packetcable-em transport radius

To configure a packet-cable billing instance, use the **packetcable-em *transport radius*** command in the SBE billing configuration mode. To disable the packet-cable billing instance, use the **no** form of this command.

packetcable-em *method-index* **transport radius** *RADIUS-client-name*

no packetcable-em *method-index* **transport radius** *RADIUS-client-name*

Syntax Description

method-index	Specifies the packetcable billing instance. The range is 0 to 7.
RADIUS-client-name	The RADIUS client name. The maximum size is 80 characters.

Command Default

No default behavior or values are available.

Command Modes

SBE billing configuration (config-sbc-sbe-billing)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example configures packet-cable billing instances of four with a RADIUS client name of 'test':

```
Router# configure terminal
Router# sbc mySbc
Router(config-sbc)# sbe
(config-sbc-sbe)# billing
(config-sbc-sbe-billing)# packetcable-em 4 transport radius test
(config-sbc-sbe-billing-packetcable-em)#
```

Related Commands

Command	Description
activate (radius)	Activates the billing functionality after configuration is committed.
billing	Configures billing.
ldr-check	Configures the time of day (local time) to run the Long Duration Check (LDR).
local-address ipv4	Configures the local IPv4 address that appears in the CDR.

Command	Description
method packetcable-em	Enable the packet-cable billing method.
show sbc sbe billing remote	Displays the local and billing configurations.

parameter-editor

To add a parameter editor associated with a header, use the parameter-editor command in the SIP Header Editor element configuration mode. To remove a parameter editor, use the **no** form of this command.

parameter-editor *editor-name*

no parameter-editor

Syntax Description

editor-name	Name of the parameter editor. The *editor-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SIP Header Editor element configuration (config-sbc-sbe-sip-hdr-ele)

Command History

Release	Modification
Cisco IOS XE Release 3.3S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

The parameter editor should be initially configured using the **sip parameter-editor** command in the SBE configuration mode.

Examples

The following example shows how to add a parameter editor to the header element of a header editor:

```
Router# config
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-editor parmprof1
Router(config-sbc-sbe-mep-prm)# exit
Router(config-sbc-sbe)# sip header-editor headerprof1
Router(config-sbc-sbe-mep-hdr)# header To
Router(config-sbc-sbe-mep-hdr-ele)# parameter-editor parmprof1
```

Related Commands

Command	Description
sip method-editor	Configures a method editor.
sip header-editor	Configures a header editor.
sip parameter-editor	Configures a parameter editor.
sip body-editor	Configures a body editor.

parameter-profile

To add a parameter profile associated with a header, use the parameter-profile command in SBE configuration mode. To remove the parameter profile, use the **no** form of this command.

parameter-profile *profile-name*

no parameter-profile *profile-name*

Syntax Description

profile name	Name of the parameter profile. The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SIP header configuration element (config-sbc-sbe-sip-hdr-ele)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to add a parameter profile to the header element for a header profile:

```
Router# config
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-profile headerprof1
Router(config-sbc-sbe-sip-hdr)# header To
Router(config-sbc-sbe-sip-hdr-ele)# parameter-profile parmprof1
```

Related Commands

Command	Description
sip method-profile	Configures a method-profile.
sip header-profile	Configures a header profile.

parameter (editor)

To add a parameter to an editor, use the **parameter** command in the SIP Parameter Editor configuration mode. To remove a parameter from an editor, use the **no** form of this command.

parameter *parameter-name*

no parameter *parameter-name*

Syntax Description

parameter-name	Name of the parameter to be added to the parameter editor. Valid names are 1 to 32 characters in length (inclusive) and are case-sensitive.

Command Default

No default behavior or values are available.

Command Modes

SIP Parameter Editor configuration (config-sbc-sbe-mep-prm)

Command History

Release	Modification
Cisco IOS XE Release 3.3S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

Use the **parameter** command to enter the SIP Parameter Editor Element configuration mode.

Examples

The following example shows how the **parameter** command adds a parameter named user to the parameter editor:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-editor paramedit
Router(config-sbc-sbe-mep-prm)# parameter user
Router(config-sbc-sbe-mep-prm-ele)#
```

Related Commands

Command	Description
action	Configures the action to be taken in an editor.
parameter-editor	Configures a parameter editor.

parameter (session border controller)

To add a parameter with a specified name to a SIP message profile, use the **parameter** command in SBE SIP parameter-profile configuration mode. To remove the method from the profile, use the **no** form of this command.

parameter {*parameter name*}

no parameter {*parameter name*}

Syntax Description

parameter name	Name of the parameter added to the parameter profile. Valid names are 1 to 32 characters in length (inclusive) and are case-sensitive.

Command Default

No default behavior or values are available.

Command Modes

SIP parameter-profile configuration

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

If a configuration is loaded on top of an active configuration, warnings are generated to notify that the configuration cannot be modified. If you must modify the entire configuration by loading a new one, please remove the existing configuration first.

Examples

The following example shows how the **parameter** command adds a parameter named user to the parameter profile Myprofile:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-profile Myprofile
Router(config-sbc-sbe-sip-prm)# parameter user
Router(config-sbc-sbe-sip-prm-ele)# action add-not-present value phone
```

Related Commands

Command	Description
action	Configures the action to take in a profile.
parameter-profile	Configures a parameter profile.

pass-body

To permit SIP message bodies to pass through [for non-vital SIP methods accepted by a method profile] in the SIP method profile mode of an SBE entity, use the **pass-body** command in SIP method configuration mode. To remove the message bodies out of non-vital SIP messages accepted by the method profile, use the **no** form of this command.

pass-body

no pass-body

Syntax Description

This command has no arguments or keywords.

Command Default

By default, the message bodies are removed out of non-vital SIP messages.

Command Modes

SIP method (config-sbc-sbe-sip-mth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **pass-body** command permits SIP message bodies to pass through for non-vital SIP methods accepted by method profile test1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-profile test1
Router(config-sbc-sbe-sip-mth)# pass-body
```

payload-type asymmetric

To configure an SBC to support Asymmetric payload types, use the **payload-type asymmetric** command. Use the **no** form of this command to disallow an SBC from supporting Asymmetric payload types.

payload-type asymmetric {allowed | disallowed}

no payload-type asymmetric {allowed | disallowed}

Syntax Description

allowed	Specifies that asymmetric payload types be allowed.
disallowed	Specifies that asymmetric payload types are not allowed.

Command Default

By default, Asymmetric payload types are allowed.

Command Modes

Configure CAC Policy CAC Table (config-sbc-sbe-cacpolicy-cactable-entry)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section that follows shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the SBC to specify support for asymmetric payload types on the mySBC SBC:

```
Router# configure terminal
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# first-cac-table my_table
Router(config-sbc-sbe-cacpolicy)# cac-table TAB1
Router(config-sbc-sbe-cacpolicy-cactable)# table-type policy-set
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# action cac-complete
Router(config-sbc-sbe-cacpolicy-cactable-entry)# payload-type asymmetric allowed
Router(config-sbc-sbe-cacpolicy-cactable-entry)# complete
Router(config-sbc-sbe)# cac-policy-set global 1
Router(config-sbc-sbe)# end
Router#
```

Following is a command output for the command **show sbc sbe cac-policy-set** command:

(config)#show sbc RAND sbe cac-policy-set 1 TAB1

```
SBC Service "RAND"

CAC Policy Set 1
  Active policy set: Yes
  Description:
  Averaging period: 60 sec
  First CAC table: TAB1
  First CAC scope: global

  Table name: TAB1
    Description:
    Table type: policy-set
    Total call setup failures (due to non-media limits): 0

    Entry 1
    CAC scope:
    CAC scope prefix length: 0
    Action: CAC complete
    Number of call setup failures (due to non-media limits): 0
    Max calls per scope:       Unlimited       Max call rate per scope:     Unlimited
    Max in-call message rate:  Unlimited       Max out-call message rate:   Unlimited
    Max reg. per scope:        Unlimited       Max reg. rate per scope:     Unlimited
    Max channels per scope:    Unlimited       Max updates per scope:       Unlimited
    Early media:               Allowed         Early media direction:       Both
    Early media timeout:       None            Transcoder per scope:        Allowed
    Callee Bandwidth-Field:    AS-to-TIAS      Caller Bandwidth-Field:      None
    Asymmetric Payload Types: Allowed      Media bypass:               Allowed
    Renegotiate Strategy:                 Delta
    Max bandwidth per scope:              Unlimited
    SRTP Transport:                       Trusted-Only (by default)
    Caller hold setting:                  Standard
    Callee hold setting:                  Standard
    Caller privacy setting:               Never hide
    Callee privacy setting:               Never hide
    Caller voice QoS profile:             Default
    Callee voice QoS profile:             Default
    Caller video QoS profile:             Default
    Callee video QoS profile:             Default
    Caller sig QoS profile:               Default
    Callee sig QoS profile:               Default
    Caller inbound SDP policy:            None
    Callee inbound SDP policy:            None
    Caller outbound SDP policy:           None
    Callee outbound SDP policy:           None
    SDP Media profile         :           None
    Caller media disabled:                None
    Callee media disabled:                None
    Caller unsignaled secure media:       Not Allowed
    Callee unsignaled secure media:       Not Allowed
    Caller tel-event payload type:        Default
    Callee tel-event payload type:        Default
    Media flag:                           None

    Restrict codecs to list:              Default
    Restrict caller codecs to list:       Default
    Restrict callee codecs to list:       Default
    Caller media-type:                    Inherit (default)
    Callee media-type:                    Inherit (default)
    Maximum Call Duration:                Unlimited
```

peer (session border controller)

To create an IMS peer and configure the name and IPv4 address of the peer, use the **peer** command in diameter configuration mode. To remove the peer, use the no form of this command.

peer *peer-name* [**vpn** *vpn-name*] {**ipv4** *ipv4-address* | *dns-name*} [**port** *port-number*]

no peer *peer-name* [**vpn** *vpn-name*] {**ipv4** *ipv4-address* | *dns-name*} [**port** *port-number*]

Syntax Description

peer-name	Specifies the name of the peer. The *peer-name* can have a maximum of 32 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.
ipv4 *ipv4-address* | *dns-name*	Assigns a standard IPv4 address to the peer, or a DNS FQDN.
vpn *vpn-name*	Name of the existing VPN to assign to the peer.
port *port-number*	Assigns a port number to the peer connect socket. The range is 1 to 65535. The default is 3868.

Command Default

If port is not specified, the default port number of the peer is 3868.

Command Modes

Diameter configuration (config-sbc-sbe-diameter)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Note When you configure the peer with a VPN, only the IPv4 address can be configured with it. You cannot use the DNS name.

Examples

The following example shows how to create an IMS peer:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# diameter
Router(config-sbc-sbe-diameter)# peer Peer1 ipv4 10.10.10.10
Router(config-sbc-sbe-diameter)#
```

Related Commands

Command	Description
diameter	Enables the Diameter protocol on a node and enter the Diameter configuration mode.
origin-realm	Configures the domain name of an IMS local realm.
origin-host	Configures the domain name of an IMS local host.
peer	Creates an IMS peer and configure the name and IPv4 address of the peer.
realm (diameter)	Configures a peer and assign the peer to a realm.
show sbc sbe diameter	Displays the configuration information for the Diameter protocol.
show sbc sbe diameter peers	Displays the configuration information for IMS peers.
show sbc sbe diameter stats	Displays the transport statistics for an IMS peer.
ims rx	Configures an IMS Rx interface for access adjacency
ims pani	Configures the P-Access-Network-Info (PANI) header process preference for an adjacency.
ims realm	Configures an IMS realm for use by an IMS Rx interface.
ims rx preliminary-aar-forbid	Prevents preliminary AAR messages from being sent in an IMS Rx session.
ims media-service	Configures a CAC table to allow the use of media resources and 3rd party transcoding resources as well as Rx resources.

ping-bad-rsp-codes

To configure the congestion response codes on SIP Adjacency by sending SIP OPTIONS pings to it , use the **ping-bad-rsp-codes** command in adjacency ping option mode. Use the **no** form of this command to disable congestion response codes on SIP Adjacency.

ping-bad-rsp-codes

no ping-bad-rsp-codes

Syntax Description

range	The response code range that SBC considers as ping failure indication. The default value range is from 300 to 399.

Command Default

range = 300 to 399

Command Modes

Ping option (config-sbc-sbe-adj-sip-ping)

Command History

Release	Modification
Cisco IOS XE Release 3.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the congestion response codes on SIP adjacency by sending SIP OPTIONS pings:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# ping-bad-rsp-codes ranges 300,398
Router(config-sbc-sbe-adj-sip-ping)# exit
Router(config-sbc-sbe-adj-sip)#
```

ping-enable

To configure the adjacency to poll its remote peer by sending SIP OPTIONS pings to it and to enter the ping option mode, use the **ping-enable** command in adjacency SIP configuration mode. Use the **no** form of this command to disable polling the remote peer for the adjacency.

ping-enable

no ping-enable

Syntax Description

This command has no arguments or keywords.

Command Default

Options pings are disabled by default.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the adjacency to poll its remote peer by sending SIP OPTIONS pings:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# exit
Router(config-sbc-sbe-adj-sip)#
```

ping-fail-count

To configure the number of consecutive pings that must fail before the adjacencies peer is deemed to be unavailable, use the **ping-fail-count** command in ping option mode. Use the **no** form of this command to set the fail count to default.

ping-fail-count *fail-count*

no ping-fail-count

Syntax Description

fail-count	The number of consecutive failures before the peer is deemed to be unavailable. The possible values are 1 to 4294967295. Note that this does not apply to the converse, that is, if an endpoint has been marked as unavailable, it only takes a single successful ping to mark it as available again. This field may be changed while active, though this will not take effect until the next ping transaction completes, and will not retroactively cause a peer marked as unavailable to become available again without a subsequent successful ping response.

Command Default

fail-count = 3

Command Modes

Ping option (config-sbc-sbe-adj-sip-ping)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the number of consecutive pings that must fail before the adjacencies peer is deemed to be unavailable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# ping-fail-count 10
Router(config-sbc-sbe-adj-sip-ping)#
```

ping-interval

To configure the interval between SIP OPTIONS pings which are sent to the remote peer, use the **ping-interval** command in ping option mode. Use the **no** form of this command to set the interval to default.

ping-interval *interval*

no ping-interval

Syntax Description

interval	The number of seconds. The possible values are 1 to 2147483.

Command Default

32 seconds

Command Modes

Ping option (config-sbc-sbe-adj-sip-ping)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the interval between SIP OPTIONS pings that are sent to the remote peer to 100 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# ping-interval 100
Router(config-sbc-sbe-adj-sip-ping)#
```

ping-lifetime

To configure the duration for which SBC waits for a response to an options ping for the adjacency, use the **ping-lifetime** command in ping option mode. Use the **no** form of this command to set the duration to default.

ping-lifetime *duration*

no ping-lifetime

Syntax Description

duration	The number of seconds.The possible values are 1 to 2147483.

Command Default

32 seconds

Command Modes

Ping option (config-sbc-sbe-adj-sip-ping)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If no response is received in the duration time, then the ping is deemed to have failed.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the duration for which SBC waits for a response to an options ping for the adjacency to 100 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# ping-lifetime 100
Router(config-sbc-sbe-adj-sip-ping)#
```

ping-suppression

To configure SBC to send ping when required on sip Adjacency, use the **ping-suppression** command in ping option mode. Use the **no** form of this command to disable sending pings on SIP adjacency.

ping-suppression

no ping-suppression

Syntax Description

options	• ood-reqeust—SBC considers a peer reachable when any out of dialog (or dialog creating) request is received, excluding OPTIONS and REGISTER messages. • ood-response—SBC considers a peer reachable when any out of dialog (or dialog creating) 2xx response is received, excluding OPTIONS and REGISTER messages. • ind-request—SBC considers a peer reachable when any in dialog request is received. • ind-response—SBC considers a peer reachable when any in dialog 2xx response is received. The default value is none.

Command Default

options = none

Command Modes

Ping option (config-sbc-sbe-adj-sip-ping)

Command History

Release	Modification
Cisco IOS XE Release 3.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure SBC to send ping when required on sip Adjacency by sending SIP OPTIONS pings:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# ping-enable
Router(config-sbc-sbe-adj-sip-ping)# ping-suppression odd-request
Router(config-sbc-sbe-adj-sip-ping)# exit
```

```
Router(config-sbc-sbe-adj-sip)#
```

policy (session border controller)

To configure the packetization period policy, use the **policy** command in the codec list configuration mode. To deconfigure the packetization period policy, use the **no** form of this command.

policy {minimum | transrating}

no policy

Syntax Description

minimum	Specifies that the packetization period is the minimum.
transrating	Specifies that the packetization period is transrating.

Command Default

No default behavior or values are available.

