwarding is applied to all dial peers that are created by the ephone-dn. An ephone-dn can create up to four dial peers:

- A dial peer for the primary number
- A dial peer for the secondary number
- A dial peer for the primary number as expanded by the **dialplan-pattern** command
- A dial peer for the secondary number as expanded by the **dialplan-pattern** command

The **primary**, **secondary**, and **dialplan-pattern** keywords allow you to apply call forwarding selectively to one or more dial peers based on the exact called number that was used to route the call to the ephone-dn. If none of the optional keywords is used, call forwarding applies to all dial-peers that are defined for the ephone-dn.

An ephone-dn can have all four types of call forwarding defined at the same time: all-calls, no-answer, busy, and night-service. Each type of call forwarding can have a different forwarding target defined in its *target-number* argument. If more than one type of call forwarding is in effect (is active) at one time, the precedence order for evaluating the different types is as follows:

1. call forward night service
2. call forward all
3. call forward busy and call forward no answer

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example forwards all calls for the ephone-dn 2345 when it is busy.

```
Router(config)# ephone-dn 236
Router(config-ephone-dn) # number 2345
Router(config-ephone-dn) # call-forward
busy 2000
```

The following example uses an ephone-dn template to forward calls for extension 2345 when it is busy.

```
Router(config)# ephone-dn-template 6
Router(config-ephone-dn-template) # call-forward
busy 2000
Router(config-ephone-dn-template) # exit
Router(config)# ephone-dn 236
Router(config-ephone-dn) # number 2345
Router(config-ephone-dn) # ephone-dn-template 6
```

The following example creates a dial-plan pattern to expand extension numbers into E.164 numbers. It then sets call forwarding of incoming calls to directory number 5005. In this example, call forwarding on busy is applied only when callers dial the primary number for this ephone-dn, 5001.

```
Router(config)# telephony-service
Router(config-telephony) # dialplan-pattern 1 40855501.. extension-length 4 extension-pattern
50..
Router(config-telephony) # exit
Router(config)# ephone-dn 1
Router(config-ephone-dn) # number 5001 secondary 5002
Router(config-ephone-dn) # call-forward
busy 5005 primary
```

Related Commands

Command	Description
callforward all	Configures call forwarding for all incoming calls to an ephone-dn.

Command	Description
call-forward night-service	Configures call forwarding for all incoming calls to an ephone-dn during the hours defined for night service.
callforward noan	Configures call forwarding to another number when no answer is received from an ephone-dn.
ephone-dn-template (ephone-dn)	Applies template to ephone-dn.

call-forward max-length

To restrict the number of digits that can be entered using the CfdwALL soft key on an IP phone, use the **callforward max-length** command in ephone-dn or ephone-dn-template configuration mode. To remove a restriction on the number of digits that can be entered, use the **no** form of this command.

call-forward max-length *length*
no call-forward max-length

Syntax Description

<i>length</i>	Number of digits that can be entered using the CfdwAll soft key on an IP phone.
---------------	---

Command Default

There is no restriction on the number of digits that can be entered.

Command Modes

Ephone-dn configuration (config-dn-ephone)
 Ephone-dn-template configuration (config-ephone-dn-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(7)T	Cisco CME 3.1	This command was introduced.
12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
12.4(11)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS Release 12.4(11)T.

Usage Guidelines

This command can be used to prevent a phone user from using the CfdwALL soft key on an IP phone to forward calls to numbers that will incur toll charges when they receive forwarded calls.

If the *length* argument is set to 0, the CfdwALL soft key is completely disabled. If the ephone-dn associated with the first line button has an active call forward number when this command is used to set the *length* argument to 0, the CfdwALL soft key will be disabled after the next phone restart.

The restriction created by this command does not apply to destinations that are entered using the Cisco IOS command-line interface (CLI) or the Cisco Unified CME GUI.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example restricts the number of digits that a phone user can enter using the CfdwALL soft key to four. In this example, extensions in the phone user's Cisco Unified CME system have four digits, so that means the user can use the IP phone to forward all calls to any extension in the system, but not to any number outside the system.

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# call-forward
max-length 4
```

The following example uses an ephone-dn-template to restrict the number of digits that a phone user can enter using the CfwdALL soft key to four.

```
Router(config)# ephone-dn-template 4
Router(config-ephone-dn-template)# call-forward
max-length 4
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# ephone-dn-template 4
```

Related Commands

Command	Description
call-forward all	Configures call forwarding for all incoming calls on one of the lines of a Cisco Unified IP phone.
ephone-dn-template (ephone-dn)	Applies an ephone-dn template to an ephone-dn.

call-forward night-service

To automatically forward calls to another number during night-service hours, use the **call-forward night-service** command in ephone-dn or ephone-dn-template configuration mode. To disable automatic call forwarding during night service, use the **no** form of this command.

call-forward night-service *target-number*
no call-forward night-service

Syntax Description

<i>target-number</i>	Phone number to which calls are forwarded.
----------------------	--

Command Default

Calls are not forwarded during night-service hours.

Command Modes

Ephone-dn configuration (config-dn-ephone)
 Ephone-dn-template configuration (config-ephone-dn-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(11)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(11)T.

Usage Guidelines

You must also configure the **night-service bell** command for this ephone-dn.

Night-service hours are defined using the **night-service date** and **night-service day** commands.

An ephone-dn can have all four types of call forwarding defined at the same time: all-calls, no-answer, busy, and night-service. Each type of call forwarding can have a different forwarding destination defined in its *target-number* argument. If more than one type of call forwarding is in effect (is active) at one time, the precedence order for evaluating the different types is as follows:

1. call forward night-service
2. call forward all
3. call forward busy and call forward no answer

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example establishes night-service hours from 1 p.m. Saturday until 8 a.m. Monday. During that time, calls to extension 1000 (ephone-dn 1) are forwarded to extension 2346. Note that the **night-service bell** command has also been used for ephone-dn 1.

```
telephony-service
 night-service day sat 13:00 12:00
 night-service day sun 12:00 08:00
 night-service code *1234
!
ephone-dn 1
 number 1000
```

```

night-service bell
call-forward night-service 2346
!

```

```

ephone-dn 2
  number 2346
ephone 12
  button 1:1
ephone 13
  button 1:2

```

The following example uses an ephone-dn template to apply call forwarding for extension 2876 during the night service hours established in the previous example.

```

ephone-dn-template 2
  call-forward night-service 2346
ephone-dn 25
  number 2876
  ephone-dn-template 2

```

Related Commands

Command	Description
callforward all	Configures call forwarding for all incoming calls to an ephone-dn.
callforward busy	Configures call forwarding to another number when an ephone-dn is busy.
callforward noan	Configures call forwarding to another number when no answer is received from an ephone-dn.
night-service bell (ephone-dn)	Marks an ephone-dn for night-service treatment.
night-service date	Defines a recurring time period associated with a month and day 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.

call-forward noan

To configure call forwarding so that incoming calls to an extension (ephone-dn) that does not answer are forwarded to another number, use the **callforward noan command** in ephone - dn or ephone-dn-template configuration mode. To disable call forwarding, use the **no** form of this command.

call-forward noan *target-number* **timeout** *seconds* [{**primary** | **secondary**}] [**dialplan-pattern**]
no call-forward noan

Syntax Description

target-number	Phone number to which calls are forwarded.
timeout <i>seconds</i>	Sets the duration that a call can ring with no answer before the call is forwarded to the target number. Range is from 3 to 60000. There is no default value.
primary	(Optional) Call forwarding is selectively applied only to the dial peer created for the primary number for this ephone-dn.
secondary	(Optional) Call forwarding is selectively applied only to the dial peer created for the secondary number for this ephone-dn.
dialplan-pattern	(Optional) Call forwarding is selectively applied only to dial peers created for this ephone-dn by the dial-plan pattern.

Command Default

Call forwarding for an extension that does not answer is not enabled.

Command Modes

Ephone-dn configuration (config-dn-ephone)
Ephone-dn-template configuration (config-ephone-dn-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.1(5)YD	Cisco ITS 1.0	This command was introduced.
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
12.4(4)XC	Cisco Unified CME 4.0	The primary , secondary , and dialplan-pattern keywords were added, and this command was made available in ephone-dn-template configuration mode.
12.4(9)T	Cisco Unified CME 4.0	This command with modifications was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

The call forwarding mechanism is applied to an individual extension (ephone-dn) and is not applied to the phone on which the extension appears.

Normally, call forwarding is applied to all dial peers that are created by the ephone-dn. An ephone-dn can create up to four dial peers:

- A dial peer for the primary number
- A dial peer for the secondary number
- A dial peer for the primary number as expanded by the **dialplan-pattern** command

- A dial peer for the secondary number as expanded by the **dialplan-pattern** command

The **primary**, **secondary**, and **dialplan-pattern** keywords allow you to apply call forwarding selectively to one or more dial peers based on the exact called number that was used to route the call to the ephone-dn. If none of the optional keywords is used, call forwarding applies to all dial-peers that are defined for the ephone-dn.

An ephone-dn can have all four types of call forwarding defined at the same time: all-calls, no-answer, busy, and night-service. Each type of call forwarding can have a different forwarding target defined in its *target-number* argument. If more than one type of call forwarding is in effect (is active) at one time, the precedence order for evaluating the different types is as follows:

1. call forward night service
2. call forward all
3. call forward busy and call forward no answer

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example forwards calls for the ephone-dn 2345 when it does not answer.

```
Router(config)# ephone-dn 236
Router(config-ephone-dn)# number 2345
Router(config-ephone-dn)# call-forward
    busy 2000
The following example uses an ephone-dn-template to forward calls for the ephone-dn 2345
when it does not answer.
Router(config)# ephone-dn-template 8
Router(config-ephone-dn-template)# call-forward
    busy 2000
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 236
Router(config-ephone-dn)# number 2345
Router(config-ephone-dn)# ephone-dn-template 8
```

The following example creates a dial-plan pattern to expand extension numbers into E.164 numbers. It then sets call forwarding of incoming calls to directory number 5005. In this example, call forwarding on no answer is applied only when callers dial the primary number for this ephone-dn, 5001.

```
Router(config)# telephony-service
Router(config-telephony)# dialplan-pattern 1 40855501.. extension-length 4 extension-pattern
    50..
Router(config-telephony)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001 secondary 5002
Router(config-ephone-dn)# call-forward
    noan 5005 primary
```

Related Commands

Command	Description
callforward all	Configures call forwarding for all incoming calls for an ephone-dn.

Command	Description
callforward busy	Configures call forwarding to another number when an ephone-dn is busy.
call-forward night-service	Configures call forwarding for all incoming calls to an ephone-dn during the hours defined for night service.
ephone-dn-template (ephone-dn)	Applies an ephone-dn-template to an ephone-dn.

call-forward pattern

To specify a pattern for calling - party numbers that are able to support the ITU-T H.450.3 standard for call forwarding, use the **callforward pattern** command in telephony-service configuration mode. To remove the pattern, use the **no** form of this command.

call-forward pattern *pattern*
no call-forward pattern *pattern*

Syntax Description	<table> <tr> <td><i>pattern</i></td><td>String that consists of one or more digits and wildcard markers or dots (.) to define a specific pattern. Calling parties that match a defined pattern use the H.450.3 standard if they are forwarded. A pattern of .T specifies the H.450.3 forwarding standard for all incoming calls.</td></tr> </table>	<i>pattern</i>	String that consists of one or more digits and wildcard markers or dots (.) to define a specific pattern. Calling parties that match a defined pattern use the H.450.3 standard if they are forwarded. A pattern of .T specifies the H.450.3 forwarding standard for all incoming calls.
<i>pattern</i>	String that consists of one or more digits and wildcard markers or dots (.) to define a specific pattern. Calling parties that match a defined pattern use the H.450.3 standard if they are forwarded. A pattern of .T specifies the H.450.3 forwarding standard for all incoming calls.		

Command Default No call-forward pattern is defined.

Command Modes Telephony-service configuration (config-telephony)

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

Usage Guidelines Use this command with Cisco IOS Telephony Services (ITS) V2.1, Cisco CallManager Express 3.0, or a later version.

When H.450.3 call forwarding is selected, the router must be configured with a Tool Command Language (Tcl) script that supports the H.450.3 protocol. The Tcl script is loaded on the router by using the **call application voice** command.

The pattern match in this command is against the phone number of the calling party. When an extension number has forwarded its calls and an incoming call is received for that number, the router sends an H.450.3 response back to the original calling party to request that the call be placed again using the forward-to destination.

Calling numbers that do not match the patterns defined using this command are forwarded using Cisco-proprietary call forwarding for backward compatibility.

Examples

The following example specifies that all 4-digit directory numbers that begin with 4 should use the H.450.3 standard whenever they are forwarded:

