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backhaul-session-manager

To enter backhaul session manager configuration mode, use the **backhaul-session-manager**command in global configuration mode.

backhaul-session-manager

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values

Command Modes

Global configuration (config)

Command History

Release	Modification
12.1(1)T	This command was introduced.
12.2(2)T	This command was implemented on the Cisco 7200.
12.2(4)T	This command was implemented on the following platforms: Cisco 2600 series, Cisco 3600 series, and Cisco MC3810.
12.2(2)XB	This command was implemented on the Cisco AS5350 and Cisco AS5400.
12.2(2)XB1	This command was implemented on the Cisco AS5850 platform.
12.2(8)T	This command was implemented on Cisco IAD2420. Support for the Cisco AS5350, Cisco AS5400, and Cisco AS5850 is not included in this release.
12.2(11)T	This command is supported on the Cisco AS5350, Cisco AS5400, and Cisco AS5850 in this release.

Usage Guidelines

Use the **backhaul-session-manager** command to switch to backhaul session manager configuration mode from global configuration mode. Use the **exit** command to exit backhaul session manager configuration mode and return to global configuration mode.

Examples

The following example enters backhaul session manager configuration mode:

```
Router(config)# backhaul-session-manager
Router(config-bsm)#
```

Related Commands

Command	Description
clear backhaul-session-manager group	Resets the statistics or traffic counters for a specified session group.
clear rudpv1 statistics	Clears the RUDP statistics and failure counters.

Command	Description
group	Creates a session group and associates it with a specified session set.
group auto-reset	Configures the maximum auto-reset value.
group cumulative-ack	Configures maximum cumulative acknowledgments.
group out-of-sequence	Configures maximum out-of-sequence segments that are received before an EACK is sent.
group receive	Configures maximum receive segments.
group retransmit	Configures maximum retransmits.
group timer cumulative-ack	Configures cumulative acknowledgment timeout.
group timer keepalive	Configures keepalive (or null segment) timeout.
group timer retransmit	Configures retransmission timeout.
group timer transfer	Configures state transfer timeout.
isdn bind-l3	Configures the ISDN serial interface for backhaul.
session group	Associates a transport session with a specified session group.
set	Creates a fault-tolerant or non-fault-tolerant session set with the client or server option.
show backhaul-session-manager group	Displays status, statistics, or configuration of a specified or all session groups.
show backhaul-session-manager session	Displays status, statistics, or configuration of sessions.
show backhaul-session-manager set	Displays session groups associated with a specific or all session sets.
show rudpv1	Displays RUDP statistics.

bandwidth (dial peer)

To set the maximum bandwidth on a POTS dial peer for an H.320 call, use the **bandwidth** command in dial peer configuration mode. To remove the bandwidth setting, use the **no** form of this command.

bandwidth maximum *value* [**maximum** *value*]
no bandwidth

Syntax Description

maximum *value*	Sets the maximum bandwidth for an H.320 call on a POTS dial peer. The range is 64 to 1024, entered in increments of 64 kilobits per second (kbps). The default is 64.
minimum *value*	(Optional)Sets the minimum bandwidth. Acceptable values are 64 kbps or **minimum***value*=**maximum***value*.

Command Default

No maximum bandwidth is set.

Command Modes

Dial peer configuration (config-dial-peer)

Command History

Release	Modification
12.4(11)T	This command was introduced.

Usage Guidelines

Use this command to set the maximum and minimum bandwidth for an H.320 POTS dial-peer. Only the maximum bandwidth is required. The value must be entered in increments of 64 kbps. The minimum bandwidth setting is optional, and the value must be either 64 kbps or equal to the maximum value setting.

Examples

The following example shows configuration for POTS dial peer 200 with a maximum bandwidth of 1024 kbps:

```
dial-peer voice 200 pots
 bandwidth maximum 1024
```

The following example shows configuration for POTS dial peer 11 with a maximum bandwidth of 640 and a minimum of 64:

```
dial-peer voice 11 pots
 bandwidth maximum 640 minimum 64
```

Related Commands

Command	Description
bandwidth	Specifies the maximum aggregate bandwidth for H.323 traffic and verifies the available bandwidth of the destination gatekeeper.

bandwidth

To specify the maximum aggregate bandwidth for H.323 traffic and verify the available bandwidth of the destination gatekeeper, use the**bandwidth**command in gatekeeper configuration mode. To disable maximum aggregate bandwidth, use the **no** form of this command.

bandwidth {**interzone** | **total** | **session**} {**default** | **zone** *zone-name*} *bandwidth-size*
no bandwidth {**interzone** | **total** | **session**} {**default** | **zone** *zone-name*}

Syntax Description

interzone	Total amount of bandwidth for H.323 traffic from the zone to any other zone.
total	Total amount of bandwidth for H.323 traffic allowed in the zone.
session	Maximum bandwidth allowed for a session in the zone.
default	Default value for all zones.
zone	A particular zone.
zone-name	Name of the particular zone.
bandwidth-size	Maximum bandwidth, in kbps. For**interzone** and **total**, range : 1 to 10000000. For **session**, range:1 to 5000.

Command Default

Maximum aggregate bandwidth is unlimited by default.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
11.3(2)NA	This command was introduced on the Cisco 2500, Cisco 3600 series and the Cisco AS5300.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T. The **bandwidth** command replaced the**zonebw**command.
12.1(5)XM	The **bandwidth** command was recognized without using the **zonegatekeeper** command.
12.2(2)T	The changes in Cisco IOS Release 12.1(5)XM were integrated into Cisco IOS Release 12.2(2)T.
12.2(2)XB1	This command was implemented on the Cisco AS5850.

Usage Guidelines

This command, in conjunction with the **bandwidthremote**command, replaces the **zonegatekeeper**command.

To specify maximum bandwidth for traffic between one zone and any other zone, use the **default** keyword with the **interzone**keyword.

To specify maximum bandwidth for traffic within one zone or for traffic between that zone and another zone (interzone or intrazone), use the**default** keyword with the **total** keyword.

To specify maximum bandwidth for a single session within a specific zone, use the**zone** keyword with the**session** keyword.

To specify maximum bandwidth for a single session within any zone, use the **default** keyword with the **session** keyword.