Command Modes

Codec list (sbe-codec-list)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure a minimum packetization period policy using the **policy** command in the codec list configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec-list my_codecs
Router(config-sbc-sbe-codec-list)# policy minimum
```

Related Commands

Command	Description
codec list	Creates a codec list.
codec packetization-period	Sets a minimum packetization period for a codec.

port (session border controller)

To configure a port for a redundant peer, use the **port** command in adjacency Session Initiation Protocol (SIP) peer configuration mode. To deconfigure a port, use the **no** form of this command.

port *port*

no port *port*

Syntax Description

port	The p**ort of a redundant peer**. The range is from **0 to 65535.**

Command Default

Default port is 5060.

Command Modes

Adjacency SIP peer configuration (config-sbc-sbe-adj-sip-peer)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section that follows shows the hierarchy of the modes and modes required to run the command.

Examples

The following example shows how the **port** command is used to configure a port for a redundant peer on a SIP adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbe-adj-sip)# redundant peer 1
Router(config-sbe-adj-sip-peer)# port 2
```

Related Commands

Command	Description
address	Configures either an IP address or a host name to act as the redundant peer.
network	Configures either an IPv4 or IPv6 network in a redundant peer.
priority	Configures a redundant peer's priority.
redundant peer	Configures an alternative signaling peer for an adjacency.

port (SBE H.248)

To configure an SBE to use a given IPv4 H.248 port for H.248 communications when acting as a media gateway controller, use the port command in H.248 control address mode. To delete a given IPv4 H.248 port, use the **no** form of this command.

port *port-number*

no port *port-number*

Syntax Description

port-number	Specifies the listening port number. The range is from 1 to 9999.

Command Default

No default behavior or values are available.

Command Modes

H.248 control address (config-sbc-sbe-ctrl-h248)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure an SBE to use port 2000:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# control address h248 index 0
Router(config-sbc-sbe-ctrl-h248)# ipv4 1.1.1.1
Router(config-sbc-sbe-ctrl-h248)# port 2000
```

Related Commands

Command	Description
control address h248 index	Selects index value and enters H.248 control address mode.
ipv4 (SBE H.248)	Configures an SBE to use a given IPv4 H.248 control address.
transport (SBE H.248)	Configures an SBE to use a certain transport for H.248 communications.

port-range

To create a port range associated with corresponding media address pool entries, use the **port-range** command in media address configuration mode. To delete a port range, use the **no** form of this command.

port-range *start-rtp-port end-rtp-port*

no port-range *start-rtp-port end-rtp-port*

Syntax Description

start-rtp-port	The starting port number of the range. The possible values are: • 16384 to 21644 • 21845 to 32767. The *start-rtp-port* value must be less than or equal to the *end-rtp-port* value.
end-rtp-port	The ending port number of the range. The possible values are: • 16384 to 21644 • 21845 to 32767. The *start-rtp-port* value must be less than or equal to the *end-rtp-port* value .

Command Default

The default is no port range.

Command Modes

Media address configuration (conf-media-addr-range)

Command History

Release	Modification
Cisco IOS XE Release 3.9S	This command was introduced.

Usage Guidelines

Use the **port-range** command in the media address configuration mode to specify up to 10 port ranges for a single media address.

Examples

The following example for a unified SBC shows how to create two port ranges for a media address:

```
Router# configure terminal
Router(config)# voice service voip
Router(conf-voi-serv)# media-address 1.3.1.2 1.3.1.2
Router(conf-media-addr-range)# port-range 32766 32766
Router(conf-media-addr-range)# port-range 16384 16384
```

Related Commands

Command	Description
media-address	Adds an IPv4 or IPv6 address to the set of addresses that can be used by the DBE as a local media address.
media-address pool	Creates a pool of IPv4 or IPv6 addresses that can be used by the DBE as local media addresses.

precedence (session border controller)

To configure the precedence of the routing entry, use the ***precedence*** command in RTG routing table entry configuration mode. To deconfigure the precedence of the routing entry, use the **no** form of this command.

precedence *precedence*

no *precedence* *precedence*

Syntax Description

precedence	Range: [0-0xFFFFFFFF]. A value of 0 means the entry will never be matched. Zero is the default.

Command Default

Zero is the default.

Command Modes

RTG routing table entry configuration (config-sbc-sbe-rtgpolicy-rtgtable-entry)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If more than one entry matches the current time, selection is based on precedence.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure an SBE to use port 2000:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-category-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# precedence 0
Router(config-sbc-sbe-rtgpolicy-rtgtable)# end
```

Related Commands

Command	Description
entry	Creates or modifies an entry in a table.

preferred-transport

To set the preferred transport protocol for SIP signaling on an adjacency, use the **preferred-transport** command in adjacency SIP configuration mode.

preferred-transport {tcp | udp}

no preferred-transport

Syntax Description

tcp	Sets the preferred transport to TCP.
udp	Sets the preferred transport to UDP.

Command Default

Adjacencies use UDP by default.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command sets the preferred transport of the SipAdj1 adjacency to TCP:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipAdj1
Router(config-sbc-sbe-adj-sip)# preferred-transport tcp
Router(config-sbc-sbe-adj-sip)# exit
```

prefix (session border controller)

To configure whether the match-address of this entry matches the start of the source or destination address, use the **prefix** command in the routing table configuration mode. To delete the table-type in the routing table, use the **no** form of this command.

prefix

no prefix

Syntax Description

This command has no arguments or keywords.

Command Default

By default, the match-address is not be denoted as a prefix.

Command Modes

Routing table entry (config-sbc-sbe-rtgpolicy-rtgtable-entry)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure an entry to match dialed numbers starting with 9:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-address-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# match-address 9
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# prefix
```

priority (session border controller)

To configure the priority of the accounting or authentication server, use the **priority** command in the appropriate configuration mode. To disable any previously set priority, use the **no** form of this command.

priority *pri*

no priority

Syntax Description

pri	Specifies the priority. Range is 1 to 10.

Command Default

By default, this command assumes that *pri* is 1.

Command Modes

Server accounting (config-sbc-sbe-acc-ser)

Server authentication (config-sbc-sbe-auth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

The priority determines which of the configured servers is selected as the default server and where all requests are sent. A RADIUS client contacts the RADIUS servers sequentially, in order of priority, to establish an active RADIUS session. Each RADIUS client sends call detail records to the currently active RADIUS server.

Examples

The following example shows how to configure accounting servers acctsvr as priority 1 and acctsvr2 as priority 2 on mySbc for RADIUS client instance radius1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# radius accounting radius1
Router(config-sbc-sbe-acc)# server acctsvr
Router(config-sbc-sbe-acc-ser)# priority 1
Router(config-sbc-sbe-acc-ser)# exit
Router(config-sbc-sbe-acc)# server acctsvr2
Router(config-sbc-sbe-acc-ser)# priority 2
```

privacy restrict outbound

To configure an H.323 adjacency to apply privacy restriction on outbound messages if the user requests it, use the **privacy restrict outbound** command in the adjacency H.323 configuration mode. To disallow privacy restriction on outbound messages sent out by the adjacency, use the **no** form of this command.

privacy restrict outbound

no privacy restrict outbound

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

Adjacency H.323 configuration (config-sbc-sbe-adj-h323)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **privacy restrict outbound** command is used to configure an H.323 adjacency to apply privacy restriction on outbound messages if a user requests it:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp422
Router(config-sbe-adj-h323)# privacy restrict outbound
```

Related Commands

Command	Description
allow private info	Configures an H.323 adjacency to allow private information on messages sent out by the H.323 adjacency.

privacy (session border controller)

To configure the trust level for determining whether the privacy service should be applied, use the **privacy** command in adjacency SIP configuration mode. To disable the trust level, use the **no** form of this command.

privacy [**inherit-profile** | **trusted** | **untrusted**]

no privacy

Syntax Description

inherit-profile	Specifies that the trust level for determining whether privacy services are required is derived from the adjacencies inherit-profile.
trusted	Specifies that the adjacency is trusted and does not require privacy services to be applied.
untrusted	Specifies that the adjacency is not trusted and requires privacy services to be applied.

Command Default

By default, the trust level is set to **inherit-profile**.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the trust level of the SIP adjacency to trusted:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SIPP
Router(config-sbe-adj-sip)# privacy trusted
```

Related Commands

Command	Description
adjacency	Configures an adjacency for an SBC.
inherit-profile	Configures a global inherit profile for the SIP adjacency.

profile (session border controller)

To apply a delegate registration profile to a delegate registration subscriber, use the **profile** command in subscriber-delegate configuration mode. To remove the delegate registration profile, use the **no profile** command.

profile *{profile name}*

no profile *{profile name}*

Syntax Description

profile name	This is the name of the delegate client registration profile that can be applied to a delegate subscriber. The profile name is a string field of 24 characters maximum length.

Command Default

No default behavior or values are available.

Command Modes

subscriber-delegate configuration mode (config-sbc-sbe-subscriber-delegate)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

apply the delegate registration profile, created previously with the **delegate-profile** command, to a delegate registration subscriber

After a delegate profile is configured, the following profile parameters may optionally be configured:

- duration
- retry-count
- retry-interval
- refresh-buffer

Delegate registration is done underneath the SBE configuration for globally unique subscribers.

Examples

The following example configures a provisioned delegate registration profile that can be applied to a delegate registration subscriber and configures a delegate registration for delegate client (aor= sip:bob@isp.example). The delegate registration profile is configured with a duration expiration time of 1000 seconds, a retry count of 5 times, a retry interval of 60 seconds, and a refresh timeout time of 200 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# delegate-profile my-profile
Router(config-sbc-sbe-subscriber-delegate-prof)# duration 1000
```

```
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-count 5
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-interval 60
Router(config-sbc-sbe-subscriber-delegate-prof)# refresh-buffer 200
Router(config-sbc-sbe-subscriber-delegate-prof)# exit
Router(config-sbc-sbe)# subscriber sip:bob@isp.example
Router(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
Router(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
Router(config-sbc-sbe-subscriber-contact)# exit
Router(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
Router(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
Router(config-sbc-sbe-subscriber-delegate)# profile my-profile
Router(config-sbc-sbe-subscriber-delegate)# activate
Router(config-sbc-sbe-subscriber-delegate)# end
```

Related Commands

Command	Description
delegate-profile	Configures a delegate registration profile that is applied to a delegate registration subscriber.
sip-contact	Configures the SIP contact information for a specified Uniform Resource Identifier (URI) for a delegate subscriber
delegate-registration	Configures a delegate registration for a delegate client.
show sbc sbe sip subscribers	Displays subscribers for whom Provisioned Delegate Registration has been provisioned.
show sbc sbe sip delegate-profile	Displays subscriber profiles for whom Provisioned Delegate Registration has been configured.

qos fax

To **configure a fax QoS profile**, use the **qos fax** command in SBE configuration mode. To **destroy the given profile**, use the **no** form of this command.

qos fax *qos-name*

no qos fax *qos-name*

Syntax Description

qos-name	Specifies the QoS profile. The string **default** is reserved. The *qos-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to enter the mode for configuring a fax QoS profile named residential:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos fax residential
Router(config-sbc-sbe-fax)# exit
```

qos sig

To **configure a signaling QoS profile**, use the **qos sig** command in SBE configuration mode. To **destroy the given profile**, use the **no** form of this command.

qos sig *qos-name*

no qos sig *qos-name*

Syntax Description

qos-name	Specifies the name of an existing QoS profile. The string **default** is reserved. The *qos-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how **qos sig** command enters the mode for configuring a signaling QoS profile residential:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos sig residential
Router(config-sbc-sbe-sig)# exit
```

qos video

To **configure a video QoS profile**, use the **qos video** command in the SBE configuration mode. To **destroy the given profile**, use the **no** form of this command

qos video *qos-name*

no qos video *qos-name*

Syntax Description

qos-name	Specifies the QoS profile. The string **default** is reserved. The *qos-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to enter the mode for configuring a video QoS profile named residential:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos video residential
Router(config-sbc-sbe-video)# exit
```

qos voice

To **configure a voice QoS profile**, use the **qos voice** command in SBE configuration mode. To **destroy the given profile**, use the **no** form of this command.

qos voice *qos-name*

no qos voice *qos-name*

Syntax Description

qos-name	Specifies the QoS profile. The string **default** is reserved. The *qos-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to enter the mode for configuring a voice QoS profile named residential:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos voice residential
Router(config-sbc-sbe-voice)# exit
```

range (session border controller)

To map a range of response codes to a response code, use the **range** command in the session initiation protocol (SIP) method profile map configuration mode or the SIP method editor map configuration mode. To **remove the mapping**, use the **no** form of this command.

range *statuscoderange* **value** *statuscodevalue*

no range *statuscoderange*

Syntax Description

statuscoderange	Range of response codes. These are specified by a three-digit number, where the first digit has the range 0 to 6, the second digit has the range 0 to 9/X, and the third digit has the range 0 to 9/X. X is a wild card.
value	Specifies the value of the range the response code is mapped to.
statuscodevalue	Range of the response code. This is mapped to the specified three-digit number, where the first digit has the range 0 to 6, the second digit has the range 0 to 9, and the third digit has the range 0 to 9.

Command Default

No default behavior or values are available.

Command Modes

SIP method profile map configuration (config-sbc-sbe-sip-mth-ele-map)

SIP method editor map configuration (config-sbc-sbe-mep-mth-ele-map)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.3S	This command was modified. This command was added in the SIP method editor map configuration mode.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

Examples

The following example shows how the **method** command adds a method, test, to the Myprofile method profile:

```
Router# configure terminal
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-profile mthdprof1
Router(config-sbc-sbe-sip-mth)# method INVITE
Router(config-sbc-sbe-sip-mth-ele)# map-status-code
Router(config-sbc-sbe-sip-mth-ele)# map-status-code
Router(config-sbc-sbe-sip-mth-ele-map)# range 5XX value 500
```

Related Commands

Command	Description
blacklist	Configures SIP header or method blacklist profiles on a SIP message.
description	Configures descriptive text for a method profile.
pass-body	Permits SIP message bodies to pass through for nonvital SIP methods accepted by a method profile.

The following example shows how to specify the range for mapping the response codes received for a method:

```
Router# configure terminal
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-editor MethodEditor1
Router(config-sbc-sbe-sip-mth)# method INVITE
Router(config-sbc-sbe-sip-mth-ele)# map-status-code
Router(config-sbc-sbe-sip-mth-ele-map)# range 5XX value 500
```

ras retry (session border controller)

To configure an H.323 Registration, Admission, and Status (RAS) retry count for an RAS transaction type, use the **ras retry** command in the appropriate configuration mode. To return to the default value for the specified RAS transaction type, use the **no** form of this command.

ras retry {**arq | brq | drq | grq | rrq | urq**} *value*

no ras retry {**arq | brq | drq | grq | rrq | urq**} *value*

Syntax Description

arq	Specifies an admission request (ARQ) transaction.
brq	Specifies a bandwidth request (BRQ) transaction.
drq	Specifies a disengage request (DRQ) transaction.
grq	Specifies a gatekeeper request (GRQ) transaction.
rrq	Specifies a registration request (RRQ) transaction.
urq	Specifies an unregistration request (URQ) transaction.
value	Specifies the retry count value. Valid values are 0 to 30.

Command Default

The default values are 2 for all except URQ which is 1.

Command Modes

Adjacency H.323 configuration (config-sbc-sbe-adj-h323)

H.323 configuration (config-sbc-sbe-h323)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **ras retry** command configures an H.323 RAS retry count in Adjacency H.323 configuration mode:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# ras retry arq 5
```

The following example shows how the **ras retry** command configures an H.323 RAS retry count in H.323 configuration mode:

```
Router# configure
```

```
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# h323
Router(config-sbc-sbe-h323)# ras retry arq 5
```

Related Commands

Command	Description
ras rrq	Configures the registration request (RRQ).
ras timeout	Configures an H.323 RAS timeout interval.

ras rrq

To configure the registration request (RRQ), use the **ras rrq** command in the appropriate configuration mode. To return to the default value, use the **no** form of this command.

ras rrq {**keepalive** | **ttl**} *value*

no ras rrq {**keepalive** | **ttl**} *value*

Syntax Description

keepalive	Specifies keepalive messages used to refresh an H.323 adjacency.
ttl	Specifies time to live (TTL) for an RRQ request.
value	Specifies the **keepalive** or **ttl** value. Valid values for **keepalive** are from 15000 to 150000 milliseconds. Valid values for **ttl** are from 16 to 300 seconds. The **ttl** value must be higher than the **keepalive** value.

Command Default

The default **keepalive** *value is 45000 milliseconds.*

The default **ttl** *value is 2 seconds.*

Command Modes

Adjacency H.323 configuration (config-sbc-sbe-adj-h323)

H.323 configuration (config-sbc-sbe-h323)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **ras rrq** command configures H.323 RAS RRQ in adjacency H.323 configuration mode:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# ras rrq ttl 100
Router(config-sbc-sbe-adj-h323)# ras rrq keepalive 60
```

The following example shows how the **ras rrq** command configures RAS RRQ in H.323 configuration mode:

```
Router# configure
Router(config)# sbc mySbc
```

```
Router(config-sbc)# sbe
Router(config-sbc-sbe)# h323
Router(config-sbc-sbe-h323)# ras rrq ttl 100
Router(config-sbc-sbe-h323)# ras rrq keepalive 60
```

Related Commands

Command	Description
ras retry	Configures an H.323 RAS retry count for an RAS transaction type.
ras timeout	Configures an H.323 RAS timeout interval.

ras timeout (session border controller)

To configure an H.323 RAS timeout interval, use the **ras timeout** command in the appropriate configuration mode. To return to the default value, use the **no** form of this command.

ras timeout {**arq | brq | drq | grq | rrq | urq**} *value*

no ras timeout {**arq | brq | drq | grq | rrq | urq**} *value*

Syntax Description

arq	Specifies ARQ transaction.
brq	Specifies BRQ transaction.
drq	Specifies DRQ transaction.
grq	Specifies GRQ transaction.
rrq	Specifies RRQ transaction.
urq	Specifies URQ transaction.
value	Specifies timeout value (seconds). Valid values are from 1000 to 45000 milliseconds.

