# show sbc sbe policy-failure-stats

To list the statistics for all of the policy failures on a specific SBE, use the **show sbc sbe policy-failure-stats** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe policy-failure-stats** *period*

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the SBC service. |
| *period* | Specifies the time period for the statistics that you want to display. The time period can be one of the following:<br>• **current15mins**—Displays statistics in 15 minute intervals starting from the current minute.<br>• **current5mins**—Displays statistics in 5 minute intervals starting from the current minute.<br>• **currentday**—Displays statistics for the current day starting midnight of the same day.<br>• **currenthour**—Displays statistics for the current hour.<br>• **previous15mins**—Displays statistics from previous 15 minute intervals.<br>• **previous5mins**—Displays statistics from previous 5 minute intervals.<br>• **previousday**—Displays statistics from the previous day.<br>• previoushour—Displays statistics from the previous hour. |

## 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. |
| Cisco IOS XE Release 2.5 | This command is obsolete in Cisco IOS XE Release 2.5. |

## Usage Guidelines

The statistics are collected at 5 minute intervals past the hour (that is, at 0, 5, 10, 15 minutes, and so on past the hour). For example, the periods covered by the various buckets at 12:43 would be as follows:

- current five minutes: 12:40-12:43
- previous five minutes: 12:35-12:40
- current 15 minutes: 12:30-12:43
- previous 15 minutes: 12:15-12:30

- current hour: 12:00-12:43
- last hour: 11:00-12:00
- current day: 00:00-12:43
- last day: 00:00-24h - 00:00.

## Examples

The following example shows the complete policy failure statistics for source adjacency glophone and source account 200 for the current day:

```
Router# show sbc global sbe policy-failure-stats currentday

SBC Service ''global''
Policy failure statistics for the current day for source adjacency glophone:
  Total call setup failures:          8
  Call setups failed due to NA:       0
  Call setups failed due to rtg:      8
  Call setups failed due to CAC:      0
  CAC fails due to num call lim:      0
  CAC fails due to rate call lim:     0
  CAC fails due to num channels lim:  0
  CAC fails due to bandwidth lim:     0

Policy failure statistics for the current day for source account 200
  Total call setup failures:          8
  Call setups failed due to NA:       0
  Call setups failed due to rtg:      8
  Call setups failed due to CAC:      0
  CAC fails due to num call lim:      0
  CAC fails due to rate call lim:     0
  CAC fails due to num channels lim:  0
  CAC fails due to bandwidth lim:     0
```

Table 1 describes the important fields shown in the output of the command.

***Table 1 show sbc sbe policy-failure-stats Field Descriptions***

| Field | Description |
|---|---|
| Total call setup failures | Total number of call setup failures due to Number Analysis, Routing, and CAC Policies. |
| Call setups failed due to NA | Total number of call setup failures due to Number Analysis policies. |
| Call setups failed due to rtg | Total number of call setup failures due to routing policies. |
| Call setups failed due to CAC | Total number of call setup failures due to CAC policies. |
| CAC fails due to num call lim | Total number of call setup failures due to CAC call limits. |
| CAC fails due to call rate lim | Total number of call setup failures due to CAC call rate limits. |
| CAC fails due to num media channels lim | Total number of call setup failures due to CAC number of media channels limits. |
| CAC fails due to num media updates lim | Total number of call setup failures due to CAC number of media updates limits. |
| CAC fails due to bandwidth lim | Total number of call setup failures due to CAC Bandwidth Limits. |

**Related Commands**

| Command | Description |
|---|---|
| **clear sbc sbe policy-rejection-stats** | Clears all the policy rejection statistics by the SBE. |
| **show sbc sbe policy-failure-stats src-adjacency** | Lists the statistics for all the policy failures on the specified SBE. |
| **show sbc sbe policy-failure-stats dst-adjacency** | Lists the statistics for the policy failures for calls with the adjacency. |
| **show sbc sbe policy-failure-stats src-account** | Lists the statistics for the policy failures for calls with the account. |
| **show sbc sbe policy-failure-stats dst-account** | Lists the statistics for the policy failures for calls with the account. |

# show sbc sbe policy-failure-stats dst-account

To list policy failure statistics for a specified target account for a specified time period, use the **show sbc sbe policy-failure-stats dst-account** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe policy-failure-stats dst-account** *name* **period** *time-period*

## Syntax Description

| | |
|---|---|
| sbc-name | Specifies the name of the SBC service. |
| *name* | Specifies the name of the account for which you would like to display statistics. The maximum length of this value is 30 characters. |
| **period** *time-period* | Specifies the time period to which the statistics apply. Choose one of the following time intervals:<br>• **current15mins**—Displays statistics in 15 minute intervals starting from the current minute.<br>• **current5mins**—Displays statistics in 5 minute intervals starting from the current minute.<br>• **currentday**—Displays statistics for the current day starting midnight of the same day.<br>• **currenthour**—Displays statistics for the current hour.<br>• **previous15mins**—Displays statistics from previous 15 minute intervals.<br>• **previous5mins**—Displays statistics from previous 5 minute intervals.<br>• **previousday**—Displays statistics from the previous day.<br>• **previoushour**—Displays statistics from the previous hour. |

## 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. |
| Cisco IOS XE Release 2.5 | This command is obsolete in Cisco IOS XE Release 2.5. |

## Usage Guidelines

The statistics are collected at 5 minute intervals past the hour (that is, at 0, 5, 10, 15 minutes, and so on past the hour). For example, the periods covered by the various buckets at 12:43 would be as follows:

- current five minutes: 12:40-12:43
- previous five minutes: 12:35-12:40
- current 15 minutes: 12:30-12:43

- previous 15 minutes: 12:15-12:30
- current hour: 12:00-12:43
- last hour: 11:00-12:00
- current day: 00:00-12:43
- last day: 00:00-24h - 00:00.

