



# Cisco IOS Voice Commands: H

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This chapter contains commands to configure and maintain Cisco IOS voice applications. The commands are presented in alphabetical order. Some commands required for configuring voice may be found in other Cisco IOS command references. Use the command reference master index or search online to find these commands.

For detailed information on how to configure these applications and features, refer to the *Cisco IOS Voice Configuration Guide*.

## h225 timeout setup

To configure the timeout value for the response of the outgoing SETUP message, use the **h225 timeout setup** command in voice class configuration mode. To remove the timeout value, use the **no** form of this command.

**h225 timeout setup** *seconds*

**no h225 timeout setup**

|                           |                |  |
|---------------------------|----------------|--|
| <b>Syntax Description</b> | <i>seconds</i> | Timeout value for the response of the outgoing SETUP message, in seconds. Default is 15. |
|---------------------------|----------------|--|

|                 |            |
|-----------------|------------|
| <b>Defaults</b> | 15 seconds |
|-----------------|------------|

|                      |                           |
|----------------------|---------------------------|
| <b>Command Modes</b> | Voice class configuration |
|----------------------|---------------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>  |
|------------------------|----------------|--|
|                        | 12.2(2)XA      | This command was introduced.   |
|                        | 12.2(4)T       | This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release. |
|                        | 12.2(2)XB1     | This command was implemented on the Cisco AS5850.  |
|                        | 12.2(11)T      | This command was integrated into Cisco IOS Release 12.2(11)T.  |

**Examples** The following example configures a timeout setup value of 10 seconds:

```
Router(config-class)# h225 timeout setup 10
```

| <b>Related Commands</b> | <b>Command</b>                    | <b>Description</b>                        |
|-------------------------|-----------------------------------|---|
|                         | <b>h225 timeout tcp call-idle</b> | Sets a timer for an idle call connection. |
|                         | <b>h225 timeout tcp establish</b> | Configures the H.225 TCP timeout.         |

# h225 timeout tcp call-idle

To set a timer for an idle call connection, use the **h225 timeout tcp call-idle** command in voice service h323 configuration mode. To reset to the default, use the **no** form of this command.

**h225 timeout tcp call-idle** { *value value* | **never** }

**no h225 timeout tcp call-idle**

## Syntax Description

|                           |   |
|---------------------------|---|
| <b>value</b> <i>value</i> | Timeout value, in minutes. Range is 0 to 1440. The default is 10. If you specify 0, the timer is disabled and the TCP connection is closed immediately after all the calls are cleared. |
| <b>never</b>              | The connection is maintained permanently or until the other endpoint closes it.   |

## Defaults

10 minutes

## Command Modes

Voice service h323 configuration

## Command History

| Release    | Modification   |
|------------|--|
| 12.2(2)XA  | This command was introduced.   |
| 12.2(4)T   | This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release. |
| 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
| 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

## Usage Guidelines

This command specifies the time to maintain an established H.225 TCP connection when there are no calls on that connection. If the timer expires, the connection is closed. If the timer is running and any new call is made on that connection, the timer stops. When all the calls are cleared on that connection, the timer starts again.

## Examples

The following example sets the timer for an idle call connection to 10 minutes:

```
Router(conf-voi-serv)# h323
Router(conf-serv-h323)# h225 timeout tcp call-idle value 10
```

## Related Commands

| Command     | Description   |
|-------------|---|
| <b>h323</b> | Enables H.323 voice service configuration commands. |

# h225 timeout tcp establish

To set the H.225 TCP timeout value for Voice over IP (VoIP) dial peers, use the **h225 timeout tcp establish** command in voice class configuration mode. To reset to the default, use the **no** form of this command.

**h225 timeout tcp establish** *seconds*

**no h225 timeout tcp establish**

|                           |                |  |
|---------------------------|----------------|--|
| <b>Syntax Description</b> | <i>seconds</i> | Number of seconds for the timeout. Range is 0 to 30. The default is 15. If you specify 0, the H.225 TCP timer is disabled. |
|---------------------------|----------------|--|

|                 |            |
|-----------------|------------|
| <b>Defaults</b> | 15 seconds |
|-----------------|------------|

|                      |                           |
|----------------------|---------------------------|
| <b>Command Modes</b> | Voice class configuration |
|----------------------|---------------------------|

|                        |                |  |
|------------------------|----------------|--|
| <b>Command History</b> | <b>Release</b> | <b>Modification</b>  |
|                        | 12.1(2)T       | This command was introduced on the following platforms: Cisco 1700, Cisco 2500 series, Cisco 2600 series, Cisco 3600 series, Cisco 7200, Cisco AS5300, Cisco uBR900, and Cisco uBR924. |

**Examples** The following example sets a timeout of 10 seconds, which is associated with the H.323 voice class labeled 1:

```
voice class h323 1
  h225 timeout tcp establish 10
```

|                         |                         |                                   |
|-------------------------|-------------------------|-----------------------------------|
| <b>Related Commands</b> | <b>Command</b>          | <b>Description</b>                |
|                         | <b>voice class h323</b> | Establishes an H.323 voice class. |

# h323

To enable the H.323 voice service configuration commands, use the **h323** command in voice service configuration mode.

## h323

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

**Defaults** No default behavior or values

**Command Modes** voice service configuration

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.2(2)XA  | This command was introduced.   |
|                 | 12.2(4)T   | This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release. |
|                 | 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
|                 | 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

**Examples** The following example enters H.323 voice service configuration mode:

```
Router(conf-voi-serv)# h323
```

| Related Commands | Command                           | Description  |
|------------------|-----------------------------------|--|
|                  | <b>call start</b>                 | Forces the H.323 Version 2 gateway to use Fast Connect or Slow Connect procedures for all H.323 calls.       |
|                  | <b>h225 timeout setup</b>         | Configures the timeout value for the response of the outgoing SETUP message.                                 |
|                  | <b>h225 timeout tcp call-idle</b> | Sets a timer for an idle call connection.  |
|                  | <b>session transport</b>          | Configures the underlying transport layer protocol for H.323 messages to be used across all VoIP dial peers. |

# h323 asr

To enable application-specific routing (ASR) and specify the maximum bandwidth for a proxy, use the **h323 asr** command in interface configuration mode. To remove a bandwidth setting but keep ASR enabled, use **no** form of this command.

**h323 asr** [**bandwidth** *max-bandwidth*]

**no h323 asr** [**bandwidth** *max-bandwidth*]

## Syntax Description

|  |  |
|--|--|
| <b>bandwidth</b><br><i>max-bandwidth</i> | (Optional) Maximum bandwidth, in mbps on the interface. Range is from 1 to 10000000. The default is the interface bandwidth. If you specify a value greater than the interface bandwidth, the bandwidth defaults to the interface bandwidth. |
|--|--|

## Defaults

ASR is disabled.

## Command Modes

Interface configuration

## Command History

| Release   | Modification  |
|-----------|---|
| 11.3(2)NA | This command was introduced on the Cisco 2500 series and Cisco 3600 series. |
| 12.0(3)T  | This command was integrated into Cisco IOS Release 12.0(3)T.                |

## Usage Guidelines

This command is independent of the **h323 interface** command.

This command is not supported on Frame Relay or ATM interfaces for the Cisco MC3810 multiservice concentrator.



### Note

Specifying the **no h323 asr bandwidth max-bandwidth command** removes the bandwidth setting but leaves ASR enabled. You must enter the **no h323 asr** command to disable ASR.

## Examples

The following example enables ASR and specifies a maximum bandwidth of 10,000 kbps:

```
h323 asr bandwidth 10000
```

# h323 call start

To force the H.323 Version 2 gateway to use Fast Connect or Slow Connect procedures for all H.323 calls, use the **h323 call start** command in voice-service configuration mode. To reset to the default, use the **no** form of this command.

```
h323 call start {fast | slow}
```

```
no h323 call start
```

| Syntax Description | fast | Gateway uses H.323 Version 2 (Fast Connect) procedures. |
|--------------------|------|---|
|                    | slow | Gateway uses H.323 Version 1 (Slow Connect) procedures. |

| Defaults | fast |
|----------|------|
|----------|------|

| Command Modes | Voice-service configuration |
|---------------|-----------------------------|
|---------------|-----------------------------|

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.1(3)XI  | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, Cisco 7200 series, Cisco AS5300, Cisco AS5800, and Cisco MC3810. |
|                 | 12.1(5)T   | This command was integrated into Cisco IOS Release 12.1(5)T.   |
|                 | 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
|                 | 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

**Usage Guidelines**

In Cisco IOS Release 12.1(3)XI and later releases, H.323 Voice over IP (VoIP) gateways by default use H.323 Version 2 (Fast Connect) for all calls including those initiating RSVP. Previously, gateways used only Slow Connect procedures for RSVP calls. To enable Cisco IOS Release 12.1(3)XI gateways to be backward compatible with earlier releases of Cisco IOS Release 12.1 T, the **h323 call start** command forces the originating gateway to initiate calls using Slow Connect.