```
Router(config)# telephony-service
Router(config-telephony)# call-forward pattern 4...
```

The following example forwards all calls that support the H.450.3 standard:

```
Router(config)# telephony-service
Router(config-telephony)# call-forward pattern .T
```

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.

calling-number local

To replace a calling-party number and name with the forwarding-party number and name (the local number and name) in calls forwarded using local hairpin call routing, use the **calling-number local** command in telephony-service configuration mode. To reset to the default, use the **no** form of this command.

calling-number local [secondary]
no calling-number local

Syntax Description	secondary (Optional) Uses the secondary number associated with the forwarding party instead of the primary number. The primary number is the default if this keyword is not used.
---------------------------	--

Command Default Calling-party numbers and names are used in forwarded calls.

Command Modes Telephony-service configuration

Command History	Cisco IOS Release	Cisco Product	Modification
	12.2(15)ZJ3	Cisco CME 3.0	This command was introduced.
	12.3(4)T	Cisco CME 3.0	This command was integrated into Cisco IOS Release 12.3(4)T.
	12.3(15)ZJ4	Cisco CME 3.0	The secondary keyword was introduced.
	12.3(14)T	Cisco CME 3.3	Support was added to the default IOS voice application framework and dependency on the TCL script was removed.

Usage Guidelines In Cisco CME 3.2 and earlier versions, this command is used with the Tool Command Language (Tcl) script app-h450-transfer.2.0.0.7 or a later version.

In Cisco CME 3.3 and later versions, this command can be used without the TCL script because the functionality is integrated into the default IOS voice application framework.

If the ephone-dn used by a forwarding party has a secondary number in addition to its primary number and neither number is registered with the gatekeeper, the primary number is the number that appears as the calling number on hairpin-forwarded calls when the **calling-number local** command is used. If only one of the numbers is registered with the gatekeeper, the registered number is the number that appears as the calling number. If both numbers are registered with the gatekeeper, the primary number is the number that appears as the calling number.

If the ephone-dn used by a forwarding party has a secondary number in addition to its primary number and the **calling-number local secondary** command is used, the secondary number is the number that appears as the calling number on hairpin-forwarded calls if both numbers are registered with the gatekeeper or if both numbers are not registered. If only one number is configured to register with the gatekeeper, the number that is registered appears as the calling number.

Examples

The following example specifies use of the name and number of the local forwarding party in hairpin-forwarded calls:

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

```
Router(config-telephony)# calling-number local
```

The following examples demonstrate the use of the **calling-number local** command without the **secondary** keyword.

- The calling number for hairpin calls forwarded from ephone-dn 1 is 1234 in the following example:

```
calling-number local
ephone-dn 1
number 1234 secondary 4321 no-reg
```

- The calling number for hairpin calls forwarded from ephone-dn 1 is 4321 in the following example:

```
calling-number local
ephone-dn 1
number 1234 secondary 4321 no-reg primary
```

- The calling number for hairpin calls forwarded from ephone-dn 1 is 1234 in the following example:

```
calling-number local
ephone-dn 1
number 1234 secondary 4321 no-reg both
```

or

```
number 1234 secondary 4321
```

The following examples demonstrate the use of the **calling-number local secondary** command.

- The calling number for hairpin calls forwarded from ephone-dn 1 is 1234 in the following example:

```
calling-number local secondary
ephone-dn 1
number 1234 secondary 4321 no-reg
```

- The calling number for hairpin calls forwarded from ephone-dn 1 is 4321 in the following example:

```
calling-number local secondary
ephone-dn 1
number 1234 secondary 4321 no-reg primary
```

- The calling number for hairpin calls forwarded from ephone-dn 1 is 4321 in the following example:

```
calling-number local secondary
ephone-dn 1
number 1234 secondary 4321 no-reg both
```

or

```
number 1234 secondary 4321
```

calling-number local (voice register global)

To replace a calling-party number and name with the forwarding-party number and name (the local number and name) in calls forwarded using local hairpin call routing, use the **calling-number local** command in voice register global configuration mode. To reset to the default, use the **no** form of this command.

calling-number local
no calling-number local

Syntax Description	This command has no arguments or keywords.
---------------------------	--

Command Default	Calling-party numbers and names are used in forwarded calls. The command is disabled by default.
------------------------	--

Command Modes	Voice register global configuration (config-register-global)
----------------------	--

Command History	Cisco IOS Release	Cisco Product	Modification
	Cisco IOS XE Everest 16.6.1	Unified CME 12.0	This command was introduced.

Usage Guidelines	Use the CLI Command calling-number local in voice register global configuration mode so that the number and name of the forwarding party appears as the calling number on hairpin-forwarded calls. Once calling-number local is configured under voice register global, the calls forwarded from local SIP phones will have the calling-number and name of the last forwarded party.
-------------------------	--

Examples

The following example specifies use of the name and number of the local forwarding party in hairpin-forwarded calls:

```
Router(config)# voice register global
Router(config-register-global)# calling-number local
```

The following examples demonstrate the use of the **calling-number local** command.

- The calling number for hairpin calls forwarded from voice register dn 1 is 1234 in the following example:

```
voice register global
calling-number local
..
voice register dn 1
 name Phone 1
 number 1234
```

callqueue-display

To configure call waiting notification display on the agent phone as continuous, periodic, or off, use the **callqueue display** command. To set the call waiting notification display to the default state of periodic (for voice hunt group) and continuous (for ephone hunt group), use the **default** form of this command.

callqueue display [{continuous | periodic | off}]
default callqueue display

Command Default

Call waiting notification is set to periodic for phones in voice hunt group, and to continuous for phones in ephone hunt group. The no form of this command also sets the call waiting display to default state.

Command Modes

Ephone-hunt configuration (config-ephone-hunt)

Voice hunt group configuration (config-voice-hunt-group)

Command History

Cisco IOS Release	Cisco Product	Modification
15.6(3)M 16.3.1	Cisco Unified CME 11.5	This command was introduced.

Usage Guidelines

The callqueue display command is valid for both voice hunt group as well as ephone hunt group.

Examples

The following example shows how to set call waiting notification display to periodic in an ephone hunt group:

```
Router(config)# ephone-hunt 1
Router(config-ephone-hunt)# call
Router(config-ephone-hunt)# callqueue
Router(config-ephone-hunt)# callqueue display
Router(config-ephone-hunt)# callqueue display periodic
```

The following example shows how to set call waiting notification display to continuous in a voice hunt group:

```
Router(config)# voice hunt-group 1
Router(config-voice-hunt-group)# callqueue display
Router(config-voice-hunt-group)# callqueue display continuous
```


call-park system

To define system parameters for the Call Park feature, use the **call-park system** command in telephony-service configuration mode. To reset to the default, use the **no** form of this command.

call-park system {**application** | **redirect**}
no call-park system {**application** | **redirect**}

Syntax Description

application	Enables Call Park and Directed Call Park for SCCP and SIP phones.
redirect	H.323 and SIP calls use H.450 or the SIP Refer method of call forwarding or transfer to park calls and to pick up calls from park.

Command Default

H.323 and SIP calls use hairpin call forwarding or transfer to park calls and to pick up calls from park.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(9)T.
12.4(22)YB	Cisco Unified CME 7.1	The application keyword and support for SIP phones was added.
12.4(24)T	Cisco Unified CME 7.1	This command has been integrated into Cisco IOS Release 12.4(24)T.

Usage Guidelines

The **application** keyword selects the enhanced Call Park method supported in Cisco Unified CME 7.1 and later versions for SCCP and SIP phones.

Examples

The following example specifies that H.323 and SIP calls will use the H.450 or SIP Refer method of call forwarding or transfer to park calls and pick up calls from park:

```
Router(config)# telephony-service
Router(config-telephony)# call-park system redirect
```

Related Commands

Command	Description
park reservation-group	Assigns a call-park reservation group to a phone.
park-slot	Creates a floating extension at which calls can be temporarily parked.

call-waiting (voice register pool)

To enable call-waiting option on a SIP phone, use the **call-waiting** command in voice register pool configuration mode. To disable call waiting, use the **no** form of this command.

call-waiting
no call-waiting

Syntax Description This command has no arguments or keywords.

Command Default Feature is enabled.

Command Modes Voice register pool configuration (call-waiting)

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

Usage Guidelines The call waiting feature is enabled by default on SIP phones. To disable call waiting, use the **no call-waiting** command.

Examples The following example shows how to disable call waiting on SIP phone 1:

```
Router(config)# voice register pool 1
Router(config-register-pool)# no call-waiting
```

Related Commands	Command	Description
	voice register pool	Enters voice register pool configuration mode for SIP phones.

call-waiting beep

To allow call-waiting beeps to be accepted by or generated from an ephone-dn, use the **call-waiting beep** command in ephone-dn or ephone-dn-template configuration mode. To disable the acceptance and generation of call-waiting beeps by an ephone-dn, use the **no** form of this command.

call-waiting beep [{accept | generate}]
no call-waiting beep [{accept | generate}]

Syntax Description	accept	(Optional) Allows call-waiting beeps to be accepted by an ephone-dn.
	generate	(Optional) Allows call-waiting beeps to be generated by an ephone-dn.

Command Default Call-waiting beeps are accepted and generated.

Command Modes Ephone-dn configuration (config-ephone-dn)
 Ephone-dn-template configuration (config-ephone-dn-template)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.3(11)T	Cisco CME 3.2	This command was introduced.
	12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
	12.4(9)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines The **call-waiting beep** command must be used with the **ephone-dn** command. The **call-waiting beep** command is used like a toggle and can be switched on and off for each ephone-dn.

A beep can be heard only if both sending and receiving ephone-dns are configured to accept call-waiting beeps.

To display how call-waiting beeps are configured, use the **show running-config** command in the privileged EXEC configuration mode. If the **no call-waiting beep generate** and **no call-waiting beep accept** commands are configured, the **show running-config** output will display the **no call-waiting beep** command.

If you configure a button to have a silent ring using the **s** option of the **button** command, you will not hear a call-waiting beep regardless of whether the ephone-dn associated with the button is configured to generate a call-waiting beep.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example configures ephone-dn 1 and ephone-dn 2 not to accept and not to generate call-waiting beeps:

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

```

Router(config-ephone-dn) # number 2588
Router(config-ephone-dn) # no call-waiting beep accept
Router(config-ephone-dn) # no call-waiting beep generate
Router(config-ephone-dn) # exit
Router(config) # ephone-dn 2
Router(config-ephone-dn) # number 2589
Router(config-ephone-dn) # no call-waiting beep accept
Router(config-ephone-dn) # no call-waiting beep generate
Router(config-ephone-dn) # exit

```

The following example uses an ephone-dn template to set the same attributes as in the previous example:

```

Router(config) # ephone-dn-template 5
Router(config-ephone-dn-template) # no call-waiting beep accept
Router(config-ephone-dn-template) # no call-waiting beep generate
Router(config-ephone-dn-template) # exit
Router(config) # ephone-dn 1
Router(config-ephone-dn) # number 2588
Router(config-ephone-dn) # ephone-dn-template 5
Router(config-ephone-dn) # exit
Router(config) # ephone-dn 2
Router(config-ephone-dn) # number 2589
Router(config-ephone-dn) # ephone-dn-template 5
Router(config-ephone-dn) # exit

```

The following example configures ephone-dn 1 and ephone-dn 2 to switch back to accept call-waiting beeps. Ephone-dn 1 and ephone-dn 2 now accept but do not generate call-waiting beeps.