Command Default

The default values vary depending on the transaction type.

Command Modes

Adjacency H.323 configuration (config-sbc-sbe-adj-h323)

H.323 configuration (config-sbc-sbe-h323)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **ras timeout** command configures an H.323 RAS timeout interval in adjacency H.323 configuration mode.

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# ras timeout arq 1
```

The following example shows how the **ras timeout** command configures an H.323 RAS timeout interval in H.323 configuration mode.

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# h323
Router(config-sbc-sbe-h323)# ras timeout arq 1
```

Related Commands

Command	Description
ras retry	Configures an RAS retry count for an RAS transaction type.
ras rrq	Configures the registration request (RRQ)

realm

To configure an adjacency with the realm that it belongs to as part of configuring an IP Realm under an adjacency, use the **realm** command in adjacency SIP configuration mode. To remove the IP realm from the adjacency, use the **no realm** command.

realm *{IP realm identifier}*

no realm *{IP realm identifier}*

Syntax Description

IP realm identifier	The IP Realm Identifier is used to indicate to which packet network the media addresses belong. The IP Realm identifier is a string, which may be in a domain name format, for example, "mynet.net" or any other string format. The format of the realm string is up to the user with certain restrictions. Realms strings are case insensitive and are made up of the characters described in the table in the "IP Realm Support" chapter of the *Cisco Unified Border Element (SP Edition) Configuration Guide: Unified Model*.

Command Default

No default behavior or values are available.

Command Modes

adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.5	This command was introduced on the unified model on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

In the SBC unified model, use the **realm** command to tag the adjacencies with the realm that they belong to. This will enable subsequent calls to use media addresses from that realm.

Examples

The following example shows how to tag the SIP adjacency Cisco-gw with the realm cisco.com:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip Cisco-gw
Router(config-sbc-sbe-adj-sip)# realm cisco.com
```

The following example shows the running configuration after the SIP adjacency Cisco-gw is tagged with the realm cisco.com:

```
Router# show run
adjacency sip Cisco-gw
signaling-address ipv4 200.100.50.8
realm cisco.com
```

Related Commands

Command	Description
adjacency	Configures an adjacency for a Session Border Controller (SBC) service.
media-address ipv4	Configures an IPv4 address to the set of addresses that can be used by the data border element (DBE) as a local media address.
media-address pool ipv4	Configures a pool of sequential IPv4 media addresses that can be used by the data border element (DBE) as local media addresses.

realm (diameter)

To configure a peer and assign the peer to a realm, use the **realm** command in diameter configuration mode. To remove the peer from the realm, use the no form of this command.

realm *realm-name* [**app rx**] **peer** *peer-name* [**priority** *priority*]

no realm *realm-name* [**app rx**] **peer** *peer-name* [**priority** *priority*]

Syntax Description

realm-name	Name of the existing route realm in which to assign the peer. The maximum length is 63.
app rx	The type of application for this route entry. Currently only Rx is valid.
peer *peer-name*	Name of the existing peer.
priority *priority*	Specifies the priority of the peer. The range is 1 to 100. The default 1.

Command Default

If priority is not specified, the default priority of the peer is 1.

Command Modes

Diameter configuration (config-sbc-sbe-diameter)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure a peer and assign the peer to a realm:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# diameter
Router(config-sbc-sbe-diameter)# origin-realm Realm1
Router(config-sbc-sbe-diameter)# peer Peer1 ipv4 10.10.10.10
Router(config-sbc-sbe-diameter)# realm Realm1 app rx peer Peer1 priority 2
Router(config-sbc-sbe-diameter)#
```

Related Commands

Command	Description
diameter	Enables the Diameter protocol on a node and enter the Diameter configuration mode.
origin-realm	Configures the domain name of an IMS local realm.

Command	Description
origin-host	Configures the domain name of an IMS local host.
peer	Creates an IMS peer and configure the name and IPv4 address of the peer.
realm (diameter)	Configures a peer and assign the peer to a realm.
show sbc sbe diameter	Displays the configuration information for the Diameter protocol.
show sbc sbe diameter peers	Displays the configuration information for IMS peers.
show sbc sbe diameter stats	Displays the transport statistics for an IMS peer.
ims rx	Configures an IMS Rx interface for access adjacency
ims pani	Configures the P-Access-Network-Info (PANI) header process preference for an adjacency.
ims realm	Configures an IMS realm for use by an IMS Rx interface.
ims rx preliminary-aar-forbid	Prevents preliminary AAR messages from being sent in an IMS Rx session.
ims media-service	Configures a CAC table to allow the use of media resources and 3rd party transcoding resources as well as Rx resources.

realm (H.248 BAC)

To configure an IP realm of the Border Access Controller (BAC) under an adjacency, use the **realm** command in the H248 BAC adjacency configuration mode. To unconfigure the IP realm from the adjacency, use the **no** form of this command.

realm *realm-number*

no realm *realm-number*

Syntax Description

realm-number	Number of the IP realm that belongs to the BAC. The range is from 1 to 100.

Command Default

None

Command Modes

H248 BAC adjacency configuration (config-h248-bac-adj)

Command History

Release	Modification
Cisco IOS XE Release 3.7	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

A realm group can contain multiple media addresses. When you configure a realm group under an adjacency, the IP address and port for the media stream of this adjacency is allocated from the media addresses in this realm group.

Examples

The following example shows how the **realm** command is used to configure an adjacency:

```
Router# configure terminal
Router(config)# sbc h248 bac
Router(config-h248-bac)# adjacency h248 access iad_80_123
Router(config-h248-bac-adj)# realm 2
```

Related Commands

Command	Description
media-address ipv4	Adds an IPv4 address to the set of addresses that the BAC can use as local media address.

realm (Rf billing)

To configure the realm information for Rf billing support on the Session Border Element of the Session Border Controller (SBC), use the **realm** command in the SBC SBE billing Rf configuration mode. To unconfigure the realm information for Rf billing support on the SBE of the SBC, use the **no** form of this command.

realm *realm-name* [**usePCFAHeader | cdf** *cdf-name* {**FQDN** *FQDN-name* **| ipv4** i*pv4-addr* **| vpn** *vpn-name*} [**port** *port-num*] [**priority** *priority*]]

no realm *realm-name* [**usePCFAHeader | cdf** *cdf-name* {**FQDN** *FQDN-name* **| ipv4** i*pv4-addr* **| vpn** *vpn-name*} [**port** *port-num*] [**priority** *priority*]]

Syntax Description

realm	Configures the realm.
realm-name	Name of the realm. String length range: 1 to 63.
usePCFAHeader	Configures the P-Charging-Function-Addresses (PCFA) header.
cdf	Configures the Charging Data Function (CDF).
cdf-name	Name of the CDF.
FQDN	Configures the Fully Qualified Domain Name (FQDN) of the CDF.
FQDN-name	Fully Qualified Domain Name
ipv4	Configures IPv4.
ipv4-addr	IPv4 address.
vpn	Configures VPN.
vpn-name	VPN name.
port	Configures port information.
port-num	Port number of the CDF socket. Range: 1 to 65535. Default: 3868.
priority	Configures priority.
priority	Priority of the realm. Range: 1 to 100. Default: 1.

Command Default

None

Command Modes

SBC SBE billing Rf configuration (config-sbc-sbe-billing-rf)

Command History

Release	Modification
Cisco IOS XE Release 3.7S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to configure the usePCFAHeader for Rf billing support on the SBE of the SBC:

```
Router> enable
Router# configure terminal
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# billing
Router(config-sbc-sbe-billing)# rf 0
Router(config-sbc-sbe-billing-rf)# realm asr1k usePCFAHeader
```

reason

To enable the entry of a user into a mode for configuring a limit to a specific event type on the source (a port, IP address, VPN, and global address space), use the **reason** command in SBE blacklist mode. The **no** form of this command returns the event to its previous values.

reason {*event* | *description}*

no reason

Syntax Description

event	The event type that should trigger the limit can be defined as any of the following: • **authentication-failure—**Requests that fail authentication. • **bad-address—**Packets from unexpected addresses. • **corrupt-message—**Signaling packets that are corrupt and cannot be decoded. • **endpoint-registration—**Endpoint registrations. • **cac-policy-rejection—**Requests that are rejected by the configured CAC policy. • **rtg-policy-rejection—**Requests that fail to be routed onward by SBC. • **na-policy-rejection—**Requests that are rejected by the configured number analysis policy.
description	Helpful description of the event that should trigger blacklisting.

Command Default

No default behavior or values are available.

Command Modes

SBE blacklist (config-sbc-sbe-blacklist)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.2S	The event type policy-rejection and routing-failure was changed to cac-policy-rejection and rtg-policy-rejection. A new na-policy-rejection event type was also introduced.

Usage Guidelines

The event field can only take the strings described in the Syntax Description.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows the use of the **reason** command in context:

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# ipv4 125.12.12.15
Router(config-sbc-sbe-blacklist-ipv4)# reason authentication-failure
```

Related Commands

Command	Description
critical-alert-size	Configures the number of specified events that most occur before a critical alert is triggered.
major-alert-size	Configures the number of specified events that most occur before a major alert is triggered.
minor-alert-size	Configures the number of specified events that most occur before a minor alert is triggered.
trigger-size	Defines the number of the specified events from the specified source that are allowed before blacklisting is triggered, and blocks all the packets from the source.
trigger-period	Defines the period over which events are considered. For details, see the description of the **trigger-size** command.
timeout	Defines the length of time for which packets from the source are blocked, should the limit be exceeded.
show sbc sbe blacklist configured-limits	Lists the explicitly configured limits, showing only the configured sources. Values not explicitly defined for each source are within brackets.
show sbc sbe blacklist source	Lists the limits in force for a particular source (whether they are from defaults or are explicitly configured) in a form in which they can be entered in the CLI. Also listed are any defaults for a smaller scope configured at this address. Values not explicitly configured (and therefore inherited from other defaults) are within brackets.
show sbc sbe blacklist current-blacklisting	Lists the limits that cause sources to be blacklisted.

redirect-limit

To configure the maximum number of redirections that SBC performs on a call, use the **redirect-limit command in** SBE configuration **mode. T**he **no** form of this command returns the adjacency to the default behavior.

redirect-limit *limit*

no redirect-limit *limit*

Syntax Description

limit	Specifies the maximum number of SIP 3xx retry attempts. The range is 0 to 200.

Command Default

The default number of redirections is 2.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the maximum number of SIP 3xx retries as 4:

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# redirect-limit 4
```

redirect-mode

To configure the behavior of SBC on receipt of a 3xx response to an invite from the SIP adjacency, **use the redirect-mode command in adjacency SIP configuration mode. The no form of this command returns the adjacency to the default behavior.**

redirect-mode {pass-through | recurse}

no redirect-mode {pass-through | recurse}

Syntax Description

pass-through	Passes all 3xx responses back to the caller.
recurse	On 300, 301, 302, and 305 invite responses, the SBC resends the invite to the first listed contact address, or else passes the 3xx responses back.

Command Default

pass-through

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to resend an invite to the first listed contact address or else pass the 3xx responses back to the sender:

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip test1
Router(config-sbc-sbe-adj-sip)# redirect-mode recurse
Router(config-sbc-sbe-adj-sip)#
```

Related Commands

Command	Description
redirect-limit	Configures the maximum number of redirections SBC performs on a call.

redundant peer

To configure an alternative signaling peer for an adjacency, use the **redundant peer** command in the adjacency SIP configuration mode. To deconfigure an alternative signaling peer, use the **no** form of this command.

redundant peer *index*

no redundant peer *index*

Syntax Description

index	The index number of a peer, ranging from 1 to 5.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section that follows shows the hierarchy of the modes and modes required to run the command.

Examples

The following example shows how the **redundant peer** command is used to configure an alternative signaling peer for an adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adj1
Router(config-sbc-sbe-adj-sip)# redundant peer 1
```

Related Commands

Command	Description
priority	Configures a redundant peer's priority.
address	Configures either an IP address or a host name to act as the redundant peer.
network	Configures either an IPv4 or IPv6 network in a redundant peer.
port	Configures a port for the redundant peer.
signaling-peer-switch	Configures a SIP adjacency to switch the signaling peer to an available destination.
signaling-peer-priority	Configures the priority of a signaling peer on a SIP adjacency.
force-signaling-peer	Forces SIP messages to go to a configured signaling peer.

refresh-buffer

To configure the length of time by which the Cisco Unified Border Element (SP Edition) attempts to renew or refresh the address location with a delegate registration before the specified expiration time, use the **refresh-buffer** command in subscriber delegate profile configuration mode. To reset the refresh time to the default refresh time, use the **no refresh-buffer command.**

refresh-buffer *{timeout in secs}*

no refresh-buffer *{timeout in secs}*

Syntax Description

timeout in secs	This is the refresh expiration time in seconds. The range is 1 to 2,147,483 seconds. The default is 30 seconds.

Command Default

The default refresh expiration time is 30 seconds.

Command Modes

Subscriber delegate profile configuration mode (config-sbc-sbe-subscriber-delegate-prof)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This is the length of time by which the SBC attempts to renew or refresh the address location with a delegate registration before the specified expiration time (configured with the **duration** command). This is one of the delegate profile parameters you can configure.

After a delegate profile is configured, the following profile parameters may optionally be configured:

- duration
- retry-count
- retry-interval
- refresh-buffer

Examples

The following example configures a provisioned delegate registration profile that can be applied to a delegate registration subscriber and configures a delegate registration for delegate client (aor= sip:bob@isp.example). The delegate registration profile is configured with a duration expiration time of 1000 seconds, a retry count of 5 times, a retry interval of 60 seconds, and a refresh timeout time of 200 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# delegate-profile my-profile
Router(config-sbc-sbe-subscriber-delegate-prof)# duration 1000
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-count 5
```

```
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-interval 60
Router(config-sbc-sbe-subscriber-delegate-prof)# refresh-buffer 200
Router(config-sbc-sbe-subscriber-delegate-prof)# exit
Router(config-sbc-sbe)# subscriber sip:bob@isp.example
Router(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
Router(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
Router(config-sbc-sbe-subscriber-contact)# exit
Router(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
Router(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
Router(config-sbc-sbe-subscriber-delegate)# profile my-profile
Router(config-sbc-sbe-subscriber-delegate)# activate
Router(config-sbc-sbe-subscriber-delegate)# end
```

Related Commands

Command	Description
duration	Configures the length of time in seconds during which the SBC tries to perform delegate registration before stopping.
retry-count	Configures the number of times the SBC repeats the delegate registration processing after the retry interval ends.
retry-interval (registration)	Configures the length of time the SBC waits before it retries delegate registration.
delegate-profile	Configures a delegate registration profile that is applied to a delegate registration subscriber.
delegate-registration	Configures a delegate registration for a delegate client.
show sbc sbe sip delegate-profile	Displays subscriber profiles for whom Provisioned Delegate Registration has been configured.

reg-min-expiry

To configure the minimum registration period in seconds on the SIP adjacency, use the **reg-min-expiry** command in the adjacency SIP configuration mode. To enter the default value, use the **no** form of this command.

reg-min-expiry *period*

no reg-min-expiry *period*

Syntax Description

period	The minimum expiry period in seconds. The range is 1 to 2000000.

Command Default

3000 seconds

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This is the minimum expiry period accepted on a subscriber registration if not fast-pathing, or the minimum-expiry period passed onward if fast-pathing is in use.

The minimum registration period cannot be changed after an adjacency has been configured. To change the minimum registration period, remove the adjacency by running **no sbc** *sbc-name* **sbe adjacency sip** *adjacency-name* command and then reconfigure the adjacency.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to enable the register minimum expiry on the SIP adjacency SipToIsp42 to 300 seconds:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# reg-min-expiry 300
Router(config-sbc-sbe-adj-sip)# exit
```

register-rate

To configure the register rate for a Session Border Controller (SBC) H.248 access adjacency, use the **register-rate** command in the H248 BAC adjacency configuration mode. To set the default value for the register rate, use the **no** form of this command.

register-rate *reg-rate*

no register-rate *reg-rate*

Syntax Description

reg-rate	Register rate for an SBC H.248 access adjacency, in seconds. Range: 30 to 300. Default: 100.

Command Default

The default value for *reg-rate* is 100.

Command Modes

H248 BAC adjacency configuration (config-h248-bac-adj)

Command History

Release	Modification
Cisco IOS XE Release 3.7S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to configure the register rate for an SBC H.248 access adjacency:

```
Router> enable
Router# configure terminal
Router(config)# sbc h248 bac
Router(config-h248-bac)# adjacency h248 access vrfex
Router(config-h248-bac-adj)# control-address ipv4 10.0.0.1 port 1
Router(config-h248-bac-adj)# register-rate 33
```

registration aggregate

To enable Aggregate Registration, use the **registration aggregate** command in adjacency sip configuration mode. To disable Aggregate Registration, use the **no registration aggregate** command.

registration aggregate

no registration aggregate

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

adjacency sip configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This command enables Aggregate Registration support from the specified SIP adjacency facing the Registrar server.

