



Cisco Unified CME Commands: H

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This chapter contains commands to configure and maintain Cisco Unified Communications Manager Express (formally known as Cisco Unified CallManager Express). The commands are presented in alphabetical order. Some commands required for configuring Cisco Unified Communications Manager Express (Cisco Unified CME) may be found in other Cisco IOS references. Use the reference master index or search online to find these commands.

headset auto-answer line

To enable auto-answer on the specified line when the headset key is engaged, use the **headset auto-answer** command in ephone configuration mode. To disable headset auto-answer for this line, use the **no** form of this command.

headset auto-answer line *line-number*

no headset auto-answer line *line-number*

Syntax Description

line-number Phone line that should be automatically answered.

Command Default

Headset auto-answer is not enabled.

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 enables headset auto-answer on a particular line. A line, as used in this command, is *not* identical to a phone button. A line, as used in this command, represents the ability for a call connection on this phone, and the line numbers generally follow a top-to-bottom sequence starting with the number 1.

The following examples represent common situations pertaining to a button:line relationship:

- button 1:1—A single ephone-dn is associated with a single ephone button. Counts as one line.
- button 1o1,2,3,4,5—Five ephone-dns are overlaid on a single ephone button. Counts as one line.
- button 2x1—An ephone button acts as an extension for an overlaid ephone button. Counts as one line.
- Button is unoccupied or programmed for speed-dial. Does not count as a line.

Examples

The following example shows how to enable headset auto-answer for line 1 (button 1) and line 4 (button 4), which has overlaid ephone-dns but counts as a single line in this context. In this example, four (1, 2, 3, and 4) buttons are defined for ephone 3.

```
ephone 3
button 1:2 2:4 3:6 4o21,22,23,24,25
headset auto-answer line 1
headset auto-answer line 4
```

The following example shows how to enable headset auto-answer for line 2 (button 2), which has overlaid ephone-dns, and line 3 (button 3), which is an overlay rollover line. In this example, three (1, 2, and 3) buttons are defined for ephone 17.

```
ephone 17
  button 1:2 2o21,22,23,24,25 3x2
  headset auto-answer line 2
  headset auto-answer line 3
```

The following example shows how to enable headset auto-answer for line 2 (button 3) and line 3 (button 5). In this case, the button numbers do not match the line numbers because buttons 2 and 4 are not used.

```
ephone 25
  button 1:2 3:4 5:6
  headset auto-answer line 2
  headset auto-answer line 3
```

hold-alert

To set a repeating audible alert notification when a call is on hold on a Cisco Unified IP phone, use the **hold-alert** command in ephone-dn or ephone-dn-template configuration mode. To disable this feature, use the **no** form of this command.

hold-alert *timeout* { **idle** | **originator** | **shared** }

no hold-alert *timeout* { **idle** | **originator** | **shared** }

Syntax Description

<i>timeout</i>	Interval after which an audible alert notification is repeated, in seconds. Range is from 15 to 300. There is no default.
idle	Alerts only when the phone is idle.
originator	Alerts whether the phone is idle or busy.
shared	Alerts only when the extension is idle but alerts all phones that share the line.

Command Default

Audible alert notification for on-hold calls is disabled. Only a visual indication is provided.

Command Modes

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

Command History

Cisco IOS Release	Cisco Product	Modification
12.2(2)XT	Cisco ITS 2.0	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

Use the **hold-alert** command to set an audible alert notification on a Cisco Unified IP phone to remind the phone user that a call is on hold. The *timeout* argument specifies the time interval in seconds from the time the call is placed on hold to the time the on-hold audible alert is generated. The alert is repeated every *timeout* seconds.

When the **idle** keyword is enabled, a one-second burst of ringing on the phone is generated on the IP phone that placed the call in the hold state, but only if the phone is in the idle state. If the phone is in active use, no on-hold alert is generated.

When the **originator** keyword is enabled, a one-second burst of ringing is generated on the phone that placed the call in the hold state, but only if the phone is in the idle state. If the phone is in use on another call, an audible beep (call-waiting tone) is generated.

When the **shared** keyword is enabled, a one-second ring burst is generated for all the idle phones that share the extension with the on-hold call. Phones that are in use do not receive an audio beep (call-waiting tone) alert. Only the phone that placed the call on hold hears a call-waiting beep if it is busy.