Examples

The following example configures the default maximum bandwidth for traffic between one zone and another zone to 5000 kbps:

```
gatekeeper
 bandwidth interzone default 5000
```

The following example configures the default maximum bandwidth for all zones to 5000 kbps:

```
gatekeeper
 bandwidth total default 5000
```

The following example configures the default maximum bandwidth for a single session within any zone to 2000 kbps:

```
gatekeeper
 bandwidth session default 2000
```

The following example configures the default maximum bandwidth for a single session with a specific zone to 1000 kbps:

```
gatekeeper
 bandwidth session zone example 1000
```

Related Commands

Command	Description
bandwidth check-destination	Enables the gatekeeper to verify available bandwidth resources at the destination endpoint.
bandwidth remote	Specifies the total bandwidth for H.323 traffic between this gatekeeper and any other gatekeeper.
h323 interface	Defines on which port the proxy listens.
h323 t120	Enables the T.120 capabilities on the router and specifies bypass or proxy mode.

bandwidth check-destination

To enable the gatekeeper to verify available bandwidth resources at the destination endpoint, use the**bandwidthcheck-destinationcommandin**gatekeeper configuration mode. To disable resource verification, use the **no** form of this command.

bandwidth check-destination
no bandwidth check-destination

Syntax Description

This command has no arguments or keywords.

Command Default

Resource verification is disabled by default.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
12.3(1)	This command was introduced.

Examples

The following example activates bandwidth resource verification at the destination:

```
gatekeeper
 bandwidth check-destination
```

Related Commands

Command	Description
bandwidth	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.
bandwidth remote	Specifies the total bandwidth for H.323 traffic between this gatekeeper and any other gatekeeper.
h323 interface	Defines the port on which port the proxy listens.
h323 t120	Enables the T.120 capabilities on your router and specifies bypass or proxy mode.

bandwidth remote

To specify the total bandwidth for H.323 traffic between this gatekeeper and any other gatekeeper, use the **bandwidthremote** command in gatekeeper configuration mode. To disable total bandwidth specified, use the**no** form of this command.

bandwidth remote *bandwidth-size*
no bandwidth remote

Syntax Description

bandwidth-size	Maximum bandwidth, in kbps. Range: 1 to 10000000.

Command Default

Total bandwidth is unlimited by default.

Command Modes

Gatekeeper configuration (config-gk)

Command History

Release	Modification
12.1(3)XI	This command was introduced on the Cisco 2600 series, Cisco 3600 series, and Cisco 7200 series.
12.2(2)T	This command was integrated into Cisco IOS Release 12.2(2)T.
12.2(2)XB1	This command was implemented on the Cisco AS5850.

Usage Guidelines

This command, with the **bandwidth**command, replaces the **zonegatekeeper** command.

Examples

The following example configures the remote maximum bandwidth to 100,000 kbps:

```
gatekeeper
 bandwidth remote 100000
```

Related Commands

Command	Description
bandwidth	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.
bandwidth check-destination	Enables the gatekeeper to verify available bandwidth resources at the destination endpoint.
h323 interface	Defines which port the proxy listens on.
h323 t120	Enables the T.120 capabilities on your router and specifies bypass or proxy mode.

battery-reversal

To specify battery polarity reversal on a Foreign Exchange Office (FXO) or Foreign Exchange Station (FXS) port, use the **battery-reversal** command in voice-port configuration mode. To disable battery reversal, use the **no** form of this command.

battery-reversal [**answer**]
no battery-reversal [**answer**]

Syntax Description

answer	(Optional) Configures an FXO port to support answer supervision by detection of battery reversal.

Command Default

Battery reversal is enabled

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.0(7)XK	This command was introduced on the Cisco 2600 series and Cisco 3600 series and on the Cisco MC3810.
12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T.
12.2(2)T	The **answer** keyword was added.

Usage Guidelines

The **battery-reversal** command applies to FXO and FXS voice ports. On Cisco 2600 and 3600 series routers, only analog voice ports in VIC-2FXO-M1 and VIC-2FXO-M2 voice interface cards are able to detect battery reversal; analog voice ports in VIC-2FXO and VIC-2FXO-EU voice interface cards do not detect battery reversal. On digital voice ports, battery reversal is supported only on E1 Mercury Exchange Limited Channel Associated Signaling (MEL CAS); it is not supported in T1 channel associated signaling (CAS) or E1 CAS.

FXS ports normally reverse battery upon call connection. If an FXS port is connected to an FXO port that does not support battery reversal detection, you can use the **nobattery-reversal** command on the FXS port to prevent unexpected behavior.

FXO ports in loopstart mode normally disconnect calls when they detect a second battery reversal (back to normal). You can use the **nobattery-reversal** command on FXO ports to disable this action.

The **battery-reversal** command restores voice ports to their default battery-reversal operation.

If an FXO voice port is connected to the PSTN and supports battery reversal, use the **battery-reversal**command with the **answer** keyword to configure answer supervision. This configures the FXO voice port to detect when a call is answered in order to provide correct billing information.

If the voice port, PSTN, or PBX does not support battery reversal, do not use the **battery-reversal**command because it prevents outgoing calls from being connected. Use the **supervisoryanswerdualtone** command instead.

If an FXO port or its peer FXS port does not support battery reversal, avoid configuring **battery-reversal** or **battery-reversalanswer** on the FXO port. On FXO ports that do not support battery reversal, the **battery-reversal** command can cause unpredictable behavior, and the **battery-reversalanswer** command

prevents calls from being answered. To ensure that battery reversal answer is disabled on FXO ports that do not support battery reversal, use the **nobattery-reversal** command.

Examples

The following example disables battery reversal on voice port 1/0/0 on a router:

```
voice-port 1/0/0
 no battery-reversal
```

The following example enables battery reversal to provide answer supervision on voice port 1/0/0 on a router:

```
voice-port 1/0/0
 battery-reversal answer
```

Related Commands

Command	Description
show voice port	Displays voice port configuration information.
supervisory answer dualtone	Enables answer supervision on an FXO voice port on which battery reversal is not supported.

battery-reversal detection-delay

To configure delay detection interval of battery-reversal signal on analog FXO voice port. Use the battery-reversal detection-delay command in voice-port configuration mode. To reset to default, use the no form of this command or battery-reversal detection-delay 0.

This command is only applicable to analog FXO voice port.

battery-reversal detection-delay [**time**]
no battery-reversal detection-delay

Syntax Description

time	0-800 - detection delay time in milliseconds (default to 0)

Command Default

no battery-reversal detection-delay

or

battery-reversal detection-delay 0

Command Modes

Voice-port configuration

bearer-capability clear-channel

To specify the information transfer capability of the bearer capability information element (IE) in the outgoing ISDN SETUP message for Session Initiation Protocol (SIP) early-media calls that negotiate the clear-channel codec, use the **bearer-capability clear-channel** command in SIP configuration mode. To reset the information transfer capability of the bearer capability IE to **speech** (default), use the **no** form of this command.

bearer-capability clear-channel {**audio** | **rdi** | **speech** | **tones** | **udi** [**bidirectional**] | **video**}
no bearer-capability clear-channel

Syntax Description

audio	Specifies 3.1 kHz audio.
rdi	Specifies restricted digital information (RDI).
speech	Specifies speech as the information transfer capability. This is the default.
tones	Specifies UDI with tones and announcements.
udi	Specifies unrestricted digital information (UDI).
bidirectional	(Optional) Enables clear-channel codec to UDI bearer capability mapping and UDI bearer capability to clear-channel codec mapping.
video	Specifies video as the information transfer capability.