Examples

The following example enables Aggregate Registration on adjacency Cary-IP-PBX, which has a preset access profile specified because it faces an access device on a UNI network. The last three commands in the configuration, entered in the correct order, enable the aggregate registration call routing to work.

```
sbc mySbc
 sbe
  adjacency sip Cary-IP-PBX
   registration rewrite-register
   inherit profile preset-access
   registration aggregate
   header-name to passthrough
   request-line request-uri rewrite
```

The following example displays detailed output for adjacency Cary-IP-PBX, including the “Register Aggregate:” field that shows Aggregate Registration is “Enabled.”

```
Router# show sbc mySbc sbe adjacencies Cary-IP-PBX detail
SBC Service "mySBC"
  Adjacency Cary-IP-PBX (SIP)
    Status:               Attached
    Signaling address:    100.100.100.100:5060, VRF Admin
    Signaling-peer:       10.10.51.10:5060
    Force next hop:       No
    Account:
    Group:                None
```

```
In header profile:     Default
Out header profile:    Default
In method profile:     Default
Out method profile:    Default
In UA option prof:     Default
Out UA option prof:    Default
In proxy opt prof:     Default
Out proxy opt prof:    Default
Priority set name:     None
Local-id:              None
Rewrite REGISTER:      Off
Target address:        None
Register Out Timer:    1800 seconds
Register Aggregate:    Enabled
NAT Status:            Auto Detect
Reg-min-expiry:        30 seconds
Fast-register:         Enabled
Fast-register-int:     30 seconds
Authenticated mode:    None
Authenticated realm:   None
Auth. nonce life time: 300 seconds
IMS visited NetID:     None
Inherit profile:       Default
Force next hop:        No
Home network Id:       None
UnEncrypt key data:    None
SIPI passthrough:      No
Rewrite from domain:   Yes
Rewrite to header:     Yes
Media passthrough:     No
Preferred transport:   UDP
Hunting Triggers:      Global Triggers
Redirect mode:         Pass-through
Security:              Untrusted
Outbound-flood-rate:   None
Ping-enabled:          No
Signaling Peer Status: Not Tested
Rewrite Request-uri:   Enabled
Registration Monitor:  Disabled
```

The following is a configuration example showing that Aggregate Registration and SoftSwitch Shielding are configured:

```
sbc test
 sbe
   sip header-profile myheader
    header P-Called-Party-ID entry 1
     action pass
   adjacency sip sippa       ================================> Adjacency facing IP-PBX
    header-profile inbound myheader
    header-profile outbound myheader
    inherit profile preset-access
    preferred-transport udp
    signaling-address ipv4 99.99.103.150
    signaling-port 5080
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5080
    registration rewrite-register
    account sipp-a
    registration aggregate
    fast-register disable
    header-name to passthrough
```

```
    request-line request-uri rewrite

    attach
   adjacency sip sippb      ==================================> Adjacency facing REGISTRAR
    nat force-off
    header-profile inbound myheader
    header-profile outbound myheader
    inherit profile preset-core
    preferred-transport udp
    signaling-address ipv4 99.99.103.150
    signaling-port 5082
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5082
    account sipp-b
    registration target address 100.100.1.64
    registration target port 5084
    fast-register disable
    attach
   cac-policy-set 1
    first-cac-table mytable
    first-cac-scope src-adjacency
    cac-table mytable
     table-type limit adjacency
     entry 1
     match-value sippa
      max-num-calls 10
      action cac-complete
    complete
   cac-policy-set global 1
   call-policy-set 1
    first-call-routing-table src-acc-table
    first-reg-routing-table src-acc-table
    rtg-src-adjacency-table src-acc-table
     entry 1
      action complete
      dst-adjacency sippb
      match-adjacency sippa
     entry 2
      action complete
      dst-adjacency sippa
      match-adjacency sippb
    complete
   call-policy-set 2
   call-policy-set default 1
 !
 vdbe global
  unexpected-source-alerting
 media-address ipv4 99.99.103.156
 media-timeout 9999
 activate
!
Softswitch shielding config
===================
sbc test
 sbe
   adjacency sip sippa
    signaling-address ipv4 99.99.103.150
    signaling-port 5080
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5080
    registration rewrite-register
    account sipp-a
```

```
    attach
   adjacency sip sippb
    signaling-address ipv4 99.99.103.150
    signaling-port 5082
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5082
    account sipp-b
    registration outgoing timer 86400
    registration target address 100.100.1.64
    registration target port 5084
    attach
   call-policy-set 1
    first-call-routing-table src-acc-table
    first-reg-routing-table src-acc-table
    rtg-src-adjacency-table src-acc-table
     entry 1
      action complete
      dst-adjacency sippb
      match-adjacency sippa
     entry 2
      action complete
      dst-adjacency sippa
      match-adjacency sippb
    complete
   call-policy-set default 1
 !
 media-address ipv4 99.99.103.156
 media-timeout 9999
 activate
!
```

Related Commands

Command	Description
registration monitor	Enables the Registrar server to monitor subscriber event changes due to registration changes.
registration outgoing timer	Enable SoftSwitch Shielding by setting the registration timeout timer for the time interval when Cisco Unified Border Element (SP Edition) forwards outgoing registration messages.
registration rewrite-register	Configures the SIP register request rewriting on an adjacency.
inherit profile	Configures a global inherit profile for the SIP adjacency.
adjacency	Configures the adjacency facing the registrar.

registration contact username

To configure a contact username in a SIP REGISTER request to either pass through unchanged or be allowed to be modified, use the **registration contact username** command in the Adjacency SIP configuration mode. To reset to the default, use the **no** form of this command.

registration contact username [***passthrough*** | ***rewrite*** [**numeric** | **userid-and-numeric**]]

no registration contact username [***passthrough*** | ***rewrite*** [**numeric** | **userid-and-numeric**]]

Syntax Description

passthrough	Specifies that the contact username in a SIP REGISTER request is passed through unchanged. **Note** If a contact username is longer than 32 characters, the username is not passed, and the contact username is rewritten as a hashed value.
rewrite	Allows the contact username in a SIP REGISTER request to be changed or rewritten.
numeric	Rewrites the contact username in a SIP REGISTER request as an originating hashed numeric value.
userid-and-numeric	Rewrites the contact username in a SIP REGISTER request as an originating user ID and a hashed numeric value.

Command Default

By default, the contact username in a SIP REGISTER request can be changed or rewritten.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.5	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.3S	This command was modified. The **numeric** and **userid-and-numeric** keywords were added.

Usage Guidelines

The **registration contact-username** command must be configured on the adjacency facing the registrar.

The **registration contact username** command with the **passthrough** option allows you to specify that the contact username in the SIP REGISTER request should be passed through unchanged when rewriting contacts. The **passthrough** option disambiguates subscribers who register from different devices with the same private username by using a unique local port number when multiple contact URIs are registered for the same public ID.

The range of valid signaling ports are configured with the **signaling-port** command on a registrar-facing adjacency. If **signaling-port** is not configured on the adjacency, the SBC is not able to disambiguate subscribers who register from different devices with the same username.

Note If a contact username is longer than 32 characters, the username is not passed, and the contact username is rewritten as a hashed value.

Examples

The following example shows how to pass a single contact username unchanged:

```
adjacency sip SIPP1Reg
    group SIPP1Reg
    inherit profile preset-core
    signaling-address ipv4 192.168.101.1
    statistics-setting summary
    signaling-port 5060 5062
    remote-address ipv4 192.168.101.12 255.255.255.255
    signaling-peer 192.168.101.12
    signaling-peer-port 7068
    registration target address 192.168.101.12
    registration target port 7069
    registration contact username passthrough
   attach

REGISTER UE to SBC (packet flow)
REGISTER sip:1.2.3.4 SIP/2.0
Via: SIP/2.0/UDP 192.169.0.1;branch=z9hG4bK+ddil+5489756
From: <sip:bob@registrar.com>;tag=tag
To: <sip:bob@registrar.com>
Call-ID: reg00001@upstream.com
CSeq: 1 REGISTER
Contact: <sip:bob@1.1.1.1>
Expires: 60

REGISTER SBC to Core (packet flow)
REGISTER sip:registrar.com SIP/2.0
Via: SIP/2.0/UDP
192.168.101.1:5060;branch=z9hG4bK+a1a6922fdaa29911319b1d263134925c1+1.2.3.4+1
Max-Forwards: 70
From: <sip:bob@registrar.com>;tag=192.168.101.1+1+14e5461d+b196176d
Content-Length: 0
To: <sip:bob@registrar.com>
Call-ID: 83d9583ea51ae624b897ec6881114e84@192.168.101.1
CSeq: 1 REGISTER
Contact: <sip:bob@192.168.101.1:5060>
```

The following is an example flow of multiple registrations for the same subscriber. The example shows how a sequence of REGISTER requests registering multiple contacts behaves. This example assumes that all the headers, apart from the contact headers, are omitted from the requests, and that the registrar-facing adjacency has a signaling port range of 5060 to 5063 (this means that four local ports are available).

```
  adjacency sip SIPP1Reg
    group SIPP1Reg
    inherit profile preset-core
    signaling-address ipv4 192.168.101.1
    statistics-setting summary
    signaling-port 5060 5063
    remote-address ipv4 192.168.101.12 255.255.255.255
    signaling-peer 192.168.101.12
    signaling-peer-port 7068
    registration target address 192.168.101.12
    registration target port 7069
```

```
registration contact username passthrough
attach
```

1. A REGISTER is received registering two contact addresses for the number 5551234:

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip:bob@1.1.1.1>
Contact: <sip:robert@1.1.1.1>
```

2. The SBC forwards this REGISTER to the registrar after rewritting the contact address and port:

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip:bob@192.168.101.1:5060>
Contact: <sip:robert@192.168.101.1:5061>
```

3. Another REGISTER is received for the number 5551234, registering another endpoint with a duplicate username:

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip:bob@2.2.2.2>
```

4. The SBC forwards this to the registrar, passing the username through unchanged:

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip:bob@192.168.101.1:5062>
```

5. A third endpoint is registered for the same number. This endpoint provides a very long contact name in the Contact field:

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip:this_is_an_extremely_long_contact_username@2.2.2.2>
```

6. The SBC forwards this request to the registrar and rewrites the username because it is over the maximum passthrough length (32):

```
REGISTER sip:5551234@1.2.3.4 SIP/2.0
Contact: <sip: 6e83bca53a48bd629a153a93ff8f4af1@192.168.101.1:5063>
```

The following example shows how to rewrite a contact username in a SIP REGISTER request as an originating user ID and a hashed numeric value:

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SIPP
Router(config-sbc-sbe-adj-sip)# registration contact username rewrite userid-and-numeric
```

The following examples show the SIP headers when the **userid-and-numeric** keyword is used:

- Incoming register at the SBC:

```
From: <sip:1234@example.com>;tag=1111
To: <sip:1234@example.com>
Contact: <sip:1234@1.1.1.1>;expires=3600
```

- Outgoing register from the SBC:

```
From: <sip:1234@example.com>;tag=1234
To: <sip:1234@example.com>
Contact: <sip:1234-j1j2j3j4@10.10.10.1>;expires=3600
```

The following example shows how to rewrite a contact username in a SIP REGISTER request as an originating hashed numeric value:

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SIPP
Router(config-sbc-sbe-adj-sip)# registration contact username rewrite numeric
```

The following examples show the SIP headers when the **numeric** keyword is used:

- Incoming register at the SBC:

```
From: <sip:1234@example.com>;tag=1111
To: <sip:1234@example.com>
Contact: <sip:1234@1.1.1.1>;expires=3600
```

- Outgoing register from the SBC:

```
From: <sip:1234@example.com>;tag=1234
To: <sip:1234@example.com>
Contact: <sip:12345678@10.10.10.1>;expires=3600
```

Related Commands

Command	Description
registration rewrite-register	Configures the SIP register request rewriting.
signaling-port	Configures a range of valid signaling ports on a registrar-facing adjacency to allow the SBC to disambiguate subscribers who register from different devices with the same username.

registration monitor

To enable the Registrar server to monitor subscriber event changes due to registration changes, use the **registration monitor** command in adjacency sip configuration mode. To disable registration monitoring, use the **no registration monitor** command.

registration monitor

no registration monitor

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

adjacency sip configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This command enables the Registrar server to monitor event subscriptions due to changes to the state of the registration. Subscription changes for each subscriber that re-registers with the Registrar server situation on the specified adjacency may cause Cisco Unified Border Element (SP Edition) to add, remove, or update the subscriber state.

Examples

The following example shows how registration monitoring is enabled:

```
sbc Raleigh-SBC
 sbe
  adjacency sip Cary-IP-PBX
   registration monitor
```

The following example displays detailed output for adjacency Cary-IP-PBX, including the "Registration Monitor:" field that shows Registration Monitoring is "Enabled:"

```
Router# show sbc mySBC sbe adjacencies Cary-IP-PBX detail
SBC Service "mySbc"
  Adjacency Cary-IP-PBX (SIP)
    Status:                Attached
    Signaling address:     100.100.100.100:5060, VRF Admin
    Signaling-peer:        10.10.51.10:5060
    Force next hop:        No
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
```

```
Out method profile:    Default
In UA option prof:     Default
Out UA option prof:    Default
In proxy opt prof:     Default
Out proxy opt prof:    Default
Priority set name:     None
Local-id:              None
Rewrite REGISTER:      Off
Target address:        None
Register Out Timer:    1800 seconds
Register Aggregate:    Enabled
NAT Status:            Auto Detect
Reg-min-expiry:        30 seconds
Fast-register:         Enabled
Fast-register-int:     30 seconds
Authenticated mode:    None
Authenticated realm:   None
Auth. nonce life time: 300 seconds
IMS visited NetID:     None
Inherit profile:       Default
Force next hop:        No
Home network Id:       None
UnEncrypt key data:    None
SIPI passthrough:      No
Rewrite from domain:   Yes
Rewrite to header:     Yes
Media passthrough:     No
Preferred transport:   UDP
Hunting Triggers:      Global Triggers
Redirect mode:         Pass-through
Security:              Untrusted
Outbound-flood-rate:   None
Ping-enabled:          No
Signaling Peer Status: Not Tested
Rewrite Request-uri:   Disabled
Registration Monitor:  Enabled
```

Related Commands

Command	Description
registration aggregate	Enables Aggregate Registration.
registration outgoing timer	Enables SoftSwitch Shielding by setting the registration timeout timer for the time interval when Cisco Unified Border Element (SP Edition) forwards outgoing registration messages.
registration rewrite-register	Configures the SIP register request rewriting on an adjacency.
inherit profile	Configures a global inherit profile for the SIP adjacency.
adjacency	Configures the adjacency facing the registrar.

registration outgoing timer

To enable SoftSwitch Shielding by setting the registration outgoing timer for the time interval when Cisco Unified Border Element (SP Edition) forwards outgoing registration messages, use the **registration outgoing timer** command in adjacency sip configuration mode. To set the outgoing time interval to zero and disable SoftSwitch Shielding, use the **no registration outgoing timer** command.

registration outgoing timer *{sec}*

no registration outgoing timer *{sec}*

Syntax Description

sec	Specifies number of seconds. The value is 1 to 2147483647 seconds. The default is zero.

Command Default

The default value of zero disables SoftSwitch Shielding.

Command Modes

adjacency sip configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This command enables SoftSwitch Shielding. It sets the registration timeout timer for the time interval in seconds when Cisco Unified Border Element (SP Edition) keeps forwarding outgoing REGISTER messages to the softswitch before timing out.

Examples

The following example configures SoftSwitch Shielding on adjacency “SoftSwitch:”

```
sbc mySbc
 sbe
  adjacency sip SoftSwitch
   registration outgoing timer <sec>
   registration rewrite-register
   inherit profile preset-core
```

The following is a configuration example showing that SoftSwitch Shielding is configured for adjacency sippb:

```
SoftSwitch Shielding Configuration
==================================
sbc test
 sbe
   adjacency sip sippa
    signaling-address ipv4 99.99.103.150
    signaling-port 5080
```

```
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5080
    registration rewrite-register
    account sipp-a
    attach
   adjacency sip sippb
    signaling-address ipv4 99.99.103.150
    signaling-port 5082
    remote-address ipv4 100.100.1.64 255.255.255.255
    signaling-peer 100.100.1.64
    signaling-peer-port 5082
    account sipp-b
    registration outgoing timer 86400
    registration target address 100.100.1.64
    registration target port 5084
    attach
   call-policy-set 1
    first-call-routing-table src-acc-table
    first-reg-routing-table src-acc-table
    rtg-src-adjacency-table src-acc-table
     entry 1
      action complete
      dst-adjacency sippb
      match-adjacency sippa
     entry 2
      action complete
      dst-adjacency sippa
      match-adjacency sippb
    complete
   call-policy-set default 1
 !
 media-address ipv4 99.99.103.156
 media-timeout 9999
 activate
!
```

Related Commands

Command	Description
registration monitor	Enables the Registrar server to monitor subscriber event changes due to registration changes.
registration aggregate	Enables Aggregate Registration.
delegate-registration	Configures Provisioned Delegate Registration for a specific delegate client.

registration required

To specify that registration is required for a call to proceed, use **registration required** command in the SBC SBE Adjacency SIP mode. Use the **no** form of this command to specify that registration is not required for the call to proceed.

registration required

no registration required

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

SBC SBE Adjacency SIP (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.6	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode.

Examples

The following example specifies that registration is required for a call to proceed on the SIP adjacency CORE:

```
Router# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip CORE
Router(config-sbc-sbe-adj-sip)# registration required

The following show command output provide details on the above configuration. Note the
value of the registration required field:
Router# show sbc test sbe adjacencies CORE detail
SBC Service "test"
  Adjacency CORE (SIP)
    Status:                Detached
    Signaling address:     44.21.171.8:default
    Signaling-peer:        :5060 (Default)
    Force next hop:        No
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
    Out method profile:    Default
    In body profile:       None
```

```
Out body profile:      None
In UA option prof:     Default
Out UA option prof:    Default
In proxy opt prof:     Default
Out proxy opt prof:    Default
Priority set name:     None
Local-id:              None
Rewrite REGISTER:      Off
Register contact username: Rewrite
Target address:        None
NAT Status:            Auto Detect
Reg-min-expiry:        3000 seconds
Fast-register:         Enabled
Fast-register-int:     30 seconds
Register aggregate:    Disabled
Registration Required: Enabled
Register Out Interval: 0 seconds
Parse username params: Disabled
Supported timer insert:Disabled
Suppress Expires:      Disabled
p-asserted-id header-value: not defined
p-assert-id assert:    Disabled
Authenticated mode:    None
Authenticated realm:   None
Auth. nonce life time: 300 seconds
IMS visited NetID:     None
Inherit profile:       Default
Force next hop:        No
Home network Id:       None
UnEncrypt key data:    None
SIPI passthrough:      No
Passthrough headers:
Media passthrough:     No
Incoming 100rel strip: No
Incoming 100rel supp:  No
Out 100rel supp add:   No
Out 100rel req add:    No
Parse TGID parms:      No
IP-FQDN inbound:
IP-FQDN outbound:
FQDN-IP inbound:
FQDN-IP outbound:
Outbound Flood Rate:   None
Hunting Triggers:      Global Triggers
Add transport=tls param:   Disabled
Redirect mode:         Pass-through
Security:              Untrusted-Unencrypted
TLS mutual authentication: No
Ping:                  Disabled
Ping Interval:         32 seconds
Ping Life Time:        32 seconds
Ping Peer Fail Count:  3
Ping Trap sending:     Enabled
Ping Peer Status:      Not Tested
Rewrite Request-uri:   Disabled
Registration Monitor:  Disabled
DTMF SIP NOTIFY Relay:     Enabled
DTMF SIP NOTIFY Interval:  2000
DTMF SIP default duration: 200
DTMF Preferred Method:     SIP NOTIFY
Realm                :     None
```

Statistics setting: Summary

registration rewrite-register

To configure the SIP register request rewriting, use the **registration rewrite-register** command in Adjacency SIP configuration mode. To deconfigure the register request rewriting, use the **no** form of this command.

registration rewrite-register

no registration rewrite-register

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **registration rewrite-register** command configures the SIP register request rewriting on SIP adjacency SipToIsp42.

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# registration rewrite-register
```

registration target address

To set the address to be used when an outbound SIP register request rewriting occurs, use the **registration target address** command in Adjacency SIP configuration mode. To remove the address, use the **no** form of this command.

registration target address *host address*

no registration target address *host address*

Syntax Description

host address	Specifies the host address to use when an outbound SIP register request rewriting occurs. This parameter can be a DNS name or an IPv4 address in dotted decimal format. Valid strings are from 1 to 255 characters in length.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **registration target address** command sets the target address for SIP adjacency SipToIsp42 as example.com:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# registration target address example.com
```

registration target port

To set the port to be used when an outbound SIP REGISTER request rewriting occurs, use the **registration target port** command in Adjacency SIP configuration mode. To enter the default value, use the **no** form of this command.

registration target port *port-number*

no registration target port *port-number*

Syntax Description

port-number	Specifies the port number to use when an outbound SIP REGISTER request rewriting occurs. Valid values can be from 1 to 65535. If you enter the default value of **0**, no port address is set.

Command Default

Default value is 0. This cannot be directly entered.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **registration target port** command sets the port number for SIP adjacency SipToIsp42 as 5070:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# registration target port 5070
```

registration unencrypted-convert

To enable the conversion of SIPS URIs to SIP URIs on a trusted-unencrypted adjacency, use the **registration unencrypted-convert** command in adjacency SIP configuration mode. To remove this configuration, use the **no** form of this command.

registration unencrypted-convert

no registration unencrypted-convert

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 3.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

Examples

The following example shows how the **registration unencrypted-convert** command is used to enable the conversion of SIPS URIs to SIP URIs on the my_adjacency adjacency:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip my_adjacency
Router(config-sbc-sbe-adj-sip)# registration unencrypted-convert
```

Related Commands

Command	Description
registration aggregate	Enables aggregate registration.
registration contact username	Configures a contact username in a SIP REGISTER request to either pass through unchanged or be allowed to be modified.
registration monitor	Enables the registrar server to monitor subscriber event changes due to registration changes.

Command	Description
registration outgoing timer	Enables SoftSwitch Shielding by setting the registration outgoing timer for the time interval when the Cisco Unified Border Element (SP Edition) forwards outgoing registration messages.
registration required	Specifies that registration is required for a call to proceed.
registration rewrite-register	Configures the SIP register request rewriting.
registration target address	Sets the address to be used when an outbound SIP register request rewriting occurs.
registration target port	Sets the port to be used when an outbound SIP REGISTER request rewriting occurs.

reject-threshold

To configure the memory threshold and reject rate for new calls, use the **reject-threshold** command. Use the **no** form of this command to restore the default values.

reject-threshold [*level***] memory [***percentage***] [***reject rate***]**

[no] reject-threshold [*level***] memory [***percentage***]**

Syntax Description

level	Level of threshold. Values are: minor, major, and critical.
percentage	Percentage of total processor memory remaining. The value range is from 6 to 50.
reject rate	Number of new calls to be rejected out of each 10 calls.

Command Modes

Configure SBC SBE (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section that follows shows the hierarchy of the modes required to run the command.

Follow these rules when configuring the threshold using this command:

- Percentage for minor level must be greater than current major level.
- Percentage for major level must be greater than current critical level.
- Percentage for major level must be less than current minor level.
- Percentage for critical level must be less than current major level.

Examples

The following example shows how to configure the minor memory congestion level set when 30 percentage of total memory is available. The reject rate at this level is set to 0:

```
(config)# sbc mySBC
(config-sbc)# sbe
(config-sbc-sbe)# reject-threshold minor memory 30 0
```

The following example shows how to restore the default major memory threshold and drop rate:

```
(config)# sbc mySBC
(config-sbc)# sbe
(config-sbc-sbe)# no reject-threshold major memory
```

Following is an example of the show command output for reject threshold:

```
Router# show sbc mySBC sbe call-stats reject-threshold

Level    Memory Trigger   Action
 ------------------------------------------------
 minor    <  25 percent    0  in 10 calls dropped
 major    <  20 percent    4  in 10 calls dropped
 critical <  15 percent    9  in 10 calls dropped
 halt     <  10 percent    10 in 10 calls dropped


 Current level: NORMAL
 Total calls rejected due to low memory threshold: 0
```

remote-address ipv4

To configure a remote IPv4 H.248 signaling address for the Media Gateway Control Function (MGCF) and the Access Gateway Control Function (AGCF), use the **remote-address ipv4** command in the H248 BAC adjacency configuration mode. To unconfigure the MGC and the AGCF from using a remote IPv4 H.248 signaling address, use the **no** form of this command.

remote-address ipv4 *ipv4-address* **port** *port-number*

no remote-address ipv4 *ipv4-address* **port** *port-number*

Syntax Description

ipv4	Configures an IPv4 H.248 signaling remote address for the MGCF and AGCF.
ipv4-address	IPv4 address assigned to an H.248 association.
port	Specifies the port for the adjacency address.
port-number	Number for the adjacency address port. The range is from 1 to 65535.

Command Default

None

Command Modes

H.248 BAC adjacency configuration (config-h248-bac-adj)

Command History

Release	Modification
Cisco IOS XE Release 3.7	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This command can be configured only in the core adjacency submode and not in the access adjacency submode.

Examples

The following example shows how the **remote-address ipv4** command is used to configure a remote IPv4 H.248 signaling address for the MGCF and AGCF:

```
Router# configure terminal
Router(config)# sbc h248 bac
Router(config-h248-bac)# adjacency h248 access iad_80_123
Router(config-h248-bac-adj)# remote-address ipv4 192.168.102.14 port 2944
```

Related Commands

Command	Description
control-address ipv4	Configures a local IPv4 H.248 signaling address for the BAC.

remote-port (session border controller)

To define the port to connect to on the SBE for an H.248 controller, use the **remote-port** command in VDBE h248 mode.

remote-port *port-num*

Syntax Description

port-num	This is the port number to be configured. If the port is not configured or is configured with the value zero, then the H.248 default port number, 2944, is used.

Command Default

Port number 2944

Command Modes

VDBE h248 (config-sbc-dbe-h248)

Command History

Release	Modification
Cisco IOS XE Release 2.1	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

The local-port and control-address are not applied until the controller is added and the remote address is configured. Also, the controller should be deleted to delete the remote address.

If the port is not configured, or is configured with the value zero, then the H.248 default port number, 2944, is used.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example configures the port to 2944 on the H.248 controller with index 1:

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# controller h248 1
Router(config-sbc-dbe-vdbe-h248)# remote-port 2944
Router(config-sbc-dbe-vdbe-h248)# exit
```

Related Commands

Command	Description
dbe	Enters into DBE-SBE configuration mode.
vdbe	Configures a virtual data border element (VDBE) and enters the VDBE configuration mode.
controller h248	Creates an H.248 controller for a DBE.

req-timeout

To configure the ENUM request timeout period, use the **req-timeout** command in ENUM configuration mode. To return the timeout period to the default value, use the no form of this command.

req-timeout *timeout*

no req-timeout *timeout*

Syntax Description

timeout	ENUM request timeout period in milliseconds. The range is 0 to 2147483647.

Command Default

The default is 5000 milliseconds.

Command Modes

ENUM configuration (config-sbc-sbe-enum)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the ENUM request timeout period:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# enum 1
Router(config-sbc-sbe-enum)# req-timeout 10000
```

Related Commands

Command	Description
activate (enum)	Activates ENUM client.
dial-plan-suffix	Configures the dial plan suffix used for the ENUM query.
div-address	Enters the diverted-by address mode to set the priority of the header or headers from which to derive a diverted-by address (inbound only).
dst-address	Enters the destination address mode to set the priority of the header or headers from which to derive a called party address (inbound only).
entry (enum)	Configures the ENUM client entry name and enter the ENUM entry configuration mode.

Command	Description
enum	Configures the ENUM client ID number and enter the ENUM configuration mode.
header-prio header-name	Configures the priority of a header that is used to derive a source, destination, or diverted-by address.
max-recursive-depth	Configures the maximum number of recursive ENUM look-ups for non-terminal Resource Records (RR).
max-responses	Configures the maximum number of ENUM records returned to the routing module.
req-timeout	Configures the ENUM request timeout period.
src-address	Enters the source address mode to set the priority of the header or headers from which to derive a calling party address (inbound only).
server ipv4	Configures the IPv4 address of a DNS server for ENUM client and optionally associate the DNS server to a VRF.
show sbc sbe call-policy-set	Displays configuration and status information about call policy sets.
show sbc sbe enum	Displays the configuration information about an ENUM client.
show sbc sbe enum entry	Displays the contents of an ENUM client entry.

request-line

To configure the actions for modifying a request line, on the outbound side, use the **request-line** command in the SIP Header Editor configuration mode. To deconfigure the actions, use the **no** form of this command.

request-line [**entry** *entry-number*]

no request-line [**entry** *entry-number*]

Syntax Description

entry	Specifies the filtered entry number. By default, it is 1.
entry-number	Entry number. It can range from 1 to 99.

Command Default

By default, the entry number is 1.

Command Modes

SIP Header Editor configuration (config-sbc-sbe-mep-hdr)

Command History

Release	Modification
Cisco IOS XE Release 3.3S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

Examples

The following example shows how to configure the actions required to modify a request line:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-editor Myeditor
Router(config-sbc-sbe-mep-hdr)# request-line
Router(config-sbc-sbe-mep-hdr-ele)# action replace-value value sip:user@host
```

Related Commands

Command	Description
blacklist	Configures a SIP header or method blacklist editors on a SIP message.
description	Configures descriptive text for a SIP header.
sip header-editor	Configures a header editor.

request-line request-uri rewrite

To request the SBC to rewrite the Request-URI to a different user and hostname before sending a request to a registered subscriber, use the **request-line request-uri rewrite** command in Adjacency SIP configuration mode.

request-line request-uri rewrite

Syntax Description

This command has no arguments or keywords.

Note Uniform Resource Identifier (URI) is an IP address of the subscriber. It is a string field of 62 characters maximum length.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

This command is used in Aggregate Registration only and is configured on the adjacency facing the IP-PBX which requires Aggregate Registration. This command allows outgoing calls to the endpoint registered with Aggregate Registration. The SBC rewrites the Request-URI as <user>@<hostname>, before sending a request to the registered subscriber (IP-PBX) on an adjacency.

The "**request-uri"** field indicates whether this adjacency faces an aggregation device, such as an IP-PBX, which cannot route incoming messages based on the P-Called-Party-ID or To header, but only on the Request-URI.

The Request-URI would normally be set to the Contact address registered by the IP-PBX rather than an endpoint address.

Before sending a request to a registered subscriber, for example IP-PBX, on this adjacency, the SBC will rewrite the Request-URI as <user>@<hostname> where:

- <user> is taken from the P-Called-Party-ID header if present, or if not, the To header.
- <hostname> is taken from the Contact address that was registered for this subscriber.

Uniform Resource Identifier (URI) is an IP address of the subscriber. It is a string field of 62 characters maximum length.

Examples

The following example shows the rewrite of the Request-URI to sip:bill@1.1.1.1 in an Aggregate Registration configuration:

Router(config-sbc-sbe-adj-sip)# **request-line request-uri rewrite sip:bill@1.1.1.1**

The following example enables Aggregate Registration on adjacency Cary-IP-PBX, which has a preset access profile specified because it faces an access device on a UNI network. The last three commands in the configuration, entered in the correct order, enable the aggregate registration call routing to work.

```
sbc mySbc
 sbe
  adjacency sip Cary-IP-PBX
   registration rewrite-register
   inherit profile preset-access
   registration aggregate
   header-name to passthrough
   request-line request-uri rewrite
```

Related Commands

Command	Description
header-name	Configures the contact header and passthrough header in non-REGISTER requests.
registration aggregate	Enables Aggregate Registration.

resource-priority-set

To establish the resource priority set to be used with the specified SIP adjacency in the mode of an SBE entity, use the **resource-priority-set** command in adjacency SIP configuration mode. To remove the priority set, use the **no** form of this command.

resource-priority-set *resource-priority-set-name*

no resource-priority-set *resource-priority-set-name*

Syntax Description

resource-priority-set-name	Specifies the name of the resource priority set. The *resource-priority-set-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **resource-priority-set** command sets the SIP adjacency SipToIsp42 with the resource-priority-set named dsn:

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# resource-priority-set dsn
```

resource-priority

To configure the priority of a resource-priority header string, use the **resource-priority** command in resource priority mode. To deconfigure the priority, use the **no** form of this command.

resource-priority *value*

no resource-priority *value*

Syntax Description

value	Specifies the string value to be assigned the priority. The *value* must be followed by the priority as shown: *value.priority.*

Command Default

No default behavior or values are available.

Command Modes

Resource priority (config-sbc-sbe-rsrc-pri-set)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how the **resource-priority** command configures the priority for resource-priority header string dsn.

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# resource-priority-set dsn
Router(config-sbc-sbe-rsrc-pri-set)# resource-priority dsn.flash
```

response-code-mapping

To define a response code map, use the **response-code-mapping** command in SIP method-profile configuration mode. The **no** form of this command removes all mappings.

response-code-mapping *map*

no response-code-mapping *map*

Syntax Description

map	Specifies a list of SIP response codes and the value that they will be mapped to as follows: Response code 100: mapping not allowed. Response code 1xx: Maps to 1yy. Response code 2xx maps to 2yy. Response code 3xx maps to 3yy. Response code 4xx maps to 4yy, 5yy, or 6yy. Response code 5xx maps to 4yy, 5yy, or 6yy Response code 6xx maps to 4yy, 5yy, or 6yy

Command Default

No response code mapping.