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 sets audible alert notification to idle on extension 1111:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 1111
Router(config-ephone-dn)# name phone1
Router(config-ephone-dn)# hold-alert 100 idle
```

The following example uses an ephone-dn template to set audible alert notification for extension 1111 to only occur when the phone is idle:

```
Router(config)# ephone-dn-template 3
Router(config-ephone-dn-template)# hold-alert 100 idle
Router(config-ephone-dn-template)# exit
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 1111
Router(config-ephone-dn)# name phone1
Router(config-ephone-dn)# ephone-dn-template 3
```

Related Commands

Command	Description
ephone-dn-template (ephone-dn)	Applies ephone-dn-template to the ephone-dn being configured.

hold-alert (voice register global)

To set a repeating audible alert notification when a call is on hold on all supported SIP phones directly connected in Cisco Unified CME, use the command in voice register global configuration mode. To disable this feature, use the **no** form of this command.

hold-alert *timeout*

no hold-alert

Syntax Description

<i>timeout</i>	Interval after which an audible alert notification is repeated, in seconds. Range is from 15 to 300. There is no default.
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Command Default

Audible alert notification for on-hold calls is disabled. Only a visual indication is provided.

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 sets an audible alert notification on all supported SIP phones in a Cisco Unified CME system to remind the phone user that a call is on hold. The alert is repeated after a specific interval as defined by the *timeout* argument.



Note

This command does not apply to Cisco ATAs that have been configured for SIP in Cisco Unified CME.

Examples

The following example shows how to set audible alert notification on SIP phones for on-hold calls:

```
Router(config)# voice register global
Router(config-register-global)# mode cme
Router(config-register-global)# hold-alert 30
```

Related Commands

	Description
call-waiting (voice register pool)	Enables call waiting on a SIP phone.
mode (voice register global)	Enables the mode for provisioning SIP phones in a Cisco CallManager Express (Cisco CME) system.

hops

To define the number of times that a call can proceed to the next ephone-dn in a peer or longest-idle ephone hunt group before the call proceeds to the final ephone-dn, use the **hops** command in ephone hunt configuration mode. To return to the default number of hops, use the **no** form of this command.

hops *number*

no hops *number*

Syntax Description

<i>number</i>	Number of hops before the call proceeds to the final ephone-dn. Range is from 2 to 20, but the value must be less than or equal to the number of extensions that are specified in the list command. Default automatically adjusts to the number of hunt group members.
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Command Default

The number of hops automatically adjusts to the number of ephone hunt group members.

Command Modes

Ephone-hunt configuration (config-ephone-hunt)

Command Modes

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.
12.3(7)T	Cisco CME 3.1	The maximum number of hops was restricted to the number of extensions specified in the list command.
12.3(11)XL	Cisco CME 3.2.1	Increased maximum number of hops to 20.
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	The default was changed from 2 hops to automatically adjust the number of hops to the number of ephone hunt group members.
12.4(9)T	Cisco Unified CME 4.0	The modification to change the default was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

This command is valid only for peer and longest-idle ephone hunt groups in Cisco Unified CallManager Express systems.

This command is required when you are configuring the **auto logout** command for peer and longest-idle hunt groups.

Examples

The following example sets the number of hops to 6 for peer hunt group 3:

```
Router(config)# ephone-hunt 3 peer
Router(config-ephone-hunt)# hops 6
```

Related Commands

Command	Description
auto logout	Enables the automatic change of an ephone hunt group agent's ephone-dn to not-ready status.
final	Defines the last ephone-dn in an ephone hunt group.
list	Defines the ephone-dns that participate in an ephone hunt group.
max-redirect	Changes the current number of allowable redirects in a Cisco Unified CME system.
no-reg (ephone-hunt)	Specifies that the pilot number of this ephone hunt group should not register with the H.323 gatekeeper.
pilot	Defines the ephone-dn that is dialed to reach an ephone hunt group.
preference (ephone-hunt)	Sets preference order for the ephone-dn associated with an ephone-hunt-group pilot number.
timeout (ephone-hunt)	Sets the number of seconds after which a call that is not answered is redirected to the next number in the hunt-group list.

hops (voice hunt-group)

To define the number of times that a call can hop to the next number in a peer hunt group before the call proceeds to the final number, use the **hops** command in voice hunt-group configuration mode. To return to the default number of hops, use the **no** form of this command.

hops *number*

no hops

Syntax Description

<i>number</i>	Number of hops before the call proceeds to the final number. Range is 2 to 10, but the value must be less than or equal to the number of extensions that are specified in the list command. The default is the same number as there are destinations defined under the list command.
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Command Default

The default is the number of *directory-number* arguments configured in the **list** command.

Command Modes

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

Command History

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

Usage Guidelines

This command is valid only for peer or longest-idle voice hunt groups in Cisco Unified CME systems.

Examples

The following example shows how to set the number of hops to 6 for peer voice hunt group 1:

```
Router(config)# voice hunt-group 1 peer
Router(config-voice-hunt-group)# list 1000, 1001, 1002, 1003, 1004, 1005, 1006, 006, 1007,
1008, 1009
Router(config-voice-hunt-group)# hops 6
```

Related Commands

Command	Description
final (voice hunt-group)	Defines the last extension in a voice hunt group.
list (voice hunt-group)	Defines the directory numbers that participate in a hunt group.
timeout (voice hunt-group)	Sets the number of seconds after which a call that is not answered is redirected to the next number in the hunt-group list and defines the last directory number in the hunt group.

hunt-group logout

To enable separate handling of DND and HLog functionality for hunt-group agents and to display the HLog soft key on phones, use the **hunt-group logout** command in telephony-service configuration mode. To return to the default, use the **no** form of this command.

hunt-group logout [DND | HLog]

no hunt-group logout [DND | HLog]

Syntax Description

DND	Agent phones do not answer the number of calls specified in the auto logout command and are automatically placed in both DND status and not-ready status. The HLog soft key is not displayed on phones.
HLog	Agent phones do not answer the number of calls specified in the auto logout command and are automatically placed only in not-ready status. The HLog soft key is displayed on phones in addition to the DND soft key.

Command Default

DND and HLog functionality is not separate and the HLog soft key will not be displayed on phones.

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

When Do Not Disturb (DND) functionality is activated, no calls are received at the phone, including ephone hunt group calls. DND is activated and canceled using the DND soft key or the DND feature access code (FAC).

When HLog functionality is activated, hunt-group agents are placed in not-ready status and hunt-group calls are blocked from the phone. Other calls that directly dial the phone's extension numbers are still received at the phone. HLog is activated and canceled using the HLog soft key or an HLog FAC.

If the **auto logout** command is used, the Automatic Agent Status Not-Ready feature is invoked for an ephone hunt group. This feature is triggered when an ephone-dn member does not answer a specified number of ephone hunt group calls. The following actions take place:

- If the **hunt-group logout HLog** command has been used, the agent is placed in not-ready status. The agent's ephone-dn will not receive further hunt group calls but will receive calls that directly dial the ephone-dn's extension numbers. An agent in not-ready status can return to ready status by pressing the HLog soft key or by using the HLog FAC.

- If the **hunt-group logout HLog** command has not been used or if the **hunt-group logout DND** command has been used, the phone on which the ephone-dn appears is placed into DND mode, in which the ephone-dn does not receive any calls at all, including hunt-group calls. The red lamp on the phone lights to indicate DND status. An agent in DND mode can return to ready status by pressing the DND soft key or by using the DND FAC.

**Note**

When an agent who is a dynamic member of a hunt group is in not-ready status, the agent's slot in the ephone hunt group is not relinquished. It remains reserved by the agent until the agent leaves the group.

Examples

The following example creates hunt group 3 with three agents (extensions 1001, 1002, and 1003). It specifies that after one unanswered call, an agent should be put into not-ready status but not into DND status.

```
Router(config)# telephony-service
Router(config-telephony)# hunt-group logout HLog
Router(config-telephony)# exit

Router(config)# ephone-hunt 3 peer
Router(config-ephone-hunt)# pilot 4200
Router(config-ephone-hunt)# list 1001, 1002, 1003
Router(config-ephone-hunt)# timeout 10
Router(config-ephone-hunt)# auto logout
Router(config-ephone-hunt)# final 4500
```

Related Commands

Command	Description
auto logout	Enables the automatic change of an agent's ephone-dn to not-ready status after a specified number of hunt-group calls are not answered.

hunt-group report delay hours

To delay the automatic transfer of Cisco CallManager Express (Cisco CME) basic automatic call distribution (B-ACD) call statistics to a file, use the **hunt-group report delay hours** command in telephony-service configuration mode. To remove the delay setting, use the **no** form of this command.

hunt-group report delay *number* **hours**

no hunt-group report delay *number* **hours**

Syntax Description

<i>number</i>	Number of hours by which the collection of statistics can be extended for the statistics collection periods configured with the hunt-group report every hours command. The range is from 1 to 10.
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Command Default

No hunt-group report delay is configured.

Command Modes

Telephony-service configuration (config-telephony)

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.

Usage Guidelines

This command is used for Cisco CME basic automatic call distribution (B-ACD) and auto-attendant (AA) service only.

The **hunt-group report delay hours** command is used as part of a statistics reporting configuration that allows Cisco CME B-ACD call statistics to be sent automatically to files using TFTP. For detailed information, see [Cisco CME B-ACD and Tcl Call-Handling Applications](#).

Statistics are collected and stored (**statistics collect** command and **hunt-group report url** command) in specified intervals (**hunt-group report every hours** command). The default is for the statistics to be collected one hour after the specified interval. Because calls are counted when they end, some of the longer calls may not be counted. For example, if there is a call from 1:35 p.m. to 3:30 p.m., the interval is 1 hour, and there is no delay, TFTP will write the 1 p.m. to 2 p.m. statistics at 3 p.m. However, at 3 p.m., the 1:35 p.m. call is still active, so the call will not be counted at that time as occurring in the 1 p.m. to 2 p.m. time slot. When the call finishes at 3:30 p.m., it will be counted as occurring from 1 p.m. to 2 p.m. The **show hunt-group** command will report it, but TFTP will have already sent out its report. To include the 1:35 p.m. call, you could use the **hunt-group report delay hours** command to delay TFTP statistics reporting for an extra hour so the 1 p.m. to 2 p.m. report will be written at 4 p.m. instead of 3 p.m.

Examples

The following example shows a configuration in which statistics are reported for B-ACD calls that occur within three-hour time frames, but the collection of the statistic collection is extended for an extra hour to include calls that did not end within the three-hour time period:

```
Router(config)# telephony-service
Router(config-telephony)# hunt-group report every 3 hours
Router(config-telephony)# hunt-group report delay 1 hours
```

The following is an example of a report that the previous configuration might send to a file if the **statistics collect** command was entered at 18:20:

```
23:00:00 UTC Tue Dec 20 2004,
,
01, Tue 18:00 - 19:00, HuntGp, 02, 01, 00005, 00002, 0003, 0006, 000001, 000001, 0011,
01, Tue 19:00 - 20:00, HuntGp, 02, 02, 00000, 00000, 0000, 0000, 000000, 000000, 0000,
01, Tue 20:00 - 21:00, HuntGp, 02, 02, 00006, 00003, 0003, 0009, 000001, 000003, 0012,
```

Statistics collection has to take place for at least three hours for the statistics to be written to a file. The following is a chronology of events:

- At 19:00, the statistics collection was active for 40 minutes, so no statistics were written to file.
- At 20:00, the statistics collection was active for 1 hour and 40 minutes, so no statistics were written to file.
- At 21:00, the statistics collection was active for 2 hours and 40 minutes, so no statistics were written to file.
- At 22:00, the statistics collection was active for 3 hours and 40 minutes but there is a one-hour delay, so no statistics were written to file.
- At 23:00 the statistics were written to a file using TFTP.

Related Commands

Command	Description
hunt-group report every hours	Sets the hourly interval after which Cisco CME B-ACD call statistics are automatically transferred to a file.
hunt-group report url	Sets filename parameters and the URL path where Cisco CME B-ACD call statistics are to be sent using TFTP.
statistics collect	Enables the collection of Cisco CME B-ACD call data for an ephone hunt group.

hunt-group report every hours

To set the hourly interval at which Cisco CallManager Express (Cisco CME) basic automatic call distribution (B-ACD) call statistics are automatically transferred to a file, use the **hunt-group report every hours** command in telephony-service configuration mode. To remove the interval setting, use the **no** form of this command.

hunt-group report every *number* hours

no hunt-group report every *number* hours

Syntax Description	<i>number</i>	Number of hours after which auto-attendant (AA) call statistics are collected and reported. The range is from 1 to 84.
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Command Default No hourly interval is configured.

Command Modes Telephony-service configuration (config-telephony)

CommandHistory	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.

Usage Guidelines This command is used for Cisco CME basic automatic call distribution (B-ACD) and auto-attendant (AA) service only.

The **hunt-group report every hours** command is used as part of a statistics reporting configuration that allows Cisco CME B-ACD call statistics to be sent automatically to files by means of TFTP. For detailed information, see [Cisco CME B-ACD and Tel Call-Handling Applications](#).

Because calls are counted when they end, some of the longer calls may not be counted in the report. To delay the time in which statistics are collected and transferred you may configure a delay time with the **hunt-group report delay hours** command.

Examples The following example sets the statistics collection to occur every three hours. There is no delay.

```
Router(config)# telephony-service
Router(config-telephony)# hunt-group report every 3 hours
```

The following is an example of a report that the previous configuration might send to a file if the **statistics collect** command was entered at 18:20:

```
22:00:00 UTC Tue Dec 20 2005,
,
01, Tue 18:00 - 19:00, HuntGp, 02, 01, 00005, 00002, 0003, 0006, 000001, 000001, 0011,
01, Tue 19:00 - 20:00, HuntGp, 02, 02, 00000, 00000, 0000, 0000, 000000, 000000, 0000,
01, Tue 20:00 - 21:00, HuntGp, 02, 02, 00006, 00003, 0003, 0009, 000001, 000003, 0012,
```

Statistics collection has to take place for at least three hours for the statistics to be written to a file. The following is a chronology of events:

- At 19:00, the statistics collection was active for 40 minutes, so no statistics were written to file.
- At 20:00, the statistics collection was active for 1 hour and 40 minutes, so no statistics were written to file.
- At 21:00, the statistics collection was active for 2 hours and 40 minutes, so no statistics were written to file.
- At 22:00, the statistics collection was active for 3 hours and 40 minutes, so statistics were written to a file using TFTP.

If the previous example were configured for a delay of one hour using the **hunt-group report delay 1 hours** command, the statistics would be written one hour later at 23:00.

Related Commands

Command	Description
hunt-group report delay hours	Delays the automatic transfer of Cisco CME B-ACD call statistics to a file.
hunt-group report url	Sets filename parameters and the URL path where Cisco CME B-ACD call statistics are to be sent using TFTP.
statistics collect	Enables the collection of Cisco CME B-ACD call statistics for an ephone hunt group.

hunt-group report url

To set filename parameters and the URL path where Cisco Unified CME basic automatic call distribution (B-ACD) call statistics are to be sent using TFTP, use the **hunt-group report url** command in telephony-service configuration mode. To remove the report URL settings and stop statistics from being sent to files, use the **no** form of this command.

hunt-group report url [**prefix** *tftp://ip-address/directory-name.../prefix* | **suffix** *from-number to to-number*]

no hunt-group report url [**prefix** *tftp://ip-address/directory-name.../prefix* | **suffix** *from-number to to-number*]

Syntax Description

prefix	Sets the parameters for how the filenames must start.
tftp://ip-address-path/	IP address to the files where AA call data is sent using TFTP.
directory-name.../	Names of directories, separated by forward slashes (/) to declare the path to the files where AA call data is sent.
prefix	Specifies a common beginning to be used for the filenames.
suffix	Sets numeric parameters for unique endings for the filenames.
from-number	Number at which the suffix range starts. The range is from 0 to 1. There is no default.
to to-number	Number at which the suffix range ends. The range is from 1 to 200. There is no default.

Command Default

No statistics are sent to files.

Command Modes

Telephony-service configuration (config-telephony)

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	Call-hold statistics were added to the output for Cisco Unified CME B-ACD hunt groups.
12.4(9)T	Cisco Unified CME 4.0	Call-hold statistics in the output for Cisco Unified CME B-ACD hunt groups was integrated into Cisco IOS Release 12.4(9)T.

Usage Guidelines

Use this command for Cisco Unified CME basic automatic call distribution (B-ACD) and auto-attendant (AA) service only. For detailed information, see [Cisco CME B-ACD and Tcl Call-Handling Applications](#).

The **hunt-group report url** command is used with the **hunt-group every hour** command to collect statistics about ephone hunt groups that are part of Cisco Unified CME B-ACD services. Data is collected for all agents combined and for individual agents. The data includes statistics on the number of calls received, the amount of time the calls had to wait to be answered, the amount of time they spent on hold or in queue, and so forth.

The **hunt-group report url** command transfers these call statistics to files using TFTP for time periods set by the **hunt-group every hours** command. Each set of statistics for each time period is sent to a different file that is named using the arguments in the **hunt-group report url** command. For example, the first set of statistics may go to a file named test001, the second set to test002, and so forth.

Prior to using the **hunt-group report url** command, you must create files with matching prefixes and suffixes. For example, for the following configuration:

```
telephony-service
  hunt-group report url prefix tftp://239.1.1.1/dirname/dirname/data
  hunt-group report url suffix 0 to 3
```

you must have files named data0, data1, data2, and data3 at the designated directory location (tftp://239.1.1.1/dirname/dirname).

For the following configuration, you must have files named data00, data01, data02, ... data50:

```
telephony-service
  hunt-group report url prefix tftp://239.1.1.1/dirname/dirname/data
  hunt-group report url suffix 0 to 50
```

For the following configuration, you must have files named data000, data002, ... data200:

```
telephony-service
  hunt-group report url prefix tftp://239.1.1.1/dirname/dirname/data
  hunt-group report url suffix 0 to 200
```

The files must be empty read-and-write files. The following is an example of the statistics sent to a file using TFTP:

```
23:00:00 UTC Wed Apr 23 2003,

01, Wed 21:00 - 22:00, HuntGp, 02, 02, 00005, 00002, 0003, 0006, 000001, 000001, 0011,
01, Wed 21:00 - 22:00, Agent, 8001, 00002, 000001, 000001, 00002, 000002, 000002,
01, Wed 21:00 - 22:00, Agent, 8003, 00001, 000001, 000001, 00000, 000000, 000000,
01, Wed 21:00 - 22:00, Queue, 00002, 00002, 00000, 00002, 00003, 00000, 00000, 00000,
00000,
```

The order of the data fields corresponds to the order of the descriptions issued by the **show hunt-group** command. See the “[Examples](#)” section for explanations of the data fields. The [Cisco CME B-ACD and Tcl Call-Handling Applications](#) document discusses how hunt-group reports align with the **show hunt-group** command output. Once the statistics are in a file, they can be sent to an application, such as Microsoft Excel or Access, to be merged into a chart or graph for easier reading.

For the report mechanism to collect data, you must first issue the **statistics collect** command.

Examples

The following configuration uses TFTP to send AA call statistics to files named test00, test01, ... test90 located at tftp://239.1.1.1/dirname/dirname/test:

```
Router(config)# telephony-service
Router(config-telephony)# hunt-group report url prefix
tftp://239.1.1.1/dirname/dirname/test
Router(config-telephony)# hunt-group report url suffix 0 to 90
```

The following example displays the raw data output that was transferred to files in TFTP format after the **hunt-group report every hours** command was used. [Table 11](#) through [Table 13](#) describe what each number in the example represents. [Table 11](#) explains the first line of data, [Table 12](#) explains the second and third lines of data, and [Table 13](#) explains the fourth line of data.