Command Default

The default information transfer capability setting for the bearer-capability IE is **speech**.

Command Modes

SIP configuration (conf-serv-sip)

Command History

Release	Modification
12.4(15)T	This command was introduced.
15.2(2)T	This command was modified. The **bidirectional** keyword was added.

Usage Guidelines

When a Cisco voice gateway receives a SIP early-media call and negotiates the clear-channel codec, the default for the information transfer capability octet (octet 3) of the bearer capability IE in the outgoing ISDN SETUP message is set to **speech**. Use the **bearer-capability clear-channel** command to change the information transfer capability of the bearer capability IE to a different value.

Note Changing the information transfer capability of the bearer capability IE affects only SIP early-media calls. The information transfer capability value is always **speech** for SIP delayed-media calls, even when the clear-channel codec is negotiated.

You can display the current information transfer capability setting for the bearer capability IE using the **show running-config** command. To show only voice service configuration information, limit the display output to the section on voice service (see the "Examples" section).

Note When the information transfer capability is set to the default value (**speech**), the output of the **show running-config** command does not include the bearer-capability information line.

When you configure the **bearer-capability clear-channel udi bidirectional** command, the ISDN UDI bearer capability is mapped only to the clear-channel codec. Non-UDI bearer capability, like speech, is mapped only to the configured voice codecs. However, the configuration does not indicate the encapsulation type to be used for the clear-channel codec. You can configure the **encap clear-channel standard** or the **voice-class sip encap clear-channel standard** command to use the clear-channel codec mode for negotiation.

Examples

The following examples show how to configure the information transfer capability of the bearer capability IE to UDI to allow for 64 kb/s data transfer over ISDN and how to display the current setting.

Use the following commands to change the information transfer capability setting in the bearer capability IE to UDI:

```
voice service voip
 sip
  bearer-capability clear-channel udi
```

Use the following command to display the current information transfer capability setting:

```
Router# show running-config | section voice service
voice service voip
 h323
 sip
  bearer-capability clear-channel udi
```

Related Commands

Command	Description
encap clear-channel standard	Globally enables RFC 4040-based clear-channel codec negotiation for SIP calls on a Cisco IOS voice gateway or Cisco UBE.
voice-class sip encap clear-channel standard	Enables RFC 4040-based clear-channel codec negotiation for SIP calls on an individual dial peer, overriding the global setting on a Cisco IOS voice gateway or Cisco UBE.

billing b-channel

To enable the H.323 gateway to access B-channel information for all H.323 calls, use the **billingb-channel** command in H.323 voice service configuration mode. To return to the default setting, use the **no** form of this command.

billing b-channel
no billing b-channel

Syntax Description

This command has no arguments or keywords.

Command Default

B-channel information is disabled.

Command Modes

H.323 voice service configuration

Command History

Release	Modification
12.3(7)T	This command was introduced.

Usage Guidelines

This command enables the H.323 application to receive B-channel information of incoming ISDN calls. The B-channel information appears in H.323 ARQ / LRQ messages and can be used during call transfer or to route a call.

Examples

The following example adds B-channel information to the H.323 gateway:

```
Router(config)# voice service voip
Router(conf-voi-serv)# h323
Router(conf-serv-h323)# billing b-channel
```

Related Commands

Command	Description
h323	Enables H.323 voice service configuration commands.
voice service	Enters voice-service configuration mode and specifies the voice encapsulation type.

bind

To bind the source address for signaling and media packets to the IPv4 or IPv6 address of a specific interface, use the **bind** command in SIP configuration mode. To disable binding, use the **no** form of this command.

bind {**control** | **media** | **all**} **source-interface** *interface-id* [**ipv4-address** *ipv4-address* | **ipv6-address** *ipv6-address*]
no bind

Syntax Description

control	Binds Session Initiation Protocol (SIP) signaling packets.
media	Binds only media packets.
all	Binds SIP signaling and media packets. The source address (the address that shows where the SIP request came from) of the signaling and media packets is set to the IPv4 or IPv6 address of the specified interface.
source-interface	Specifies an interface as the source address of SIP packets.
interface-id	Specifies one of the following interfaces: • **Async** : ATM interface • **BVI** : Bridge-Group Virtual Interface • **CTunnel** : CTunnel interface • **Dialer** : Dialer interface • **Ethernet** : IEEE 802.3 • **FastEthernet** : Fast Ethernet • **Lex** : Lex interface • **Loopback** : Loopback interface • **Multilink** : Multilink-group interface • **Null** : Null interface • **Serial** : Serial interface (Frame Relay) • **Tunnel** : Tunnel interface • **Vif** : PGM Multicast Host interface • **Virtual-Template** : Virtual template interface • **Virtual-TokenRing** : Virtual token ring
ipv4-address *ipv4-address*	(Optional) Configures the IPv4 address. Several IPv4 addresses can be configured under one interface.
ipv6-address *ipv6-address*	(Optional) Configures the IPv6 address under an IPv4 interface. Several IPv6 addresses can be configured under one IPv4 interface.

Command Default

Binding is disabled.

Command Modes

SIP configuration (conf-serv-sip)

Voice class tenant

Command History

Release	Modification
12.2(2)XB	This command was introduced on the Cisco 2600 series, Cisco 3600 series, Cisco 7200 series, Cisco AS5300, Cisco AS5350, and Cisco AS5400.
12.2(2)XB2	This command was implemented on the Cisco AS5850.
12.2(8)T	This command was integrated into Cisco IOS Release 12.2(8)T. This command does not support the Cisco AS5300, Cisco AS5350, Cisco AS5850, and Cisco AS5400 in this release.
12.3(4)T	The **media** keyword was added.
12.4(22)T	Support for IPv6 was added.
Cisco IOS XE Release 2.5	This command was integrated into Cisco IOS XE Release 2.5
Cisco IOS XE Amsterdam 17.2.1r	Introduced support for YANG models.

Usage Guidelines

Async, Ethernet, FastEthernet, Loopback, and Serial (including Frame Relay) are interfaces within the SIP application.

If the **bind** command is not enabled, the IPv4 layer still provides the best local address.

Examples

The following example sets up binding on a SIP network:

```
Router(config)# voice serv voip
Router(config-voi-serv)# sip
Router(config-serv-sip)# bind control source-interface FastEthernet 0
```

Related Commands

Command	Description
sip	Enters SIP configuration mode from voice service VoIP configuration mode.

bind interface

To bind an interface to a Cisco CallManager group, use the **bindinterface**command in SCCP Cisco CallManager configuration mode. To unbind the selected interface, use the **no** form of this command.

bind interface {**dynamic** | *interface-type interface-number*}
no bind interface {**dynamic** | *interface-type interface-number*}

Syntax Description

dynamic	The transcoder interface is chosen based on the remote IP address.
interface-type	Type of selected interface.
interface-number	Number of the selected interface.