This **h323 call start** command is configured as part of the global voice-service configuration for VoIP services. It does not take effect unless the **call start system** voice-class configuration command is configured in the VoIP dial peer.

**Examples**

The following example selects Slow Connect procedures for the gateway:

```
voice service voip
  h323 call start slow
```

| <b>Related Commands</b> | <b>Command</b>                     | <b>Description</b>  |
|-------------------------|------------------------------------|---|
|                         | <b>call rsvp-sync</b>              | Enables synchronization between RSVP and the H.323 voice signaling protocol.                                    |
|                         | <b>call rsvp-sync resv-timer</b>   | Sets the timer for RSVP reservation setup.  |
|                         | <b>call start</b>                  | Selects whether the H.323 gateway uses Fast Connect or Slow Connect procedures for the specific VoIP dial peer. |
|                         | <b>debug call rsvp-sync events</b> | Displays the events that occur during RSVP synchronization.   |
|                         | <b>show call rsvp-sync conf</b>    | Displays the RSVP synchronization configuration.  |
|                         | <b>show call rsvp-sync stats</b>   | Displays statistics for calls that attempted RSVP reservation.  |
|                         | <b>voice service</b>               | Enters voice-service configuration mode and specifies the voice encapsulation type.                             |

# h323 gatekeeper

To specify the gatekeeper associated with a proxy and to control how the gatekeeper is discovered, use the **h323 gatekeeper** command in interface configuration mode. To disassociate the gatekeeper, use the **no** form of this command.

```
h323 gatekeeper [id gatekeeper-id] {ipaddr ipaddr [port] | multicast}
```

```
no h323 gatekeeper [id gatekeeper-id] {ipaddr ipaddr [port] | multicast}
```

## Syntax Description

|   |  |
|---|--|
| <b>id</b> <i>gatekeeper-id</i>              | (Optional) Gatekeeper name. Typically, this is a Domain Name Server (DNS) name, but it can also be a raw IP address in dotted form. If this parameter is specified, gatekeepers that have either the default or explicit flags set for the subnet of the proxy respond. If this parameter is not specified, only those gatekeepers with the default subnet flag respond. |
| <b>ipaddr</b> <i>ipaddr</i> [ <i>port</i> ] | The gatekeeper discovery message is unicast to this address and, optionally, the port specified.   |
| <b>multicast</b>                            | The gatekeeper discovery message is multicast to the well-known RAS multicast address and port.  |

## Defaults

No gatekeeper is configured for the proxy

## Command Modes

Interface configuration

## Command History

| Release   | Modification  |
|-----------|---|
| 11.3(2)NA | This command was introduced on Cisco 2500 series and Cisco 3600 series. |

## Usage Guidelines

You must enter the **h323 interface** and **h323 h323-id** commands before using this command. The **h323 gatekeeper** command must be specified on your Cisco IOS platform or the proxy does not go online. The proxy uses the interface address as its RAS signaling address.

## Examples

The following example sets up a unicast discovery to a gatekeeper whose name is unknown:

```
h323 gatekeeper ipaddr 192.168.5.2
```

The following example sets up a multicast discovery for a gatekeeper of a particular name:

```
h323 gatekeeper id gk.zone5.com multicast
```

## Related Commands

| Command               | Description  |
|-----------------------|--|
| <b>h323 h323-id</b>   | Registers an H.323 proxy alias with a gatekeeper.                  |
| <b>h323 interface</b> | Specifies the interface from which the proxy takes its IP address. |

# h323 h323-id

To register an H.323 proxy alias with a gatekeeper, use the **h323 h323-id** command in interface configuration mode. To remove an H.323 proxy alias, use the **no** form of this command.

**h323 h323-id** *h323-id*

**no h323 h323-id** *h323-id*

|                           |                |  |
|---------------------------|----------------|--|
| <b>Syntax Description</b> | <i>h323-id</i> | Name of the proxy. It is recommended that this name be a fully qualified e-mail ID, with the domain name being the same as that of its gatekeeper. |
|---------------------------|----------------|--|

|                 |   |
|-----------------|---|
| <b>Defaults</b> | No <i>H.323</i> proxy alias is registered |
|-----------------|---|

|                      |                         |
|----------------------|-------------------------|
| <b>Command Modes</b> | Interface configuration |
|----------------------|-------------------------|

| <b>Command History</b> | <b>Release</b>   | <b>Modification</b>  |
|------------------------|--|--|
|                        | 11.3(2)NA  | This command was introduced on Cisco 2500 and Cisco 3600 series routers. |
| 12.0(3)T               | This command was integrated into Cisco IOS Release 12.0(3)T. |  |

|                         |  |
|-------------------------|--|
| <b>Usage Guidelines</b> | Each entry registers a specified H.323 ID proxy alias to a gatekeeper. Typically, these aliases are either simple text strings or legitimate e-mail IDs. |
|-------------------------|--|



**Note**

You must enter the **h323 interface** command before using this command. The **h323 h323-id** command must be entered on the same interface as the **h323 gatekeeper** command. The proxy does not go online without the **h323 interface** command.

|                 |   |
|-----------------|---|
| <b>Examples</b> | The following example registers an H.323 proxy alias called proxy1@zone5.com with a gatekeeper:<br><pre>h323 h323-id proxy1@zone5.com</pre> |
|-----------------|---|

| <b>Related Commands</b> | <b>Command</b>         | <b>Description</b>  |
|-------------------------|------------------------|---|
|                         | <b>h323 gatekeeper</b> | Specifies the gatekeeper associated with a proxy and controls how the gatekeeper is discovered. |
|                         | <b>h323 interface</b>  | Specifies the interface from which the proxy takes its IP address.                              |

# h323 interface

To select an interface whose IP address is used by the proxy to register with the gatekeeper, use the **h323 interface** command in interface configuration mode. To reset to the default port, use the **no h323 interface** command and then the **h323 interface** command.

**h323 interface** [*port-number*]

**no h323 interface** [*port-number*]

## Syntax Description

|                    |   |
|--------------------|---|
| <i>port-number</i> | (Optional) Port number that the proxy listens on for incoming call-setup requests. Range is from 1 to 65356. The default port number for the proxy is 11,720 in -isx- or -jsx- Cisco IOS images. The default port number for the proxy is 1720 in -ix- Cisco IOS images, which do not contain the VoIP gateway. |
|--------------------|---|

## Defaults

Default port number is image dependent as described in the Syntax Description.

## Command Modes

Interface configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 11.3(2)NA | This command was introduced on Cisco 2500 and Cisco 3600 series routers.   |
| 12.1(5)T  | The ability to specify the proxy port number was added on the Cisco 2600 series, Cisco 3600 series, and Cisco 7200 series routers and on the Cisco MC3810. |

## Usage Guidelines

At proxy startup, Cisco IOS software checks for the presence of the VoIP gateway subsystem. If the subsystem is found to be present, the proxy code opens and listens for call setup requests on the new port. The proxy then registers this port with the gatekeeper.

## Examples

The following example configures Ethernet interface 0 for incoming call-setup requests:

```
interface ethernet0
 h323 interface
```

## Related Commands

| Command                 | Description   |
|-------------------------|---|
| <b>bandwidth</b>        | Specifies the maximum aggregate bandwidth for H.323 traffic from a zone to another zone, within a zone, or for a session in a zone. |
| <b>bandwidth remote</b> | Specifies the total bandwidth for H.323 traffic between this gatekeeper and any other gatekeeper.                                   |

| Command          | Description   |
|------------------|---|
| <b>h323 qos</b>  | Enables QoS on the proxy.   |
| <b>h323 t120</b> | Enables the T.120 capabilities on your router and specifies bypass or proxy mode. |

# h323 qos

To enable quality of service (QoS) on the proxy, use the **h323 qos** command in interface configuration mode. To disable QoS, use the **no** form of this command.

**h323 qos** {**ip-precedence** *value* | **rsvp** {**controlled-load** | **guaranteed-qos**}}

**no h323 qos** {**ip-precedence** *value* | **rsvp** {**controlled-load** | **guaranteed-qos**}}

## Syntax Description

|                                   |  |
|-----------------------------------|--|
| <b>ip-precedence</b> <i>value</i> | RTP streams set their IP precedence bits to the specified <i>value</i> . |
| <b>rsvp controlled-load</b>       | Controlled load class of service.  |
| <b>rsvp guaranteed-qos</b>        | Guaranteed QoS class of service.   |

## Defaults

No QoS is configured

## Command Modes

Interface configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 11.3(2)NA | This command was introduced on Cisco 2500 and Cisco 3600 series routers. |

## Usage Guidelines

You must execute the **h323 interface** command before using this command.

Both IP precedence and RSVP QoS can be configured by invoking this command twice with the two different QoS forms.