Command Modes

SIP method-profile configuration (config-sbc-sbe-sip-mth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example defines a response code map**:**

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-profile Myprofile
Router(config-sbc-sbe-sip-mth)# response-code-mapping maptest
```

Related Commands

Command	Description
sip method-profile	Configures a method-profile.

retry-count

To configure the number of times the Cisco Unified Border Element (SP Edition) repeats the provisioned delegate registration processing after the retry interval ends, use the **retry-count** command in subscriber delegate profile configuration mode. To reset the retry count time to the default retry count time, use the **no retry-count command.**

retry-count *{#times to retry}*

no retry-count *{#times to retry}*

Syntax Description

#times to retry	the number of times the SBC repeats the delegate registration processing after the retry interval ends. The default is 3 times. The range is 0 to 255 times.

Command Default

The default number of retries is 3 times.

Command Modes

Subscriber delegate profile configuration mode (config-sbc-sbe-subscriber-delegate-prof)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Configures the number of times the Cisco Unified Border Element (SP Edition) repeats the delegate registration processing after the retry interval ends. The default is 3 times. This is one of the delegate profile parameters you can configure.

After a delegate profile is configured, the following profile parameters may optionally be configured:

- duration
- retry-count
- retry-interval
- refresh-buffer

Examples

The following example configures a provisioned delegate registration profile that can be applied to a delegate registration subscriber and configures a delegate registration for delegate client (aor= sip:bob@isp.example). The delegate registration profile is configured with a duration expiration time of 1000 seconds, a retry count of 5 times, a retry interval of 60 seconds, and a refresh timeout time of 200 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# delegate-profile my-profile
```

```
Router(config-sbc-sbe-subscriber-delegate-prof)# duration 1000
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-count 5
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-interval 60
Router(config-sbc-sbe-subscriber-delegate-prof)# refresh-buffer 200
Router(config-sbc-sbe-subscriber-delegate-prof)# exit
Router(config-sbc-sbe)# subscriber sip:bob@isp.example
Router(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
Router(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
Router(config-sbc-sbe-subscriber-contact)# exit
Router(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
Router(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
Router(config-sbc-sbe-subscriber-delegate)# profile my-profile
Router(config-sbc-sbe-subscriber-delegate)# activate
Router(config-sbc-sbe-subscriber-delegate)# end
```

Related Commands

Command	Description
duration	Configures the length of time in seconds during which the SBC tries to perform delegate registration before stopping.
retry-interval (registration)	Configures the length of time the SBC waits before it retries delegate registration.
refresh-buffer	Configures the length of time by which the SBC attempts to refresh the address location with a delegate registration before the specified expiration time.
delegate-profile	Configures a delegate registration profile that is applied to a delegate registration subscriber.
delegate-registration	Configures a delegate registration for a delegate client.
show sbc sbe sip delegate-profile	Displays subscriber profiles for whom Provisioned Delegate Registration has been configured.

retry-interval

To set the interval for resending an accounting request to the Radius server, use the **retry-interval** command in SBE accounting mode. To set the interval to its default, use the **no** form of this command.

retry-interval *range*

no retry-interval *range*

Syntax Description

range	Range is 10-10000 ms.

Command Default

1200 ms

Command Modes

Server accounting (config-sbc-sbe-acc-ser)

Server authentication (config-sbc-sbe-auth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to set the **retry-interval to 1000 ms.**

```
Router# configure
Router(config)# sbc uut105-1
Router(config-sbc)# sbe
Router(config-sbc-sbe)# radius accounting SBC1-account-1
Router(config-sbc-sbe-acc)# retry-interval 1000
```

Related Commands

Command	Description
retry-limit	Sets the retry interval to the RADIUS server.
concurrent-requests	Sets the maximum number of concurrent requests to the RADIUS server.
activate	Activates the RADIUS client.

retry-interval (registration)

To configure the length of time the Cisco Unified Border Element (SP Edition) waits before it retries provisioned delegate registration, use the **retry-interval** command in subscriber delegate profile configuration mode. To reset the retry interval to the default retry interval, use the **no retry-interval command.**

retry-interval *{retry time in secs}*

no retry-interval *{retry time in secs}*

Syntax Description

retry time in secs	This is the length of time before the delegate registration processing is retried after the retry interval ends. The range is 1 to 2,147,483 seconds. The default is 30 seconds.

Command Default

The default retry time is 30 seconds.

Command Modes

Subscriber delegate profile configuration mode (config-sbc-sbe-subscriber-delegate-prof)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Configures the length of time the SBC waits before it retries delegate registration after the retry interval ends. The default is 30 seconds. This is one of the delegate profile parameters you can configure.

After a delegate profile is configured, the following profile parameters may optionally be configured:

- duration
- retry-count
- retry-interval
- refresh-buffer

Examples

The following example configures a provisioned delegate registration profile that can be applied to a delegate registration subscriber and configures a delegate registration for delegate client (aor= sip:bob@isp.example). The delegate registration profile is configured with a duration expiration time of 1000 seconds, a retry count of 5 times, a retry interval of 60 seconds, and a refresh timeout time of 200 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# delegate-profile my-profile
Router(config-sbc-sbe-subscriber-delegate-prof)# duration 1000
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-count 5
```

```
Router(config-sbc-sbe-subscriber-delegate-prof)# retry-interval 60
Router(config-sbc-sbe-subscriber-delegate-prof)# refresh-buffer 200
Router(config-sbc-sbe-subscriber-delegate-prof)# exit
Router(config-sbc-sbe)# subscriber sip:bob@isp.example
Router(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
Router(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
Router(config-sbc-sbe-subscriber-contact)# exit
Router(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
Router(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
Router(config-sbc-sbe-subscriber-delegate)# profile my-profile
Router(config-sbc-sbe-subscriber-delegate)# activate
Router(config-sbc-sbe-subscriber-delegate)# end
```

Related Commands

Command	Description
duration	Configures the length of time in seconds during which the SBC tries to perform delegate registration before stopping.
retry-count	Configures the number of times the SBC repeats the delegate registration processing after the retry interval ends.
refresh-buffer	Configures the length of time by which the SBC attempts to refresh the address location with a delegate registration before the specified expiration time.
delegate-profile	Configures a delegate registration profile that is applied to a delegate registration subscriber.
delegate-registration	Configures a delegate registration for a delegate client.
show sbc sbe sip delegate-profile	Displays subscriber profiles for whom Provisioned Delegate Registration has been configured.

retry-limit (radius)

To set the number of times for resending an accounting request to the Radius server, use the **retry-limit** command in SBE accounting mode. To set the number to its default, use the **no** form of this command.

retry-limit *range*

no retry-limit *range*

Syntax Description

range	Range for the maximum number of retries is 0-9.

Command Default

5 retries.

Command Modes

Server accounting (config-sbc-sbe-acc)

Server authentication (config-sbc-sbe-auth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to set the retry-limit to 4 attempts.

```
Router# configure terminal
Router(config)# sbc uut105-1
Router(config-sbc)# sbe
Router(config-sbc-sbe)# radius accounting SBC1-account-1
Router(config-sbc-sbe-acc)# retry-limit 4
```

Related Commands

Command	Description
retry-interval	Sets the retry interval to connect to the RADIUS server.
concurrent-requests	Sets the maximum number of concurrent requests to the RADIUS server.
activate	Activates the RADIUS client.

retry-limit (routing table)

To set the maximum number of routing table lookup retry attempts, use the **retry-limit** command in SBE configuration mode. To set the number to its default, use the **no** form of this command.

retry-limit ***0-200***

Syntax Description

0-200	Range for the maximum number of retries is 0-200.

Command Default

3 retries.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to set the **retry-limit to 4 attempts.**

```
Router# configure terminal
Router(config)# sbc uut105-1
Router(config-sbc)# sbe
Router(config-sbc-sbe)# retry-limit 4
```

rf

To create a new Rf billing instance on the Session Border Element (SBE), use the **rf** command in the SBC SBE billing configuration mode. To delete a new Rf billing instance on the SBE, use the **no** form of this command.

rf *index*

no rf *index*

Syntax Description

index	Unique index for a billing instance. Range: 0to 7.

Command Default

None

Command Modes

SBC SBE billing configuration (config-sbc-sbe-billing)

Command History

Release	Modification
Cisco IOS XE Release 3.7S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to enable Rf support for index 0 on the SBE of the Cisco Session Border Controller (SBC):

```
Router> enable
Router# configure terminal
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# billing
Router(config-sbc-sbe-billing)# rf 0
```

Related Commands

Command	Description
origin-host (session border controller)	Specifies the domain name of an origin host for Rf support on the SBE of the SBC.
origin-realm (session border controller)	Specifies the domain name of an origin realm for Rf support on the SBE of the SBC.

rtcp-mux

To configure the detection of RTCP streams multiplexed with RTP streams (or SRTCP streams multiplexed with SRTP streams), use the **rtcp-mux** command in the SBE configuration mode. To disable this feature, use the **no** form of the command.

rtcp-mux

no rtcp-mux

Syntax Description

This command has no arguments or keywords.

Command Default

By default, the detection of RTCP streams multiplexed *with RTP streams is disabled. The same applies to SRTCP streams multiplexed with SRTP streams.*

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 3.4S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run this command.

Examples

The following example shows how to configure the detection of RTCP streams multiplexed with RTP streams using the **rtcp-mux** command. The same applies to SRTCP streams multiplexed with SRTP streams.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# rtcp-mux
```

Related Commands

Command	Description
sbe	Enters the SBE configuration mode.

rtcp-regenerate

To generate and terminate the RTCP packets on the SPA-DSP, use the **rtcp-regenerate** command in the SBC configuration mode for the Cisco Unified Border Element: Unified Model, and from the SBC DBE configuration mode for the Cisco Unified Border Element: Distributed Model.

rtcp-regenerate

no rtcp-regenerate

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

SBC configuration (config-sbc) for the Unified Model

SBC DBE configuration (config-sbc-dbe) for the Distributed Model

Command History

Release	Modification
Cisco IOS XE Release 3.4.0S	This command was introduced.

Usage Guidelines

Use this command to generate and terminate the RTCP packets on the SPA-DSP on a Cisco ASR 1000 Series Router.

Examples

The following example shows how to generate and terminate the RTCP packets on the SPA-DSP on the Unified Model:

```
Router# configure terminal
Router(config)# sbc mySBC
Router(config-sbc)# rtcp-regenerate
```

The following example shows how to generate and terminate the RTCP packets on the SPA-DSP on the Distributed Model:

```
Router# configure terminal
Router(config)# sbc mySBC dbe
```

rtg-carrier-id-table

To enter the configuration mode of a routing table or to create a new routing table, whose events match the carrier ID of an SBE policy set, use the **rtg-carrier-id-table** command in SBE call policy set mode.

The **no** form of the command destroys the routing table. However, a routing table may not be destroyed if it is in the context of the active policy set.

rtg-carrier-id-table *table-name*

no rtg-carrier-id-table *table-name*

Syntax Description

table-name	Name of the routing table to be configured. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to add the carrier ID table MyCarrierIDTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-carrier-id-table MyCarrierIDTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-round-robin-table	Enters the configuration mode of a policy table, with events that have no match-value parameters or next-table actions.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source account.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

rtg-category-table

To enter the mode of configuration of a routing table whose entries match on the category within the context of an SBE policy set, use the **rtg-category-table** command in SBE routing call policy mode.

The **no** form of the command destroys the routing table. However, a routing table may not be destroyed if it is in the context of the active policy set.

rtg-category-table *WORD*

no rtg-category-table *WORD*

Syntax Description

WORD	Name of the routing table to be configured. The *WORD* field can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If necessary, a new routing table is created. The user is not allowed to enter the mode of routing table configuration in the context of the active policy set.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example creates the routing policy table MyRtgTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-category-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# end
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-round-robin-table	Enters the configuration mode of a policy table, with events that have no match-value parameters or next-table actions.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source account.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

rtg-dst-address-table

To enters the configuration mode of a routing table whose entries match on the dialed number (after number analysis) within the context of an SBE policy set, use the **rtg-dst-address-table** command in the SBE routing policy mode. To remove the routing table, use the **no** form of this command.

rtg-dst-address-table *table-id*

no rtg-dst-address-table *table-id*

Syntax Description

table-id	Specifies the name of the table. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If necessary, a new routing table is created. The user is not allowed to enter the mode of routing table configuration in the context of the active policy set.

A routing table may not be destroyed if it is in the context of the active policy set.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates the routing policy table MyRtgTable:

```
Router# configure
Router(config)# sbc mySbc sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-address-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# exit
Router(config-sbc-sbe-rtgpolicy)# exit
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-carrier-id-table	Enters the configuration mode for creation or configuration of a routing table, with entries that match the carrier ID of an SBE call policy set.
rtg-src-domain-table	Enters the configuration mode for creation or configuration of a routing table, with entries that match the source domain name of an SBE call policy set.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

rtg-dst-domain-table

To enter the configuration mode of a routing table with entries that match the destination domain name of an SBE policy set, use the **rtg-dst-domain-table** command in SBE call policy set mode. If no table exists, the command creates a new routing table.

The **no** form of the command deletes the routing table.

rtg-dst-domain-table *table-name*

no rtg-dst-domain-table *table-name*

Syntax Description

table-name	Name of the routing table to be configured. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

You cannot delete a routing table if it is in the active policy set. You cannot enter the mode of a routing table configuration in the active policy set.

Examples

The following command creates the routing policy table *MyRtgTable.*

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-domain-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-carrier-id-table	Enters the configuration mode for creation or configuration of a routing table, with entries that match the carrier ID of an SBE call policy set.
rtg-src-domain-table	Enters the configuration mode for creation or configuration of a routing table, with entries that match the source domain name of an SBE call policy set.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

rtg-dst-trunk-group-id-table

To enter the configuration mode of an existing routing table or to create a new table whose entries match the destination TGID or TGID context parameters of an SBE policy set, use the **rtg-dst-trunk-group-id-table** command in SBE call policy set mode. Use the **no** form of this command to delete the routing table.

rtg-dst-trunk-group-id-table *table-id*

no rtg-dst-trunk-group-id-table *table-id*

Syntax Description

table-id	ID of the routing table to be configured. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.5	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates a new table, MyRtgTable, whose entries match the destination TGID or TGID context parameters.

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adj1
Router(config-sbc-sbe-adj-sip)# tgid-routing
Router(config-sbc-sbe-adj-sip)# exit
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-trunk-group-id-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.
rtg-src-trunk-group-id-table	Enters the configuration mode of an existing routing table or creates a new table whose entries match the source TGID or TGID context parameters of an SBE policy set.
tgid-routing	Enables parsing the trunk-group identifier for call routing.

rtg-least-cost-table

To configure the least-cost routing table and enter the mode of configuration of a routing table, use the ***rtg-least-cost-table*** command in SBE routing policy mode.

The **no** form of the command destroys the routing table. However, a routing table may not be destroyed if it is in the context of the active policy set.

rtg-least-cost-table *table_name*

no ***rtg-least-cost-table*** *table_name*

Syntax Description

table-name	Name of the routing table to be configured. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If necessary, a new routing table is created. The user is not allowed to enter the mode of routing table configuration in the context of the active policy set.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates the routing policy table MyRtgTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-least-cost-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# end
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-round-robin-table	Enters the configuration mode of a policy table, with events that have no match-value parameters or next-table actions.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source account.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

rtg-round-robin-table

To enter the configuration mode of a policy table, whose events have no match-value parameters or next-table actions, use the **rtg-round-robin-table** command SBE call policy set mode. Use the **no** form of this command to delete the table.

rtg-round-robin-table *table-name*

no rtg-round-robin-table*-name*

Syntax Description

table-name	Name of the routing table to be configured. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

The actions of this command are restricted to setting destination adjacency. A group of adjacencies is chosen for an event if an entry in a routing table matches that event and points to a round-robin adjacency table in the next table action.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example show how to add the round robin routing table MyRoundRobinTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-round-robin-table MyRoundRobinTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
rtg-carrier-id-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the carrier ID of an SBE policy set.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source account.

rtg-src-account-table

To enter the configuration mode of an existing routing table or to create a new one, with entries that match the source account, use the **rtg-src-account-table** command SBE call policy set mode.

Note You cannot issue this command if the table is part of the active policy set.

The **no** form of the command deletes the match value of the given entry in the routing table.

rtg-src-account-table *table-id*

no rtg-src-account-table *table-id*

Syntax Description

table-id	Specifies the ID of the routing table to be configured. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command enters the configuration mode of an existing routing table MyRtgTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-account-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
rtg-round-robin-table	Enters the configuration mode of a policy table, with events that have no match-value parameters or next-table actions.
rtg-carrier-id-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the carrier ID of an SBE policy set.

rtg-src-address-table

To enter the configuration mode of a routing table whose entries match on the dialer's number within the context of an SBE policy set, use the **rtg-src-address-table** command in SBE routing policy mode. To remove the table entry, use the **no** form of this command.

rtg-src-address-table *table-id*

no rtg-src-address-table *table-id*

Syntax Description

table-id	Specifies the name of the table. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates the routing policy table MyRtgTable:

```
Router# configure
Router# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-address-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# exit
Router(config-sbc-sbe-rtgpolicy)# exit
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, enters the configuration mode of an existing service.