Command Default

Interfaces are not associated with any Cisco CallManager group.

Command Modes

SCCP Cisco CallManager configuration (config-sccp-ccm)

Command History

Release	Modification
12.3(8)T	This command was introduced.
15.1(3)T1	This command was modified. The **dynamic** keyword was added.
Cisco IOS XE Amsterdam 17.2.1r	Introduced support for YANG models.

Usage Guidelines

Normally a firewall only opens certain addresses or port combination to the outside world and those addresses can change dynamically. The VoIP technology requires the use of more than one address or port combination to pass information. The **bindinterface** command allows administrators to dictate the use of one network to transport the signaling and another network to transport the media by assigning an interface to a Cisco CallManager group for a specific interface for the signaling or media application.

The selected interface is used for all calls that belong to the profiles that are associated to this Cisco CallManager group. If the **dynamic** keyword is configured, the networking device chooses the transcoder interface based on the remote address. If the interface is not configured, the Skinny Call Control Protocol (SCCP) selects the best interface IP address in the gateway. Interfaces are selected according to user requirements. If there is only one group interface, configuration is not needed.



Note Only one interface can be selected. A given interface can be bound to more than one Cisco CallManager group.

Examples

The following example shows how to bind the interface to a specific Cisco CallManager group:

```
Router(config-sccp-ccm)#bindinterfacefastethernet2:1
```

Related Commands

Command	Description
associate profile	Associates a DSP farm profile with a Cisco CallManager group.
sccp ccm group	Creates a Cisco CallManger group and enters SCCP Cisco CallManager configuration mode.

block

To configure global settings to drop (not pass) specific incoming Session Initiation Protocol (SIP) provisional response messages on a Cisco IOS voice gateway or Cisco Unified Border Element (CUBE), use the **block** command in voice service SIP configuration mode or voice class tenant configuration mode. To disable a global configuration to drop incoming SIP provisional response messages, use the **no** form of this command.

block {**180** | **181** | **183**} [**sdp** {**absent** | **present**}**[system]**]
no block {**180** | **181** | **183**}

Syntax Description

180	Specifies that incoming SIP 180 Ringing messages should be dropped (not passed to the other leg).
181	Specifies that incoming SIP 181 Call is Being Forwarded messages should be dropped (not passed to the other leg).
183	Specifies that incoming SIP 183 Session in Progress messages should be dropped (not passed to the other leg).
sdp	(Optional) Specifies that either the presence or absence of Session Description Protocol (SDP) information in the received response determines when the dropping of specified incoming SIP messages takes place.
absent	Configures the SDP option so that specified incoming SIP messages are dropped only if SDP is absent from the received provisional response.
present	Configures the SDP option so that specified incoming SIP messages are dropped only if SDP is present in the received provisional response.
system	Specifies that the block use the global forced CLI setting. This keyword is available only for the tenant configuration mode.

Command Default

Incoming SIP 180, 181, and 183 provisional responses are forwarded.

Command Modes

Voice service SIP configuration (conf-serv-sip)

Voice class tenant configuration (config-class)

Command History

Release	Modification
12.4(22)YB	This command was introduced. Only SIP 180 and SIP 183 messages are supported on Cisco UBEs.
15.0(1)M	This command was integrated into Cisco IOS Release 15.0(1)M.
15.0(1)XA	This command was modified. Support was added for SIP 181 messages on the Cisco IOS SIP gateway, SIP-SIP Cisco UBEs, and the SIP trunk of Cisco Unified Communications Manager Express (Cisco Unified CME).
15.1(1)T	This command was integrated into Cisco IOS Release 15.1(1)T.

Release	Modification
Cisco IOS XE Release 3.1S	This command was integrated into Cisco IOS XE Release 3.1S
Cisco IOS 15.4(1)T	The **block 183 sdp absent** command was modified to provide support for PRACK and 18x with SDP.
15.6(2)T and IOS XE Denali 16.3.1	This command was modified to include the keyword: **system**. This command is now available under voice class tenants.
Cisco IOS XE Cupertino 17.7.1a	Introduced support for YANG models.

Usage Guidelines

Use the **block** command in voice service SIP configuration mode to globally configure Cisco IOS voice gateways and Cisco UBEs to drop specified SIP provisional response messages. Additionally, you can use the **sdp** keyword to further control when the specified SIP message is dropped based on either the absence or presence of SDP information.

To configure settings for an individual dial peer, use the **voice-classsipblock** command in dial peer voice configuration mode. To disable global configurations for dropping specified incoming SIP messages on a Cisco IOS voice gateway or Cisco UBE, use the **noblock** command in voice service SIP configuration mode.

Note This command is supported only on outbound dial peers--it is nonoperational if configured on inbound dial peers. You should configure this command on the outbound SIP leg that sends out the initial INVITE message. Additionally, this feature applies only to SIP-to-SIP calls and will have no effect on H.323-to-SIP calls.

Note When the **block 183 sdp absent** command is enabled, the Require: rel1xx header is not disabled, thus supporting for PRACK and 18x with SDP.

Examples

The following example shows how to globally configure dropping of incoming SIP provisional response messages:

```
Router> enable
Router# configure
 terminal
Router(config)# voice
 service
 voip
Router(conf-voi-serv)# sip
Router(conf-serv-sip)# block 181
```

The following example shows how to globally configure dropping of incoming SIP with SDP provisional response messages:

```
Router> enable
Router# configure
 terminal
Router(config)# voice
 service
```

```
 voip
Router(conf-voi-serv)# sip
Router(conf-serv-sip)# block 183 sdp present
```

The following example shows how to globally configure dropping of incoming SIP without SDP provisional response messages:

```
Router> enable
Router# configure
 terminal
Router(config)# voice
 service
 voip
Router(conf-voi-serv)# sip
Router(conf-serv-sip)# block 180 sdp absent
```

The following example shows how to globally configure passing all specified incoming SIP provisional response messages (except for those on individual dial peers that are configured to override the global configuration):

```
Router> enable
Router# configure
 terminal
Router(config)# voice
 service
 voip
Router(conf-voi-serv)# sip
Router(conf-serv-sip)# no block 181
```

The following example shows how to block responses in CUBE in the voice class tenant configuration mode:

```
Router(config-class)# block 181 system
```

Related Commands

Command	Description
map resp-code	Configures global settings on a CUBE for mapping specific incoming SIP provisional response messages to a different SIP response message.
voice-class sip block	Configures an individual dial peer on a Cisco IOS voice gateway or CUBE to drop specified SIP provisional response messages.
voice-class sip map resp-code	Configures a specific dial peer on a CUBE to map specific incoming SIP provisional response messages to a different SIP response message.

block-caller

To configure call blocking on caller ID, use the **block-caller** command in dial peer voice configuration mode. To disable call blocking on caller ID, use the **no** form of this command.

block-caller *number*
no block-caller *number*

Syntax Description

number	Specifies the telephone number to block. You can use a period (.) as a digit wildcard. For example, the command **block-caller5.51234**blocks all numbers beginning with the digit 5, followed by any digit, and then sequentially followed by the digits 5, 1, 2, 3, and 4.