## Examples

The following example lists the policy failure statistics for an adjacent account named AA for the current hour:

```
Router# show sbc mysbc sbe policy-failure-stats dst-account AA period currenthour

SBC Service "mysbc"
Policy failure statistics for the current hour for source adjacency AA

Total call setup failures: 10
Call setups failed due to NA: 5
Call setups failed due to rtg: 3
Call setups failed due to CAC: 2
CAC fails due to num call lim: 1
CAC fails due to rate call lim: 0
CAC fails due to num channels lim: 0
CAC fails due to bandwidth lim: 1
```

Table 2 describes the important fields shown in the output of the command.

***Table 2 show sbc sbe policy-failure-stats dst-account Field Descriptions***

| Field | Description |
|---|---|
| Total call setup failures | Total number of call setup failures due to Number Analysis, Routing, and CAC Policies. |
| Call setups failed due to NA | Total number of call setup failures due to Number Analysis policies. |
| Call setups failed due to rtg | Total number of call setup failures due to routing policies. |
| Call setups failed due to CAC | Total number of call setup failures due to CAC policies. |
| CAC fails due to num call lim | Total number of call setup failures due to CAC call limits. |
| CAC fails due to call rate lim | Total number of call setup failures due to CAC call rate limits. |
| CAC fails due to num media channels lim | Total number of call setup failures due to CAC number of media channels limits. |
| CAC fails due to num media updates lim | Total number of call setup failures due to CAC number of media updates limits. |
| CAC fails due to bandwidth lim | Total number of call setup failures due to CAC Bandwidth Limits. |

**Related Commands**

| Command | Description |
|---|---|
| **show sbc sbe policy-failure-stats dst-adjacency** | Lists policy failure statistics for calls within the specified target adjacency for the specified time period. |
| **show sbc sbe policy-failure-stats src-account** | Lists policy failure statistics for calls within the specified source account for the specified time period. |
| **show sbc sbe policy-failure-stats src-adjacency** | Lists policy failure statistics for calls within the specified source adjacency for the specified time period. |

# show sbc sbe policy-failure-stats dst-adjacency

To list policy failure statistics for a specified target adjacency for a specified time period **use the show sbc sbe policy-failure-stats dst-adjacency command in** Privileged EXEC **mode.**

**show sbc** *sbc-name* **sbe policy-failure-stats dst-adjacency** *name* **period** *time-period*

## Syntax Description

| | |
|---|---|
| sbc-name | Specifies the name of the SBC service. |
| *name* | Specifies the name of the adjacency for which you would like to display statistics. The maximum length of this value is 30 characters. |
| **period** *time-period* | Specifies the time period to which the statistics apply. Choose one of the following time intervals:<br>• **current15mins**—Displays statistics in 15 minute intervals starting from the current minute.<br>• **current5mins**—Displays statistics in 5 minute intervals starting from the current minute.<br>• **currentday**—Displays statistics for the current day starting midnight of the same day.<br>• **currenthour**—Displays statistics for the current hour.<br>• **previous15mins**—Displays statistics from previous 15 minute intervals.<br>• **previous5mins**—Displays statistics from previous 5 minute intervals.<br>• **previousday**—Displays statistics from the previous day.<br>• **previoushour**—Displays statistics from the previous hour. |

## 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. |
| Cisco IOS XE Release 2.5 | This command is obsolete in Cisco IOS XE Release 2.5. |

## Usage Guidelines

The statistics are collected at 5 minute intervals past the hour (that is, at 0, 5, 10, 15 minutes, and so on past the hour). For example, the periods covered by the various buckets at 12:43 would be as follows:

- current five minutes: 12:40-12:43
- previous five minutes: 12:35-12:40
- current 15 minutes: 12:30-12:43

- previous 15 minutes: 12:15-12:30
- current hour: 12:00-12:43
- last hour: 11:00-12:00
- current day: 00:00-12:43
- last day: 00:00-24h - 00:00.

## Examples

The following example shows the policy failure statistics for an adjacency named ZZ for the current hour:

```
Router# show sbc mysbc sbe policy-failure-stats dst-adjacency ZZ period currenthour

SBC Service "mysbc"
Policy failure statistics for the current hour for source adjacency ZZ

Total call setup failures: 10
Call setups failed due to NA: 5
Call setups failed due to rtg: 3
Call setups failed due to CAC: 2
CAC fails due to num call lim: 1
CAC fails due to rate call lim: 0
CAC fails due to num channels lim: 0
CAC fails due to bandwidth lim: 1
```

Table 3 describes the important fields shown in the output of the command.

***Table 3 show sbc sbe policy-failure-stats dst-adjacency Field Descriptions***

| Field | Description |
|---|---|
| Total call setup failures | Total number of call setup failures due to Number Analysis, Routing, and CAC Policies. |
| Call setups failed due to NA | Total number of call setup failures due to Number Analysis policies. |
| Call setups failed due to rtg | Total number of call setup failures due to routing policies. |
| Call setups failed due to CAC | Total number of call setup failures due to CAC policies. |
| CAC fails due to num call lim | Total number of call setup failures due to CAC call limits. |
| CAC fails due to call rate lim | Total number of call setup failures due to CAC call rate limits. |
| CAC fails due to num media channels lim | Total number of call setup failures due to CAC number of media channels limits. |
| CAC fails due to num media updates lim | Total number of call setup failures due to CAC number of media updates limits. |
| CAC fails due to bandwidth lim | Total number of call setup failures due to CAC Bandwidth Limits. |

**Related Commands**

| Command | Description |
|---|---|
| **show sbc sbe policy-failure-stats dst-account** | Lists policy failure statistics for calls within the specified target account for the specified time period. |
| **show sbc sbe policy-failure-stats src-account** | Lists policy failure statistics for calls within the specified source account for the specified time period. |
| **show sbc sbe policy-failure-stats src-adjacency** | Lists policy failure statistics for calls within the specified source adjacency for the specified time period. |

# show sbc sbe policy-failure-stats src-account

To list policy failure statistics for a specified source account for a specified time period **use the show sbc sbe policy-failure-stats src-account command in** Privileged EXEC mode**.**