```

Router(config) # ephone-dn 1
Router(config-ephone-dn) # call-waiting beep accept
Router(config) # ephone-dn 2
Router(config-ephone-dn) # call-waiting beep accept

```

Related Commands

Command	Description
show running-config	Displays the contents of the currently running configuration file or the configuration for a specific interface, or map class information.
ephone-dn-template (ephone-dn)	Applies a template to an ephone-dn.

call-waiting ring

To allow an ephone-dn to use a ring sound for call-waiting notification, use the **call-waiting ring** command in ephone-dn or ephone-dn-template configuration mode. To disable the ring notification, use the **no** form of this command.

call-waiting ring
no call-waiting ring

Syntax Description	This command has no arguments or keywords.
Command Default	The ephone-dn accepts call waiting and uses beeps for notification.
Command Modes	Ephone-dn configuration (config-ephone-dn) Ephone-dn-template configuration (config-ephone-dn-template)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.3(11)XL	Cisco CME 3.2.1	This command was introduced.
	12.3(14)T	Cisco CME 3.3	This command was integrated into Cisco IOS Release 12.3(14)T.
	12.4(4)XC	Cisco Unified CME 4.0	This command was made available in ephone-dn-template configuration mode.
	12.4(9)T	Cisco Unified CME 4.0	This command in ephone-dn-template configuration mode was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

To use a ring sound for call-waiting notification on an ephone-dn, you must ensure that the ephone-dn will accept secondary calls while it is connected to another line. The acceptance of call waiting is the default ephone-dn behavior. However, the **no call-waiting beep accept** command can change this default so an ephone-dn does not accept call waiting. This command must be removed for ringing notification to work.

The **call-waiting ring** command will automatically disable a call-waiting beep configuration.

If you configure a button to have a silent ring using the **s** option of the **button** command, you will not hear a call-waiting ring regardless of whether the ephone-dn associated with the button is configured to generate a call-waiting ring.



Note The call-waiting ring option cannot be used on the Cisco Unified IP Phone 7902, Cisco Unified IP Phone 7905, or Cisco Unified IP Phone 7912. Do not use the **call-waiting ring** command for ephone-dns associated with these types of phones.

If you use an ephone-dn template to apply a command to an ephone-dn and you also use the same command in ephone-dn configuration mode for the same ephone-dn, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example configures ephone-dn 1 and ephone-dn 2 to use ringing for their call-waiting notification:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# call-waiting ring
Router(config)# ephone-dn 2
Router(config-ephone-dn)# no call-waiting ring
```

The following example uses an ephone-dn template to set the same attributes as in the previous example:

```
Router(config)# ephone-dn-template 9
Router(config-ephone-dn-template)# call-waiting ring
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn-template 10
Router(config-ephone-dn-template)# no
call-waiting ring
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# ephone-dn-template 9
Router(config-ephone-dn)# exit
Router(config)# ephone-dn 2
Router(config-ephone-dn)# ephone-dn-template 10
Router(config-ephone-dn)# exit
```

Related Commands

Command	Description
call-waiting beep	Allows call-waiting beeps to be accepted by or generated from an ephone-dn.
ephone-dn-template (ephone-dn)	Applies template to ephone-dn.

camera

To enable USB camera capability on Cisco Unified IP Phones 9951 and 9971, use the **camera** command in voice register global, voice register template, and voice register pool configuration modes. To disable video capabilities on Cisco Unified IP Phones 9951 and 9971, use the **no** form of this command.

camera

no camera

Syntax Description

This command has no arguments or keywords.

Command Default

USB camera capability is disabled on Cisco Unified IP Phones 9951 and 9971.

Command Modes

Voice register global
Voice register template
Voice register pool

Command History

Cisco IOS Release	Cisco Product	Modification
15.1(4)M	Cisco Unified CME 8.6	This command was introduced.

Usage Guidelines

Use this command to enable USB camera capability on Cisco Unified IP Phones 9951 and 9971. You need to create profile and apply-config or restart to the phone to enable the video capability on phones.

Examples

The following example shows camera command configured in voice register global:

```
Router#show run
!
!
!
voice service voip
  allow-connections sip to sip
  fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback none
!
!
voice register global
  mode cme
  bandwidth video tias-modifier 244 negotiate end-to-end
  max-pool 10
  camera
voice register template 10
!
!
```

The following example shows video and camera commands configured under voice register pool 5, you can also configure both camera and video commands under voice register template:

```
Router#show run
!
!
!
voice service voip
  allow-connections sip to sip
  fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback none
```

```

!
!
voice register global
  mode cme
  bandwidth video tias-modifier 244 negotiate end-to-end
  max-pool 10
!
voice register pool 1
  id mac 1111.1111.1111
!
voice register pool 4
!
voice register pool 5
  logout-profile 58
  id mac 0009.A3D4.1234
  camera
!

```

Related Commands

Command	Description
apply-config	Allows to dynamically apply the phone configuration on Cisco Unified SIP IP phones 8961, 9951, and 9971,

capf-auth-str

To define a string of digits that a user enters at the phone for CAPF authentication, use the **capf-auth-str** command in ephone configuration mode. To return to the default, use the **no** form of this command.

capf-auth-str *digit-string*
no capf-auth-str

Syntax Description

<i>digit-string</i>	String of digits that a phone user enters at the phone for CAPF authentication.
---------------------	---

Command Default

No authentication string exists for the phone.

Command Modes

Ephone configuration (config-ephone)

Command History

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

Usage Guidelines

This command is used with Cisco Unified CME phone authentication to create or remove an authentication string (Personal Identification Number or PIN) for the specified secure ephone. Use this command if the **auth-string** keyword is specified in the **auth-mode** command. Once you specify a CAPF authentication string, it becomes part of the ephone configuration. This value can also be set globally or per ephone using the **auth-string** command in CAPF configuration mode.

Use the **show capf-server auth-str** command to display configured authentication strings.

When a phone is configured for a certificate upgrade that requires auth-string authentication, the CAPF initiation needs to be performed manually by the phone user using the following steps:

1. Press the Settings button.
2. If the configuration is locked, press ****#** (asterisk, asterisk, pound sign) to unlock it.
3. Scroll down the menu and select Security Configuration.
4. Scroll down the next menu to LSC and press the Update soft key.
5. When prompted for the authentication string, enter the string provided by the system administrator.

Examples

The following example specifies the type of authentication for ephone 392 is an authentication string that is entered from the phone, and then defines the string as 38593.

```
ephone 392
 button 1:23 2:24 3:25
 device-security-mode authenticated
 cert-oper upgrade auth-mode auth-string
 capf-auth-str 38593
```

Related Commands

Command	Description
auth-mode	Specifies the type of authentication to use during CAPF sessions.
auth-string	Generates or removes authentication strings for one or all secure ephones.
show capf-server	Displays configuration and session information for the CAPF server.

capf-server

To enter CAPF-server configuration mode to set CAPF server parameters, use the **capf-server** command in global configuration mode. To remove the CAPF server configuration, use the **no** form of this command.

capf-server
no capf-server

Syntax Description This command has no keywords or arguments.

Command Default No CAPF server configuration is present.

Command Modes Global configuration (config)

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

Usage Guidelines This command is used with Cisco Unified CME phone authentication.

Examples The following example sets parameters for the CAPF server:

```
Router(config)# capf-server
Router(config-capf-server)# source address 10.10.10.1
Router(config-capf-server)# trustpoint-label server25
Router(config-capf-server)# cert-oper upgrade all
Router(config-capf-server)# cert-enroll-trustpoint server12 password 0 x8oWiet
Router(config-capf-server)# auth-mode auth-string
Router(config-capf-server)# auth-string generate all
Router(config-capf-server)# port 3000
Router(config-capf-server)# keygen-retry 5
Router(config-capf-server)# keygen-timeout 45
Router(config-capf-server)# phone-key-size 2048
```

cert-enroll-trustpoint

To enroll the CAPF with the CA or RA, use the **cert-enroll-trustpoint** command in CAPF-server configuration mode. To remove an enrollment, use the **no** form of this command.

cert-enroll-trustpoint *ca-label* **password** {**0** | **1**} *password-string*
no cert-enroll-trustpoint

Syntax Description

<i>ca-label</i>	PKI trustpoint label for the CA or for the RA if an RA is being used.
password	Values that follow apply to the password.
0 1	Encryption status of the password string that follows. <ul style="list-style-type: none"> • 0—Encrypted. • 1—Clear text. <p>Note This option refers to the way that you want the password to appear in show command output and not to the way that you enter the password in this command.</p>
<i>password-string</i>	Alphanumeric challenge password that is required for certificate enrollment.

Command Default

The CAPF server is not enrolled with the CA or RA.

Command Modes

CAPF-server configuration (config-capf-server)

Command History

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

Usage Guidelines

This command is used with Cisco Unified CME phone authentication.

Examples

The following example specifies that the CAPF server should enroll with the trustpoint named server12 (the CA) using the password x8oWiet, which should be encrypted:

```
Router(config)# capf-server
Router(config-capf-server)# source address 10.10.10.1
Router(config-capf-server)# trustpoint-label server25
Router(config-capf-server)# cert-oper upgrade all
Router(config-capf-server)# cert-enroll-trustpoint server12 password 0 x8oWiet
Router(config-capf-server)# auth-mode auth-string
Router(config-capf-server)# auth-string generate all
Router(config-capf-server)# port 3000
Router(config-capf-server)# keygen-retry 5
Router(config-capf-server)# keygen-timeout 45
Router(config-capf-server)# phone-key-size 2048
```

clear cti session

To tear down the connection between a CSTA client application and Cisco Unified CME, use the **clear cti session** command in privileged EXEC configuration mode.

clear cti session *session_id*

Syntax Description

<i>session_id</i>	Unique numeric identifier for the session. String length is 1 to 10 characters. String value is 1 to 2147483647.
-------------------	--

Command Default

The CTI session between the application and the router is active.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

This command gracefully disassociates the connection between a CSTA application and Cisco Unified CME. Use this command to direct Cisco Unified CME to send a SIP BYE for the CSTA call to the application and to clean up the session internally. This command does not reset the IP phone.

To disassociate the connection without using this command, you must reboot the router or the CSTA client application.

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

To determine the ID for an active CTI session, use the **show cti session** command.

Examples

The following example shows how to tear down session 10133 between a CSTA client application and Cisco Unified CME:

```
Router# clear cti session 10133
Router#
```

Related Commands

Command	Description
show cti session	Displays active CTI sessions.

clear telephony-service conference hardware number

To drop all conference parties and clear the conference call, use the **clear telephony-service conference hardware number** command in privileged EXEC mode.

clear telephony-service conference hardware number *number*

Syntax Description

<i>number</i>	Conference telephone or extension number.
---------------	---

Command Default

The conference call continues with all current parties.

Command Modes

Privileged EXEC (#)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.

Usage Guidelines

Use the **show telephony-service conference hardware** command to display the active hardware conferences. Use the **clear telephony-service conference hardware number** command to clear the desired conference.

Examples

The following example clears the conference number 1111 and drops all its parties:

```
Router# clear telephony-service conference hardware number 1111
```

Related Commands

Command	Description
show telephony-service conference hardware	Displays information about hardware conferences in a Cisco CME system.

clear telephony-service ephone-attempted-registrations

To empty the log of ephones that unsuccessfully attempt to register with Cisco Unified CME, use the **clear telephony-service ephone-attempted-registrations** command in privileged EXEC configuration mode.

clear telephony-service ephone-attempted-registrations

Syntax Description

This command has no keywords or arguments.

Command Default

The log continues to accumulate attempted ephone registrations.

Command Modes

Privileged EXEC (#)

Command History

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

Usage Guidelines

The **no auto-reg-ephone** command blocks the automatic registration of ephones whose MAC addresses are not explicitly listed in the configuration. When automatic registration is blocked, Cisco Unified CME records the MAC addresses of phones that attempt to register but cannot because they are blocked.

Use the **show ephone attempted-registrations** command to view the list of phones that have attempted to register but have been blocked. The **clear telephony-service ephone-attempted-registrations** command clears the list.

Examples

The following example clears the attempted-registrations log.

```
Router# clear telephony-service ephone-attempted-registrations
```

Related Commands

Command	Description
auto-reg-ephone	Enables automatic registration of ephones with Cisco Unified CME.
show ephone attempted-registrations	Displays the log of ephones that unsuccessfully attempt to register with Cisco CME.

clear telephony-service xml-event-log

To clear the event table used for the Cisco Unified CME XML application, use the **clear telephony-service xml-event-log** command in privileged EXEC mode.

clear telephony-service xml-event-log

Syntax Description This command has no keywords or arguments.

Command Default The XML event table is not cleared.

Command Modes Privileged EXEC (#)

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

Usage Guidelines The **show fb-its-log** command displays the contents of the XML event table.

Examples The following example clears the entries from the XML event table:

```
Router# clear telephony-service xml-event-log
```

Related Commands	Command	Description
	show fb-its-log	Displays Cisco Unified CME XML API information.

clear voice fac statistics

To clear the voice FAC statistics information, use the clear voice fac statistics command in user EXEC or privileged EXEC mode.

clear voice fac statistics

Syntax Description This command has no arguments or keywords.

Command Default No default behavior or value.

Command Modes Privileged EXEC.