## Examples

The following example enables QoS on the proxy:

```
interface Ethernet0
 ip address 172.21.127.38 255.255.255.192
 no ip redirects
 ip rsvp bandwidth 7000 7000
 ip route-cache same-interface
 fair-queue 64 256 1000
 h323 interface
 h323 qos rsvp controlled-load
 h323 h323-id px1@zone1.com
 h323 gatekeeper ipaddr 172.21.127.39
```

## Related Commands

| Command               | Description  |
|-----------------------|--|
| <b>h323 interface</b> | Specifies the interface from which the proxy takes its IP address. |

# h323 t120

To enable the T.120 capabilities on your router and to specify bypass or proxy mode, use the **h323 t120** command in interface configuration mode.

**h323 t120 {bypass | proxy}**

| Syntax Description |   |  |
|--------------------|---|--|
| <b>bypass</b>      | Bypass mode. In this mode, the H.245 Open Logical Channel messages for T.120 data channels are passed unmodified through the proxy, and TCP connections for T.120 are established directly between the two endpoints of the H.323 call. |  |
| <b>proxy</b>       | Proxy mode. In this mode, T.120 features function properly.   |  |

**Defaults** Bypass mode

**Command Modes** Interface configuration

| Command History | Release  | Modification  |
|-----------------|----------|---|
|                 | 12.1(5)T | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, Cisco 7200, and Cisco MC3810. |

**Usage Guidelines** The **no** form of this command has no function—the only possible commands are **h323 t120 bypass** and **h323 t120 proxy**.

**Examples** The following example enables T.120 capabilities:

```
proxy h323
interface ethernet0
 h323 t120 proxy
```

| Related Commands | Command                 | Description   |
|------------------|-------------------------|---|
|                  | <b>bandwidth</b>        | Specifies the maximum aggregate bandwidth for H.323 traffic from a zone to another zone, within a zone, or for a session in a zone. |
|                  | <b>bandwidth remote</b> | Specifies the total bandwidth for H.323 traffic between this gatekeeper and any other gatekeeper.                                   |
|                  | <b>h323 interface</b>   | Defines which port the proxy listens on.  |

# h323-annexg

To enable the border element (BE) on the gatekeeper and to enter BE configuration mode, use the **h323-annexg** command in gatekeeper configuration mode. To disable the BE, use the **no** form of this command.

**h323-annexg** *border-element-id* **cost** *cost* **priority** *priority*

**no h323-annexg**

| Syntax Description |                                 |   |
|--------------------|---------------------------------|---|
|                    | <i>border-element-id</i>        | Identifier of the Annex G border element that you are provisioning. Possible values are any International Alphabet 5 (IA5) string, without spaces and up to 20 characters in length. The <i>border-element-id</i> argument associates the gatekeeper with the BE identifier that is configured on the BE.         |
|                    | <b>cost</b> <i>cost</i>         | Cost associated with this Annex G border element. When a gatekeeper sends requests to remote zones and to the BE in its attempt to resolve an address, the remote zone or BE that resolves the address and has the lowest cost and highest priority is given preference. Range is from 1 to 99. Default is 50.    |
|                    | <b>priority</b> <i>priority</i> | Priority associated with this Annex G border element. When a gatekeeper sends requests to remote zones and to the BE in its attempt to resolve an address, the remote zone or BE that resolves the address and has the lowest cost and highest priority is given preference. Range is 1 to 99. The default is 50. |

| Defaults |                          |
|----------|--------------------------|
|          | Cost: 50<br>Priority: 50 |

| Command Modes |                          |
|---------------|--------------------------|
|               | Gatekeeper configuration |

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.2(2)XA  | This command was introduced.   |
|                 | 12.2(4)T   | This command was integrated into Cisco IOS Release 12.2(4)T. Support for the Cisco AS5300, Cisco AS5350, and Cisco AS5400 is not included in this release. |
|                 | 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
|                 | 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

| Usage Guidelines |   |
|------------------|---|
|                  | The Annex G border element must be configured using the <b>call-router</b> command before the gatekeeper can be associated with the Annex G border element. The <b>h323-annexg</b> command associates the gatekeeper with a previously configured Annex G border element and indicates that the gatekeeper should interact with the BE in address resolution. |

---

**Examples**

The following example enables Annex G configuration for a BE named “be20”:

```
Router(config-gk)# h323-annexg be20 cost 10 priority 40  
Router(config-gk-annexg)#
```

---

**Related Commands**

| <b>Command</b>     | <b>Description</b>   |
|--------------------|--|
| <b>call-router</b> | Enables the Annex G border element configuration commands.                   |
| <b>prefix</b>      | Restricts the prefixes for which the gatekeeper should query the Annex G BE. |

---

# h323-gateway voip bind srcaddr

To designate a source IP address for the voice gateway, use the **h323-gateway voip bind srcaddr** command in interface configuration mode. To remove the source IP address, use the **no** form of the command.

```
h323-gateway voip bind srcaddr ip-address
```

```
no h323-gateway voip bind srcaddr
```

---

**Syntax Description**

|            |  |
|------------|--|
| ip-address | Source IP address, in dotted-decimal notation. |
|------------|--|

---

---

**Defaults**

No default behaviors or values

---

**Command Modes**

Interface configuration

---

**Command History**

| Release  | Modification   |
|----------|--|
| 12.1(2)T | This command was introduced on the following platforms: Cisco 1700, Cisco 2500, Cisco 2600 series, Cisco 3600 series, Cisco 7200, Cisco S5300, and Cisco uBR924. |

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---

**Usage Guidelines**

You do not have to issue this command on the interface that you defined as the voice gateway interface (although it may be more convenient to do so). Use this command the interface that contains the IP address to which you want to bind.

---

**Examples**

The following example assigns a source IP address of 10.1.1.1:

```
h323-gateway voip bind srcaddr 10.1.1.1
```

# h323-gateway voip h323-id

To configure the H.323 name of the gateway that identifies this gateway to its associated gatekeeper, use the **h323-gateway voip h323-id** command in interface configuration mode. To disable this defined gateway name, use the **no** form of this command.

**h323-gateway voip h323-id** *interface-id*

**no h323-gateway voip h323-id** *interface-id*

## Syntax Description

|                     |  |
|---------------------|--|
| <i>interface-id</i> | H.323 name (ID) used by this gateway when this gateway communicates with its associated gatekeeper. Usually, this ID is the name of the gateway with the gatekeeper domain name appended to the end and in name@domain-name. |
|---------------------|--|

## Defaults

No gateway identification is defined

## Command Modes

Interface configuration

## Command History

| Release    | Modification   |
|------------|--|
| 11.3(6)NA2 | This command was introduced on the Cisco 2500 series, Cisco 3600 series, and Cisco AS5300. |
| 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
| 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.                              |

## Examples

The following example configures Ethernet interface 0.0 as the gateway interface. In this example, the gateway ID is GW13@cisco.com.

```
interface Ethernet0/0
 ip address 172.16.53.13 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id GK15.cisco.com ipaddr 172.16.53.15 1719
 h323-gateway voip h323-id GW13@cisco.com
 h323-gateway voip tech-prefix 13#
```

## Related Commands

| Command                              | Description   |
|--------------------------------------|---|
| <b>h323-gateway voip id</b>          | Defines the name and location of the gatekeeper for this gateway.             |
| <b>h323-gateway voip interface</b>   | Configures an interface as an H.323 interface.                                |
| <b>h323-gateway voip tech-prefix</b> | Defines the technology prefix that the gateway registers with the gatekeeper. |

## h323-gateway voip id

To define the name and location of the gatekeeper for a specific gateway, use the **h323-gateway voip id** command in interface configuration mode. To disable this gatekeeper identification, use the **no** form of this command.

```
h323-gateway voip id gatekeeper-id {ipaddr ip-address [port-number] | multicast}
  [priority number]
```

```
no h323-gateway voip id gatekeeper-id {ipaddr ip-address [port-number] | multicast}
  [priority number]
```

### Syntax Description

|                        |   |
|------------------------|---|
| <i>gatekeeper-id</i>   | H.323 identification of the gatekeeper. This value must exactly match the gatekeeper ID in the gatekeeper configuration. The recommended format is <i>name.doman-name</i> . |
| <b>ipaddr</b>          | The gateway uses an IP address to locate the gatekeeper.  |
| <i>ip-address</i>      | IP address used to identify the gatekeeper.   |
| <i>port-number</i>     | (Optional) Port number used.  |
| <b>multicast</b>       | Indicates that the gateway uses multicast to locate the gatekeeper.   |
| <b>priority number</b> | (Optional) Priority of this gatekeeper. Range is 1 to 127. The default is 127.  |

### Defaults

No gatekeeper identification is defined.