**show sbc** *sbc-name* **sbe policy-failure-stats src-account** *name* **period** *time-period*

## Syntax Description

| | |
|---|---|
| sbc-name | Specifies the name of the SBC service. |
| *name* | Specifies the name of the account for which you would like to display statistics. The maximum length of this value is 30 characters. |
| **period** *time-period* | Specifies the time period to which the statistics apply. Choose one of the following time intervals:<br>• **current15mins**—Displays statistics in 15 minute intervals starting from the current minute.<br>• **current5mins**—Displays statistics in 5 minute intervals starting from the current minute.<br>• **currentday**—Displays statistics for the current day starting midnight of the same day.<br>• **currenthour**—Displays statistics for the current hour.<br>• **previous15mins**—Displays statistics from previous 15 minute intervals.<br>• **previous5mins**—Displays statistics from previous 5 minute intervals.<br>• **previousday**—Displays statistics from the previous day.<br>• **previoushour**—Displays statistics from the previous hour. |

## 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. |
| Cisco IOS XE Release 2.5 | This command is obsolete in Cisco IOS XE Release 2.5. |

## Usage Guidelines

The statistics are collected at 5 minute intervals past the hour (that is, at 0, 5, 10, 15 minutes, and so on past the hour). For example, the periods covered by the various buckets at 12:43 would be as follows:

- current five minutes: 12:40-12:43
- previous five minutes: 12:35-12:40
- current 15 minutes: 12:30-12:43

- previous 15 minutes: 12:15-12:30
- current hour: 12:00-12:43
- last hour: 11:00-12:00
- current day: 00:00-12:43
- last day: 00:00-24h - 00:00.

## Examples

The following example shows the policy failure statistics for a source account named BB for the current hour:

```
Router# show sbc mysbc sbe policy-failure-stats src-account BB period currenthour

SBC Service "mysbc"
Policy failure statistics for the current hour for source adjacency BB

Total call setup failures: 10
Call setups failed due to NA: 5
Call setups failed due to rtg: 3
Call setups failed due to CAC: 2
CAC fails due to num call lim: 1
CAC fails due to rate call lim: 0
CAC fails due to num channels lim: 0
CAC fails due to bandwidth lim: 1
```

Table 4 describes the important fields shown in the output of the command.

***Table 4 show sbc sbe policy-failure-stats src-account Field Descriptions***

| Field | Description |
|---|---|
| Total call setup failures | Total number of call setup failures due to Number Analysis, Routing, and CAC Policies. |
| Call setups failed due to NA | Total number of call setup failures due to Number Analysis policies. |
| Call setups failed due to rtg | Total number of call setup failures due to routing policies. |
| Call setups failed due to CAC | Total number of call setup failures due to CAC policies. |
| CAC fails due to num call lim | Total number of call setup failures due to CAC call limits. |
| CAC fails due to call rate lim | Total number of call setup failures due to CAC call rate limits. |
| CAC fails due to num media channels lim | Total number of call setup failures due to CAC number of media channels limits. |
| CAC fails due to num media updates lim | Total number of call setup failures due to CAC number of media updates limits. |
| CAC fails due to bandwidth lim | Total number of call setup failures due to CAC Bandwidth Limits. |

**Related Commands**

| Command | Description |
|---|---|
| **show sbc sbe policy-failure-stats dst-adjacency** | Lists policy failure statistics for calls within the specified target adjacency for the specified time period. |
| **show sbc sbe policy-failure-stats dst-account** | Lists policy failure statistics for calls within the specified target account for the specified time period. |
| **show sbc sbe policy-failure-stats src-adjacency** | Lists policy failure statistics for calls within the specified source adjacency for the specified time period. |

# show sbc sbe policy-failure-stats src-adjacency

To list policy failure statistics for a specified source adjacency for a specified time period **use the show sbc sbe policy-failure-stats src-adjacency command in** Privileged EXEC **mode.**

**show sbc** *sbc-name* **sbe policy-failure-stats src-adjacency** *name* **period** *time-period*

## Syntax Description

| | |
|---|---|
| sbc-name | Specifies the name of the SBC service. |
| *name* | Specifies the name of the adjacency for which you would like to display statistics. The maximum name length is 30 characters. |
| **period** *time-period* | Specifies the time period to which the statistics apply. Choose one of the following time intervals:<br>• **current15mins**—Displays statistics in 15 minute intervals starting from the current minute.<br>• **current5mins**—Displays statistics in 5 minute intervals starting from the current minute.<br>• **currentday**—Displays statistics for the current day starting midnight of the same day.<br>• **currenthour**—Displays statistics for the current hour.<br>• **previous15mins**—Displays statistics from previous 15 minute intervals.<br>• **previous5mins**—Displays statistics from previous 5 minute intervals.<br>• **previousday**—Displays statistics from the previous day.<br>• **previoushour**—Displays statistics from the previous hour. |

## 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. |
| Cisco IOS XE Release 2.5 | This command is obsolete in Cisco IOS XE Release 2.5. |

## Usage Guidelines

The statistics are collected at 5 minute intervals past the hour (that is, at 0, 5, 10, 15 minutes, and so on past the hour). For example, the periods covered by the various buckets at 12:43 would be as follows:

- current five minutes: 12:40-12:43
- previous five minutes: 12:35-12:40
- current 15 minutes: 12:30-12:43

- previous 15 minutes: 12:15-12:30
- current hour: 12:00-12:43
- last hour: 11:00-12:00
- current day: 00:00-12:43
- last day: 00:00-24h - 00:00.

## Examples

The following example displays policy failure statistics for a source adjacency named YY for the current hour:

```
Router# show sbc test sbe policy-failure-stats src-adjacency Acct1
period current15mins

SBC Service ''test''
Policy failure statistics for the current 15 mins for source adjacency Acct1
Total call setup failures: 0
Call setups failed due to NA: 0
Call setups failed due to rtg: 0
Call setups failed due to CAC: 0
CAC fails due to num call lim: 0
CAC fails due to rate call lim: 0
CAC fails due to num channels lim: 0
CAC fails due to bandwidth lim: 0
```

Table 5 describes the important fields shown in the output of the command.