Command History	Cisco IOS Release	Cisco Product	Modification
	15.1(3)T	Cisco Unified CME 8.5	This command was introduced.

Usage Guidelines Use this command to clear the voice Forced Authentication Code (FAC) statistics information collected by the system.

Router #clear voice fac statistics

Related Commands	Command	Description
	show voice fac statistics	Displays details of phones that attempted to register and failed.

clear voice lpcor statistics

To clear all logical partitioning class of restriction (LPCOR) statistics that are displayed when the **show voice lpcor statistics** command is used, use the **clear voice lpcor statistics** command in privileged EXEC mode.

clear voice lpcor statistics

Syntax Description This command has no arguments or keywords.

Command Default Statistics continue to increment.

Command Modes Privileged EXEC (#)

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

Usage Guidelines This command resets all LPCOR failed-call statistics to 0. Use the **show voice lpcor statistics** command to display the current statistics.

Examples The following example resets the LPCOR statistics:

```
Router# clear voice lpcor statistics
```

Related Commands	Command	Description
	show voice lpcor statistics	Displays information about LPCOR policies and calls.
	voice lpcor policy	Creates a LPCOR policy for a resource group.

clear voice moh-group statistics

To clear the display of MOH subsystem statistics information and reset the packet counters, use the **clear voice moh-group statistics** command in privileged EXEC mode.

clear voice moh-group statistics

Syntax Description This command has no arguments or keywords

Command Modes Privileged EXEC (#)

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

Usage Guidelines Use this command to clear the display of MOH subsystem statistics information displayed by the show voice moh-group statistics command.

We recommend that the clear voice moh-group statistics should be used once every two years to reset the packet counters. Each packet counter is of 32 bit size limit and the largest count a packet counter can hold is 4294967296 intervals. This means that with 20 milliseconds packet interval (for G.711), the counters will restart from 0 any time after 2.72 years (2 years and 8 months).

Examples

```
Router# clear voice moh-group statistics
All moh group stats are cleared
```

Related Commands	Command	Description
	show voice moh-group statistics	Displays the MOH subsystem statistics information
	show voice moh-group	Displays the MOH groups configured

clear voice register attempted-registrations

To clear the attempted-registrations, use the `clear voice register attempted-registrations` command in voice register global mode.

clear voice register attempted registrations [{ip ip-address | mac H.H.H}]

Syntax Description

<i>ip</i> <i>ip-address</i>	(Optional) IP address of the SIP phone attempting to register.
mac H.H.H	(Optional) MAC address of the SIP phone attempting to register.

Command Default

The attempted-registration entries are not cleared.

Command Modes

Privileged EXEC.

Command History

Cisco IOS Release	Cisco Product	Modification
15.1(2)T	Cisco Unified CME 8.1	This command was introduced.

Usage Guidelines

Use this command to delete the entries in the attempted-registration table. The `clear voice register attempted-registrations` command does not alter the table size, but clears the existing entries. A user confirmation is sought before the cleanup is done.

The primary key to recognize the SIP phones that fail to register is through their MAC address (hardware address) and the secondary key is the IP address. You can clear the attempted registration entry for a specific phone that failed to register by providing its IP address or MAC address and create more space for new attempted registration entries in the attempted-registrations table. When no options (IP or MAC) are selected, all the entries are removed. A user confirmation is sought in such a case, before clearing the attempted-registrations table.

The `ip` keyword allows you to delete entries corresponding to a specific IP address. Similarly, the `mac` keyword allows you to clear the entries related to a specific MAC address. User confirmation is not sought if `ip` or `mac` option is used.

Examples

```
Router # clear voice regis attempted-registrations
This will clear all the entries. Proceed? Yes/No? [no]: Yes
```

```
Router# clear voice register attempted-registrations ?
  ip      IP Address of the phone
  mac     MAC Address of the phone
```

Related Commands

Command	Description
attempted-registrations size	Allows to set the size of the attempted-registrations table.
show voice register attempted-registration	Displays details of phones that attempted to register and failed.

cnf-file

To specify the generation of different phone configuration files by type of phone or by individual phone, use the **cnf-file** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

cnf-file {perphonetype | perphone}
no cnf-file {perphonetype | perphone}

Syntax Description

perphonetype	A separate configuration file is generated for each type of phone.
perphone	A separate configuration file is generated for each phone.

Command Default

A single configuration file is used for all phones.

Command Modes

Telephony-service (config-telephony)

Command History

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

Usage Guidelines

Configuration files can be applied in the following ways:

- Per system—All phones use a single configuration file. This is the default behavior for Cisco Unified CME and does not require you to configure this command. The default user and network locale in a single configuration file are applied to all phones in the Cisco Unified CME system. Alternative and user-defined user and network locales are not supported. To use the per-system option after configuring this command, use the **no cnf-file** command to reset the option to default behavior.
- Per phone type—Creates separate configuration files for each phone type. For example, all Cisco Unified IP Phone 7960s use XMLDefault7960.cnf.xml, and all Cisco Unified IP Phone 7905s use XMLDefault7905.cnf.xml. All phones of the same type use the same configuration file which is generated using the default user and network locale. This option is not supported if the **cnf-file location** is configured for system.
- Per phone—Creates a separate configuration file for each phone, by MAC address. For example, a Cisco Unified IP Phone 7960 with the MAC address 123.456.789 creates the per-phone configuration file SEP123456789.cnf.xml. The configuration file for a phone is generated with the default user and network locale unless a different user and network locale is applied to the phone using an ephone template. This option is not supported if the location option is system.

To reset the type of configuration file to the default, use the **no** form of this command and the keyword that you previously used to set the type.

This feature is supported only on the following phones:

- Cisco Unified IP Phones 7940 and 7940G
- Cisco Unified IP Phones 7960 and 7960G
- Cisco Unified IP Phone 7970G
- Cisco Unified IP Phone 7971G-GE

Examples

The following example selects flash memory as the configuration file storage location and per-phone as the type of configuration files that the system should generate.

```
telephony-service
  cnf-file location flash:
  cnf-file perphone
```

Command	Description
cnf-file location	Specifies a storage location for XML configuration files.
create cnf	Generates the XML configuration files used for provisioning SCCP phones.

cnf-file location

To specify a storage location for phone configuration files, use the **cnf-file location** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

cnf-file location {**flash:** | **slot0:** | **tftp***tftp-url*}

no cnf-file location {**flash:** | **slot0:** | **tftp***tftp-url*}

Syntax Description

flash:	Router flash memory.
slot0:	Router slot 0 memory.
tftp <i>tftp-url</i>	External TFTP server at the specified URL.

Command Default

A single phone configuration file is stored in system memory and is used by all phones.

Command Modes

Telephony-service configuration

Command History

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

Usage Guidelines

TFTP does not support file deletion. When configuration files are updated, they overwrite any existing configuration files with the same name. If you change the configuration file location, files are not deleted from the TFTP server.

You can specify any of the following locations in which to store configuration files:

- **System**—This is the default. When the system is the storage location, there is only one default configuration file and it is used for all phones in the system. All phones, therefore, use the same user locale and network locale. User-defined user and network locales are not supported. To use the system location, do not use this command to specify a location other than system or use the **no** version of this command to reset the option from a previous, different location.

If VRF Support on Cisco Unified CME is configured and the **cnf-file location** command is configured for **system:**, the configuration file for an ephone in a VRF group is created in *system:/its/vrf<group-tag>/*. The vrf group directory is created and appended to the TFTP path automatically. No action is required on your part. The location for locale files is not affected. Locale files are created in *system:/its/*.

- **Flash or slot 0**—When flash or slot 0 memory on the router is the storage location, you can create additional configuration files that can be applied per phone type or per individual phone. Up to five user-defined user and network locales can be used in these configuration files. To store configuration files in flash or slot 0, use the **cnf-file location flash:** or **cnf-file location slot0:** command. The generation of configuration files on flash or slot 0 can take up to a minute, depending on the number of files that are being generated.

If VRF Support on Cisco Unified CME is configured and the **cnf-file location** command is configured as **flash:** or **slot0:**, the per phone or per phone type file for an ephone in a VRF group is named

flash:/its/vrf<group-tag>_<filename> or *slot0:/its/vrf<group-tag>_<filename>* . The vrf group directory is created and appended to the TFTP path automatically. No action is required on your part. The location for locale files is not affected. Locale files are created in *flash:/its/* or in *slot0:/its*

**Note**

When the storage location chosen is flash and the file system type on this device is Class B(LEFS), make sure to check free space on the device periodically and use the **squeeze** command to free the space used up by deleted files. Unless you use the **squeeze** command, the space used by the moved or deleted configuration files cannot be used by other files.

- TFTP—When an external TFTP server is the storage location, you can create additional configuration files that can be applied per phone type or per individual phone. Up to five user-defined user and network locales can be used in these configuration files. To store configuration files on an external TFTP server, use the **cnf-file location tftp url** command.

Examples

The following example selects flash memory as the configuration file storage location and per-phone as the type of configuration files that the system should generate.

```
telephony-service
cnf-file location flash:
cnf-file perphone
```

Related Commands

Command	Description
cnf-file	Specifies the use of different phone configuration files by type of phone or by individual phone.
create cnf	Generates the XML configuration files used for provisioning SCCP phones.

codec (ephone)

To select a preferred codec for Cisco Unified CME to use when configuring calls for a phone, use the **codec** command in ephone or ephone-template configuration mode. To return to the command default, use the **no** form of this command.

codec {**g711ulaw** | **g722r64** | **g729r8** [**dspfarm-assist**] | **ilbc**}
no codec

Syntax Description

g711ulaw	Preferred codec: G.711 micro-law 64K bps.
g722r64	Preferred codec: G.722-64K bps.
g729r8	Preferred codec: G.729-8K bps.
dspfarm-assist	(Optional) DSP-farm resources are used for transcoding the segment between the phone and the Cisco Unified CME router if G.711 is negotiated for the call. Note The dspfarm-assist keyword is ignored if the SCCP endpoint type is ATA, VG224, or VG248.
ilbc	Preferred codec: iLBC 20ms.

Command Default

G.711 micro-law is the preferred codec.

Command Modes

Ephone configuration (config-ephone)
 Ephone-template configuration (config-ephone-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced.
12.4(9)T	Cisco Unified CME 4.0	This command was integrated into Cisco IOS Release 12.4(9)T.
12.4(15)XZ	Cisco Unified CME 4.3	The g722r64 and ilbc keywords were added.
12.4(20)T	Cisco Unified CME 7.0	This command was integrated into Cisco IOS Release 12.4(20)T.

Usage Guidelines

This command can be used to help save network bandwidth for a remote IP phone.

For calls to phones that are not in the same Cisco Unified CME system (such as VoIP calls), the codec is negotiated based on the protocol that is used for the call (such as H.323). The Cisco Unified CME system plays no part in the negotiation.

The G.722-64K codec is supported on some varieties of phone models. Check your phone documentation to make sure the phone supports the G.722-64K codecs.

The telephone's firmware version must support the specified codec. If a codec is specified by using this command and a phone does not support the preferred codec, then the phone will use the global codec as specified by using the **codec** command in telephony-service configuration mode or if the global codec is not supported, G.711 micro-law.

For calls to other phones in the same Cisco Unified CME system, an IP phone that is configured to use G.729 will always have its calls set up to use G.729. If the phone participates in a call on a line that is shared with a phone that is configured for G.729 or is paged together with another phone that is configured for G.729, it must use G.729.

When you use the **codec** command without the **dspfarm-assist** keyword, you affect only calls between two phones on the Cisco Unified CME router (such as between an IP phone and another IP phone or between an IP phone and a FXS analog phone). The command has no effect on a call directed through a VoIP dial peer unless you use the **dspfarm-assist** keyword.

When you use the **g729r8** keyword to select the G.729r8 codec for the RTP segment between the IP phone and the Cisco Unified CME router and you also use the **dspfarm-assist** keyword, the router attempts to use DSP-farm resources in the following way: If the IP phone is in a VoIP call (H.323 or SIP) or a Cisco Unified CME conference in which the codec must be set to G.711, the router uses configured DSP-farm resources to attempt to return the segment between the phone and the Cisco Unified CME router to G.729. Adequate DSP resources must be appropriately configured separately.

If the **dspfarm-assist** keyword is configured for a phone and a DSP resource is not available when needed for transcoding, a phone registered to the local Cisco Unified CME router will use G.711 instead of G.729r8. This is not true for non-SCCP call legs; if no DSP resource is available for the transcoding required for a conference, for example, the conference will not be created.