### Command Modes

Interface configuration

### Command History

| Release    | Modification   |
|------------|--|
| 11.3(6)NA2 | This command was introduced on the following platforms: Cisco 2500, Cisco 3600 series, and Cisco AS5300. |
| 12.0(7)T   | The <b>priority number</b> keyword and argument were added.  |
| 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
| 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

### Usage Guidelines

This command tells the H.323 gateway associated with this interface which H.323 gatekeeper to talk to and where to locate it. The gatekeeper ID configured here must exactly match the gatekeeper ID in the gatekeeper configuration.

You can configure one or two alternate gatekeepers.

The IP address of the gatekeeper does not have to be explicit; you can also use the multicast option. Multicasting saves bandwidth by forcing the network to replicate packets only when necessary. The multicast option, shown below, notifies every gatekeeper in the LAN using a universal address, 224.0.1.41.

```
h323-gateway voip id GK1 multicast
h323-gateway voip id GK2 ipaddr 172.18.193.65 1719
```

### Examples

The following example configures Ethernet interface 0.0 as the gateway interface and defines a specific gatekeeper for it. In this example, the gatekeeper ID is GK15.cisco.com, and its IP address is 172.16.53.15 (using port 1719).

```
interface Ethernet0/0
 ip address 172.16.53.13 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id GK15.cisco.com ipaddr 172.16.53.15 1719
 h323-gateway voip h323-id GW13@cisco.com
 h323-gateway voip tech-prefix 13#
```

### Related Commands

| Command                              | Description   |
|--------------------------------------|---|
| <b>h323-gateway voip h323-id</b>     | Configures the H.323 name of the gateway that identifies this gateway to its associated gatekeeper. |
| <b>h323-gateway voip interface</b>   | Configures an interface as an H.323 interface.  |
| <b>h323-gateway voip tech-prefix</b> | Defines the technology prefix that the gateway registers with the gatekeeper.                       |

# h323-gateway voip interface

To configure an interface as an H.323 gateway interface, use the **h323-gateway voip interface** command in interface configuration mode. To disable H.323 gateway functionality for an interface, use the **no** form of this command.

**h323-gateway voip interface**

**no h323-gateway voip interface**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Disabled

## Command Modes

Interface configuration

## Command History

| Release    | Modification   |
|------------|--|
| 11.3(6)NA2 | This command was introduced on the following platforms: Cisco 2500, Cisco 3600 series, and Cisco AS5300. |
| 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
| 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

## Examples

The following example configures Ethernet interface 0.0 as the gateway interface. In this example, the **h323-gateway voip interface** command configures this interface as an H.323 interface.

```
interface Ethernet0/0
 ip address 172.16.53.13 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id GK15.cisco.com ipaddr 172.16.53.15 1719
 h323-gateway voip h323-id GW13@cisco.com
 h323-gateway voip tech-prefix 13#
```

## Related Commands

| Command                              | Description   |
|--------------------------------------|---|
| <b>h323-gateway voip h323-id</b>     | Configures the H.323 name of the gateway that identifies this gateway to its associated gatekeeper. |
| <b>h323-gateway voip id</b>          | Defines the name and location of the gatekeeper for this gateway.                                   |
| <b>h323-gateway voip tech-prefix</b> | Defines the technology prefix that the gateway registers with the gatekeeper.                       |

# h323-gateway voip tech-prefix

To define the technology prefix that the gateway registers with the gatekeeper, use the **h323-gateway voip tech-prefix** command in interface configuration mode. To disable this defined technology prefix, use the **no** form of this command.

**h323-gateway voip tech-prefix** *prefix*

**no h323-gateway voip tech-prefix** *prefix*

## Syntax Description

|               |  |
|---------------|--|
| <i>prefix</i> | Numbers used as the technology prefixes. Each technology prefix can contain up to 11 characters. Although not strictly necessary, a pound sign (#) is frequently used as the last digit in a technology prefix. Valid characters are 0 to 9, the pound sign (#), and the asterisk (*). |
|---------------|--|

## Defaults

Disabled

## Command Modes

Interface configuration

## Command History

| Release    | Modification   |
|------------|--|
| 11.3(6)NA2 | This command was introduced on the following platforms: Cisco 2500, Cisco 3600 series, and Cisco AS5300. |
| 12.2(2)XB1 | This command was implemented on the Cisco AS5850.  |
| 12.2(11)T  | This command was integrated into Cisco IOS Release 12.2(11)T.  |

## Usage Guidelines

This command defines a technology prefix that the gateway then registers with the gatekeeper. Technology prefixes can be used as a discriminator so that the gateway can tell the gatekeeper that a certain technology is associated with a particular call (for example, 15# could mean a fax transmission), or it can be used like an area code for more generic routing. No standard currently defines what the numbers in a technology prefix mean. By convention, technology prefixes are designated by a pound sign (#) as the last character.



### Note

Cisco gatekeepers use the asterisk (\*) as a reserved character. If you are using Cisco gatekeepers, do not use the asterisk as part of the technology prefix.

**Examples**

The following example configures Ethernet interface 0.0 as the gateway interface. In this example, the technology prefix is defined as 13#.

```
interface Ethernet0/0
 ip address 172.16.53.13 255.255.255.0
 h323-gateway voip interface
 h323-gateway voip id GK15.cisco.com ipaddr 172.16.53.15 1719
 h323-gateway voip h323-id GW13@cisco.com
 h323-gateway voip tech-prefix 13#
```

**Related Commands**

| Command                            | Description   |
|------------------------------------|---|
| <b>h323-gateway voip h323-id</b>   | Configures the H.323 name of the gateway that identifies this gateway to its associated gatekeeper. |
| <b>h323-gateway voip id</b>        | Defines the name and location of the gatekeeper for this gateway.                                   |
| <b>h323-gateway voip interface</b> | Configures an interface as an H.323 interface.  |

# h323zone-id (voice source group)

To specify the zone identification for an incoming H.323 call, use the **h323zone-id** command in voice source-group configuration mode. To delete the zone ID, use the **no** form of this command.

**h323zone-id** *name*

**no h323zone-id** *name*

## Syntax Description

*name* Zone ID name. Maximum size is 127 alphanumeric characters.

## Defaults

No default behavior or values

## Command Modes

Voice source-group configuration

## Command History

| Release   | Modification                 |
|-----------|------------------------------|
| 12.2(11)T | This command was introduced. |

## Usage Guidelines

Use this command to specify the zone to use for incoming H.323 calls in the voice source-group definition. The zone ID name matches the source zone ID of an incoming H.323 call.



### Note

The SIP protocol does not support zone ID functionality.

## Examples

The following example associates zone ID “5400-gw1” with incoming calls for source IP group “northcal”:

```
Router(config)# voice source-group northcal
Router(cfg-source-grp)# h323zone-id 5400-gw1
```

## Related Commands

| Command                   | Description                             |
|---------------------------|---|
| <b>voice source-group</b> | Defines a source group for voice calls. |

## h450 h450-2 timeout

To specify timeout values for call transfers using the ITU-T H.450.2 standard, use the **h450 h450-2 timeout** command in H.323 voice service configuration mode. To return to the default, use the **no** form of this command.

**h450 h450-2 timeout** {T1 | T2 | T3 | T4} *milliseconds*

**no h450 h450-2 timeout** {T1 | T2 | T3 | T4}

### Syntax Description

|                     |   |
|---------------------|---|
| <b>T1</b>           | Timeout value to wait to identify a response.       |
| <b>T2</b>           | Timeout value to wait for call setup.               |
| <b>T3</b>           | Timeout value to wait to initiate a response.       |
| <b>T4</b>           | Timeout value to wait for setup of a response.      |
| <i>milliseconds</i> | Number of milliseconds. Range is from 500 to 60000. |

### Defaults

T1 timer is 2000 milliseconds.  
 T2 timer is 5000 milliseconds.  
 T3 timer is 5000 milliseconds.  
 T4 timer is 5000 milliseconds.

### Command Modes

H323 voice service configuration

### Command History

| Release    | Modification  |
|------------|---|
| 12.2(11)YT | This command was introduced.                                  |
| 12.2(15)T  | This command was integrated into Cisco IOS Release 12.2(15)T. |

### Usage Guidelines

Use this command with Cisco IOS Telephony Service (ITS) V2.1 or a later version.

This command is primarily used when the default settings for these timers do not match your network delay parameters. Refer to the ITU-T H.450.2 specification for more information on these timers.

### Examples

The following example defines a T1 timeout of 3000 milliseconds:

```
Router(config)# voice service voip
Router(conf-voi-serv) # h323
Router(conf-serv-h323) # h450 h450-2 timeout T1 3000
```

### Related Commands

| Command              | Description   |
|----------------------|---|
| <b>h323</b>          | Enables H.323 voice service configuration commands. |
| <b>voice service</b> | Enters voice-service configuration mode.            |

## h450 h450-3 timeout

To specify timeout values for call forwarding using the ITU-T H.450.3 standard, use the **h450 h450-3 timeout** command in H.323 voice service configuration mode. To return to the default, use the **no** form of this command.