***Table 5 show sbc sbe policy-failure-stats src-adjacency Field Descriptions***

| Field | Description |
|---|---|
| Total call setup failures | Total number of call setup failures due to Number Analysis, Routing, and CAC Policies. |
| Call setups failed due to NA | Total number of call setup failures due to Number Analysis policies. |
| Call setups failed due to rtg | Total number of call setup failures due to routing policies. |
| Call setups failed due to CAC | Total number of call setup failures due to CAC policies. |
| CAC fails due to num call lim | Total number of call setup failures due to CAC call limits. |
| CAC fails due to call rate lim | Total number of call setup failures due to CAC call rate limits. |
| CAC fails due to num media channels lim | Total number of call setup failures due to CAC number of media channels limits. |
| CAC fails due to num media updates lim | Total number of call setup failures due to CAC number of media updates limits. |
| CAC fails due to bandwidth lim | Total number of call setup failures due to CAC Bandwidth Limits. |

**Related Commands**

| Command | Description |
|---|---|
| **show sbc sbe policy-failure-stats dst-adjacency** | Lists policy failure statistics for calls within the specified target adjacency for the specified time period. |
| **show sbc sbe policy-failure-stats src-account** | Lists policy failure statistics for calls within the specified source account for the specified time period. |
| **show sbc sbe policy-failure-stats dst-account** | Lists policy failure statistics for calls within the specified target account for the specified time period. |

# show sbc sbe qos-profiles

To list all QoS profiles, use the **show sbc sbe qos-profiles** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe qos-profiles** [*profile-name*]

## Syntax Description

| | |
|---|---|
| sbc-name | Specifies the name of the SBC service. |
| profile-name | (Optional) Specifies the profile name.<br>If you specify a QoS profile, the details of that profile are shown. |

## 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 list all of the QoS profiles on the SBE:

```
Router# show sbc test sbe qos-profiles

SBC Service ''test''
profile name Class
-------------------------------------------------------
default Voice
profile6 Voice
residential Voice
default Video
profile3 Video
profile5 Video
profile7 Video
profile9 Video
default Fax
default Signaling
profile2 Signaling
profile4 Signaling
profile8 Signaling 7
```

The **show sbc test sbe qos-profiles** command is invalid when displaying one profile. Correct usage is singular as shown below.

```
Router# show sbc test sbe qos-profiles profile6
^
% long command detected at '^' marker.

Router# show sbc test sbe qos-profile profile6
SBC Service ''test''
QoS profile profile6
```

```
Class of Service Voice
Marking type Passthrough

Router#
```

# show sbc sbe radius-client-accounting accounting

To list the parameters configured for the account, use the **show sbc sbe radius-client-accounting accounting** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe radius-client-accounting accounting** *client-name*

## Syntax Description

| | |
|---|---|
| *sbc name* | This is the name of the SBC service. |
| *client-name* | Clears all statistics for the specified local RADIUS client. |

## 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 lists the parameters configured for accounting:

Router# **show sbc uut105-1 sbe radius-client-accounting accounting SBC1-account-1**

```
SBC Service ''uut105-1''
radius client address = 88.105.2.100
radius client retry interval = 1200
radius client retry limit = 5
radius client concurrent requests limit = 250
Router#
```

# show sbc sbe radius-client-accounting authentication

To list the parameters configured for the authentication, use the **show sbc sbe radius-client-accounting authentication** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe radius-client-accounting authentication**

**Syntax Description**

| | |
|---|---|
| *sbc name* | This is the name of the SBC service. |

**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 lists the parameters configured for the authentication:

Router# **show sbc mysbc sbe radius-client-accounting authentication**

```
SBC Service ''node105''
radius client address = 88.105.128.100
radius client retry interval = 1800
radius client retry limit = 5
radius client concurrent requests limit = 250
```

# show sbc sbe radius-client-stats

To list the RADIUS accounting client statistics for all accounting clients configured on an SBE, use the **show sbc sbe radius-client-stats** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe radius-client-stats** *radius-client* **[accounting** *client-name* | **authentication]**

## Syntax Description

| | |
|---|---|
| *sbc name* | This is the name of the SBC service. |
| *radius-client* | Specifies the RADIUS client to show. |
| **accounting** *client-name* | Specifies the name to assign to the accounting RADIUS client. |
| **authentication** | Enables client authentication. |

## 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 list the RADIUS accounting server statistics for all accounting servers configured on an SBE:

```
Router# show sbc j sbe radius-client-stats accounting CISCO_UM
SBC Service "j"
  Bad address packets:     0
  Primary server:          RADIUS1
  Radius SET state:     Active
```

The following example shows how to list the RADIUS accounting server statistics for all authentication servers configured on an SBE:

```
Router# show sbc j sbe radius-client-stats authentication
SBC Service "j"
  Bad address packets:     0
  Primary server:
```

# show sbc sbe radius-server-stats

To list the RADIUS server statistics for all accounting servers configured on a RADIUS client on an SBE, use the **show sbc sbe radius-server-stats** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe radius-server-stats** *radius-client* **[accounting** *client-name* **|**
**authentication]**

## Syntax Description

| | |
|---|---|
| *sbc name* | This is the name of the SBC service. |
| *radius-client* | Specifies the RADIUS client to show. |
| **accounting** *client-name* | Specifies the name to assign to the accounting RADIUS client. |
| **authentication** | Enables client authentication. |

## 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 list the RADIUS server statistics for all accounting servers configured on a radius client on an SBE:

```
Router# show sbc sanity sbe radius-server-stats accounting SBC1-account-1

SBC Service ''sanity''
Cisco-AR1-PC:
Round trip time: 0 ms
Access-requests sent: 0
Access-request retransmitted: 0
Access-accepts received: 0
Access-reject received: 0
Access-challenge received: 0
Accounting-requests sent: 0
Accounting-requests retransmitted: 0
Accounting-responses received: 0
Malformed packets received: 0
Invalid authenticators received: 0
Outstanding responses: 0
Timeouts occurred: 0
Unknown packets: 0
Packets dropped: 0
```