It is recommended that the **dspfarm-assist** keyword be used sparingly and only when absolutely required for bandwidth savings or when you know the phone will have few calls that require a G.711 codec.

You should consider your options carefully when deciding to use the **dspfarm-assist** keyword with the **codec** command. The benefit is that it allows calls to use the G.729r8 codec on the call leg between the IP phone and the Cisco Unified CME router, which saves network bandwidth. The disadvantage is that for situations requiring G.711 codecs, such as conferencing and Cisco Unity Express, DSP resources that can be scarce will be used to transcode the call, and delay will be introduced while voice is shuttled to and from the DSP. In addition, the overuse of this feature can mask configuration errors in the codec selection mechanisms involving dial peers and codec lists.

For information about configuring DSP-farm resources, see the [Cisco Unified CME Administrator Guide](#).



Note

The **dspfarm-assist** keyword is ignored if the SCCP endpoint type is ATA, VG224, or VG248.

This command can also be configured in ephone-template configuration mode. If you use an ephone template to apply a command to a phone and you also use the same command in ephone configuration mode for the same phone, the value that you set in ephone configuration mode has priority.

Examples

The following example selects the G.729 codec with DSP farm assist for calls that are being configured for ephone 25:

```
ephone 25
  button 1:37
  codec g729r8 dspfarm-assist
```

The following example uses ephone template 1 to apply the G.729 codec preference to ephone 25:

```
ephone-template 1
  codec g729r8
```

```
ephone 25  
  button 1:37  
  ephone-template 1
```

Related Commands

Command	Description
<code>dspfarm (dspfarm)</code>	Enables digital-signal-processor (DSP) farm service
<code>dsp services dspfarm</code>	Specifies the NM-HDV or NM-HDV-FARM on which DSP-farm services are to be enabled.
<code>dspfarm transcoder maximum sessions</code>	Specifies the maximum number of transcoding sessions to be supported by a DSP farm.
<code>show dspfarm</code>	Displays summary information about DSP resources.

codec (telephony-service)

To select a default codec for SCCP IP phones in Cisco Unified CME, use the **codec** command in telephony-service configuration mode. To disable the codec, use the **no** form of this command.

```
codec {g711ulaw | g722r64}
no codec
```

Syntax Description

g711-ulaw	Preferred codec: G.711 micro-law.
g722-64k	Preferred codec: G.722 64K bps.

Command Default

The default is G.711 micro-law.

Command Modes

Telephony-service configuration (config-telephony)

Command History

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

Usage Guidelines

This command can be used to help save network bandwidth for a remote IP phone.

The G.722-64K codec is supported on certain phones only, such as the Cisco Unified IP Phone 7906G, 7911G, 7941G-GE, 7942G, 7945G, 7961G-GE, 7962G, 7965G, and 7975G. Check your phone documentation to make sure your phones support the G.722-64K codec.

The telephone firmware version on a Cisco Unified IP phone must support the specified codec. If this command is configured and a phone does not support the specified codec, the default codec for that phone is G.711 micro-law.

Examples

The following example shows how to configure a G.722-64K codec in telephony-service configuration mode:

```
Router(config)# telephony-service
Router(config-telephony)# codec g722r64
Router(config-telephony)# service phone g722CodecSupport 2
Router(config-telephony)#
```

Related Commands

Command	Description
service phone	Modifies VendorConfig parameters in configuration files for IP phones.

conference (ephone-dn)

To configure a conference associated with a directory number, use the **conference** command in ephone-dn configuration mode. To disable a conference associated with a directory number, use the **no** form of this command.

conference {ad-hoc [video] | [meetme [video] [homogeneous]] | unlocked}
no conference {ad-hoc [video] | [meetme [video] [homogenous]] unlocked}

Syntax Description

ad-hoc	Configures ad hoc conferences.
video	(Optional) Configures video conferences.
meetme	Configures meet-me conferences.
homogenous	(Optional) Enables a homogeneous video conference in which all participants use the same video format. Note The video keyword must be specified in the command.
unlocked	Unlocks the meet-me conference bridge.

Command Default

No conference is associated with the directory number.

Command Modes

Ephone-dn configuration (config-ephone-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T
15.0(1)XA	Cisco Unified CME 8.0	This command was modified. The command output was enhanced to display the unlocked meet-me conference setting.
15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.
15.1(4)M	Cisco Unified CME 8.6	This command was modified to configure video conferences.
Cisco IOS XE Everest 16.5.1b	Unified CME 11.7	This command was integrated into Cisco IOS XE Everest 16.5.1 Release to support Cisco 4000 Series Integrated Services Router.

Usage Guidelines

Ad hoc conferences are those that begin as a call between the conference creator and another party. The creator then calls other parties and adds them to the original call creating a conference.

Meet-me conferences have a designated meet-me telephone or extension number that all parties call to join the conference. The conference creator initiates the meet-me conference by pressing the MeetMe softkey, then dialing the meet-me number. Other parties join the conference by dialing the meet-me number. Homogenous video conferences only applies to meet-me conferences.

An unlocked meet-me conference allows the user to unlock the meet-me conference bridge. All DN tags with the same number should be configured with the unlocked option. Unlocking the meet-me conference bridge can allow unrestricted and uncontrolled access for the external callers. This feature is support only for meet-me conferences.

When you unlock meet-me conference bridge in Cisco Unified CME, the user can initiate a meet-me conference without pressing the MeetMe softkey, which would allow the external callers to initiate a meet-me conference.

**Note**

To configure an unlocked meet-me conference, all ephone-dn tags associated with the same number should have the unlocked option configured. If some of the ephone-dn tags do not have the unlocked option configured, the unlocked meet-me conference may not work properly.

Use the **ephone-dn** command to configure enough extensions for your conference needs. Each extension can handle two conference parties if the **dual-line** keyword is used with the **ephone-dn** command, as shown in the following example. Use the **show ephone-dn** command to display phone information for the extension.

Examples

The following example configures extension 9001 as a four-party meet-me conference number.

```
Router(config)# ephone-dn 1 dual-line
Router(config-ephone-dn)# number 9001
Router(config-ephone-dn)# conference meetme
Router(config-ephone-dn)# no huntstop
Router(config)# ephone-dn 2 dual-line
Router(config-ephone-dn)# number 9001
Router(config-ephone-dn)# conference meetme
Router(config-ephone-dn)# preference 1
```

You must configure additional directory numbers to add more parties to the conference.

Related Commands

Command	Description
show ephone-dn	Displays phone information for specified dn-tag or for all dn-tags.

conference (voice register template)

To enable the soft key for conference in a SIP phone template, use the **conference** command in voice register template configuration mode. To disable the soft key, use the **no** form of this command.

conference
no conference

Syntax Description

This command has no arguments or keywords.

Command Default

Soft key for conference is enabled.

Command Modes

Voice register template configuration (config-register-temp)

Command History

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

Usage Guidelines

This command enables a soft key for conference in the specified template which can then be applied to SIP phones. The conference soft key is enabled by default. To disable the conference soft key, use the **no conference** command. To apply a template to a SIP phone, use the **template** command in voice register pool configuration mode.

Examples

The following example shows how to disable the conference soft key in template 1:

```
Router(config)# voice register template 1
Router(config-register-temp)# no conference
```

Related Commands

Command	Description
template (voice register pool)	Applies a template to a SIP phone.
transfer-attended (voice register template)	Enables a soft key for attended transfer in a SIP phone template.
transfer-blind (voice register template)	Enables a soft key for blind transfer in a SIP phone template.
voice register pool	Enters voice register pool configuration mode for SIP phones.

conference add-mode

To configure the mode for adding parties to ad hoc hardware conferences, use the **conference add-mode** command in ephone or ephone-template configuration mode. To return to the default, use the **no** form of this command.

conference add-mode [creator]
no conference add-mode [creator]

Syntax Description

creator	Specifies that only the creator can add parties.
----------------	--

Command Default

Any party can add other parties provided the creator remains in the conference.

Command Modes

Ephone configuration (config-ephone)
 Ephone-template configuration (config-ephone-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.
Cisco IOS XE Everest 16.5.1b	Unified CME 11.7	Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.

Usage Guidelines

For more control of conference participation, use this command to specify that only the creator can add new parties. This configuration ensures that no one can add parties to the conference without the creator's knowledge.

Use this command to configure an ephone directly in ephone configuration mode, or use it to configure an ephone template in ephone-template configuration mode. Use the **ephone-template** command in ephone configuration mode to apply the ephone template to one or more ephones. Use the **show telephony-service ephone** command to display the add and drop modes for the ephone. Use the **show telephony-service ephone-template** command to display the ephone template.

Examples

The following example configures ad hoc hardware conferences so that only the creator can add participants.

```
Router(config)# ephone 1
Router(config-ephone)# conference add-mode creator
```

Related Commands

Command	Description
ephone-template (ephone)	Applies an ephone template to an ephone.
show telephony-service ephone	Displays configuration for the Cisco IP phones.
show telephony-service ephone-template	Displays the contents of ephone-templates.

conference add-mode (voice register)

To configure the mode for adding participants to ad-hoc hardware conferences on Cisco Unified SIP IP phones, use the **conference add-mode** command in voice register pool or voice register template configuration mode. To return to the default, use the **no** form of this command.

conference add-mode [creator]
no conference add-mode

Syntax Description	<table><tr><td>creator</td><td>(Optional) Specifies that only the conference creator can add participants to an ad-hoc hardware conference.</td></tr></table>		creator	(Optional) Specifies that only the conference creator can add participants to an ad-hoc hardware conference.				
creator	(Optional) Specifies that only the conference creator can add participants to an ad-hoc hardware conference.							
Command Default	The conference creator or any of the participants can add a new participant.							
Command Modes	Voice register pool configuration (config-register-pool) Voice register template configuration (config-register-temp)							
Command History	<table><tr><th>Release</th><th>Modification</th></tr><tr><td>15.2(2)T</td><td>This command was introduced.</td></tr><tr><td>Cisco IOS XE Everest 16.5.1b</td><td>Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.</td></tr></table>		Release	Modification	15.2(2)T	This command was introduced.	Cisco IOS XE Everest 16.5.1b	Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.
Release	Modification							
15.2(2)T	This command was introduced.							
Cisco IOS XE Everest 16.5.1b	Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.							
Usage Guidelines	Use the conference add-mode creator command to specify that only the conference creator can add new participants. This configuration ensures that no one can add participants to the hardware conference without the creator’s knowledge.							
Examples	<p>The following example shows how to configure the mode so that only the conference creator can add new participants to a hardware conference on voice register pool 10:</p> <pre>Router(config)# voice register pool 10 Router(config-register-pool)# conference add-mode creator</pre> <p>The following example shows how to configure the mode so that only the conference creator can add new participants to a hardware conference on template 1:</p> <pre>Router(config)# voice register template 1 Router(config-register-temp)# conference add-mode creator</pre>							
Related Commands	<table><tr><th>Command</th><th>Description</th></tr><tr><td>voice register pool</td><td>Enters voice register pool configuration mode and creates a pool configuration for Cisco Unified SIP IP phones in Cisco Unified CME.</td></tr><tr><td>voice register template</td><td>Enters voice register template configuration mode and defines a template of common parameters for Cisco Unified SIP IP phones.</td></tr></table>		Command	Description	voice register pool	Enters voice register pool configuration mode and creates a pool configuration for Cisco Unified SIP IP phones in Cisco Unified CME.	voice register template	Enters voice register template configuration mode and defines a template of common parameters for Cisco Unified SIP IP phones.
Command	Description							
voice register pool	Enters voice register pool configuration mode and creates a pool configuration for Cisco Unified SIP IP phones in Cisco Unified CME.							
voice register template	Enters voice register template configuration mode and defines a template of common parameters for Cisco Unified SIP IP phones.							

conference admin

To configure the ephone as the ad hoc and meet-me hardware conference administrator, use the **conference admin** command in ephone or ephone-template configuration mode. To return to the defaults, use the **no** form of this command.

conference admin
no conference admin

Syntax Description	This command has no arguments or keywords.
Command Default	This ephone is not the ad hoc and meet-me hardware conference administrator.
Command Modes	Ephone configuration (config-ephone) Ephone-template configuration (config-ephone-template)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
	12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T

Usage Guidelines	Use this command to configure an ad hoc and meet-me hardware conference administrator. The administrator can:
	<ul style="list-style-type: none"> • Dial in to any conference directly through the conference number • Use the ConfList soft key to list conference parties • Remove any party from any conference

The administrator can control the use of conference bridges by enforcing time limits and making sure conference bridges are available for scheduled meetings.