Command	Description
sbe	Enters the mode of an SBE entity within an SBC service.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new table whose entries match the source account
rtg-round-robin-table	Enters the configuration mode of a policy table whose events have no match-value parameters or next-table actions.

rtg-src-adjacency-table

To enter the configuration mode of an existing routing table or to create a new table whose entries match the source adjacency, use the **rtg-src-adjacency-table** command in SBE call policy set mode. Use the **no** form of this command to delete the routing table.

rtg-src-adjacency-table *table-id*

no rtg-src-adjacency-table *table-id*

Syntax Description

table-id	Specifies the ID of the routing table to be configured. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates a new table, MyRtgTable, whose entries match the source adjacency.

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-adjacency-table MyRtgTable
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

Command	Description
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new table whose entries match the source account
rtg-round-robin-table	Enters the configuration mode of a policy table whose events have no match-value parameters or next-table actions.

rtg-src-domain-table

To enter the mode of a routing table configuration, with entries that match the source domain name, use the **rtg-src-domain table** command in SBE call policy set mode. If no table exists, the command creates a new routing table.

Note You cannot enter the mode of a routing table configuration in the active policy set.

The **no** form of the command destroys the routing table.

Note You cannot destroy a routing table if it is in the active policy set.

rtg-src-domain-table *table-name*

no rtg-src-domain-table *table-name*

Syntax Description

table-name	Name of the number analysis table within an SBE policy set, with entries matching the source account. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates the routing policy table *MyRtgTable.*

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-domain-table MyRtgTable
```

```
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-dst-domain-table	Enters the configuration submode for creation or configuration of a routing table, with entries that match the destination domain name of an SBE call policy set.
rtg-carrier-id-table	Enters the configuration mode for creation or configuration of a routing table, with entries that match the carrier ID of an SBE call policy set.

rtg-src-trunk-group-id-table

To enter the configuration mode of an existing routing table or to create a new table whose entries match the source TGID or TGID context parameters of an SBE policy set, use the **rtg-src-trunk-group-id-table** command in SBE call policy set mode. Use the **no** form of this command to delete the routing table.

rtg-src-trunk-group-id-table *table-id*

no rtg-src-trunk-group-id-table *table-id*

Syntax Description

table-id	ID of the routing table to be configured. The *table-id* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.5	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates a new table, MyRtgTable, whose entries match the source TGID or TGID context parameters.

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adj1
Router(config-sbc-sbe-adj-sip)# tgid-routing
Router(config-sbc-sbe-adj-sip)# exit
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-trunk-group-id-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)#
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.
rtg-dst-trunk-group-id-table	Enters the configuration mode of an existing routing table or creates a new table whose entries match the destination TGID or TGID context parameters of an SBE policy set.
tgid-routing	Enables parsing the trunk-group identifier for call routing.

rtg-time-table

To configure time-based routing and enter the routing table mode, use the ***rtg-time-table*** command in SBE routing call policy mode.

The **no** form of the command destroys the routing table. However, a routing table may not be destroyed if it is in the context of the active policy set.

rtg-time-table *table_name*

no ***rtg-time-table*** *table_name*

Syntax Description

table-name	Name of the routing table to be configured. The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE routing policy (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If necessary, a new routing table is created. The user is not allowed to enter the mode of routing table configuration in the context of the active policy set.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command creates the routing policy table MyRtgTable:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-time-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# end
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
rtg-round-robin-table	Enters the configuration mode of a policy table, with events that have no match-value parameters or next-table actions.
rtg-src-account-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source account.
rtg-src-adjacency-table	Enters the configuration mode of an existing routing table or creates a new one, with entries that match the source adjacency.
sbc	Creates a new SBC service and enters a new SBC configuration mode. Alternatively, it enters the configuration mode of an existing service.
sbe	Enters the mode of an SBE entity within an SBC service.

sbc

To enter the mode of an SBC service (creating it if necessary), use the **sbc** command in the SBC configuration mode. To delete the service, use the **no** form of this command.

sbc sbc-name

no sbc sbc-name

Syntax Description

sbc-name	Name of the SBC service. The *sbc-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBC configuration mode (config-sbc)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers for the unified model.

Examples

The following command creates SBC service mySbc.

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc)# exit
```

Related Commands

Command	Description
dbe	Enters into DBE-SBE configuration mode.

sbc dbe

To create the data border element (DBE) service on a session border controller (SBC) and enter into the SBC-DBE configuration mode, use the **sbc dbe** command in global configuration mode. To remove the DBE entity, use the **no** form of this command.

sbc {*sbc-name*} **dbe**

no sbc {*sbc-name*} **dbe**

Syntax Description

sbc-name	The SBC service name.

Command Default

No default behavior or values

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Release 2.1	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example creates a DBE service on an SBC called “mySbc,” and enters into SBC-DBE configuration mode:

```
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# end
```

Related Commands

Command	Description
interface sbc	Creates the session border controller (SBC) interface.

sbc dump-alarms

To move alarm logs from the buffer to a file system, use the **sbc dump-alarms** command in privileged EXEC mode.

sbc dump-alarms [*file-system***]**

Syntax Description

file-system	Name of the file system to which you want the alarm logs to be moved. For example, *file-system* can be one of the following: • **bootflash:** • **flash:** • **fpd:** • **ftp:** • **http:** • **https:** • **obfl:** • **pram:** • **rcp:** • **scp:** • **tftp:** **Note** If you do not specify a file system, the alarm logs are moved to the default file system.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.5S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

The following is the naming convention for the log file that is generated when you run the **sbc dump-alarms** command:

*yyyymmdd_hhmmss*_manual_alarmtrc.log

Examples

The following example show how the **sbc dump-alarms** command is used to move alarm logs to the bootflash file system:

```
Router# sbc dump-alarms bootflash:
```

The following is the name of a sample log file that is generated when the **sbc dump-alarms** command is run on 12-May-2011 at 04:34:31:

20110512_043431_manual_alarmtrc.log

Related Commands

Command	Description
debug sbc alarm-filter	Specifies the alarm types for which alarm logs must be generated.
debug sbc alarm-log-level	Specifies the output mode for and the alarm severity level at which alarms must be logged.
sbc periodic-dump-alarms	Configures periodic movement of alarm logs from the buffer to a file system.
show debugging	Displays information about the types of debugging that are enabled for the router.

sbc periodic-dump-alarms

To configure periodic movement of alarm logs from the buffer to a file system, use the **sbc periodic-dump-alarms** command in the privileged EXEC mode.

sbc periodic-dump-alarms {dump-location *file-system* **[time-period** *time-period*] **| time-period** *time-period*}

Syntax Description

dump-location	Specifies that you want the alarm logs to be stored in a file system. If you do not specify the dump location, the alarm logs are moved to the default file system.
file-system	Name of the file system where you want the alarm logs to be moved. For example, *file-system* can be one of the following: • **bootflash:** • **flash:** • **fpd:** • **ftp:** • **http:** • **https:** • **obfl:** • **pram:** • **rcp:** • **scp:** • **tftp:**
time-period	Specifies that you want the logs to be moved to a file system at periodic intervals.
time-period	Interval, in minutes, after which the logs must be moved. The range is from 0 to 1440. The default is 60.

Command Default

The default is that alarm logs are moved to the default file system at 60-minute intervals.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.5S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

The buffer that is used to store alarm logs may run out of free space when log files are stored in it. In addition, you may want to store alarm logs for future reference. Use the **sbc periodic-dump-alarms** command to meet the requirements created by this scenario. Use the **sbc periodic-dump-alarms time-period 0** command if you want to disable the periodic movement of alarm logs from the buffer to a file system.

Examples

In the following example, the **sbc periodic-dump-alarms** command is used to specify that the logs must be moved to the bootflash file system at 120-minute intervals:

```
Router# sbc periodic-dump-alarms dump-location bootflash: time-period 120
```

The following is the naming convention for the log file that is generated:

*yyyymmdd_hhmmss*_periodic_alarmtrc.log

The following is the name of a sample log file that is generated when the **sbc periodic-dump-alarms** command is used to configure periodic dumping of log files at 1-hour intervals:

20110512_080005_periodic_alarmtrc.log

Related Commands

Command	Description
debug sbc alarm-filter	Specifies the alarm types for which alarm logs must be generated.
debug sbc alarm-log-level	Specifies the output mode for and the alarm severity level at which alarms must be logged.
sbc dump-alarms	Moves alarm logs from the buffer to a file system.
show debugging	Displays information about the types of debugging that are enabled for the router.

sbc redundancy-group tcp (session border controller)

To assign a redundancy group for the Session Border Controller (SBC) to track, use the **sbc redundancy-group tcp** command in the global configuration mode. To unassign a redundancy group, use the **no** form of this command.

sbc redundancy-group *group-number* **tcp**

no sbc redundancy-group *group-number* **tcp**

Syntax Description

group-number	The redundancy group number.
tcp	Specifies the Transmission Control Protocol (TCP), and the redundancy group protocol.

Command Default

No default behavior or values are available.

Command Modes

Global configuration (config)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to assign an redundancy group for the SBC to track:

```
Router# configure terminal
Router# sbc redundancy-group 1 tcp
```

sc-cold-boot-delay

To configure a delay timer that delays generation of a ServiceChange coldBoot request, use the **sc-cold-boot-delay** command in VDBE configuration mode.

The **no** form of the command turns off the cold boot delay timer on the next reboot.

sc-cold-boot-delay *delay*

no sc-cold-boot-delay *delay*

Syntax Description

delay	Specifies the delay in seconds, 0 through 1200 seconds.

Command Default

No default behavior or values are available.

Command Modes

VDBE configuration mode (config-sbc-dbe-vdbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers for distributed Session Border Controller (SBC).

Usage Guidelines

This command is supported in distributed SBC. This command configures a delay timer that delays generation of the Service Change Cold Boot after SBC has started with the **activate** command. The delay of the Service Change Cold Boot can only occur while the system is booting. This delay allows SBC to start up and be ready to respond to a large number of SIP pinhole requests that will be initiated by the ServiceChange ColdBoot.

To disable the delay Service Change Cold Boot timer, you must issue the **no activate** command followed by an **activate** command to attach to the MGC immediately. The **no sc-cold-boot-delay** command is used to make sure that the delayed SC mode doesn't occur on the next reboot.

Use the **show sbc dbe controllers** command to display the configured delay and the time remaining before the Service Change will be issued.

Examples

The following command describes a DBE configuration where a delay timer is configured to 120 seconds to delay generation of a ServiceChange coldBoot request:

```
Router# configure terminal
Router(config)# sbc global dbe
Router(config-sbc-dbe)# vdbe global
Router(config-sbc-dbe-vdbe)# h248-version 3
Router(config-sbc-dbe-vdbe)# h248-napt-package napt
Router(config-sbc-dbe-vdbe)# local-port 2970
Router(config-sbc-dbe-vdbe)# control-address h248 ipv4 200.50.1.40
Router(config-sbc-dbe-vdbe)# controller h248 2
Router(config-sbc-dbe-vdbe-h248)# remote-address ipv4 200.50.1.254
```

```
Router(config-sbc-dbe-vdbe-h248)# remote-port 2970
Router(config-sbc-dbe-vdbe-h248)# exit
Router(config-sbc-dbe-vdbe)# attach-controllers
Router(config-sbc-dbe-vdbe)# sc-cold-boot-delay 120
Router(config-sbc-dbe-vdbe)# exit
Router(config-sbc-dbe)# activate
```

The following example shows that the configured activation delay is 112 seconds, which is the time remaining before the Service Change is issued, and the controller status is detached.

```
Router# show sbc global dbe controllers
SBC Service "global"
  vDBE in DBE location 1

   DBE Admin Status:    Activation Delayed 112 seconds
    Media gateway controller in use:
      H.248 controller address
        200.50.1.254:2970
      Status:   Detached

                  Sent        Received    Failed


Retried
      Requests    1           0           0           1
      Replies     0           0                       0

    Segmentation:
      MGC PDU Size:  N/A
      MG PDU Size:   N/A
      MGC Seg timer: N/A
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A

    Configured controllers:
      H.248 controller 2:
```

Related Commands

Command	Description
activate	To initiate the DBE service of the SBC.
show sbc dbe controllers	Lists the MGCs and controller address configured on each DBE.

sck-pool-size

To configure the buffer size of a Session Initiation Protocol (SIP) socket control, use the **sck-pool-size** command in the SBE configuration mode. To reconfigure the buffer size of the SIP socket control to the default value, use the **no** form of this command.

sck-pool-size *pool_size*

no sck-pool-size *pool_size*

Syntax Description

pool_size	Pool size number. The range is from 1 to 65535. The default is 400.

Command Default

None

Command Modes

SBE configuration mode

Command History

Release	Modification
Cisco IOS Release 15.2(04)S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to configure the buffer size of an SIP socket control:

```
Router> enable
Router# configure terminal
Router(config)# sbc 123
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sck-pool-size 23
```

script-set lua

To configure a script set composed of scripts written using the Lua programming language, use the **script-set** command in the SBE configuration mode. To remove the configuration of the script set, use the **no** form of this command.

script-set *script-set-number* **lua**

no script-set *script-set-number*

Syntax Description

script-set-number	Specifies the script set number.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 3.4S	This command was introduced on the Cisco ASR 100 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run this command.

Examples

In the following example, the **script-set** command is used to configure a script set with the script order number 10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# script-set 10 lua
```

Related Commands

Command	Description
active-script-set	Activates a script set,
clear sbc sbe script-set-stats	Clears the stored statistics related to a script set.
complete	Completes a CAC policy set, call policy set, or script set after committing the full set.

Command	Description
editor	Specifies the order in which a particular editor must be applied.
editor-list	Specifies the stage at which the editors must be applied.
editor type	Configures an editor type to be applied on a SIP adjacency.
filename	Specifies the path and name of the script file written using the Lua programming language.
load-order	Specifies the load order of a script in a script set.
script	Configures a script written using the Lua programming language.
show sbc sbe editors	Displays a list of all the editors registered on the SBC.
show sbc sbe script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

script

To configure a script written using the Lua programming language, use the **script** command in the SBE script-set configuration mode. To remove the configuration of the script, use the **no** form of this command.

script *script-name*

no script *script-name*

Syntax Description

script-name	Specifies the name of the script. The *script-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

SBE script-set configuration (config-sbc-sbe-script-set)

Command History

Release	Modification
Cisco IOS XE Release 3.4S	This command was introduced on the Cisco ASR 100 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run this command.

Examples

In the following example, the **script** command is used to configure a script file with the name mySBCScript:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# script-set 10 lua
Router(config-sbc-sbe-script-set)# script mySBCScript
```

Related Commands

Command	Description
active-script-set	Activates a script set,
clear sbc sbe script-set-stats	Clears the stored statistics related to a script set.
complete	Completes a CAC policy set, call policy set, or script set after committing the full set.
editor	Specifies the order in which a particular editor must be applied.
editor-list	Specifies the stage at which the editors must be applied.
editor type	Configures an editor type to be applied on a SIP adjacency.
filename	Specifies the path and name of the script file written using the Lua programming language.
load-order	Specifies the load order of a script in a script set.
show sbc sbe editors	Displays a list of all the editors registered on the SBC.
show sbc sbe script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
script-set lua	Configures a script set composed of scripts written using the Lua programming language.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

sdp repeat answer

To configure SBC to repeat an agreed Session Description Protocol (SDP), in a 200 INVITE response, after the successful provisioning of an offer-answer exchange when needed, use the **sdp repeat answer** command in CAC table entry configuration mode. To restore the default, where agreed SDPs are not repeated, use the no form of this command.

sdp repeat answer

no sdp repeat answer

Syntax Description

This command has no arguments or keywords.

Command Default

By default, an agreed SDP in a 200 INVITE response is not repeated.

Command Modes

CAC table entry configuration (config-sbc-sbe-cacpolicy-cactable-entry)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the repeat of an Session Description Protocol (SDP), in a 200 INVITE response, after the successful provisioning of an offer-answer exchange:

```
Router# configure terminal
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table cac-tbl-1
Router(config-sbc-sbe-cacpolicy-cactable)# table-type policy-set
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# sdp repeat answer
```

secure-media

To configure the Session Border Controller (SBC) to enable a DTLS or SRTP media passthrough, use the **secure-media** command in the SBE configuration mode. To disable the media passthrough, use the no form of this command.

secure-media

no secure-media

Syntax Description

This command has no arguments or keywords.

Command Default

The media passthrough is disabled.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example configures the SBC to treat every media flow as an encrypted media flow. This allows media packets, such as DTLS and SRTP packets, to pass through the SBC.