The following example shows how to list the RADIUS server statistics for all authentication servers configured on a radius client on an SBE:

```
Router# show sbc sanity sbe radius-server-stats authentication

SBC Service ''sanity''
Cisco-AR1-PC:
Round trip time: 0 ms
Access-requests sent: 0
Access-request retransmitted: 0
Access-accepts received: 0
Access-reject received: 0
Access-challenge received: 0
Accounting-requests sent: 0
Accounting-requests retransmitted: 0
Accounting-responses received: 0
Malformed packets received: 0
Invalid authenticators received: 0
Outstanding responses: 0
Timeouts occurred: 0
Unknown packets: 0
Packets dropped: 0
```

# show sbc sbe redirect-limit

To display the current limit on the maximum number of redirections that a call can undergo, **use the show sbc sbe redirect-limit command in** Privileged EXEC **mode.**

**show sbc** *sbc-name* **sbe redirect-limit**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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 displays the limit on the maximum number of redirections that a call can undergo:

```
Router# show service sbc mysbc sbe redirect-limit

SBC Service "mySbc"
Call redirect limit is 4
```

# show sbc sbe resource-priority-sets

To display the resource priority sets, use the **show sbc sbe resource-priority-sets** command in Privileged EXEC mode.

show sbc *sbc-name* sbe resource-priority-sets

**Syntax Description**

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

**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. |

**Usage Guidelines**

Lists the high-level status and capabilities of each instantiated SBE or DBE.

**Examples**

The following example shows how the **show sbc sbe resource-priority-sets** command is used to display the resource priority sets:

```
Router# show sbc mysbc sbe resource-priority-sets
SBC Service ''mysbc''
Resource priority sets
------------------------------------------------------------
dsn
Router# show sbc test sbe resource-priority-set dsn
SBC Service ''mysbc''
Resource priority set: dsn

Name Value
------------------------------------------------------------------------
dsn.flash Flash
ACE-104-1.4/Admin#
```

# show sbc sbe script-set

To display a summary of the details pertaining to all the configured script sets or show the details of a specified script set, use the **show sbc sbe script-set** command in the privileged EXEC mode.

**show sbc** *sbc-name* **sbe script-set** *script-set-number* **[program [line-numbers] | script** *script-name* **[line-numbers] | statistics]**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *script-set-number* | Script set number. |
| **program** | Specifies that all scripts must be displayed as a single program. |
| **line-numbers** | Specifies that line numbers must be included while displaying the scripts. |
| **script** | Specifies that details of a single script from the script set must be displayed. |
| *script-name* | Name of the script that must be displayed. |
| **statistics** | Specifies that script set statistics must be displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## 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 privileged EXEC mode. The Examples section shows the output of the command for each output mode (program, script, and statistics) that the command supports.

## Examples

In the following example, the **program** output mode has been specified in the **show sbc sbe script-set** command:

```
Router# show sbc mySbc sbe script-set 10 program line-numbers

1   : function add_a_line1(msg)
2   : msg.sdp:insert_child_last(MeSdpLine.new("a=rtpmap:0 PCMU/8000"))
3   : end
4   : MeEditor.register(MeEditor.AFTER_SEND,"sdp_add_a_after",add_a_line1)
5   :
6   :
7   :
8   :  --Script to delete all a=candidate and a=ice lines in sdp
```

```
9   :
10  :  function remove_specified_a_line(msg)
11  :    for line in msg.sdp:select_by_prefix("a=candidate"):iter() do
12  :       line:delete()
13  :    end
14  :    for line in msg.sdp:select_by_prefix("a=ice"):iter() do
15  :       line:delete()
16  :    end
17  :  end
18  :
19  :
MeEditor.register(MeEditor.BEFORE_RECEIVE,"remove_specified_a_line",remove_specified_a_lin
e)
```

In the following example, the **script** output mode has been specified in the **show sbc sbe script-set** command:

```
Router# show sbc SBC1 sbe script-set 10 script remove-a-line line-numbers

1   :
2   :  --Script to delete all a=candidate and a=ice lines in sdp
3   :
4   :  function remove_specified_a_line(msg)
5   :    for line in msg.sdp:select_by_prefix("a=candidate"):iter() do
6   :       line:delete()
7   :    end
8   :    for line in msg.sdp:select_by_prefix("a=ice"):iter() do
9   :       line:delete()
10  :    end
11  :  end
12  :
13  :
MeEditor.register(MeEditor.BEFORE_RECEIVE,"remove_specified_a_line",remove_s
pecified_a_line)
```

In the following example, the **statistics** output mode has been specified in the **show sbc sbe script-set** command:

```
Router# show sbc mySbc sbe script-set 10 statistics

Current Memory Usage =      40461      (bytes)
Total Memory Limit =        0          (bytes)
Total Failures =            0
Last Script Failure =       ""
Last Failure Line-Number =  0
Last Failure Cause =        ""
Stack:
```

## 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. |

| Command | Description |
|---|---|
| **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. |
| **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. |

# show sbc sbe sdp-h245-mapping

To display the mapping for codec strings between SDP (SIP) and H245 (H323), use the **show sbc sbe sdp-h245-mapping** command in Privileged EXEC mode.

**show sbc *sbc-name* sbe sdp-h245-mapping**

**Syntax Description**

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

**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. |

**Usage Guidelines**

Lists the high-level status and capabilities of each instantiated SBE or DBE.