Use this command to configure an ephone directly in ephone configuration mode, or use it to configure an ephone template in ephone-template configuration mode. Use the **ephone-template** command in ephone configuration mode to apply the ephone template to one or more ephones. Use the **show telephony-service ephone** command to display the add and drop modes for the ephone. Use the **show telephony-service ephone-template** command to display the ephone template.

Examples	The following example configures ephone 1 as the ad hoc and meet-me hardware conference administrator.
-----------------	--

```
Router(config)# ephone 1
Router(config-ephone)# conference admin
```

Related Commands	Command	Description
	ephone-template (ephone)	Applies an ephone template to an ephone.
	show telephony-service ephone	Displays configuration for the Cisco IP phones.

Command	Description
show telephony-service ephone-template	Displays the contents of ephone-templates.

conference admin (voice register)

To assign a Cisco Unified SIP IP phone as the ad-hoc or meet-me hardware conference administrator, use the **conference admin** command in voice register pool or voice register template configuration mode. To return to the default, use the **no** form of this command.

conference admin
no conference admin

Syntax Description

This command has no arguments or keywords.

Command Default

The Cisco Unified SIP IP phone is not the conference administrator.

Command Modes

Voice register pool configuration (config-register-pool)

Voice register template configuration (config-register-temp)

Command History

Release	Modification
15.2(2)T	This command was introduced.

Usage Guidelines

Use the **conference admin** command to assign an ad-hoc or meet-me hardware conference administrator. The administrator can:

- Dial in to any conference directly through the conference number.
- Use the ConfList soft key to list conference participants.
- Remove any participant from any conference.

The administrator can control the use of conference bridges by enforcing time limits and making sure conference bridges are available for scheduled meetings.

Examples

The following example shows how to configure voice register pool 25 as the conference administrator:

```
Router(config)# voice register pool 25
Router(config-register-pool)# conference admin
```

Related Commands

Command	Description
voice register pool	Enters voice register pool configuration mode and creates a pool configuration for Cisco Unified SIP IP phones in Cisco Unified CME.
voice register template	Enters voice register template configuration mode and defines a template of common parameters for Cisco Unified SIP IP phones.

conference drop-mode

To configure the mode for terminating ad hoc hardware conferences when parties drop out, use the **conference drop-mode** command in ephone or ephone-template configuration mode. To return to the default, use the **no** form of this command.

conference drop-mode [{creator | local}]
no conference drop-mode [{creator | local}]

Syntax Description

creator	Specifies that the active conference terminates when the creator hangs up.
local	Specifies that the active conference terminates when the last local party in the conference hangs up or drops out of the conference.

Command Default

The conference is not dropped, regardless of whether the creator hangs up, provided three parties remain in the conference.

Command Modes

Ephone configuration (config-ephone)
 Ephone-template configuration (config-ephone-template)

Command History

Cisco IOS Release	Cisco Product	Modification
12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T
Cisco IOS XE Everest 16.5.1b	Unified CME 11.7	Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.

Usage Guidelines

For more control of conference participation, use this command to specify that the conference drops when the creator hangs up (see the example). This configuration ensures that the conference cannot continue without the creator's presence.

Use this command to configure an ephone directly in ephone configuration mode, or use it to configure an ephone template in ephone-template configuration mode. Use the **ephone-template** command in ephone configuration mode to apply the ephone template to one or more ephones. Use the **show telephony-service ephone** command to display the add and drop modes for the ephone. Use the **show telephony-service ephone-template** command to display the ephone template.

Examples

The following example configures ad hoc hardware conferences so that only the creator can add participants and the active conference terminates when the creator hangs up.

```
Router(config)# ephone 1
Router(config-ephone)# conference drop-mode creator
```

Related Commands

Command	Description
ephone-template (ephone)	Applies an ephone template to an ephone.
show telephony-service ephone	Displays configuration for the Cisco IP phones.
show telephony-service ephone-template	Displays the contents of ephone-templates.

conference drop-mode (voice register)

To specify who can terminate an active ad-hoc hardware conference by hanging up, use the **conference drop-mode** command in voice register pool or voice register template configuration mode. To return to the default, use the **no** form of this command.

conference drop-mode {creator | local}
no conference drop-mode

Syntax Description	creator	Terminates the active conference when the conference creator hangs up.
	local	Terminates the active conference when the last local participant hangs up or drops out of the conference.

Command Default An active conference is never dropped.

Command Modes Voice register pool configuration (config-register-pool)
 Voice register template configuration (config-register-temp)

Command History	Release	Modification
	15.2(2)T	This command was introduced.
	Cisco IOS XE Everest 16.5.1b	Support for this command was introduced on the Cisco 4000 Series Integrated Services Routers.

Usage Guidelines Use the **conference drop-mode creator** command to specify that an active hardware conference is terminated when the creator hangs up. This configuration ensures that the hardware conference cannot continue without the creator's presence.

Examples

The following example shows how to configure an active conference so that it is terminated when the conference creator hangs up:

```
Router(config)# voice register pool 60
Router(config-register-pool)# conference drop-mode creator
```

The following example shows how to configure an active conference so that it is terminated when the last local participant hangs up or drops out of the conference:

```
Router(config)# voice register template 7
Router(config-register-temp)# conference drop-mode local
```

Related Commands	Command	Description
	voice register pool	Enters voice register pool configuration mode and creates a pool configuration for Cisco Unified SIP IP phones in Cisco Unified CME.

Command	Description
voice register template	Enters voice register template configuration mode and defines a template of common parameters for Cisco Unified SIP IP phones.

conference hardware

To configure a Cisco Unified CallManager Express system for hardware conferencing only, use the **conference hardware** command in telephony-service configuration mode. To return to the default three-party software conferencing, use the **no** form of this command.

conference hardware
no conference hardware

Syntax Description	This command has no arguments or keywords.
Command Default	Three-party ad hoc software conferencing.
Command Modes	Telephony-service configuration (config-telephony)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(11)XJ2	Cisco Unified CME 4.1	This command was introduced.
	12.4(15)T	Cisco Unified CME 4.1	This command was integrated into Cisco IOS Release 12.4(15)T.
	Cisco IOS XE Everest 16.5.1b	Unified CME 11.7	This command was integrated into Cisco IOS XE Everest 16.5.1 Release to support Cisco 4000 Series Integrated Services Router.

Usage Guidelines

Software conferencing allows a maximum of three parties in a conference. Use this command to take advantage of DSP farm resources for hardware conferencing that allows ad hoc conferences with more than three parties.

If you need ad hoc hardware conferences, you must use this command to configure DSP farm hardware conferencing. You can configure other conferencing features using the **conference-join custom-cptone**, **conference-leave custom-cptone**, and **maximum conference-participants** commands in DSP farm profile configuration mode. Use the **show dspfarm profile** command to display the DSP farm profile.

Examples

The following example configures hardware conferencing as the default for ad hoc conferences on this Cisco Unified CallManager Express system:

```
Router(config)# telephony-service
Router(config-telephony)# conference hardware
```

Related Commands	Command	Description
	conference-join custom-cptone	Associates a custom call-progress tone to indicate joining a conference with a DSP farm profile.
	conference-leave custom-cptone	Associates a custom call-progress tone to indicate leaving a conference with a DSP farm profile.

Command	Description
maximum conference-participants	Configures the maximum number of conference participants allowed in each conference.
show dspfarm profile	Displays configured DSP farm profile information.

conference hardware (voice register global)

To configure Cisco Unified Communications Manager Express (Cisco Unified CME) DSPFarm hardware-based ad-hoc conferencing, use the **conference hardware** command in voice register global configuration mode. To return to the default, use the **no** form of this command.

conference hardware
no conference hardware

Syntax Description	This command has no arguments or keywords.
Command Default	Cisco Unified SIP IP phone local conference is enabled.
Command Modes	Voice register global configuration (config-register-global)

Command History	Cisco IOS Release	Cisco Product	Modification
	15.2(2)T	Cisco Unified CME 9.0	This command was introduced.
	Cisco IOS XE Everest 16.5.1b	Unified CME 11.7	This command was integrated into Cisco IOS XE Everest 16.5.1 Release yto support Cisco 4000 Series Integrated Services Router.

Usage Guidelines

Use the **conference hardware** command in voice register global configuration mode to take advantage of DSPfarm resources that allow ad-hoc hardware conferences with more than three parties.

Enable hardware conferencing in telephony-service configuration mode before configuring hardware conferencing in voice register global configuration mode. Otherwise, the configuration of hardware conferencing in voice register global configuration mode will be rejected.

If you apply any changes to the configuration of the hardware conference, you must use the **create profile** command in voice global configuration mode to regenerate the configuration profile files required for Cisco Unified SIP IP phones. Then, reboot the phone.

Examples

The following example shows how to configure Cisco Unified CME DSPFarm hardware-based ad-hoc conferencing:

```
Router(config)# telephony-service
Router(config-telephony)# conference hardware
.
Router(config)# voice register global
Router(config-register-global)# conference hardware
```

Related Commands	Command	Description
	conference hardware	Configures a Cisco Unified CME system for hardware conferencing only in telephony-service configuration mode.

conference max-length

To allow conferencing, only if the number of dialed digits are within the max-length limit, use the **conference max-length** command. To remove the configuration, use the **no** form of this command.

conference max-length <value>

no conference max-length

Syntax Description

value Maximum number of digits that can be dialed. The range is from 3 to 16.

Command Default

By default, no value is defined for conferencing.

Command Modes

Ephone (config-ephone)

Ephone-template ephone (config-ephone-template)

Voice register pool (config-register-pool)

Voice register template(config-register-temp)

Command History

Cisco IOS Release	Cisco Product	Modification
15.4(3)M	Cisco Unified CME 10.5	This command was introduced.

Usage Guidelines

Use the **conference max-length** command to configure, the Cisco Unified CME to allow conferencing, only if the dialed digits are within the maximum length limit.

Example

The following example shows how to configure the maximum length of 8 digits that can be dialed to make a conference call:

```
Router(config)# ephone 1
Router(config-ephone)# conference max-length 8
```

Related Commands

Command	Description
conference-pattern blocked	Blocks extensions on an ephone or a voice register pool from making conference calls.
conference transfer-pattern	Apply transfer -pattern configuration for conference cases.
transfer max-length	Allows transfer of calls to phones, where the number of dialed digits are less than the maximum length configured.
transfer-pattern (telephony-service)	Allows the transfer of calls to phones outside the Cisco Unified CME network.

conference-pattern blocked

To prevent extensions on an ephone or a voice register pool from initiating a conference to external numbers, use the **conference-pattern blocked** command. Note that the **conference-pattern blocked** command does not impact call transfer functions. To remove the configuration, use the **no** form of this command.

conference-pattern blocked
no conference-pattern blocked

Syntax Description This command has no arguments or keywords.

Command Default No default values are defined.

Command Modes

- Ephone configuration (config-ephone)
- Ephone-template configuration (config-ephone-template)
- Voice register pool configuration (config-register-pool)
- Voice register template configuration (config-register-temp)

Command History	Cisco IOS Release	Cisco Product	Modification
	15.4(3)M	Cisco Unified CME 10.5	This command was introduced.

Usage Guidelines Use the **conference-pattern blocked** command to prevent specific extensions from making conference calls to patterns generally allowed through the **transfer-pattern** command.

Example

The following example shows how to prevent extensions from making conference calls using the **conference-pattern blocked** command:

```
Router(config)# ephone 1
Router(config-ephone-template)# conference-pattern blocked
```

Related Commands	Command	Description
	conference max-length	Allows conferences to numbers where dialed digits are within the configured maximum length value.
	conference transfer-pattern	Apply transfer-pattern configuration for conference cases.
	transfer-pattern blocked	Blocks individual phones from transferring calls to nonlocal numbers that have been globally enabled for transfer.
	transfer-pattern (telephony-service)	Allows the transfer of calls to phones outside the Cisco Unified CME network.

conference transfer-pattern

To configure a Cisco Unified CallManager Express system to apply transfer-pattern <pattern> to the conference call using conference softkey or feature button, use the **conference transfer-pattern** command in telephony-service configuration mode. To return to the default, use the no form of this command.

conference transfer-pattern

no conference transfer-pattern

Syntax Description This command has no arguments or keywords.

Command Default Transfer-pattern <pattern> does not apply to call conferencing.

Command Modes Telephony-service configuration (config-telephony)

Command History	Cisco IOS Release	Cisco Product	Modification
	15.2(4)M	Cisco Unified CME 9.1	This command was introduced.