Command Default

Call blocking is disabled; the router does not block any calls for any listed directory numbers (LDNs) based on caller ID numbers

Command Modes

Dial peer configuration (config-dial-peer)

Command History

Release	Modification
12.1(2)XF	This command was introduced on the Cisco 800 series routers.
12.1(5)T	This command was integrated into Cisco IOS Release 12.1(5)T.

This command is available on Cisco 800 series routers that have plain old telephone service (POTS) ports. For each dial peer, you can enter up to ten caller ID numbers to block. The routers do not accept additional caller ID numbers if ten numbers are already present. In that case, a number must be removed before another caller ID number can be added for blocking.

If you do not specify the **block-caller** command for a local directory, all voice calls to that local directory are accepted. If you specify the **block-caller** command for a local directory, the router verifies that the incoming calling-party number does not match any caller ID numbers in that local directory before processing or accepting the voice call. Each specified caller ID number and incoming calling-party number is compared from right to left, up to the number of digits in the specified caller ID number or incoming calling-party number, whichever has fewer digits.

This command is effective only if you subscribe to caller ID service. If you enable call blocking on caller ID without subscribing to the caller ID service, the routers do not perform the verification process on calling-party numbers and do not block any calls.

Examples

The following example configures a router to block calls from a caller whose caller ID number is 408-555-0134.

```
dial-peer voice 1 pots
 block-caller 4085550134
```

Related Commands

Command	Description
caller-id	Identifies incoming calls with caller ID.

Command	Description
debug pots csm csm	Activates events from which an application can determine and display the status and progress of calls to and from POTS ports.
isdn i-number	Configures several terminal devices to use one subscriber line.
pots call-waiting	Enables local call waiting on a router.
registered-caller ring	Configures the Nariwake service registered caller ring cadence.

bootup e-lead off

To prevent an analog ear and mouth (E&M) voice port from keying the attached radio on router boot up, use the **bootupe-leadoff** command in voice-port configuration mode. To allow the analog E&M voice port to key the attached radio on boot up, use the **no** form of this command.

bootup e-lead off
no bootup e-lead off

Syntax Description

This command has no arguments or keywords.

Command Default

The analog E&M voice port keys the attached radio on radio boot up.

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.3(4)XD	This command was introduced.
12.3(7)T	This command was integrated into Cisco IOS Release 12.3(7)T.
12.3(14)T	This command was implemented on the Cisco 2800 series and Cisco 3800 series.
12.4(2)T	This feature was integrated into Cisco IOS Release 12.4(2)T.

Usage Guidelines

This command configures the E-lead behavior on boot up for both voice ports on the voice interface card (VIC).

Examples

The following example configures the analog E&M voice port to not key the attached radio on router boot up:

```
voice-port 1/0/0
 bootup e-lead off
```

busyout forced

To force a voice port into the busyout state, use the **busyoutforced**command in voice-port configuration mode. To remove the voice port from the busyout state, use the **no** form of this command.

busyout forced
no busyout forced

Syntax Description

This command has no arguments or keywords.

Command Default

The voice-port is not in the busyout state.

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.0(3)T	This command was introduced on the Cisco MC3810.
12.0(7)XK	This command was implemented on the Cisco 2600s series and Cisco 3600 series. On the Cisco MC3810, the **voice-portbusyout**command was eliminated in favor of this command.
12.1(2)T	The command was integrated into Cisco IOS Release 12.1(2)T.

Usage Guidelines

If a voice port is in the forced busyout state, only the **nobusyoutforced** command can restore the voice port to service.

To avoid conflicting command-line interface (CLI) commands, do not use the **busyoutforced** command and the **ds0busyout**command on the same controller.

Examples

The following example forces analog voice port 3/1/1 on a Cisco 3600 router into the busyout state:

```
voice-port 3/1/1
 busyout forced
```

The following example forces digital voice port 0/0:12 on a Cisco 3600 router into the busyout state:

```
voice-port 0/0:12
 busyout forced
```

Related Commands

Command	Description
busyout-monitor interface	Configures a voice port to monitor a serial interface for events that would trigger a voice-port busyout.
busyout seize	Changes the busyout seize procedure for a voice port.
show voice busyout	Displays information about the voice busyout state.

busyout monitor

To place a voice port into the busyout monitor state, enter the **busyoutmonitor** command in voice-portconfiguration mode. To remove the busyout monitor state from the voice port, use the **no** form of this command.

busyout monitor {**serial** *interface-number* | **ethernet** *interface-number* | **keepalive**} [**in-service**]
no busyout monitor {**serial** *interface-number* | **ethernet** *interface-number* | **keepalive**}

Syntax Description

serial	Specifies monitoring of a serial interface. More than one interface can be entered for a voice port.
ethernet	Specifies monitoring of an Ethernet interface. More than one interface can be entered for a voice port.
interface-number	The interface to be monitored for the voice port busyout function.
keepalive	In case of keepalive failures, the selected voice port or ports are busied out.
in-service	(Optional) Configures the voice port to be busied out when any monitored interface comes into service (its state changes to up). If the keyword is not entered, the voice port is busied out when all monitored interfaces go out of service (that is, the state changes to down).

Command Default

The voice port does not monitor any interfaces.

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.0(3)T	This command was introduced on the Cisco MC3810.
12.0(5)XE	This command was implemented on the Cisco 7200 series.
12.0(5)XK	This command was implemented on the Cisco 2600 series and Cisco 3600 series.
12.0(7)T	This command was implemented on the Cisco 2600 series and Cisco 3600 series and integrated into Cisco IOS Release 12.0(7)T.
12.0(7)XK	The ability to monitor an Ethernet port was introduced and the **in-service** keyword was added. The **serial** keyword was first supported on the Cisco 2600 series and Cisco 3600 series.
12.1(1)T	The implementation of this command on the Cisco 7200 series was integrated into Cisco IOS Release 12.1(1)T.
12.1(2)T	The **serial** and **ethernet** keywords were added, the **in-service** keyword was integrated into Cisco IOS Release 12.1(2)T, and the *interface-number*argument was added to the **serial** and **ethernet** keywords.
12.1(3)T	The **interface** keyword was removed.