```
18:00:00 UTC Tue Apr 23 2003,
,
01, Tue 16:00 - 17:00, HuntGp, 06, 06, 00002, 00002, 00000, 0006, 0011, 000004, 000006,
0000, 00002, 000002, 000005,
01, Tue 16:00 - 17:00, Agent, 8001, 00001, 000002, 000002, 00001, 000003, 000003, 00002,
000003, 000003, 00002, 000001, 000001,
01, Tue 16:00 - 17:00, Agent, 8003, 00001, 000006, 000006, 00001, 000005, 000005, 00000,
000000, 000000, 00000, 000000, 000000,
01, Tue 16:00 - 17:00, Queue, 00002, 00002, 00000, 00001, 00001, 00000, 00000, 00000,
00000,
```

[Table 11](#) explains the first line of TFTP-format statistics, which are the main statistics that present data for the hunt group as a whole.

Table 11 Ephone Hunt Group TFTP Format Main Statistics

Hunt Group Data Line Example (Entire Hunt Group):	
01, Tue 16:00 - 17:00, HuntGp, 06, 06, 00002, 00002, 00000, 0006, 0011, 000004, 000006, 0000, 00002, 000002, 000005,	
Data	Explanation
01	Statistics for hunt group 1 are provided in this line of data.
Tue 16:00 - 17:00	Period during which the statistics were collected.
HuntGp	Main statistics for a complete hunt group are provided in this line of data.
06	Maximum number of agents.
06	Minimum number of agents.
00002	Total calls.
00002	Answered calls.
00000	Abandoned calls.
0006	Average time to answer, in seconds.
0011	Longest time to answer, in seconds.
000004	Average time in call, in seconds.
000006	Longest time in call, in seconds.
0000	Average time before abandonment, in seconds.
00002	Calls on hold.
000002	Average time on hold, in seconds.
000005	Longest time on hold, in seconds.

Table 12 explains the next two lines of TFTP-format statistics in the example, which provide data for individual agents. Note that only the second line is presented in the table, but the third line follows the same format.

In the table, some statistics are marked with the following comments.

- Direct—Indicates calls that were made directly to the hunt group pilot number.
- Queue—Indicates calls that passed through a Cisco Unified CME B-ACD call queue.

Table 12 Ephone Hunt Group TFTP Format Per-Agent Statistics

Agent Data Line Example:	
01, Tue 16:00 - 17:00, Agent, 8001, 00001, 000002, 000002, 00001, 000003, 000003, 00002, 000003, 000003, 00002, 000001, 000001,	
Data	Explanation
01	Statistics for hunt group 1 are provided in this line of data.
Tue 16:00 - 17:00	Period during which these statistics were collected.
Agent	Hunt group statistics for a single agent are provided in this line of data.
8001	Agent number.
00001	Total calls answered (Direct).
000002	Average time in call, in seconds (Direct).
000002	Longest time in call, in seconds (Direct).
00001	Total calls on hold (Direct).
000003	Average hold time, in seconds (Direct).
000003	Longest hold time, in seconds (Direct).
00002	Total calls answered (Queue).
000003	Average time in call, in seconds (Queue).
000003	Longest time in call, in seconds (Queue).
00002	Total calls on Hold (Queue).
000001	Average hold time, in seconds (Queue).
000001	Longest hold time, in seconds (Queue).

Table 13 explains the final line of data in the example, which is the data for the B-ACD queue.

Table 13 *Ephone Hunt Group TFTP Format Queue-Related Statistics*

Queue-Related Data Line Example:

```
01, Tue 16:00 - 17:00, Queue, 00002, 00002, 00000, 00001, 00001, 00000, 00000,
00000, 00000,
```

Data	Explanation
01	Statistics for hunt group 1 are provided in this line of data.
Tue 16:00 - 17:00	Period during which these statistics were collected.
Queue	Queue-related statistics are provided in this line of data.
00002	Total number of calls presented to the queue.
00002	Calls answered by agents.
00000	Number of calls in the queue.
00001	Average time to answer, in seconds.
00001	Longest time to answer, in seconds.
00000	Number of abandoned calls.
00000	Average time before abandonment, in seconds.
00000	Calls forwarded to voice mail.
00000	Calls answered by voice mail.

Related Commands

Command	Description
ephone-hunt	Defines an ephone hunt group and enters ephone-hunt configuration mode.
hunt-group report delay hours	Delays the automatic transfer of Cisco Unified CME B-ACD call statistics to a file.
hunt-group report every hours	Sets the hourly interval after which Cisco Unified CME B-ACD call statistics are automatically transferred to a file.
statistics collect	Enables the collection of Cisco Unified CME B-ACD call statistics for an ephone hunt group.

huntstop (ephone-dn and ephone-dn-template)

To disable call hunting for directory numbers or channels, use the **huntstop** command in ephone-dn or ephone-dn-template configuration mode. To reset to the default, use the **no** form of this command.

huntstop [**channel** *number-of-channels*]

no huntstop [**channel** *number-of-channels*]

Syntax Description

channel	(Optional) For dual-line and octo-line directory numbers. Prevents incoming calls from hunting to the next channel if the first channel is busy or does not answer.
<i>number-of-channels</i>	Supported for octo-line directory numbers only. Number of channels available to accept incoming calls. Remaining channels are reserved for outgoing calls or features such as call transfer, call waiting, and conferencing. Range: 1 to 8. Default: 8.

Command Default

Ephone-dn huntstop is enabled.
Channel huntstop is disabled for dual-line directory numbers.
Channel huntstop is set to 8 for octo-line directory numbers.

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(2)XT	Cisco ITS 2.0	This command was implemented on the Cisco 1750 and Cisco 1751.
12.2(8)T	Cisco ITS 2.0	This command was integrated into Cisco IOS Release 12.2(8)T.
12.2(15)ZJ	Cisco CME 3.0	The channel keyword was introduced.
12.3(4)T	Cisco CME 3.0	This channel keyword was integrated into Cisco IOS Release 12.3(4)T.
12.4(4)XC	Cisco Unified CME 4.0	This command was added to 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.
12.4(15)XZ	Cisco Unified CME 4.3	The <i>number-of-channels</i> argument was added for octo-lines.
12.4(20)T	Cisco Unified CME 7.0	This command with the <i>number-of-channels</i> argument for octo-lines was integrated into Release 12.4(20)T.

Usage Guidelines

Use this command without the **channel** keyword to disable call hunting for ephone-dns. An incoming call does not roll over (hunt) to another ephone-dn if the called number is busy or does not answer and a call hunt strategy has been established that includes this ephone-dn. A huntstop prevents hunt-on-busy from redirecting a call from a busy phone into a dial-peer with a catch-all default destination. Use the **no huntstop** command to disable huntstop and allow hunting for ephone-dns.

Channel huntstop works in a similar way, but it affects call hunting behavior for the two channels of a dual-line ephone-dn. Use the **channel** keyword to prevent incoming calls from hunting to the second channel of an ephone-dn if the first channel is busy or does not answer. Incoming calls hunt forward to the next ephone-dn in the hunt sequence instead of to the next channel on the same ephone-dn.

For example, an incoming call might search through the following ephone-dns and channels:

```
ephone-dn 10 (channel 1)
ephone-dn 10 (channel 2)

ephone-dn 11 (channel 1)
ephone-dn 11 (channel 2)
ephone-dn 12 (channel 1)
ephone-dn 12 (channel 2)
```

If the **huntstop channel** command is not enabled (the default), a call might ring for 30 seconds on ephone-dn 10 (channel 1) and then after 30 seconds move to ephone-dn 10 (channel 2), which is usually not the desired behavior. It is useful to reserve the second channel of a dual-line ephone-dn for call transfer, call waiting, or conferencing.

The *number* argument is required for an octo-line directory number when using the **channel** keyword. This argument limits the number of channels for incoming calls on an octo-line directory number and reserves the other channels for outgoing calls or features such as call transfer or conferencing. The router selects idle channels from the lowest number to the highest. This argument is supported only for an octo-line directory number.

In an ephone-dn template, you can apply separate **huntstop channel** commands for dual-line directory numbers and octo-line directory numbers.

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 huntstop is disabled for ephone-dn 1. The huntstop attribute is set to OFF and allows calls to extension 5001 to hunt to another directory number when directory number 1 is busy.

```
ephone-dn 1
 number 5001
 no huntstop
```

The following example shows a typical configuration in which enabling huntstop (default) is required:

```
ephone-dn 1
 number 5001

ephone 4
 button 1:1
 mac-address 0030.94c3.8724

dial-peer voice 5000 voip
 destination-pattern 5...
 session target ipv4:192.168.17.225
```

In the previous example, the huntstop attribute for the dial peer is set to ON by default and prevents calls to extension 5001 from being rerouted to the on-net H.323 dial peer for 5... when extension 5001 is busy (the three periods are used as wildcards).

The following example shows another configuration in which huntstop is not desired and is explicitly disabled. In this example, ephone 4 is configured with two lines, each with the same extension number 5001. This allows the second line to provide call-waiting notification for extension number 5001 when the first line is in use. Setting **no huntstop** on the first line (ephone-dn 1) allows incoming calls to hunt to the second line (ephone-dn 2) when the first line is busy.

Ephone-dn 2 has call forwarding set to extension 6000, which corresponds to a locally attached answering machine connected to a foreign exchange station (FXS) voice port. In this example, the plain old telephone system (POTS) dial peer for extension 6000 also has the dial-peer huntstop attribute explicitly set to prevent further hunting.