**Examples**

The following example shows how the **show sbc sbe sdp-h245-mapping** command is used.

```
Router# show sbc mysbc sbe sdp-h245-mappings

SBC Service ''mysbc''

SDP H.245
------------------
PCMA g711Alaw64k
PCMU g711Ulaw64k
G722 g722_64k
G723 g7231
G728 g728
G729 g729,
g729AnnexA,
g729wAnnexB,
g729AnnexAwAnnexB
GSM gsmFullRate
t38 t38Fax

In H.323 calls,
- T.38 fax is the only non-audio codec supported.
- Audio codecs not in the list above are reported as ''PCMU''.

In SIP/H.323 interworking calls, only audio codecs using static
RTP payload types are supported.
```

# show sbc sbe sdp-match-table

This command was deprecated in Cisco IOS XE Release 2.5.

To show the SDP match table configured on the SBC, use the **show sbc sbe sdp-match-table** command in Privileged EXEC mode.

show sbc *sbc-name* sbe sdp-match-table [detail]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| detail | Shows the SDP attribute configured on a given SDP match table. |

## 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. |
| Cisco IOS XE Release 2.5 | This command was deprecated. It was replaced by the new command **show sbc sbe sip sdp-match-table**. |

## Examples

The following example shows how the **show sbc sbe sdp-match-table** command is used to display SDP match table:

```
Router# show sbc pgw sbe sdp-match-table detail
      Name         :   m                       <--- table name
      Action       :   blacklist               <--- action: blacklist or whitelist
      Match String :   ddd                     <--- several match string
                       ddf

-------------------------------------------------
      Name         :   n
      Action       :   whitelist
      Match String :   2
                       3
                       4
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sdp-h245-mapping** | Displays the mapping for codec strings between SDP (SIP) and H245 (H323). |

# show sbc sbe sdp-policy-table

This command was deprecated in Cisco IOS XE Release 2.5.

To show the SDP policy table configured on the SBC, use the **show sbc sbe sdp-policy-table** command in Privileged EXEC mode.

show sbc *sbc-name* sbe sdp-policy-table

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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. |
| Cisco IOS XE Release 2.5 | This command was deprecated. It was replaced by the new command **show sbc sbe sip sdp-policy-table**. |

## Examples

The following example shows how the **show sbc sbe sdp-policy-table** command is used to display the SDP policy table:

```
Router# show sbc pgw sbe sdp-policy-table
      Name                                SDP Match Table
      --------------------------------------------------
      p                                   m            <--- "m" is sdp match table name
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sdp-match-table** | Shows the SDP match table configured on the SBC. |

# show sbc sbe sip body-editor

To display all the body editors of the non-SDP message bodies or the details for a specific body editor, use the **show sbc sbe sip body-editor** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip body-editor** [*editor-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *editor-name* | Name of the editor. Also, displays details about the specified editor.<br>If omitted, information pertaining to all the SIP body editors is displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how to display all the non-SDP message body editors that are in use:

```
Router# show sbc mySBC sbe sip body-editor

body-editors for SBC service "mySBC"
  Name                            In use
  ====================================
  Hello                            No
  default                          Yes
```

The following example shows how to display the details of a specific non-SDP message body editor named editor2:

```
Router# show sbc mySBC sbe sip body-editor Body1

body-editor "Body1"
    Description: "The first Body Editor"
    Bodies:
      media-type/media-sub-type
        action nopass
        hunt-on-reject false
    In use by adjacency:SIPP (in)
    Not in use with any method-editor
```

## Related Commands

| Command | Description |
|---|---|
| **sip body-editor** | Configures a body editor. |

# show sbc sbe sip body-profile

To display all body profiles of non-SDP message bodies or to show details for a specified body profile, use the **show sbc sbe sip body-profile** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip body-profile** [*body_profile-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| **body_profile-name** | Optional. Specifies the name of the body profile and displays details about the specified body profile.<br>If omitted, the command shows information about all body profiles. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example displays all the non-SDP message body profiles in use:

```
Router# show sbc mySBC sbe sip body-profile

Name                In Use

profile1            Yes
profile2            Yes
profile3            No
```

The following example displays the details of the specified non-SDP message body profile named "profile2":

```
Router# show sbc mySBC sbe sip body-profile profile2

Name          :           profile2
Description   :           test-profile

Element       :           application/ISUP
Action        :           nopass

Hunt-on-reject:           false

Element       :           application/QSIG
Action        :           pass
Hunt-on-reject:           false
```

# show sbc sbe sip delegate-profiles

To display delegate profiles for subscribers for whom Provisioned Delegate Registration has been configured, use the **show sbc sbe sip delegate-profiles** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip delegate-profiles**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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 displays delegate profiles for subscribers for whom delegate registration has been configured:

```
Router# show sbc mySBC sbe sip delegate-profiles

        0        1         2       3     4        5        6       7
012345789012345789012345789012345789012345789012345789012345789012345789

Delegate profiles:
-------------------------------------------------
  profile               = steve
  Duration (secs)       = 1800
  Retry Count           = 3
  Retry Interval (secs) = 30
  Refresh Buffer (secs) = 30
-------------------------------------------------
```

# show sbc sbe sip error-profile

To display the configuration information of an error profile, use the **show sbc sbe sip error-profile** command in privileged EXEC mode.

**show sbc** *sbc-name* sbe **sip error-profile** *error-profile-name*

## Syntax Description

| | |
|---|---|
| sbc-name | Name of the SBC service. |
| *error-profile-name* | Name of the configured error profile. |

## Command Default

If the *error-profile-name* is not given, information for all error profiles is displayed.