Usage Guidelines There is no check for the conference numbers for call conferencing. Use this command to apply transfer-pattern for call conferencing.

Examples The following example enables transfer-pattern to be applied for conference parties:

```
Router(config)# telephony-service
Router(config-telephony)# conference transfer-pattern
```

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

cor (ephone-dn)

This command is now documented as the **corlist** command. For complete command information, see the **corlist** command page.

cor (voice register)

To configure a class of restriction (COR) on the VoIP dial peers associated with directory numbers, use the **cor** command in voice register pool or voice register template configuration mode. To disable a COR associated with directory numbers, use the **no** form of this command.

cor {**incoming** | **outgoing**} *cor-list-name* {*cor-list-number* *starting-number* [- *ending-number*]} [**default**]
no cor {**incoming** | **outgoing**} *cor-list-name* {*cor-list-number* *starting-number* [- *ending-number*]} [**default**]

Syntax Description

incoming	COR list to be used by incoming dial peers.
outgoing	COR list to be used by outgoing dial peers.
<i>cor-list-name</i>	COR list name.
<i>cor-list-number</i>	COR list identifier.
<i>starting-number</i>	Start of a directory number range, if an ending number is included. Can also be a standalone number.
-	(Optional) Indicator that a full range is configured.
<i>ending-number</i>	(Optional) End of a directory number range.
default	Instructs the COR list to assume behavior according to a predefined default COR list.

Command Default

COR is not configured on VoIP dial peers.

Command Modes

Voice register pool configuration (config-register-pool)

Voice register template configuration (config-register-temp)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(15)ZJ	Cisco SIP SRST 3.0	This command was introduced.
12.3(4)T	Cisco SIP SRST 3.0	This command was integrated into Cisco IOS Release 12.3(4)T.
12.4(4)T	Cisco CME 3.4 Cisco SIP SRST 3.4	This command was added to Cisco CallManager Express (Cisco CME).
Cisco IOS XE Fuji 16.7.1	Unified CME 12.1	This command was supported in voice register template configuration mode.

Usage Guidelines

The **cor** command sets the dial-peer COR parameter for dynamically created VoIP dial peers. A list-based mechanism assigns COR parameters to specific set of number ranges. The COR functionality provides the ability to deny certain call attempts on the basis of the incoming and outgoing class of restrictions provisioned on the dial peers. This functionality provides flexibility in network design, allows users to block calls (for example, calls to 900 numbers), and applies different restrictions to call attempts from different originators.

COR specifies which incoming dial peer can use which outgoing dial peer to make a call. Each dial peer can be provisioned with an incoming and an outgoing COR list.

A default COR is assigned to the directory numbers that do not match any COR list number or number range. During Cisco Unified Session Initiation Protocol (SIP) Survivable Remote Site Telephony (SRST) registration, a dial peer is created and that dial peer includes a default COR value. The **cor** command allows you to change the automatically selected default.

In dial-peer configuration mode, build your COR list and add members. Then in voice register pool configuration mode, use the **cor** command to apply the name of the dial-peer COR list.

If the **cor** command is configured under voice register template and voice register pool configuration modes, precedence is for the COR configuration under voice register pool configuration mode.

You can have up to four COR lists for the Cisco Unified SIP SRST configuration, comprised of incoming or outgoing dial peers. The first four COR lists are applied to a range of phone numbers. The phone numbers that do not have a COR list configuration are assigned to the default COR list, providing that a default COR list has been defined.



Note Configure the **id** (voice register pool) command before any other voice register pool commands, including the **cor** command. The **id** command identifies a locally available individual Cisco SIP IP phone or set of Cisco SIP IP phones.

Examples

The following is sample output from the **show running-config** command:

```
..
voice register pool 1
  id mac 0030.94C2.A22A
  preference 5
  cor incoming call91 1 91011
  translate-outgoing called 1
  proxy 10.2.161.187 preference 1 monitor probe icmp-ping
  alias 1 94... to 91011 preference 8
  voice-class codec 1
.
.
.
dial-peer cor custom
  name 95
  name 94
  name 91
!
dial-peer cor list call91
  member 91
!
dial-peer voice 91500 pots
  corlist incoming call91
  corlist outgoing call91
  destination-pattern 91500
  port 1/0/0
.
.
.
```

The following is a sample output of the **show running-config** for COR configured under voice register template configuration mode.

```

..
voice register template 1
  id mac 0030.94C2.A22A
  preference 5
  cor incoming call91 1 91011
  translate-outgoing called 1
  proxy 10.2.161.187 preference 1 monitor probe icmp-ping
  alias 1 94... to 91011 preference 8
  voice-class codec 1
.
.
.
dial-peer cor custom
  name 95
  name 94
  name 91
!
dial-peer cor list call91
  member 91
!
dial-peer voice 91500 pots
  corlist incoming call91
  corlist outgoing call91
  destination-pattern 91500
  port 1/0/0
.
.

```

Related Commands

Command	Description
dial-peer cor custom	Specifies that named CORs apply to dial peers.
dial-peer cor list	Defines a COR list name.
id (voice register pool)	Explicitly identifies a locally available individual Cisco SIP IP phone, or when running Cisco Unified SIP SRST, set of Cisco SIP IP phones.
member (dial-peer cor list)	Adds a member to a dial-peer COR list.
name (dial-peer custom cor)	Provides a name for a custom COR.
show dial-peer voice	Displays information for voice dial peers.

corlist

This command was previously documented as the **cor** command.

To apply a class of restriction (COR) to the dial peers associated with a Cisco CME extension (ephone-dn), use the **corlist** command in ephone-dn configuration mode. To disable the COR associated with an extension, use the **no** form of this command.

corlist {**incoming** | **outgoing**} *corlist-name*
no corlist {**incoming** | **outgoing**}

Syntax Description

incoming	Specifies a COR list to be used by incoming dial peers.
outgoing	Specifies a COR list to be used by outgoing dial peers.
<i>corlist-name</i>	COR list name.

Command Default

No COR is used by the dial peers associated with the extension that is being configured.

Command Modes

Ephone-dn configuration (config-ephone-dn)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(2)XT	Cisco ITS 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	Cisco ITS 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	Cisco ITS 2.0	This command was implemented on the Cisco 2600-XM and Cisco 2691.
12.2(11)T	Cisco ITS 2.01	This command was implemented on the Cisco 1760.

Usage Guidelines

COR is used to specify which incoming ephone-dn dial peer can use which outgoing ephone-dn dial peer to make a call. COR denies certain call attempts on the basis of the incoming and outgoing class of restrictions that have been provisioned on the dial peers. This functionality provides flexibility in network design, allows administrators to block calls (for example, calls to 900 numbers), and applies different restrictions to call attempts from different originators.

Each dial peer can be provisioned with an incoming and an outgoing COR list.

The **corlist incoming** and **corlist outgoing** commands in dial-peer configuration mode perform these functions for dial peers that are not associated with ephone-dns. The **dial-peer cor list** and **member** commands define the sets of capabilities, or COR lists, that are referred to in the **corlist** commands.

Examples

The following example shows how to set a COR parameter for incoming calls to dial peers associated with the extension that has the dn-tag 1:

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

```
Router(config-ephone-dn) # corlist incoming  
corlist1
```

Related Commands

Command	Description
corlist incoming	Specifies the COR list to be used when a specified dial peer acts as the incoming dial peer.
corlist outgoing	Specifies the COR list to be used by an outgoing dial peer.
dial-peer cor list	Defines a COR list name.

create cnf-files

To build the eXtensible Markup Language (XML) configuration files that are required for IP phones in Cisco Unified CME, use the **create cnf-files** command in telephony-service configuration mode. To remove the configuration files and disable the automatic generation of configuration files, use the **no** form of this command.

create cnf-files

no create cnf-files

Syntax Description

This command has no arguments or keywords.

Command Default

Required XML configuration files are not built.

Command Modes

Telephony-service configuration (config-telephony)

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(11)YT	Cisco ITS 2.1	This command was introduced.
12.2(15)T	Cisco ITS 2.1	This command was integrated into Cisco IOS Release 12.2(15)T.
12.4(4)XC	Cisco Unified CME 4.0	This command was modified to interact with the cnf-file command and the cnf-file location command.
12.4(9)T	Cisco Unified CME 4.0	Modifications to this command for interacting with the cnf-file command and the cnf-file location command were integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

Use this command to generate the XML configuration files used for provisioning SCCP phones and write the files to the location specified with the **cnf-file location** command.

Examples

The following example builds the necessary XML configuration files on the Cisco Unified CME router:

```
Router(config)# telephony-service
Router(config-telephony)# create cnf-files
```

Related Commands

Command	Description
cnf-file	Specifies the type of configuration file to be created.
cnf-file location	Specifies a storage location for phone configuration files

create cnf-files (voice-gateway)

To generate the eXtensible Markup Language (XML) configuration files that are required to autoconfigure the Cisco voice gateway, use the **create cnf-files** command in voice-gateway configuration mode. To disable the generating of configuration files, use the **no** form of this command.

create cnf-files
no create cnf-files

Syntax Description This command has no arguments or keywords.

Command Default Required XML configuration files are not built.

Command Modes Voice-gateway configuration (config-voice-gateway)

Command History	Cisco IOS Release	Cisco Product	Modification
	12.4(22)YB	Cisco Unified CME 7.1	This command was introduced.

Usage Guidelines Cisco Unified CME writes the XML files generated by this command to the location specified with the **cnf-file location** command, or to the default location in system:/its/. The voice gateway downloads its configuration file from Cisco Unified CME when you run the autoconfiguration process on the voice gateway.

Examples The following example shows that the gateway configuration files are generated by Cisco Unified CME:

```
voice-gateway system 1
 network-locale FR
 type VG224
 mac-address 001F.A30F.8331
 voice-port 0-23
 create cnf-files
```

Related Commands	Command	Description
	cnf-file location	Specifies a storage location for phone configuration files.
	reset (voice-gateway)	Performs a complete reboot of all analog phones associated with the voice gateway and registered to Cisco Unified CME.
	restart (voice-gateway)	Performs a fast restart of all analog phones associated with the voice gateway and registered to Cisco Unified CME.

create profile (voice register global)

To generate the configuration profile files required for SIP phones, use the **create profile** command in voice register global configuration mode. To return to the default, use the **no** form of this command.

create profile
no create profile

Syntax Description

This command has no arguments or keywords.

Command Default

Configuration files are not generated.

Command Modes

Voice register global configuration (config-register-global)

Command History

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

Usage Guidelines

This command generates the configuration files used for provisioning SIP phones and writes the files to the location specified with the **tftp-path** command.

Examples

The following example shows how to create the configuration profile:

```
Router(config)# voice register global
Router(config-register-global)# mode cme
Router(config-register-global)# create profile
```

Related Commands

Command	Description
file text (voice register global)	Generates ASCII text files for SIP phones.
mode (voice register global)	Enables the mode for provisioning SIP phones in a Cisco CallManager Express (Cisco CME) system.
reset (voice register global)	Performs a complete reboot of all SIP phones associated with a Cisco CME router.
source-address (voice register global)	Identifies the IP address and port through which SIP phones communicate with a Cisco CME router.
tftp-path (voice register global)	Specifies the directory to which the provisioning file for SIP phones in a Cisco CallManager Express (Cisco CME) system will be written.

credentials

To enter credentials configuration mode to configure a certificate for a Cisco Unified CME CTL provider or for Cisco Unified SRST router communication to Cisco Unified CallManager, use the **credentials** command in global configuration mode. To set all commands in credentials configuration mode to the default of nonsecure, use the **no** form of this command.

credentials

no credentials

Syntax Description

This command has no arguments or keywords.

Command Default

Credentials are not provided.

Command Modes

Global configuration (config)

Command History

Cisco IOS Release	Cisco Product	Modification
12.3(14)T	Cisco SRST 3.3	This command was introduced for Cisco SRST.
12.4(4)XC	Cisco Unified CME 4.0	This command was introduced for Cisco Unified CME.
12.4(9)T	Cisco Unified CME 4.0	This command for Cisco Unified CME was integrated into Cisco IOS Release 12.4(9)T.
Cisco IOS XE Fuji 16.7.1 Release	Unified SRST 12.1	This command was introduced for Unified SRST support on Cisco 4000 Series Integrated Services Router.

Usage Guidelines

This command is used to configure credentials service for Cisco Unified CME and Cisco Unified SRST.