```
Router# configure terminal
Router(config)# sbc global
Router(config-sbc)# sbe
Router(config-sbc-sbe)# secure-media
```

Related Commands

Command	Description
sbc	Creates the SBC service on Cisco Unified Border Element (SP Edition).
sbe	Enters the mode of the signaling border element (SBE) function of the SBC.

security (session border controller)

To implement transport-level security on a Session Initiation Protocol (SIP) adjacency, use the **security** command in SBE adjacency SIP configuration mode. To indicate that the adjacency cannot be secured, use the **no** form of this command.

security [untrusted | trusted-encrypted | untrusted-encrypted | trusted-unencrypted]

no security [untrusted | trusted-encrypted | untrusted-encrypted | trusted-unencrypted]

Syntax Description

untrusted	Specifies that this adjacency is not secured by any means. This is the default.
trusted-encrypted	Specifies that the encrypted signaling is used to ensure security on this adjacency.
untrusted-encrypted	Specifies that the adjacency is untrusted and SSL/TLS encryption is used.
trusted-unencrypted	Specifies that a non-encryption mechanism is used to guarantee secure signaling for all messages on this adjacency.

Command Default

untrusted is the default.

Command Modes

Adjacency SIP configuration (config-sbc-sbe-adj-sip)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Any number of accounting servers can be specified. Call Detail Reports are sent to the accounting server with the highest priority upon call termination.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command configures accounting servers castor and pollux on mySbc for RADIUS client instance radius1:

```
Router# configure
Router(config)# sbc mySbc
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip adjacency test
Router(config-sbc-sbe-adj-sip)# security trusted-encrypted
```

server-retry disable

To disable the SBC from automatically retrying a failed RADIUS server, use the **server-retry disable** command in the server authentication mode or the server accounting mode. Use the **no** form of this command to enable the SBC to automatically retry a failed RADIUS server.

server-retry disable

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

Server accounting (config-sbc-sbe-acc)

Server authentication (config-sbc-sbe-auth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

If you have disabled the SBC from automatically retrying a failed RADIUS server with the **server-retry disable** command, you must use the **service sbc sbe radius accounting** command to reactivate the connection between the SBC and a RADIUS server after connectivity is lost or to restart billing after connectivity is restored.

Examples

The following example shows how to stop the SBC from automatically retrying a failed RADIUS server:

```
Router# configure
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# radius authentication
Router(config-sbc-sbe-auth)# server-retry disable
```

Related Commands

Command	Description
service sbc sbe radius accounting	Reactivates connection between the SBC and a RADIUS server after connectivity is lost or to restart billing after connectivity is restored.

server ipv4

To configure the IPv4 address of a DNS server for ENUM client and optionally associate the DNS server to a VRF, use the **server ipv4** command in ENUM entry configuration mode. To remove IPv4 address of a DNS server for ENUM client, use the no form of this command.

server ipv4 *ip_address* [**vrf** *vrf_name*]

no server ipv4 *ip_address* [**vrf** *vrf_name*]

Syntax Description

ip_address	Specifies the IPv4 address in standard format: *A.B.C.D.*
vrf *vrf_name*	(Optional) Specifies the VRF for the DNS server.

Command Default

No default behavior or values are available.

Command Modes

ENUM entry configuration (config-sbc-sbe-enum-entry)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following example shows how to configure the IPv4 address of a DNS server for ENUM client and associate the DNS server to a VRF:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# enum 1
Router(config-sbc-sbe-enum)# entry ENUM_1
Router(config-sbc-sbe-enum-entry)# server ipv4 10.10.10.10 vrf VRF1
Router(config-sbc-sbe-enum-entry)#
```

Related Commands

Command	Description
activate (enum)	Activates ENUM client.
dial-plan-suffix	Configures the dial plan suffix used for the ENUM query.
div-address	Enters the diverted-by address mode to set the priority of the header or headers from which to derive a diverted-by address (inbound only).

Command	Description
dst-address	Enters the destination address mode to set the priority of the header or headers from which to derive a called party address (inbound only).
entry (enum)	Configures the ENUM client entry name and enter the ENUM entry configuration mode.
enum	Configures the ENUM client ID number and enter the ENUM configuration mode.
header-prio header-name	Configures the priority of a header that is used to derive a source, destination, or diverted-by address.
max-recursive-depth	Configures the maximum number of recursive ENUM look-ups for non-terminal Resource Records (RR).
max-responses	Configures the maximum number of ENUM records returned to the routing module.
req-timeout	Configures the ENUM request timeout period.
src-address	Enters the source address mode to set the priority of the header or headers from which to derive a calling party address (inbound only).
server ipv4	Configures the IPv4 address of a DNS server for ENUM client and optionally associate the DNS server to a VRF.
show sbc sbe call-policy-set	Displays configuration and status information about call policy sets.
show sbc sbe enum	Displays the configuration information about an ENUM client.
show sbc sbe enum entry	Displays the contents of an ENUM client entry.

server (session border controller)

To enter a mode for configuring ordered lists of RADIUS accounting and RADIUS authentication servers, use the **server** command in server accounting and server authentication configuration modes. Use the **no** form of the command to leave the mode.

server *server-name*

no server *server-name*

Syntax Description

server-name	Specifies the name of the server (local to this SBE). The *server-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

Server accounting (config-sbc-sbe-acc)

Server authentication (config-sbc-sbe-auth)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Any number of accounting servers and authentication servers can be specified. Call Detail Reports are sent to the accounting server or authentication server with the highest priority upon call termination.

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of modes required to run the command.

Examples

The following command configures accounting servers castor and pollux on mySbc for RADIUS client instance radius1:

```
Router# configure
Router(config)# sbc mySbc
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# radius accounting radius1
Router(config-sbc-sbe-acc)# server castor
Router(config-sbc-sbe-acc-ser)# address ipv4 200.200.200.12
Router(config-sbc-sbe-acc-ser)# exit
Router(config-sbc-sbe-acc)# server pollux
Router(config-sbc-sbe-acc-ser)# address ipv4 200.200.200.15
Router(config-sbc-sbe-acc-ser)# exit
```

service sbc sbe radius accounting

To reactivate connection between the SBC and a RADIUS server after connectivity is lost or to restart remote billing after connectivity is restored, use the **service sbc sbe radius accounting** command in the Privileged EXEC mode.

service sbc name sbe radius accounting radius client name {resend | server word reactivate}

Syntax Description

resend	Restarts remote billing between SBC and RADIUS on the reactivated RADIUS server connection for new billing requests.
server	RADIUS account server commands.
name	Specifies the name of the SBC service.
radius client	Specifies the name of the RADIUS client.
word	Specifies the server name.
reactivate	Reactivates the connection between SBC and RADIUS server. You need to do this to manually recover the connection after it has failed.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how to resend cached messages:

Router# service sbc test sbe radius accounting acc resend

The following example shows how to reactivate connection to a RADIUS server:

Router# service sbc test sbe radius accounting acc server svr reactivate

session-refresh renegotiation

To enable or disable renegotiation of media bypass after session refreshes, use the **session-refresh renegotiation** command in the CAC table entry configuration mode. To remove this configuration, use the **no** form of this command.

session-refresh renegotiation {allow | suppress}

no session-refresh renegotiation

Syntax Description

allow	Specifies that an offer that contains duplicate SDP must be processed using the normal offer-answer rules. Media reservations can change, and interworking functions can be renegotiated.
suppress	Specifies that an offer that contains duplicate SDP must be processed using the session refresh variant of the offer-answer rules. Media reservations are not changed, and interworking functions are not renegotiated. The SBC forwards the last sent offer or answer regardless of the offer or answer that was received.

Command Default

The default is that the session refresh strategy for the call is not affected by this CAC policy entry.

Command Modes

CAC table entry configuration (config-sbc-sbe-cacpolicy-cactable-entry)

Command History

Release	Modification
Cisco IOS XE Release 3.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

To use this command, you must be in the correct configuration mode. The Examples section shows the hierarchy of the modes required to run the command.

Examples

The following example shows how to disable renegotiation of media bypass after the session refreshes:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyTable
Router(config-sbc-sbe-cacpolicy-cactable)# table-type src-adjacency
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
```

Related Commands

Command	Description
cac-policy-set	Creates a policy set, copies an existing complete policy set, or swaps the references of a complete policy set to another policy set.
cac-table	Creates or configures an admission control table.
entry	Creates or modifies an entry in a table or an SDP media profile.
table-type	Configures a CAC table type that enables the priority of the call to be used as a criterion in a CAC policy.

show debugging

To display information about the types of debugging that are enabled for your router, use the **show debugging** command in the privileged EXEC mode.

show debugging

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
11.1	This command was introduced.
12.3(7)T	The output of this command was enhanced to show TCP Explicit Congestion Notification (ECN) configuration.
12.2(33)SRA	This command was integrated into Cisco IOS Release 12.2(33)SRA.
12.2(31)SB2	This command was integrated into Cisco IOS Release 12.2(31)SB2.
12.2SX	This command is supported in the Cisco IOS Release 12.2SX train. Support in a specific 12.2SX release of this train depends on your feature set, platform, and platform hardware.
12.4(20)T	The output of this command was enhanced to show the user-group debugging configuration.
3.5.0S	This command was implemented on Cisco IOS XE Release 3.5.0S. In addition, the output of this command was enhanced to display the output of the **debug sbc alarm-filter** command and the **debug sbc alarm-log-level** command.

Examples

The following is sample output of the **show debugging** command. In this example, the remote host is neither configured nor connected.

```
Router# show debugging
!
TCP:
  TCP Packet debugging is on
  TCP ECN debugging is on
!
Router# telnet 10.1.25.234
!
Trying 10.1.25.234 ...
!
00:02:48: 10.1.25.31:11001 <---> 10.1.25.234:23 out ECN-setup SYN
00:02:48: tcp0: O CLOSED 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 ECE CWR SYN  WIN 4128
00:02:50: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:02:50: cwnd from 1460 to 1460, ssthresh from 65535 to 2920
00:02:50: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 ECE CWR SYN  WIN 4128
00:02:54: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
```

```
00:02:54: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:02:54: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 ECE CWR SYN  WIN 4128
00:03:02: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:03:02: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:03:02: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 ECE CWR SYN  WIN 4128
00:03:18: 10.1.25.31:11001 <---> 10.1.25.234:23 SYN with ECN disabled
00:03:18: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:03:18: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:03:18: tcp0: O SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 SYN  WIN 4128
00:03:20: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:03:20: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:03:20: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 SYN  WIN 4128
00:03:24: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:03:24: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:03:24: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 SYN  WIN 4128
00:03:32: 10.1.25.31:11001 <---> 10.1.25.234:23 congestion window changes
00:03:32: cwnd from 1460 to 1460, ssthresh from 2920 to 2920
00:03:32: tcp0: R SYNSENT 10.1.25.234:11001 10.1.25.31:23 seq 1922220018
        OPTS 4 SYN  WIN 4128
!Connection timed out; remote host not responding
```

The following is sample output of the **show debugging** command when user-group debugging is configured:

```
Router# show debugging
!
usergroup:
 Usergroup Deletions debugging is on
 Usergroup Additions debugging is on
 Usergroup Database debugging is on
 Usergroup API debugging is on
!
```

The following is sample output of the **show debugging** command when SNAP debugging is configured:

```
Router# show debugging
Persistent variable debugging is currently All


SNAP Server Debugging ON


SNAP Client Debugging ON

Router#
```

Table 1 describes the significant fields in the output.

Table 1 show debugging Field Descriptions

Field	Description
OPTS 4	Bytes of TCP expressed as a number. In this case, the bytes are 4.
ECE	Echo congestion experience.
CWR	Congestion window reduced.
SYN	Synchronize connections—Request to synchronize sequence numbers, used when a TCP connection is being opened.
WIN 4128	Advertised window size, in bytes. In this case, the bytes are 4128.
cwnd	Congestion window (cwnd)—Indicates that the window size has changed.
ssthresh	Slow-start threshold (ssthresh)—Variable used by TCP to determine whether or not to use slow-start or congestion avoidance.
usergroup	Statically defined user group to which source IP addresses are associated.

show monitor event-trace sbc ha

To display the event trace messages for the Session Border Controller (SBC), use the **show monitor event-trace sbc** command in the privileged EXEC mode.

show monitor event-trace sbc ha {**all** [**detail**] | **back** {*minutes* | *hours:minutes*} [**detail**] | **clock** *hours***:***minutes* [*day month*] [**detail**] | **from-boot** [*seconds*] [**detail**] | **latest** [**detail**] | **parameters**}1

Syntax Description

ha	Displays the event trace messages pertaining to the SBC high availability.
all	Displays all the event trace messages that are currently in memory pertaining to the SBC high availability.
detail	(Optional) Displays detailed trace information.
back	Specifies how far back from the current time you want to view messages. For example, you can view messages displayed over the last 30 minutes.
minutes	Time argument in minutes. The time argument is specified in the minutes format (mmm).
*hours***:***minutes*	Time argument in hours and minutes. The time argument is specified in the hours and minutes format (hh:mm).
clock	Displays event trace messages starting from a specific time in the hours and minutes format (hh:mm).
day month	(Optional) The day of the month (from 1 to 31), and the name of the month.
from-boot	Displays event trace messages that started after booting.
seconds	(Optional) Specifies the number of seconds to display event trace messages after booting. Range: 0 to the number of seconds elapsed since the boot.
latest	Displays only the event trace messages since the last **show monitor event-trace sbc ha** command was entered.
parameters	Displays the trace parameters. The parameters displayed are the size (number of trace messages) of the trace file and whether stacktrace is disabled.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.1	This command was introduced.
Cisco IOS XE Release 2.3	The **sbc_ha** keyword was bifurcated into two keywords, **sbc** and **ha**.
Cisco IOS XE Release 3.2S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Use the **show monitor event-trace sbc ha** command to display trace message information pertaining to the SBC high availability.

The trace function is not locked when information is displayed on the console, which means that the new trace messages can be accumulated in memory. If entries are accumulated faster than they may be displayed, some messages can be lost. If this happens, the **show monitor event-trace sbc ha** command generates a message indicating that some messages may be lost. However, messages continue to be displayed on the console. If the number of lost messages is excessive, the **show monitor event-trace sbc ha** command stops displaying messages.

Examples

The following is a sample output of the **show monitor event-trace sbc ha all** command. In the following example, all the messages from the SBC high availability events are displayed:

```
Router# show monitor event-trace sbc ha all

*Jan 16 07:21:49.718: RF: Is Active, from boot = 0x1
*Jan 16 07:21:49.720: IPC: Initialised as master
*Jan 16 07:21:49.720: RF: Active reached, from boot = 0x1
*Jan 16 07:21:59.448: ILT: Registered on 48, result = 0x1
*Jan 16 07:21:59.448: RF: Start SM on 48
*Jan 16 07:49:02.523: IPC: Session to peer opened
*Jan 16 07:49:02.605: ISSU: Negotiation starting
*Jan 16 07:49:02.605: RF: Delaying progression at 300
*Jan 16 07:49:02.617: ISSU: Negotiation done
*Jan 16 07:49:02.617: RF: Negotiation result = 0x1
*Jan 16 07:49:02.617: RF: Peer state change, peer state = 0x1
*Jan 16 07:49:02.617: RF: Resuming progression at event 300
*Jan 16 07:50:00.853: ISSU: Transformed transmit message
*Jan 16 07:50:00.853: IPC: Queuing message type SBC_HA_MPF_CAPS_MSG_TYPE
*Jan 16 07:50:00.854: IPC: Queued message type SBC_HA_MPF_CAPS_MSG_TYPE
```

Table 2 describes the significant fields shown in the display.

Table 2 show monitor event-trace sbc ha all Field Descriptions

Field	Description
RF:	Redundancy Facility (RF) events. RF controls and drives the high availability redundancy events.
IPC:	Interprocess communication (IPC) messages.
ILT:	Interlocation Transport (ILT) events. ILT is the interface and mechanism for transporting the SBC high availability data.
ISSU:	In Service Software Upgrade (ISSU) events.

The following is a sample output of the **show monitor event-trace sbc ha latest** command. This command displays the messages from the SBC high availability events since the last **show monitor event-trace sbc ha** command was entered.

```
Router# show monitor event-trace sbc ha latest

*Jan 16 07:50:00.922: IPC: Sent message type SBC_HA_SEND_IPS_MSG_TYPE
*Jan 16 07:50:00.922: IPC: Received message type SBC_HA_SEND_IPS_MSG_TYPE
*Jan 16 07:50:00.922: ISSU: Transformed received message
*Jan 16 07:50:00.922: ILT: Received IPS for PID 0x30105000, type = 0x16820002
*Jan 16 07:50:00.922: ILT: Target 49 is remote, for PID 0x31105000
```

```
*Jan 16 07:50:00.922: ILT: Send IPS to PID 0x31105000, type = 0x16820001
*Jan 16 07:50:00.922: ISSU: Transformed transmit message
*Jan 16 07:50:00.922: IPC: Queuing message type SBC_HA_SEND_IPS_MSG_TYPE
*Jan 16 07:50:00.922: IPC: Queued message type SBC_HA_SEND_IPS_MSG_TYPE
*Jan 16 07:50:00.922: IPC: Sent message type SBC_HA_SEND_IPS_MSG_TYPE
```

This command displays the messages since the last **show monitor event-trace sbc ha** command was entered.

Table 3 describes the significant fields shown in the display.

Table 3 show monitor event-trace sbc ha latest Field Descriptions

Field	Description
IPC:	IPC messages.
ILT:	ILT events. ILT is the interface and mechanism for transporting SBC high availability data.
ISSU:	ISSU events.

The following is a sample output of the **show monitor event-trace sbc ha parameters** command. This command displays the number of event trace messages in the trace file, and whether stacktrace is disabled.

```
Router# show monitor event-trace sbc ha parameters

Trace has 2048 entries
Stacktrace is disabled by default
```

Related Commands

Command	Description
monitor event-trace sbc ha (EXEC)	Monitors and controls the event trace function for the SBC.
monitor event-trace sbc ha (global)	Configures event tracing for the SBC.