Release	Modification
12.4(6)T	The **keepalive** keyword was added.

Usage Guidelines

When you place a voice port in the busyout monitor state, the voice port monitors the specified interface and enters the busyout state when the interface is down. This down state forces the rerouting of calls.

The **busyoutmonitor**command monitors only the up or down status of an interface--not end-to-end TCP/IP connectivity.

When an interface is operational, a busied-out voice port returns to its normal state.

This feature can monitor LAN, WAN, and virtual subinterfaces.

A voice port can monitor multiple interfaces at the same time. To configure a voice port to monitor multiple interfaces, reenter the **busyoutmonitor**command for each additional interface to be monitored.

If you specify more than one monitored interface for a voice port, all the monitored interfaces must be down to trigger busyout on the voice port.

You can combine in-service and out-of-service monitoring on a voice port. The following rule describes the action if monitored interfaces change state. A voice port is busied out if either of the following occurs:

- Any interface monitored for coming into service comes up.
- All interfaces monitored for going out of service go down.

Examples

The following example shows configuration of analog voice port 1/2 to busy out if serial port 0 or 1 comes into service:

```
voice-port 1/2
 busyout monitor serial 0 in-service
 busyout monitor serial 1 in-service
```

The following example shows configuration of digital voice port 1/2/2 on a Cisco 3600 series router to busy out if serial port 0 goes out of service:

```
voice-port 1/2/2
 busyout monitor serial 0
```

The following example shows configuration of the voice port to monitor two serial interfaces and an Ethernet interface. When all these interfaces are down, the voice port is busied out. When at least one interface is operating, the voice port is put back into a normal state.

```
voice-port 3/0:0
 busyout monitor ethernet 0/0
 busyout monitor serial 1/0
 busyout monitor serial 2/0
```

The following example shows configuration of the voice port to be busied out in case of a keepalive failure:

```
voice-port 10
 busyout monitor keepalive
```

Related Commands

Command	Description
busyout forced	Forces a voice port into the busyout state.
busyout monitor probe	Configures a voice port to enter busyout state if an SAA probe signal returned from a remote interface crosses a delay or loss threshold.
busyout seize	Changes the busyout seize procedure for a voice port.
show voice busyout	Displays information about the voice busyout state.
voice-port busyout	Places all voice ports associated with a serial or ATM interface into a busyout state.

busyout monitor action

To place a voice port into graceful or shutdown busyout state when triggered by the busyout monitor, use the **busyoutmonitoraction**command in voice-port configuration mode. To remove the voice port from the busyout state, use the **no** form of this command.

busyout monitor action {**graceful** | **shutdown** | **alarm blue**}
no busyout monitor action {**graceful** | **shutdown** | **alarm blue**}

Syntax Description

graceful	Graceful busyout state.
shutdown	D-channel shutdown busyout state.
alarm blue	Shutdown state with a blue alarm, also known as an alarm-indication signal (AIS).

Command Default

Default voice busyout behavior without this command is a forced busyout.

Default voice busyout behavior for PRI depends on whether or not the ISDN switch type supports service messages:

- If the switch type supports service messages, default voice busyout behavior is to transmit B-channel out-of-service (OOS) messages and to keep the D channel active. D-Channel service-messages are supported on the following ISDN switch-types: NI, 4ESS (User Side only), 5ESS (User Side only), DMS100.
- If the switch type does not support service messages, default voice busyout behavior is to bring down the D channel.
- For switch-types not specified above, the D-channel is taken down when the **busyoutmonitoractiongraceful** is configured.

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.2(13)T	The **busyoutmonitoractiongraceful**command was introduced on the following platforms: Cisco 2600 series, Cisco 2600XM, Cisco 2691, Cisco 3640, Cisco 3660, Cisco 3725, and Cisco VG200.
12.3(6)	The **busyoutmonitoractionshutdown** command was introduced on the following platforms: Cisco 1700 series, Cisco IAD2420 series, Cisco 2600 series, Cisco 2600XM series, Cisco 2691, Cisco 3600 series, Cisco 3700 series, Cisco 4224, Cisco 7200 series, Cisco 7301, Cisco 7400 series, Cisco MC3810, Cisco WS-X4604-GWY, and Cisco VG200.
12.3(7)T	The **busyoutmonitoractionshutdown** command was integrated into Cisco IOS Release 12.3(7)T and support was added for the Cisco IAD2430 series.
12.4(6)T	The **busyoutmonitoractiongraceful** and **busyoutmonitoractionshutdown**commands were introduced to replace the **busyoutactiongraceful**and**busyoutactionshutdown**commands.

Release	Modification
12.4(9)T	The **busyoutmonitoraction**command was introduced to combine the **busyoutmonitoractiongraceful** and **busyoutmonitoractionshutdown** commands. The **shutdownalarmblue** keywords were added.

Usage Guidelines

Use this command to control busyout behavior that is triggered by the**busyoutmonitor**command.

This command with the **graceful**keyword busies out the voice port immediately or, if there is an active call on this voice port, waits until the call is over.

This command with the **shutdown** keyword has the following attributes:

- Before Cisco IOS Release 12.2(8)T, when voice busyout is triggered on a PRI voice port, the D channel is deactivated until the busyout trigger is cleared. Some ISDN switch types, however, support in-service and OOS Q.931 messages that permit B channels to be taken out of service while still keeping the D channel active. Starting in Cisco IOS Release 12.3(8)T for these ISDN switch types, OOS messages are sent and the D channel is kept active when a voice busyout is triggered.
- This keyword is available only for PRI voice ports.
- For switch-types not specified above, the D-channel is be taken down when the **busyoutmonitoractiongraceful**command is configured.

Examples

The following example shows analog voice-port busyout state set to graceful:

```
voice-port 2/0:15
 busyout monitor action graceful
```

The following example shows E1 PRI voice-port busyout state set to shutdown:

```
voice-port 1/1:15 (E1 PRI)
 busyout monitor gatekeeper
 busyout monitor action shutdown
```

The following example shows T1 PRI voice-port busyout state set to shutdown:

```
voice-port 0/1:23 (T1 PRI)
 busyout monitor gatekeeper
 busyout monitor action shutdown
```

Related Commands

Command	Description
busyout forced	Forces a voice port into busyout state.
busyout monitor	Configures a voice port to monitor an interface for events that would trigger voice-port busyout.
busyout monitor backhaul	Configures a voice port to enter busyout-monitor state with backhaul-L3 connectivity monitoring during a WAN failure.
busyout monitor gatekeeper	Configures a voice port to enter busyout state if connectivity to the gatekeeper is lost.