```
ephone-dn 1
 number 5001
 no huntstop
 preference 1
 call-forward noan 6000

ephone-dn 2
 number 5001
 preference 2
 call-forward busy 6000
 call-forward noan 6000

ephone 4
 button 1:1 2:2
 mac-address 0030.94c3.8724

dial-peer voice 6000 pots
 destination-pattern 6000
 huntstop
 port 1/0/0
 description answering-machine
```

The following example shows a dual-line configuration in which an ephone-dn template is used to prevent calls from hunting to the second channel of any ephone-dn. The calls hunt through the first channels for each ephone-dn in the order 10, 11, 12.

```
ephone-dn-template 2
 huntstop channel

ephone-dn 10 dual-line
 number 1001
 no huntstop
 ephone-dn-template 2

ephone-dn 11 dual-line
 number 1001
 no huntstop
 ephone-dn-template 2
 preference 1

ephone-dn 12 dual-line
 number 1001
 no huntstop
 ephone-dn-template 2
 preference 2
```

■ huntstop (ephone-dn and ephone-dn-template)

The following example shows a configuration in which incoming calls to octo-line directory number 7 are limited to four, freeing the other four channels for outgoing calls or features such as call transfer or conferencing.

```
ephone-dn 7 octo-line
  number 2001
  name Smith, John
  huntstop channel 4
```

The following example shows an ephone-dn template configuration in which the huntstop is set for both dual-line and octo-line directory numbers.

```
ephone-dn-template 1
  huntstop channel
  huntstop channel 4
```

Related Commands

Command	Description
huntstop (dial-peer)	Disables further dial-peer hunting if a call fails using hunt groups.
number	Associates a telephone or extension number with a directory number (ephone-dn).

huntstop (voice register dn)

To disable call hunting behavior for a directory number on a SIP phone, use the **huntstop** command in voice register dn configuration mode. To reset to the default, use the **no** form of this command.

huntstop [*channel number*]

no huntstop [*channel number*]

Syntax Description

channel <i>number</i>	(Optional) Number of channels available to accept incoming calls. Remaining channels are reserved for outgoing calls or features such as call transfer, call waiting, and conferencing. Range: 1 to 50. Default: 0 (disabled).
------------------------------	--

Command Default

Call hunting is enabled for the directory number.
Channel huntstop is disabled (0) for the directory number.

Command Modes

Voice register dn configuration (config-register-dn)

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(22)YB	Cisco Unified CME 7.1	The channel keyword and <i>number</i> argument 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 disables call hunting behavior for a directory number on a SIP IP phone so that an incoming call does not roll over (hunt) to another directory number if the called directory number is busy or does not answer and if a hunting strategy has been established that includes this directory number. A huntstop allows you to prevent hunt-on-busy from redirecting a call from a busy phone into a dial-peer setup with a catch-all default destination. Use the **no huntstop** command to disable huntstop and allow hunting for directory numbers (default).

The **channel** keyword and *number* argument limits the number of channels for incoming calls to a directory number and reserves the other channels for outgoing calls or features such as call transfer or conferencing. The router selects idle channels from the lowest number to the highest.

Examples

The following example shows a typical configuration in which huntstop is required. The **huntstop** command is enabled and prevents calls to extension 5001 from being rerouted to the on-net H.323 dial peer for 5... when extension 5001 is busy (three periods are used as wild cards).

```
voice register dn 1
  number 5001
  huntstop

voice register pool 4
  button 1:1
  mac-address 0030.94c3.8724

dial-peer voice 5000 voip
  destination-pattern 5...
  session target ipv4:192.168.17.225
```

The following example shows a configuration in which huntstop is not desired (default). In this example, directory number 4 is configured with two lines, each with the same extension number 5001. This is done to allow the second line to provide call-waiting notification for extension number 5001 when the first line is in use. Not enabling huntstop on the first line (directory number 1) allows incoming calls to hunt to the second line (directory number 2) on phone 4 when the directory number 1 line is busy.

Directory number 2 has call forwarding set to extension 6000, which corresponds to a locally attached answering machine connected to a foreign exchange station (FXS) voice port. In this example, the plain old telephone system (POTS) dial peer for extension 6000 has the dial-peer huntstop attribute explicitly set to prevent further hunting.

```
voice register dn 1
  number 5001
  preference 1
  call-forward noan 6000

voice register dn 2
  number 5001
  preference 2
  call-forward busy 6000
  call-forward noan 6000

voice register pool 4
  button 1:1 2:2
  mac-address 0030.94c3.8724

dial-peer voice 6000 pots
  destination-pattern 6000
  huntstop
  port 1/0/0
  description answering-machine
```

The following example shows a configuration in which incoming calls to directory number 23 are blocked if the total number of calls to extension 8123 exceeds 4. This frees the other channels for outgoing calls or features such as call transfer or conferencing.

```
voice register dn 23
  number 8123
  shared-line max-calls 4
  huntstop channel 4
```

■ **huntstop (voice register dn)**

Related Commands	Command	Description
	huntstop (dial-peer)	Disables all further dial-peer hunting if a call fails on the dial peer.
	shared-line	Creates a directory number to be shared by multiple SIP phones.