## Command Modes

Privileged EXEC (#)

## 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 display the configuration information of an error profile:

### Example 1: Default Error profile

```
Router# show sbc SBC1 sbe sip error-profile

Name                            in-use
==================================
default                         yes
```

### Example 2: Specific Error profile

```
Router# show sbc SBC2 sbe sip error-profile Error_profile_1

  Error profile "Error_profile_1"
    Description:
    cause  rtg-no-route-found    sub-cause rtg-src-adjacency
      status-code: 604
      reason: "SBC: No route found based on src adjacency"
    cause rtg-route-unavailable  sub-cause
      status-code: 486
      reason: "SBC: no route available"
  in use by adjacency:sip-1
```

**Related Commands**

| Command | Description |
|---|---|
| **error-profile** | Configures an existing error profile as the outbound SIP error profile. |
| **sip error-profile** | Creates an error profile and enters error profile configuration mode. |
| **cause** | Configures the cause of an internal error for an error profile. |
| **show sbc sbe sip error-profile** | Displays the configuration information of an error profile. |

# show sbc sbe sip essential-headers

To display a list of the essential SIP headers, use the **show sbc sbe sip essential-headers** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip essential-headers**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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 the **show sbc sbe sip essential-headers** command is used to display a list of all essential headers:

```
Router# show sbc mySbc sbe sip essential-headers

Essential headers:
AUTHORIZATION CALL-ID CONTACT CONTENT-LENGTH
CONTENT-TYPE CSEQ EVENT EXPIRES FROM MAX-FORWARDS
MIN-EXPIRES PROXY-AUTHORIZATION
PROXY-AUTHENTICATE PROXY-REQUIRE RACK
RECORD-ROUTE REFERRED-BY REFER-TO REPLACES
REQUIRE ROUTE RSEQ SUBSCRIPTION-STATE SUPPORTED
TO VIA WWW-AUTHENTICATE
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip header-profile** | Displays a list of all configured SIP header profiles. |

# show sbc sbe sip essential-methods

To display a list of the essential SIP methods, use the **show sbc sbe sip essential-methods** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip essential-methods**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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 the **show sbc sbe sip essential-methods** command is used to display a list of all essential methods:

```
Router# show sbc mySbc sbe sip essential-methods

Essential methods:
ACK BYE CANCEL INVITE NOTIFY PRACK REFER REGISTER
SUBSCRIBE
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip method-profiles** | Displays a list of all configured SIP method profiles. |

# show sbc sbe sip essential-options

To show the options that are vital for base SBC operation, use the **show sbc sbe sip essential-options** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip essential-options**

**Syntax Description**

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

**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. |

**Usage Guidelines**

These options can not be configured on an option profile.

**Examples**

The following example shows how the **show sbc sbe sip essential-options** command is used to display a list of all essential methods:

```
Router# show sbc test sbe sip essential-options
Essential options:
100REL
```

# show sbc sbe sip fast-register-stats

To show how many subscribers have been afforded fast register status by the application, use the **show sbc sbe sip fast-register-stats** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip fast-register-stats**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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. |

## Usage Guidelines

A register message in the context of this command is counted as a unique combination of the pair of address-of-record (AOR) and Contact-URI (CURI). Thus, a single REGISTER message from the subscriber, identified by an AOR with two contact URI will translate to a count of 2.

## Examples

The following example shows how the **show sbc sbe sip essential-options** command is used to display a list of all essential methods:

```
Router# show sbc mysbc sbe sip fast-register-stats
SBC Service "mysbc"

SIP fast register statistics:
   Total entries:                                                    15
```

# show sbc sbe sip header-editor

To display a summary of all the configured header editors or the details pertaining to a specific header editor, use the **show sbc sbe sip header-editor** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip header-editor** [*editor-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *editor-name* | Name of the editor. Also, displays details about the specified editor.<br>If omitted, information pertaining to all the SIP header editors is displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip header-editor** command is used to display the details of a specific header editor:

```
Router# show sbc test sbe sip header-editor Head1

header-editor "Head1"
    Description:
    Type:        Whitelist
    src-address: (inbound only)
        header-prio 1 header-name head1
    store-rules:
        entry 1
          description:
            Not specified
    request-line:
        entry 1
          description:
          action replace-value value "hell#hkk"
    headers:
      head1
        entry 1
          description:
          action pass
      head3
        entry 1
          description:
          action as-profile
            parameter-profile Param1
    Not in use with any adjacencies
    Not in use with any method-editor
```

The following example shows how the **show sbc sbe sip header-editor** command is used to display a list of all the configured header editors:

```
Router# show sbc mySbc sbe sip header-editor

header-editors for SBC service "mySbc"

  Name                             In use
  ===================================
  Head1                             No
  head1                             No
  NoHelo                            No
  headedit                          No
  HeadEdit1                         No
  preset-call-tag                   No
  preset-acc-in-hdr                 No
  preset-std-in-hdr                 No
  preset-acc-out-hdr                No
  preset-core-in-hdr                No
  preset-std-out-hdr                No
  preset-core-out-hdr               No
  preset-ipsec-in-hdr               No
  preset-ipsec-out-hdr              No
  default                           Yes
  preset-ibcf-ext-in-hdr            No
  preset-ibcf-int-in-hdr            No
  preset-ibcf-utr-in-hdr            No
  preset-ibcf-ext-out-hdr           No
  preset-ibcf-int-out-hdr           No
  preset-ibcf-utr-out-hdr           No
  preset-std-block-in-hdr           No
  preset-std-block-out-hdr          No
```

## Related Commands

| Command | Description |
|---|---|
| **sip header-editor** | Configures a header editor. |

# show sbc sbe sip header-profile

To display all SIP header profiles or to show details for a specified header profile, use the **show sbc sbe sip header-profile** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip header-profile** [*profile-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| **profile-name** | Optional. Specifies the name of the profile and displays details about the specified profile.<br>If omitted, the command shows information about all SIP header profiles. |

## 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. |
| Cisco IOS XE Release 2.5 | The *profile-name* argument was changed from required to optional. The ability to list all SIP header profiles was added. |

## Examples

The following example shows how the **show sbc sbe sip header-profile** command is used to display details of the specified header profile:

```
Router# show sbc test sbe sip header-profile default

Header profile ''default''
Type: Whitelist
Headers:
HEADERS-A
HEADERS-B
HEADERS-C
Adjacency: sip-60 (out)
Adjacency: sip-61 (in)
```

The following example shows how the **show sbc sbe sip header-profile** command is used to display a list of all configured header profiles:

```
Router# show sbc mySbc sbe sip header-profile

Header profile for SBC service "mysbc"
Name                            In use
===================================
profile1                           Yes
Default                            No
```