Command	Description
busyout monitor probe	Configures a voice port to enter busyout state if an SAA probe signal returned from a remote, IP-addressable interface crosses a specified delay or loss threshold.
busyout seize	Changes the busyout seize procedure for a voice port.
show voice busyout	Displays information about voice-busyout state.
voice-port	Enters voice-port configuration mode and identifies the voice port to be configured.

busyout monitor backhaul

To configure a voice port to enter busyout-monitor state with backhaul-L3 connectivity monitoring during a wide-area-network (WAN) failure, use the **busyoutmonitorbackhaul**command in voice-port configuration mode. To disable busyout-monitor state, use the **no** form of this command.

busyout monitor backhaul
no busyout monitor backhaul

Syntax Description

This command has no arguments or keywords.

Command Default

If this command is not used, the voice port is not configured to enter busyout state during a WAN failure.

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.4(9)T	This command was introduced.

Usage Guidelines

Use this command to implement backhaul-L3 connectivity monitoring.

Examples

The following example configures a voice port to enter busyout-monitor state with backhaul-L3 connectivity monitoring during a WAN failure:

```
Router(config-voiceport)# busyout monitor backhaul
```

Related Commands

Command	Description
busyout monitor action	Places a voice port into busyout state.
busyout monitor	Configures a voice port to enter busyout-monitor state.

busyout monitor gatekeeper

To configure a voice port to enter the busyout state if connectivity to the gatekeeper is lost, use the **busyoutmonitorgatekeeper** command in voice-port configuration mode. To configure the monitor to trigger a busyout when any voice port assigned to a specific voice class loses connectivity to the gatekeeper, use the **busyoutmonitorgatekeeper** command in voice-class configuration mode. To disable the busyout monitoring state for the gatekeeper, use the **no** form of this command.

busyout monitor gatekeeper
no busyout monitor gatekeeper

Syntax Description

This command has no arguments or keywords.

Command Default

If this command is not used, the voice port or voice class is not configured to enter a busyout state if connectivity to the gatekeeper is lost.

Command Modes

Voice-class configuration (config-voice-class)
Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.2(13)T	This command was introduced on the following platforms: Cisco 2600 series, Cisco 2600XM, Cisco 2691, Cisco 3640, Cisco 3660, Cisco 3725 and Cisco VG200.
12.4(6)T	This command was extended to include functionality in voice-class configuration mode.

Usage Guidelines

Use this command to monitor the connection between the gateway and gatekeeper. In voice-port configuration mode, if a voice port loses connectivity to the gatekeeper, the voice port enters a busyout state. In voice configuration mode, if any voice port assigned to a specific voice class loses connectivity to the gatekeeper, a busyout is triggered.

Examples

The following example shows the busyout monitor state set to busy out the port according to the state of the gatekeeper:

```
voice-port 1/1/1
 busyout monitor gatekeeper
```

The following example enters voice-class (busyout) configuration mode and creates a voice class named 33. The monitor is set to busyout when any voice port in voice class 33 loses connectivity to the gatekeeper:

```
voice-class busyout 33
 busyout monitor gatekeeper
```

Related Commands

Command	Description
busyout monitor action graceful	Places a voice port into the graceful busyout state when triggered by the busyout monitor.

Command	Description
busyout monitor action shutdown	Shuts down the voice port immediately, but if there is an active call it waits until the call is over.
busyout forced	Forces a voice port into the busyout state.
busyout monitor	Configures a voice port to monitor an interface for events that would trigger a voice-port busyout.
busyout monitor probe	Configures a voice port to enter the busyout state if an SAA probe signal returned from a remote, IP-addressable interface crosses a specified delay or loss threshold.
busyout seize	Changes the busyout seize procedure for a voice port.
show voice busyout	Displays information about the voice busyout state.
voice-port	Enters voice-port configuration mode and identifies the voice port to be configured.

busyout monitor probe

To configure a voice port to enter the busyout state if a Service Assurance Agent (SAA) probe signal is returned from a remote IP-addressable interface after the expiration of a specified delay or loss threshold, use the **busyoutmonitorprobe** command invoice-port configuration mode or voice class busyout mode. To configure a voice port not to monitor SAA probe signals, use the **no** form of this command.

busyout monitor probe [**icmp-ping**] *ip-address* [**codec** *codec-type* | **size** *bytes*] [**icpif** *number* | **loss** *percent* **delay** *milliseconds*] [**grace-period** *seconds*] **size**
no busyout monitor probe *ip-address*

Syntax Description

icmp-ping	(Optional) Configures voice-port parameters to use ICMP pings to monitor IP destinations.
ip -address	The IP address of a target interface for the SAA probe signal.
codec	(Optional) Configures the profile of the SAA probe signal to mimic the packet size and interval of a specific codec type.
codec -type	(Optional) The codec type for the SAA probe signal. Available options are as follows: • **g711a** --G.711 a-law • **g711u** --G.711 mu-law (the default) • **g729** --G.729 • **g729a** --G.729 Annex A • **g729b** --G.729 Annex B
size *bytes*	(Optional) Size (in bytes) of the ping packet. Default is 32.
icpif	(Optional) Configures the busyout monitor probe to use an Impairment/Calculated Planning Impairment Factor (ICPIF) loss/delay busyout threshold, in accordance with ITU-T G.113. The ICPIF numbers represent predefined combinations of loss and delay.
number	(Optional) The ICPIF threshold for initiating a busyout condition. Range is from 0 to 30. Low numbers are equivalent to low loss and delay thresholds.
loss	(Optional) Configures the percentage-of-packets-lost threshold for initiating a busyout condition.
percent	(Optional) The loss value (expressed as a percentage) for initiating a busyout condition. Range is from 1 to 100.
delay	(Optional) Configures the average packet delay threshold for initiating a busyout condition.
milliseconds	(Optional) The delay threshold, in milliseconds, for initiating a busyout condition. Range is from 1 to 2,147,483,647.
grace-period	(Optional) Configures a time limit that the system waits before initiating a busyout condition after the loss of SAA probe connectivity.

seconds	(Optional) Number of seconds for the duration of the grace period. Range is from 30 to 300.

Command Default

If the **busyoutmonitorprobe**command is not entered, the voice port does not monitor SAA probe signals.

If the **busyoutmonitorprobe**command is entered with no optional keywords or arguments, the default codec type is G.711 a-law, the default loss and delay thresholds are the threshold values that are configured with the **callfallbackthresholddelay-loss**command, and the loss of SAA connectivity causes an immediate forced busyout condition.

Command Modes

Voice-port configuration and voice class busyout

Command History

Release	Modification
12.1(3)T	This command was introduced on the Cisco 2600 and Cisco 3600 series and on the Cisco MC3810.
12.3(15)	This command was integrated into Cisco IOS Release 12.3(15) and the **grace-period** keyword and *seconds* argument were added.
12.4(1)	This command was integrated into Cisco IOS Release 12.4(1).
12.4(2)T	This command was integrated into Cisco IOS Release 12.4(2)T.