**h450 h450-3 timeout T1** *milliseconds*

**no h450 h450-3 timeout T1**

### Syntax Description

|                     |  |
|---------------------|--|
| <b>T1</b>           | Timeout value to wait for a rerouting response.                      |
| <i>milliseconds</i> | Number of milliseconds. Range is from 500 to 60000. Default is 5000. |

### Defaults

T1 timer is 5000 milliseconds.

### Command Modes

H323 voice service configuration

### Command History

| Release    | Modification  |
|------------|---|
| 12.2(11)YT | This command was introduced.                                  |
| 12.2(15)T  | This command was integrated into Cisco IOS Release 12.2(15)T. |

### Usage Guidelines

Use this command with Cisco IOS Telephony Service (ITS) V2.1 or a later version.

This command is primarily used when the default setting for this timer does not match your network delay parameters. Refer to the ITU-T H.450.3 specification for more information on these timers.

### Examples

The following example defines a T1 timeout of 3000 milliseconds:

```
Router(config)# voice service voip
Router(conf-voi-serv)# h323
Router(conf-serv-h323)# h450 h450-3 timeout T1 3000
```

### Related Commands

| Command              | Description   |
|----------------------|---|
| <b>h323</b>          | Enables H.323 voice service configuration commands. |
| <b>voice service</b> | Enters voice-service configuration mode.            |

# hold-alert (ephone-dn)

To set audible alert notification on the Cisco IP phone for alerting the user about on-hold calls, use the **hold-alert** command in ephone-dn 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>    | How long, in seconds, the audible alert notification is repeated. |
| <b>idle</b>       | Alerts only during the idle state.                                |
| <b>originator</b> | Alerts always: on idle or busy state.                             |
| <b>shared</b>     | Alerts all phones that share the line during the idle state.      |

## Defaults

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

## Command Modes

Ephone-dn

## Command History

| Release   | Modification   |
|-----------|--|
| 12.2(2)XT | This command was introduced on the following platforms: Cisco 1750, Cisco 1751, Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420. |
| 12.2(8)T  | 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 | This command was implemented on the Cisco 2600-XM and Cisco 2691.  |
| 12.2(11)T | This command was implemented on the Cisco 1760.  |

## Usage Guidelines

The **hold-alert** command sets audible alert notification on the Cisco IP phone for alerting the user about on-hold calls. The *timeout* parameter 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 into the hold state, 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 into the hold state if the phone is in the idle state. If the phone is in use on another call, an audible beep is generated (call-waiting beep).



### Note

From the perspective of the originator of the call-on-hold, the **shared** and the **originator** keywords provide the same functionality.

**hold-alert (ephone-dn)**

When the **shared** keyword is enabled, a one-second ring burst is generated for all the idle phones that share the same line appearance. If the phones are in use, they do not get an audio beep alert. Only the phone that initiated the call, if busy, hears a call-waiting beep.

**Examples**

The following example sets audible alert notification to idle on the Cisco IP phone for alerting the user about on-hold calls:

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 1111
Router(config-ephone-dn)# name phone1
Router(config-ephone-dn)# hold-alert 10 idle
```

**Related Commands**

| Command          | Description                          |
|------------------|--------------------------------------|
| <b>ephone-dn</b> | Enters ephone-dn configuration mode. |

# hopcount

To specify the maximum number of border element (BE) hops through which an address resolution request can be forwarded, use the **hopcount** command in Annex G configuration mode. To restore the default, use the **no** form of this command.

**hopcount** *hopcount-value*

**no hopcount**

|                           |                       |   |
|---------------------------|-----------------------|---|
| <b>Syntax Description</b> | <i>hopcount-value</i> | Maximum number of BE hops through which an address resolution request can be forwarded. Range is from 1 to 255. The default is 7. |
|---------------------------|-----------------------|---|

|                 |        |
|-----------------|--------|
| <b>Defaults</b> | 7 hops |
|-----------------|--------|

|                      |                       |
|----------------------|-----------------------|
| <b>Command Modes</b> | Annex G configuration |
|----------------------|-----------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>  |
|------------------------|----------------|--|
|                        | 12.2(2)XA      | This command was introduced.   |
|                        | 12.2(4)T       | This command was integrated into Cisco IOS Release 12.2(4)T. This command does not support the Cisco AS5300, Cisco AS5350, and Cisco AS5400 in this release. |
|                        | 12.2(2)XB1     | This command was implemented on the Cisco AS5850.  |
|                        | 12.2(11)T      | This command was integrated into Cisco IOS Release 12.2(11)T.  |

**Examples** The following example sets address-resolution forwarding to a maximum of 10 hops:

```
Router(config)# call-router h323-annexg be20
Router(config-annexg)# hopcount 10
```

| <b>Related Commands</b> | <b>Command</b>                 | <b>Description</b>   |
|-------------------------|--------------------------------|--|
|                         | <b>call-router</b>             | Enables the Annex G border element configuration commands. |
|                         | <b>show call-router status</b> | Displays the Annex G BE status.                            |

# http client cache memory

To set the memory limits for the HTTP client cache, use the **http client cache memory** command in global configuration mode. To reset to the default, use the **no** form of this command.

**http client cache memory** {file size | pool size}

**no http client cache memory** {file | pool}

## Syntax Description

|                  |  |
|------------------|--|
| <b>file size</b> | Maximum file size, in kilobytes, allowed for caching. Any file that is larger is not cached. Range is from 1 to 10000. The default is 2.                             |
| <b>pool size</b> | Maximum memory pool size, in kilobytes, allowed for caching. Range is from 0 to 100000. The default is 100. Setting the memory pool size to 0 disables HTTP caching. |

## Defaults

File memory size: 2 KB  
Pool memory size: 100 KB

## Command Modes

Global configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.2(2)XB | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.2(11)T | This command was implemented on the Cisco 3640 and Cisco 3660.                   |

## Usage Guidelines

A larger cache size may permit caching of frequently used files, decreasing the fetching time between the client and server and increasing performance. Allocation of memory to increase file size or pool size does not reduce the amount of memory available. Cache memory is used only when needed, and afterward returns to being memory shared with other resources.

The amount of memory required for an expected level of performance depends on a number of factors, including the type of voice gateway (for example, Cisco AS5300 or Cisco AS5400).

The recommended maximum file size is 10 MB; the recommended maximum pool size is 100 MB.

The gateway might accept invalid characters such as “#” or “!” when you input the value for this command. The gateway ignores any invalid characters.



### Note

For more information on HTTP caching, refer to the specification on which it is based: RFC 2616, *Hypertext Transfer Protocol HTTP/1.1*, June 1999, IETF.

---

**Examples**

The following example sets the HTTP client cache memory pool to 50,000 KB:

```
http client cache memory pool 50000
```

The following example sets the HTTP client cache memory file to 8000 KB:

```
http client cache memory file 8000
```

---

**Related Commands**

| Command                                    | Description  |
|--|--|
| <b>http client cache refresh</b>           | Configures the refresh time for the HTTP client cache. |
| <b>http client connection idle timeout</b> | Configures the HTTP client connection.                 |
| <b>http client response timeout</b>        | Configures the HTTP client server response.            |
| <b>show http client cache</b>              | Displays current HTTP client cache information.        |

# http client cache refresh

To set the time limit for how long a cached entry is considered current by the HTTP client, use the **http client cache refresh** command in global configuration mode. To reset to the default, use the **no** form of this command.

**http client cache refresh** *seconds*

**no http client cache refresh**

|                           |                |  |
|---------------------------|----------------|--|
| <b>Syntax Description</b> | <i>seconds</i> | Lifetime of a cached HTTP entry, in seconds. Range is from 1 to 864000. The default is 86400 (24 hours). |
|---------------------------|----------------|--|

|                 |                           |
|-----------------|---------------------------|
| <b>Defaults</b> | 86,400 seconds (24 hours) |
|-----------------|---------------------------|

|                      |                      |
|----------------------|----------------------|
| <b>Command Modes</b> | Global configuration |
|----------------------|----------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>  |
|------------------------|----------------|--|
|                        | 12.2(2)XB      | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
|                        | 12.2(11)T      | This command was implemented on the Cisco 3640 and Cisco 3660.                   |

**Usage Guidelines**

This command must be used to set the refresh time only if the HTTP server does not provide the necessary information in the HTTP header to calculate this value.

The gateway might accept invalid characters such as “#” or “!” when you input the value for this command. The gateway ignores any invalid characters.

When a request is made to an expired cached entry (that is, an entry that is the same age as or older than the refresh time), the HTTP client sends the server a conditional request for an update.

An expired entry is not automatically updated unless a request from the user hits the same cached entry. Expired entries are not cleaned up until 70 percent or more of the cache pool memory is consumed; then all expired entries that lack a user reference are deleted from the cache table.



**Note**

For more information on HTTP caching, refer to the specification on which it is based: RFC 2616, *Hypertext Transfer Protocol HTTP/1.1*, June 1999, IETF.

**Examples**

The following example shows the HTTP client cache refresh to be 10 seconds:

```
http client cache refresh 10
```

**Related Commands**

| <b>Command</b>                             | <b>Description</b>                                      |
|--|---|
| <b>http client cache memory</b>            | Configures the memory limits for the HTTP client cache. |
| <b>http client connection idle timeout</b> | Configures the HTTP client connection.                  |
| <b>http client response timeout</b>        | Configures the HTTP client server response.             |
| <b>show http client cache</b>              | Displays current HTTP client cache information.         |

# http client connection idle timeout

To set the number of seconds for which the HTTP client waits before terminating an idle connection, use the **http client connection idle timeout** command in global configuration mode. To reset to the default, use the **no** form of this command.

**http client connection idle timeout** *seconds*

**no http client connection idle timeout**

## Syntax Description

|                |   |
|----------------|---|
| <i>seconds</i> | How long, in seconds, the HTTP client waits before terminating an idle connection. Range is from 1 to 60. The default is 2. |
|----------------|---|

## Defaults

2 seconds

## Command Modes

Global configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.2(2)XB | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.2(11)T | This command was implemented on the Cisco 3640 and Cisco 3660.                   |

## Usage Guidelines

The setting of this command determines when the HTTP client is disconnected from the HTTP server, which is necessary when the server does not disconnect the client after a desirable length of time.

The default value is recommended and should normally not be changed.

In the **show http client connection** command output, this parameter is displayed as *connection idle timeout*.

The gateway might accept invalid characters such as “#” or “!” when you input the value for this command. The gateway ignores any invalid characters.

## Examples

The following example sets the timeout to 40 seconds:

```
http client connection idle timeout 40
```

## Related Commands

| Command                             | Description  |
|-------------------------------------|--|
| <b>http client cache memory</b>     | Configures the HTTP client cache.                    |
| <b>http client response timeout</b> | Configures the HTTP client server response.          |
| <b>show http client connection</b>  | Displays current HTTP client connection information. |

# http client connection persistent

To enable HTTP persistent connections so that multiple files can be loaded using the same connection, use the **http client connection persistent** command in global configuration mode. To disable HTTP persistent connections, use the **no** form of this command.

**http client connection persistent**

**no http client connection persistent**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Persistent connections are enabled

## Command Modes

Global configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.2(2)XB | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.2(11)T | This command was implemented on the Cisco 3640 and Cisco 3660.                   |

## Usage Guidelines

The setting of this command determines whether the HTTP client requests a keepalive or closed connection from the server. The HTTP server is responsible for granting or denying the keepalive connection request from the client.

Enabling persistent connections is recommended.

In the **show http client connection** command output, activation of this command is displayed as *persistent connection*.

## Examples

The following example shows the HTTP client connection **persistent** parameter to be enabled:

```
http client connection persistent
```

## Related Commands

| Command                             | Description  |
|-------------------------------------|--|
| <b>http client cache memory</b>     | Configures the HTTP client cache.                    |
| <b>http client response timeout</b> | Configures the HTTP client server response.          |
| <b>show http client connection</b>  | Displays current HTTP client connection information. |

# http client connection timeout

To set the number of seconds for which the HTTP client waits for a server to establish a connection before abandoning its connection attempt, use the **http client connection timeout** command in global configuration mode. To reset to the default, use the **no** form of this command.

**http client connection timeout** *seconds*

**no http client connection timeout**

|                           |                |   |
|---------------------------|----------------|---|
| <b>Syntax Description</b> | <i>seconds</i> | How long, in seconds, the HTTP client waits for a server to establish a connection before abandoning its connection attempt. Range is from 1 to 60. The default is 5. |
|---------------------------|----------------|---|

|                 |           |
|-----------------|-----------|
| <b>Defaults</b> | 5 seconds |
|-----------------|-----------|

|                      |                      |
|----------------------|----------------------|
| <b>Command Modes</b> | Global configuration |
|----------------------|----------------------|

| <b>Command History</b> | <b>Release</b>   | <b>Modification</b>  |
|------------------------|--|--|
|                        | 12.2(2)XB  | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.2(11)T              | This command was implemented on the Cisco 3640 and Cisco 3660. |  |

**Usage Guidelines**

The setting of this command determines when the HTTP client abandons its attempt to connect to the server, which is necessary when a connection to the server cannot be established after a desirable length of time.

The default value is recommended and should normally not be changed.

In the **show http client connection** command output, activation of this command is displayed as *initial socket connection timeout*.

The gateway might accept invalid characters such as “#” or “!” when you input the value for this command. The gateway ignores any invalid characters.

**Examples**

The following example shows the HTTP client connection **timeout** parameter to be 20 seconds:

```
http client connection timeout 20
```

| <b>Related Commands</b> | <b>Command</b>                      | <b>Description</b>                                   |
|-------------------------|-------------------------------------|--|
|                         | <b>http client cache memory</b>     | Configures the HTTP client cache.                    |
|                         | <b>http client response timeout</b> | Configures the HTTP client server response.          |
|                         | <b>show http client connection</b>  | Displays current HTTP client connection information. |

# http client response timeout

To configure the number of seconds for which the HTTP client waits for a server response, use the **http client response timeout** command in global configuration mode. To reset to the default, use the **no** form of this command.

**http client response timeout** *seconds*

**no http client response timeout**

|                           |                |   |
|---------------------------|----------------|---|
| <b>Syntax Description</b> | <i>seconds</i> | How long, in seconds, the HTTP client waits for a response from the server after making a request. Range is from 1 to 300. The default is 10. |
|---------------------------|----------------|---|

|                 |            |
|-----------------|------------|
| <b>Defaults</b> | 10 seconds |
|-----------------|------------|

|                      |                      |
|----------------------|----------------------|
| <b>Command Modes</b> | Global configuration |
|----------------------|----------------------|

| <b>Command History</b> | <b>Release</b>   | <b>Modification</b>  |
|------------------------|--|--|
|                        | 12.2(2)XB  | This command was introduced on the Cisco AS5300, Cisco AS5350, and Cisco AS5400. |
| 12.2(11)T              | This command was implemented on the Cisco 3640 and Cisco 3660. |  |

**Usage Guidelines**

This command is used to adjust the time allowed for the HTTP client to wait for the server to respond to a request before declaring a timeout error. Under normal conditions, the default of 10 seconds is sufficient. If more or less server response time is desired, use this command. For example, if your server responds slowly to the HTTP client requests, you may want to set this timer to wait longer.

In the **show running-config** command output, the value is displayed only if it is set to other than the default.

The gateway might accept invalid characters such as “#” or “!” when you input the value for this command. The gateway ignores any invalid characters.

**Examples**

The following example shows the HTTP client response timeout to be 5 seconds:

```
http client response timeout 5
```

| <b>Related Commands</b> | <b>Command</b>                     | <b>Description</b>                   |
|-------------------------|------------------------------------|--------------------------------------|
|                         | <b>show http client cache</b>      | Displays the HTTP client cache.      |
|                         | <b>show http client connection</b> | Displays the HTTP client connection. |

# hunt-scheme least-idle

To enable the least-idle search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme least-idle** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of the command.

**hunt-scheme least-idle** [**both** | **even** | **odd**]

**no hunt-scheme**

## Syntax Description

|             |  |
|-------------|--|
| <b>both</b> | (Optional) Searches both even- and odd-numbered channels.  |
| <b>even</b> | Searches for an idle even-numbered channel with the shortest idle time. If no idle even-numbered channel is available, an odd-numbered channel with the longest idle time is sought. |
| <b>odd</b>  | Searches for an idle odd-numbered channel with the shortest idle time. If no idle odd-numbered channel is available, an even-numbered channel with the longest idle time is sought.  |

## Defaults

Hunt scheme: least-used  
Channel number: **both**

## Command Modes

Trunk group configuration

## Command History

| Release   | Modification                 |
|-----------|------------------------------|
| 12.2(11)T | This command was introduced. |

## Usage Guidelines

Use the least-idle hunt scheme in situations where you want to reuse the most recently selected channel.

The least-idle hunt scheme looks for the channel that has just become available. The software looks at all the channels in the trunk group, regardless of member precedence, and selects the channel that has most recently come into the available queue.

If no channels are available at the time of the call request, the software returns a cause code determined by the application configured on the inbound dial peer.

If the **even** quantifier is set, the even-numbered channel with the shortest idle time is selected. If the **odd** quantifier is set, the odd-numbered channel with the shortest idle time is selected. If **both** is set, the most recently available channel, regardless of channel number, is selected.

## Examples

The following example searches for an even-numbered idle channel having the shortest idle time within a trunk group:

```
Router(config)# trunk group northwestsales
Router(config-trunk-group)# hunt-scheme least-idle even
```

**Related Commands**

| <b>Command</b>                  | <b>Description</b>                    |
|---------------------------------|---------------------------------------|
| <b>hunt-scheme longest-idle</b> | Enables the longest-idle hunt scheme. |
| <b>trunk group</b>              | Initiates a trunk group profile.      |

# hunt-scheme least-used

To enable the least used search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme least-used** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of the command.

**hunt-scheme least-used** [**both** | **even** | **odd** [**up** | **down**]]

**no** hunt-scheme

## Syntax Description

|             |   |
|-------------|---|
| <b>both</b> | Searches both even- and odd-numbered channels.  |
| <b>even</b> | Searches for an idle even-numbered channel. If no idle even-numbered channels are available, an odd-numbered channel is sought. |
| <b>odd</b>  | Searches for an idle odd-numbered channel. If no idle odd-numbered channels are available, an even-numbered channel is sought.  |
| <b>up</b>   | Searches channels in ascending order based within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .      |
| <b>down</b> | Searches channels in descending order within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .           |

## Defaults

Hunt scheme: least-used  
Channel number: both  
Direction: up

## Command Modes

Trunk group configuration

## Command History

| Release   | Modification                 |
|-----------|------------------------------|
| 12.2(11)T | This command was introduced. |

## Usage Guidelines

The least-used search method selects an idle channel from a trunk group member that has the highest number of available channels at the time that the hunt request is initiated. The high number of unused channels indicates that the trunk group member has not been very active in comparison with other trunk group members.

After selecting the trunk group member, the software searches the channels by direction and then by channel number:

- If **even up** is set, the software searches the trunk group members in ascending order of preference to determine which member has the highest number of available even-numbered channels. If no available even-numbered channel is found, the software searches the members again in ascending order for the member that has the highest number of available odd-numbered channels.

- If **odd up** is set, the software searches the trunk group members in ascending order of preference to determine which member has the highest number of available odd-numbered channels. If no available odd-numbered channel is found, the software searches the members again in ascending order for the member that has the highest number of available even-numbered channels.
- If **even down** is set, the software searches in descending order of preference to determine which member has the highest number of available even-numbered channels. If no available even-numbered channel is found, the software searches the members again in descending order for the member that has the highest number of available odd-numbered channels.
- If **odd down** is set, the software searches in descending order of preference to determine which member has the highest number of available odd-numbered channels. If no available odd-numbered channel is found, the software searches the members again in descending order for the member that has the highest number of available even-numbered channels.

If no channel is available in any of the trunk group members, the software returns the standard “no service” message.

### Examples

The following example searches in ascending order for an even-numbered idle channel in a trunk group member having the highest number of available channels:

```
Router(config)# trunk group northwetsales
Router(config-trunk-group)# hunt-scheme least-used even up
```

### Related Commands

| Command            | Description                      |
|--------------------|----------------------------------|
| <b>trunk group</b> | Initiates a trunk group profile. |

# hunt-scheme longest-idle

To enable the longest-idle search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme longest-idle** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of this command.

**hunt-scheme longest-idle** [**both** | **even** | **odd**]

**no hunt-scheme**

## Syntax Description

|             |  |
|-------------|--|
| <b>both</b> | Searches both even- and odd-numbered channels.   |
| <b>even</b> | Searches for an idle even-numbered channel with the longest idle time. If no idle even-numbered channel is available, an odd-numbered channel with the shortest idle time is sought. |
| <b>odd</b>  | Searches for an idle odd-numbered channel with the longest idle time. If no idle odd-numbered channel is available, an even-numbered channel with the shortest idle time is sought.  |

## Defaults

Hunt scheme: least-used  
Channel number: both

## Command Modes

Trunk group configuration

## Command History

| Release   | Modification                 |
|-----------|------------------------------|
| 12.2(11)T | This command was introduced. |

## Usage Guidelines

The longest-idle hunt schemes attempts to route a call using a channel from the trunk group member that has been idle for the longest time.

If the **even** qualifier is set, the search looks for an even-numbered idle channel from the trunk group member that has been idle the longest. If no even-numbered idle channel is found, the search looks for an odd-numbered idle channel from the trunk group member that has the shortest idle time.

If the **odd** qualifier is set, the search begins looking for an odd-numbered channel from the trunk group member that has been idle the longest. If no odd-numbered idle channel is found, the search looks for an even-numbered idle channel from the trunk group member that has the shortest idle time.

If the **both** qualifier is set, the search looks for any (odd or even) idle channel in the trunk group member that has been idle the longest.

If no channel is available in any of the trunk group members, the software returns the standard “no service” message.

---

**Examples**

The following example searches in ascending order for an even-numbered idle channel in the trunk group member having the largest idle time:

```
Router(config)# trunk group northwestsales
Router(config-trunk-group)# hunt-scheme longest-idle even
```

---

**Related Commands**

| Command                       | Description                         |
|-------------------------------|-------------------------------------|
| <b>hunt-scheme least-idle</b> | Enables the least-idle hunt scheme. |
| <b>trunk group</b>            | Initiates a trunk group profile.    |

# hunt-scheme random

To enable the random search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme random** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of this command.

**hunt-scheme random**

**no hunt-scheme**

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

**Defaults** Hunt scheme: least-used

**Command Modes** Trunk group configuration

| Command History | Release   | Modification                 |
|-----------------|-----------|------------------------------|
|                 | 12.2(11)T | This command was introduced. |

**Usage Guidelines** The random search method selects trunk group member at random for an idle channel. After the trunk group member is selected, a channel is chosen at random. If that channel is not available, another trunk group member is chosen at random, and one of its channels is randomly chosen.

If no channel is available, the software returns the standard “no service” message.

**Examples** The following example searches trunk group members in random order for an idle channel:

```
Router(config)# trunk group northwestsales
Router(config-trunk-group)# hunt-scheme random
```

| Related Commands | Command            | Description                      |
|------------------|--------------------|----------------------------------|
|                  | <b>trunk group</b> | Initiates a trunk group profile. |

# hunt-scheme round-robin

To enable the round robin search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of this command.

**hunt-scheme round-robin [both | even | odd [up | down]]**

**no hunt-scheme**

| Syntax Description | both        | Searches for an idle channel among both even- and odd-numbered channels at the same precedence.                             |
|--------------------|-------------|---|
|                    | <b>even</b> | Searches for an idle even-numbered channel. If no idle even-numbered channel is available, an odd-numbered channel is used. |
|                    | <b>odd</b>  | Searches for an idle odd-numbered channel. If no idle odd-numbered channel is available, an even-numbered channel is used.  |
|                    | <b>up</b>   | Searches channels in ascending order based within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .  |
|                    | <b>down</b> | Searches channels in descending order within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .       |

| Defaults | Hunt scheme: least-used<br>Channel number: both |
|----------|---|
|----------|---|

| Command Modes | Trunk group configuration |
|---------------|---------------------------|
|---------------|---------------------------|

| Command History | Release   | Modification                 |
|-----------------|-----------|------------------------------|
|                 | 12.2(11)T | This command was introduced. |

**Usage Guidelines** The round-robin hunt scheme searches trunk group members one after the other for an idle channel. The history of the most recently used trunk group member is saved to identify the next trunk group member to use for a new idle channel request. This method tries to balance the load of channel use across trunk group members.

For example, suppose a trunk group has three trunk group members: A, B, and C. Trunk group member A has the highest preference, B has the next highest, and C has the lowest. The software starts the search with A:

- If A has an idle channel, that channel is used, and the next request for an idle channel starts with B.
- If A does not have an idle channel, the search moves to B:
- If B has an idle channel, that channel is used, and the next request for an idle channel starts with C.
- If B does not have an idle channel, the search moves to C:
- If C has an idle channel, that channel is used, and the next request for an idle channel starts with A.

- If C does not have an idle channel, the search returns to A.

If none of the trunk group members has an idle channel available for the current channel request, the software returns the standard “no service” message.

Compare this hunt scheme with **hunt-scheme sequential**, in which the next request for an idle channel always starts with the first trunk group member of the trunk group, regardless of where the last idle channel was found.

If the **even** qualifier is set, the search looks for an even-numbered idle channel starting with the trunk group member having the highest preference. If no even-numbered idle channel is found, the search looks for an even-numbered idle channel in the next trunk group member. If no even-numbered idle channel is found in any trunk group member, the search repeats the process for an odd-numbered channel.

If the **odd** qualifier is set, the search begins looking for an odd-numbered channel, and if none is found in any of the trunk group members, the search repeats the process for an even-numbered channel.

If the **both** qualifier is set, the search looks for any idle channel in the trunk group member.

### Examples

The following example searches for an even-numbered idle channel starting with the trunk group member next in order after the previously used member:

```
Router(config)# trunk group northwestregion
Router(config-trunk-group)# hunt-scheme round-robin even
```

### Related Commands

| Command                       | Description                                      |
|-------------------------------|--|
| <b>hunt-scheme sequential</b> | Enables a “sequential idle channel” hunt scheme. |
| <b>trunk group</b>            | Initiates a trunk group profile definition.      |

# hunt-scheme sequential

To specify the sequential search method for finding an available channel in a trunk group for outgoing calls, use the **hunt-scheme sequential** command in trunk group configuration mode. To delete the hunt scheme from the trunk group profile, use the **no** form of this command.

**hunt-scheme sequential** [**both** | **even** | **odd** [**up** | **down**]]

**no hunt-scheme**

| Syntax Description | both        | Searches both even- and odd-numbered channels.  |
|--------------------|-------------|---|
|                    | <b>even</b> | Searches for an idle even-numbered channel. If no idle even-numbered channel is available, an odd-numbered channel is sought. |
|                    | <b>odd</b>  | Searches for an idle odd-numbered channel. If no idle odd-numbered channel is available, an even-numbered channel is sought.  |
|                    | <b>up</b>   | Searches channels in ascending order based within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .    |
|                    | <b>down</b> | Searches channels in descending order within a trunk group member. Used with <b>even</b> , <b>odd</b> , <b>both</b> .         |

| Defaults | Hunt scheme: least-used<br>Channel number: both<br>Direction: up |
|----------|--|
|----------|--|

| Command Modes | Trunk group configuration |
|---------------|---------------------------|
|---------------|---------------------------|

| Command History | Release   | Modification                 |
|-----------------|-----------|------------------------------|
|                 | 12.2(11)T | This command was introduced. |

**Usage Guidelines** The sequential hunt scheme selects an idle channel, starting with the trunk group member that has the highest preference within the trunk group. Regardless of where the last idle channel was found, an idle channel request starts searching with this highest-preference trunk group member.

For example, suppose a trunk group has three trunk group members: A, B, and C. Trunk group member A has the highest preference, B has the next highest, and C has the lowest. The software starts the search with trunk group A:

- If A has an idle channel, that channel is used, and the next request for an idle channel starts with A.
- If A does not have an idle channel, the search moves to B:
- If B has an idle channel, that channel is used, and the next request for an idle channel starts with A.
- If B does not have an idle channel, the search moves to C:
- If C has an idle channel, that channel is used, and the next request for an idle channel starts with A.
- If C does not have an idle channel, the software returns the standard “no service” message.

Compare this hunt scheme with **hunt-scheme round-robin**, where the next request for an idle channel starts with the next unused trunk group member of the trunk group.

If the **even** qualifier is set, the search looks for an even-numbered idle channel starting with the trunk group member having the highest preference. If no even-numbered idle channel is found, the search looks for an even-numbered idle channel in the next trunk group member. If no even-numbered idle channel is found, the search repeats the process for an odd-numbered idle channel.

If the **odd** qualifier is set, the search begins looking for an odd-numbered channel, starting with the trunk group member having the highest preference. If none is found in any of the trunk group members, the search repeats the process for an even-numbered channel.

If the **both** qualifier is set, the search looks for any idle channel in the trunk group member.

Use the sequential hunt scheme in situations that benefit from a predictable channel allocation. In addition, if one end of the routing path is defined with **sequential even up** and the other end with **sequential odd up**, glare conditions are avoided.

---

### Examples

The following example searches in ascending order for an even-numbered idle channel starting with the trunk group member of highest precedence:

```
Router(config)# trunk group northwestsales
Router(config-trunk-group)# hunt-scheme sequential even up
```

---

### Related Commands

| Command                        | Description                                 |
|--------------------------------|---|
| <b>hunt-scheme round-robin</b> | Enables a round-robin hunt scheme.          |
| <b>trunk group</b>             | Initiates a trunk group profile definition. |

# huntstop

To disable all dial-peer hunting if a call fails when using hunt groups, use the **huntstop** command in dial-peer configuration mode. To reenable dial-peer hunting, use the **no** form of this command.

**huntstop**

**no huntstop**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Disabled

## Command Modes

Dial-peer configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.0(5)T  | This command was introduced on the Cisco MC3810.                         |
| 12.0(7)XK | This command was implemented on Cisco 2600 series and Cisco 3600 series. |
| 12.1(2)T  | This command was integrated into Cisco IOS Release 12.1(2)T.             |

## Usage Guidelines

Once you enter this command, no further hunting is allowed if a call fails on the specified dial peer.



### Note

This command can be used with all types of dial peers.

## Examples

The following example shows how to disable dial-peer hunting on a specific dial peer:

```
dial peer voice 100 vofr
  huntstop
```

The following example shows how to reenable dial-peer hunting on a specific dial peer:

```
dial peer voice 100 vofr
  no huntstop
```

## Related Commands

| Command                | Description  |
|------------------------|--|
| <b>dial-peer voice</b> | Enters dial-peer configuration mode and specifies the method of voice-related encapsulation. |

# huntstop (cm-fallback)

To set the huntstop attribute for the dial peers associated with the Cisco IP phone dial peers created during CallManager fallback, use the **huntstop** command in call-manager-fallback configuration mode. To disable huntstop, use the **no** form of this command.

**huntstop**

**no huntstop**

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

**Defaults** Huntstop is enabled by default

**Command Modes** Call-manager-fallback configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.1(5)YD | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420. |
| 12.2(2)XT | This command was implemented on Cisco 1750 and Cisco 1751.   |
| 12.2(8)T  | 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 | This command was implemented on the Cisco 2600-XM and Cisco 2691.  |
| 12.2(11)T | This command was implemented on the Cisco 1760.  |

## Usage Guidelines

In call-manager-fallback configuration mode, the huntstop attribute by default is set uniformly to all Cisco IP phone lines (for example, to all or to none).



### Note

Use the **no huntstop** command only if you want to disable huntstop.

## Examples

The following example shows how to disable huntstop for all the Cisco IP phones:

```
Router (config) # call-manager-fallback
Router (config-cm-fallback) # no huntstop
```

## Related Commands

| Command                      | Description  |
|------------------------------|--|
| <b>call-manager-fallback</b> | Enables SRS Telephony feature support and enters call-manager-fallback configuration mode. |
| <b>huntstop (dial-peer)</b>  | Disables all further dial-peer hunting if a call fails using hunt groups.                  |

# huntstop (ephone-dn)

To set the huntstop attribute for the dial peers associated with the Cisco IP phone lines, use the **huntstop** command in ephone-dn configuration mode. To disable huntstop, use the **no** form of this command.

**huntstop**

**no huntstop**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Huntstop is set by default

## Command Modes

Ephone-dn configuration

## Command History

| Release   | Modification   |
|-----------|--|
| 12.1(5)YD | This command was introduced on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco IAD2420. |
| 12.2(2)XT | This command was implemented on Cisco 1750 and Cisco 1751.   |
| 12.2(8)T  | 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 | This command was implemented on the Cisco 2600-XM and Cisco 2691.  |
| 12.2(11)T | This command was implemented on the Cisco 1760.  |

## Usage Guidelines

In the ephone-dn configuration mode, the huntstop attribute is set by default for the dial peers associated with the Cisco IP phone lines on a line-by-line basis. This allows you to prevent hunt-on-busy from redirecting a call to a busy phone into a dial-peer setup with a catch-all default destination.



### Note

Use the **no huntstop** command only if you want to disable huntstop.

## Examples

The following example shows how to disable huntstop for the destination dial peer with the extension 5001. The huntstop for the dial peer is set to OFF and prevents calls to extension 5001 from being rerouted to the on-net H.323 dial-peer for 5... (the three decimal points are used as wildcards) destination when 5001 is busy.

```
Router(config)# ephone-dn 1
Router(config-ephone-dn)# number 5001
Router(config-ephone-dn)# no huntstop
```

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

```
ephone-dn 1
number 5001
```

■ **huntstop (ephone-dn)**

```

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

dial-peer voice 5000 voip
destination-pattern 5...
session target ipv4:223.223.223.223

```

In the previous example, the huntstop attribute 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 the 5001 extension is busy.

The following example shows another instance in which huntstop is not desired and is explicitly disabled:

```

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

```

In this example, ephone 4 is configured with two lines, each with the same extension number 5001. This is done in order to allow 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) on ephone 4 when the ephone-dn 1 line is busy.

The 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 service (POTS) dial-peer for extension 6000 also has the dial-peer huntstop attribute explicitly set to prevent further hunting.

**Related Commands**

| Command                     | Description   |
|-----------------------------|---|
| <b>ephone-dn</b>            | Enters ephone-dn configuration mode.                                      |
| <b>huntstop (dial-peer)</b> | Disables all further dial-peer hunting if a call fails using hunt groups. |