Cisco Unified CME

This command is used with Cisco Unified CME phone authentication to configure a CTL provider on each Cisco Unified CME router on which the CTL client is not running. That is, if there is a primary and a secondary Cisco Unified CME router and the CTL client is running on the primary router, a CTL provider must be configured on the secondary router, and vice versa. If the CTL client is running on a router that is not a Cisco Unified CME router, CTL providers must be configured on all Cisco Unified CME routers.

Credentials service for Cisco Unified CME runs on default port 2444.

Cisco Unified SRST

The credential server provides certificates to any device that requests a certificate. The credentials server does not request any data from a client; thus no authentication is necessary. When the client, Cisco Unified CallManager, requests a certificate, the credentials server provides the certificate. Cisco Unified CallManager exports the certificate to the phone, and the Cisco Unified IP phone holds the SRST router certificate in its configuration file. The device certificate for secure SRST routers is placed in the configuration file of the Cisco Unified IP phone because the entry limit in the certificate trust list (CTL) of Cisco Unified CallManager is 32.

Credentials service for SRST runs on default port 2445. Cisco Unified CallManager connects to port 2445 on the secure SRST router and retrieves the secure SRST device certificate during the TLS handshake.

Activate this command on all SRST routers.


Caution

For security reasons, credentials service should be deactivated on all SRST routers after provisioning to Cisco Unified CallManager is completed.

Examples

Cisco Unified CME

The following example configures a CTL provider on the Cisco Unified CME router with the IP address 172.19.245.1. CTL providers must be configured on all Cisco Unified CME routers on which the CTL client is not running.

```
Router(config)# credentials
Router(config-credentials)# ip source-address 172.19.245.1 port 2444
Router(config-credentials)# trustpoint cmeca
Router(config-credentials)# ctl-service admin user4 secret 0 c89L8o
```

Cisco Unified SRST

The following example enters credentials configuration mode and sets the IP source address and the trustpoint:

```
Router(config)# credentials
Router(config-credentials)# ip source-address 10.6.21.4 port 2445
Router(config-credentials)# trustpoint srstca
```

Related Commands

Command	Description
ctl-service admin	Specifies a user name and password to authenticate the CTL client during the CTL protocol.
debug credentials	Sets debugging on the credentials service that runs between a Cisco Unified CME CTL provider the CTL client or between an SRST router and Cisco Unified CallManager.
ip source-address (credentials)	Enables the Cisco Unified CME or SRST router to receive messages through the specified IP address and port.
show credentials	Displays the credentials settings on a Cisco Unified CME or SRST router.
trustpoint (credentials)	Specifies the name of the trustpoint to be associated with a Cisco Unified CME CTL provider certificate or with an SRST router certificate.

cti csta mode basic

To set the CTI interface in Cisco Unified CME into basic mode, use the **cti csta mode basic** command in voice-service configuration mode. To return to default, use the **no** form of this command.

cti csta mode basic
no cti csta mode basic

Syntax Description This command has no arguments or keywords.

Command Default CTI interface is in advanced mode.

Command Modes Voice-service configuration (config-voi-serv)

Command History	Release	Cisco Product	Modification
	15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
	15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1.(1)T.
	Cisco IOS XE Gibraltar 16.11.1a Release	Unified CME 12.6	This command was deprecated. It is not supported on Unified CME 12.6 and later releases.

Usage Guidelines This command suppresses all enhanced extensions/features, such as shared line and shared media, in a CTI message from Cisco Unified CME.

This command is required if the computer-based CSTA client application that is interacting with Cisco Unified CME is a Microsoft Office Communicator (MOC) client.

Examples

The following example shows a voice-service configuration with this command enabled:

```
!
voice service voip
  no cti shutdown
  cti csta mode basic
!
```

Related Commands

Command	Description
cti shutdown	Disables CTI integration.

cti message device-id suppress-conversion

To suppress the conversion or promotion of all extension numbers except the primary number in a CTI message, use the **cti message device-id suppress-conversion** command in voice-service configuration mode. To return to default, use the **no** form of this command.

cti message device-id suppress-conversion
no cti message device-id suppress-conversion

Syntax Description This command has no arguments or keywords.

Command Default All SCCP extension numbers are converted or promoted in CTI messages.

Command Modes Voice-service configuration (config-voi-serv)

Release	Cisco Product	Modification
15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.
Cisco IOS XE Gibraltar 16.11.1a Release	Unified CME 12.6	This command was deprecated. It is not supported on Unified CME 12.6 and later releases.

Usage Guidelines This command specifies that only the requested (primary) extension number is converted or promoted in the outgoing CTI message when an expanded number is presented in a RequestSystemStatus from a CSTAclient application. Use this command to suppress the conversion or promotion of all secondary numbers in a CTI message.

By default, Cisco Unified CME converts or promotes all SCCP primary and secondary extension numbers when reporting events.

Examples The following example shows the voice-service configuration with this command enabled:

```
!  
voice service voip  
  no cti shutdown  
  cti csta mode basic  
  cti message device-id suppress-conversion
```

Related Commands	Command	Description
	cti shutdown	Disables CTI integration.

cti notify

To force an ephone-dn into a constant “up” state, use the **cti notify** command in ephone-dn or ephone-dn-template configuration mode. To return to default, use the **no** form of this command.

cti notify

no cti notify

Syntax Description

This command has no arguments or keywords.

Command Default

Cisco Unified CME cannot send notifications to the ephone-dn because a CTI session cannot be established.

Command Modes

Ephone-dn configuration (config-ephone-dn)

Ephone-dn-template configuration (config-ephone-dn-template)

Command History

Release	Cisco Product	Modification
15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.
Cisco IOS XE Gibraltar 16.11.1a Release	Unified CME 12.6	This command was deprecated. It is not supported on Unified CME 12.6 and later releases.

Usage Guidelines

This command forces an ephone-dn into a constant “up” state.

Use this command to permit a CTI session to be established with a directory number that is not associated with a physical device, allowing Cisco Unified CME to send notifications to the directory number. If a directory number is not associated to an ephone configuration that includes the button command, a static fwd is applied to the directory number and all incoming calls are forwarded to another directory number.

If you use an ephone-dn template to apply this command to a directory number and you also use this command in ephone-dn configuration mode for the same directory number, the value that you set in ephone-dn configuration mode has priority.

Examples

The following example shows the configuration for ephone-dn 4 including this command. A CTI session can be established for this directory number (204) even though the number is not associated with an ephone configuration because this directory number is always “up.”

```
!
ephone-dn 4
 number 204
 cti notify
 cti watch
!
!
ephone 1
 mac-address 001E.4A34.A35F
 type 7961
 button 1:1
```

```
!  
!  
!  
ephone 2  
  mac-address 000F.8FC7.B681  
  type 7960  
  button 1:2  
!  
!  
!  
ephone 3  
  mac-address 0019.E7FF.1E30  
  type 7961  
  logout-profile 1  
!
```

The following example shows how to create the same configuration for ephone-dn 4 using this command in ephone-dn template configuration mode and then applying the template to the directory number:

```
ephone-dn-template 15  
  cti notify  
  cti watch  
ephone-dn 4  
  number 204  
  ephone-dn-template 15
```

Related Commands

Command	Description
ephone-dn-template (ephone-dn)	Applies an ephone-dn template to an ephone-dn.

cti watch

To allow a CSTA client application to monitor and control a directory number in Cisco Unified CME, use the **cti watch** command in ephone-dn or ephone-dn-template configuration mode. To return to default, use the **no** form of this command.

cti watch
no cti watch

Syntax Description	This command has no arguments or keywords.
Command Default	A CSTA client application cannot use the CTI interface to monitor and control an ephone-dn in Cisco Unified CME.
Command Modes	Ephone-dn configuration (config-ephone-dn) Ephone-dn-template configuration (config-ephone-dn-template)

Command History	Release	Cisco Product	Modification
	15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
	15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.
	Cisco IOS XE Gibraltar 16.11.1a Release	Unified CME 12.6	This command was deprecated. It is not supported on Unified CME 12.6 and later releases.

Usage Guidelines	<p>This command enables a CSTA client application to monitor and control a directory number in Cisco Unified CME.</p> <p>If you use an ephone-dn template to apply this command to a directory number and you also use this command in ephone-dn configuration mode for the same directory number, the value that you set in ephone-dn configuration mode has priority.</p>
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Examples	<p>The following example shows the configuration for ephone-dn 4 with this command configured. The CSTA application can monitor and control the directory number (204).</p>
-----------------	---

```
!
ephone-dn 4
 number 204
 cti notify
 cti watch
```

The following example shows how to create the same configuration for ephone-dn 4 using this command in ephone-dn template configuration mode and applying the template to the directory number:

```
ephone-dn-template 15
 cti notify
```

```
cti watch
ephone-dn 4
number 204
ephone-dn-template 15
```

Related Commands

Command	Description
ephone-dn-template (ephone-dn)	Applies an ephone-dn template to an ephone-dn

cti-aware

To bind a session to the CTI subsystem, use the **cti aware** command in voice session-server configuration mode. To return to default, use the **no** form of this command.

cti-aware

no cti-aware

Syntax Description

This command has no keywords or arguments.

Command Default

CTI-register heartbeat continues even after the CTI session is shutdown.

Command Modes

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

Command History

Cisco IOS Release	Cisco Product	Modification
15.0(1)XA	Cisco Unified CME 8.0	This command was introduced.
15.1(1)T	Cisco Unified CME 8.0	This command was integrated into Cisco IOS Release 15.1(1)T.
Cisco IOS XE Gibraltar 16.11.1a Release	Unified CME 12.6	This command was deprecated. It is not supported on Unified CME 12.6 and later releases.

Usage Guidelines

This command causes the CSTA SIP keepalive response to stop if the CTI session between Cisco Unified CME and the CSTA client application expires or is down for any reason. By default, the CSTA SIP keepalive response continues even after the CTI session expires and the CSTA client application is unaware that the CTI session is not operational.

Examples

The following partial output shows the configuration for a session manager for a CSTA client application in which this command is configured:

```
router# show running-configuration
.
.
.
voice register session-server 1
 register-id appl
 keepalive 360
 cti-aware
```

Related Commands

Command	Description
keepalive (voice register session-server)	Duration for registration after which the registration expires unless the feature server or application reregisters before the registration expiry.
register-id	Creates an ID for explicitly identifying an external feature server or application during Register requests

ctl-client

To enter CTL-client configuration mode to set parameters for the CTL client, use the **ctl-client** command in global configuration mode. To return to the default, use the **no** form of this command.

ctl-client
no ctl-client

Syntax Description This command has no keywords or arguments.

Command Default No CTL-client parameters are set.

Command Modes Global configuration (config)

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

Usage Guidelines This command is used with Cisco Unified CME phone authentication.

Examples

The following example defines server IP addresses and trustpoints for the CAPF server, the Cisco Unified CME router, and the TFTP server, as well as trustpoints for SAST1 and SAST2. It also specifies that a new CTL file should be generated.

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

ctl-service admin

To specify a user name and password to authenticate the client during the CTL protocol, use the **ctl-service admin** command in credentials configuration mode. To return to the default, use the **no** form of this command.

ctl-service admin *username* **secret** **{0 | 1}** *password-string*
no **ctl-service admin**

Syntax Description

<i>username</i>	Defines the name that will be used to authenticate the client.
secret {0 1}	Defines a character string for login authentication and whether it will be encrypted when it is stored in the running configuration. <ul style="list-style-type: none"> 0—Not encrypted. 1—Encrypted using Message Digest 5 (MD5).
<i>password-string</i>	Character string for login authentication

Command Default

No user name or password is defined for authentication.

Command Modes

Credentials configuration (config-credentials)

Command History

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

Usage Guidelines

This command is used with Cisco Unified CME phone authentication to define a user who will be used to authenticate the CTL client with a CTL provider.

Examples

The following example creates a CTL provider on a Cisco Unified CME router that is not running the CTL client.

```
Router(config)# credentials
Router(config-credentials)# ip source-address 172.19.245.1 port 2444
Router(config-credentials)# trustpoint ctlpv
Router(config-credentials)# ctl-service admin user4 secret 0 c89L8o
```

Command	Description
debug credentials	Sets debugging on the credentials service that runs between a Cisco Unified CME CTL provider and the CTL client or between an SRST router and Cisco Unified CallManager.
show credentials	Displays the credentials settings on a Cisco Unified CME or SRST router.
trustpoint (credentials)	Specifies the name of the trustpoint to be associated with a Cisco Unified CME CTL provider certificate or with an SRST router certificate.