Usage Guidelines

A voice port can monitor multiple interfaces at the same time. To configure a voice port to monitor multiple interfaces, enter the **busyoutmonitorprobe**command for each additional interface to be monitored.



Caution The **busyoutmonitorprobe**command is effective only if the call fallback function is enabled on the source router, and the SAA responder is enabled on the target router. To enable the call fallback function, you must enter the **callfallbackactive** command for the **busyoutmonitorprobe** command to work.

The SAA probe is transmitted periodically with a period determined by the call fallback function.

Low thresholds of ICPIF, loss, and delay result in early busyout when the link deteriorates, thereby raising the voice minimum quality level. High thresholds prevent busyout until loss and delay are long, allowing transmission of lower-quality voice.



Caution If thresholds are set too low, the link can alternate between in-service and out-of-service states, causing repeated interruptions of traffic.

Before the introduction of the **grace-period** keyword to the **busyoutmonitorprobe** command, the loss of SAA probe connectivity was sufficient to immediately enforce busyout, causing service and connectivity problems in some networks because busyout conditions could occur frequently and abruptly. To improve busyout monitoring via SAA probes, the **grace-period** setting allows for an additional timer that must expire before a busyout condition is enforced. That is, the SAA probes and the period of grace must both expire before a busyout condition is invoked. If the SAA IP connectivity is restored within the period of grace, the busyout condition does not occur.

Note To disable the **grace-period** option, you must first enter the**nobusyoutmonitorprobe** command and then re-enter the **busyoutmonitorprobe**command without the **grace-period** option.

The **grace-period** keyword is not available in Cisco IOS Release 12.3T.

Examples

The following example shows how to configure analog voice port 1/1/0 to use an SAA probe with a G.711a-law profile to probe the link to two remote interfaces that have IP addresses and to busy out the voice port if SAA probe connectivity is lost for at least 5 seconds. Both links have a loss exceeding 25 percent or a packet delay of more than 1.5 seconds.

```
voice-port 1/1/0
 busyout monitor probe 209.165.202.128 codec g711a loss 25 delay 1500 grace-period 45
 busyout monitor probe 209.165.202.129 codec g711a loss 25 delay 1500 grace-period 45
```

Related Commands

Command	Description
busyout monitor	Places a voice port into the busyout monitor state.
call fallback active	Enables the ICMP-ping or SAA (formerly RTR) probe mechanism for use with the dial-peer **monitorprobe** or voice-port **busyoutmonitorprobe** commands.
call fallback threshold delay-loss	Forces a voice port into the busyout state.
show voice busyout	Displays information about the voice busyout state.
voice class busyout	Creates a voice class for local voice busyout functions.

busyout seize

To change the busyout action for a Foreign Exchange Office (FXO) or Foreign Exchange Station (FXS) voice port, use the **busyoutseize** command in voice-port configuration mode. To restore the default busyout action, use the **no** form of this command.

busyout seize {**ignore** | **repeat**}
no busyout seize

Syntax Description

ignore	Specifies the type of ignore procedure, depending on the type of voice port signaling. See the table below for more information.
repeat	Specifies the type of repeat procedure, depending on the type of voice port signaling. See the table below for more information.

Command Default

See the table below for the default actions for different voice ports and signaling types

Command Modes

Voice-port configuration (config-voiceport)

Command History

Release	Modification
12.0(3)T	This command was introduced on the Cisco MC3810.
12.0(7)XK	This command was implemented on the Cisco 2600 and Cisco 3600 series.
12.1(2)T	This command was integrated into Cisco IOS Release 12.1(2)T.

Usage Guidelines

The **busyoutseize** command is valid for both analog and digital voice ports. On digital voice ports, the busyout actions are valid whether the busyout results from a voice-port busyout event or from the **ds0-busyout** command.

The voice port returns to an idle state when the event that triggered the busyout disappears.

The table below describes the busyout actions for the **busyoutseize** settings on each voice port type.

The busyout action for E and M voice ports is to seize the far end by setting lead busy.

Table 1: Busyout Seize Actions for Voice Ports

Voice Port Signaling Type	Procedure Setting (busyout-option command)	Busyout Actions
FXS loop start	Default	Removes the power from the loop. For analog voice ports, this is equivalent to removing the ground from the tip lead. For digital voice ports, the port generates the bit pattern equivalent to removing the ground from the tip lead, or it busies out if the bit pattern exists.

Voice Port Signaling Type	Procedure Setting (busyout-option command)	Busyout Actions
FXS loop start	Ignore	Ignores the ground on the ring lead.
FXS ground start	Default	Grounds the tip lead and stays at this state.
FXS ground start	Ignore	**1.** Leaves the tip lead open. **2.** Ignores the ground on the ring lead.
FXS ground start	Repeat	**1.** Grounds the tip lead. **2.** Waits for the far end to close the loop. **3.** The far end closes the loop. **4.** If the far end then opens the loop, FXS removes the ground from the tip lead. **5.** FXS waits for several seconds before returning to Step 1.
FXO loop start	Default	Closes the loop and stays at this state.
FXO loop start	Ignore	**1.** Leaves the loop open. **2.** Ignores the ringing current on the ring level.
FXO loop start	Repeat	**1.** Closes the loop. **2.** After the detected far end starts the power denial procedure, FXO opens the loop. **3.** After the detected far end has completed the power denial procedure, FXO waits for several seconds before returning to Step 1.
FXO ground start	Default	Grounds the tip lead.
FXO ground start	Ignore	**1.** Leaves the loop open. **2.** Ignores the running current on the ring lead, or the ground current on the tip lead.
FXO ground start	Repeat	**1.** Grounds the ring lead. **2.** Removes the ground from the ring lead and closes the loop after the detected far end grounds the tip lead. **3.** When the detected far end removes the ground from tip lead, FXO opens the loop. **4.** FXO waits for several seconds before returning to Step 1.

Examples

The following example shows configuration of analog voice port 1/1 to perform the ignore actions when busied out:

```
voice-port 1/1
 busyout seize ignore
```

The following example shows configuration of digital voice port 0:2 to perform the repeat actions when busied out:

```
voice-port 0:2
 busyout seize repeat
```

Related Commands

Command	Description
busyout forced	Forces a voice port into the busyout state.
busyout-monitor interface	Configures a voice port to monitor an interface for events that would trigger a voice port busyout.
ds0 busyout	Forces a DS0 time slot on a controller into the busyout state.
show voice busyout	Displays information about the voice busyout state.
voice-port busyout	Places all voice ports associated with a serial or ATM interface into a busyout state.