# show sbc sbe sip header-profiles

To display a list of all configured SIP header profiles, use the **show sbc sbe sip header-profiles** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip header-profiles**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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. |
| Cisco IOS XE Release 2.5 | This command was deprecated. Its functionality was added to the **show sbc sbe sip header-profile** command. |

## Examples

The following example shows how the **show sbc sbe sip header-profiles** command is used to display a list of all configured header profiles:

```
Router# show sbc mySbc sbe sip header-profiles

Header profile for SBC service "mysbc"
Name                              In use
==================================
profile1                            Yes
Default                             No
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip header-profile** | Displays details of the specified SIP header profile. |

# show sbc sbe sip ip-fqdn-mapping

To display the IP-FQDN mapping table, **use the show sbc sbe sip ip-fqdn-mapping command in the privileged EXEC mode**.

**show sbc** *sbc-name* **sbe sip ip-fqdn-mapping**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## Command Default

No default behavior or values are available.

## Command Modes

**Privileged EXEC (#)**

## 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 2.6 | The output of this command was modified with IPv6 details. |

## Examples

The following example shows the IP-FQDN mappings (IPv4) that are configured on SBEs:

```
Router# show sbc test sbe sip ip-fqdn-mapping

IP FQDN mappings for SBC service "test"

     Index Up?                                    IP Dir FQDN
         1 Yes                           11.22.33.41 <-> example.sbc1.com

* -> = one-way, <-> = both-ways
Router#
```

The “Up?” column in the output shows whether an entry is active or inactive. Inactive entries are often caused by mappings that clash with each other.

The following example shows the IP-FQDN mappings (IPv6) that are configured on SBEs:

```
Router# show sbc test sbe sip ip-fqdn-mapping

Router# show sbc test sbe sip ip-fqdn-mapping
IP FQDN mappings for SBC service "test"

     Index Up?                                    IP Dir FQDN
         1 Yes                      2001::10:0:50:137 ->  ccm137.cisco.com

    -> = one-way, <-> = both-ways
```

# show sbc sbe sip method-editor

To display all the SIP method editors or the details pertaining to a specific method editor, use the **show sbc sbe sip method-editor** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip method-editor** [*editor-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *editor-name* | Name of the editor. Also, displays details about the specified editor.<br>If omitted, information pertaining to all the SIP method editors is displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip method-editor** command is used to display a specific method editor:

```
Router# show sbc test sbe sip method-editor method2
method-editor "method2"
    Description:
    Type:    Whitelist
    Methods:
      No method-editor elements found.
    Not in use with any adjacencies
```

The following example shows how the **show sbc sbe sip method-editor** command is used to display a list of all the configured method editors:

```
Router# show sbc mySbc sbe sip method-editor
method-editors for SBC service "mySbc"

  Name                              In use
  ==================================
  Hello1                             No
  methodeditor                       No
  preset-acc-in-mth                  No
  preset-std-in-mth                  No
  preset-acc-out-mth                 No
  preset-core-in-mth                 No
  preset-std-out-mth                 No
  preset-core-out-mth                No
  preset-ipsec-in-mth                No
  preset-ipsec-out-mth               No
  default                            Yes
```

```
preset-ibcf-ext-in-mth          No
preset-ibcf-int-in-mth          No
preset-ibcf-utr-in-mth          No
preset-ibcf-ext-out-mth         No
preset-ibcf-int-out-mth         No
preset-ibcf-utr-out-mth         No
preset-std-block-in-mth         No
preset-std-block-out-mth        No
```

## Related Commands

| Command | Description |
|---|---|
| **sip method-editor** | Configures a method editor. |

# show sbc sbe sip method-profile

To display all SIP method profiles or to show details for a specified method profile, use the **show sbc sbe sip method-profile** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip method-profile** [*prof-name*]

## Syntax Description

| *sbc-name* | Specifies the name of the SBC service. |
|---|---|
| **prof-name** | Optional. Name of profile. If omitted, the command shows information about all profiles. |

## 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. |
| Cisco IOS XE Release 2.5 | The *prof-name* argument was changed from required to optional. The ability to list all SIP method profiles was added. |

## Examples

The following example shows how the **show sbc sbe sip method-profile** command is used to display a specific method profile:

```
Router# show sbc test sbe sip method-profile method2

Method profile ''method2''
Type: Whitelist
Methods:
meth1
meth2
Adjacency: sip-60 (in)
Adjacency: sip-61 (out)
```

The following example shows how the **show sbc sbe sip method-profile** command is used to display a list of all configured method profiles:

```
Router# show sbc mySbc sbe sip method-profile
Method profile for SBC service "mysbc"
Name                          In use
=====================================
profile1                        No
Default                         Yes
```

# show sbc sbe sip method-profiles

This command was deprecated in Cisco IOS XE Release 2.5.

To display a list of all SIP method profiles, use the **show sbc sbe sip method-profiles** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip method-profiles**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## 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. |
| Cisco IOS XE Release 2.5 | This command was deprecated. Its functionality was added to the **show sbc sbe sip method-profile** command. |

## Examples

The following example shows how the **show sbc sbe sip method-profiles** command is used to display a list of all configured method profiles:

```
Router# show sbc mySbc sbe sip method-profiles
Method profile for SBC service "mysbc"
Name                          In use
=====================================
profile1                        No
Default                         Yes
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip method-profile** | Displays details of the specified SIP method profile. |

# show sbc sbe sip method-stats

To show the summary or detailed statistics for a SIP method, use the **show sbc sbe sip method-stats** command in Privileged EXEC mode.

**Note** This command name was changed slightly in Cisco IOS XE Release 2.5.

***show sbc*** *sbc-name* ***sbe sip method-stats*** *adj-name sip-req-name sip-response-code summery-period*

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| *adj-name* | Specifies the name of the adjacency. |
| *sip-req-name* | Specifies the request name: ACK BYE CANCEL INFO INVITE MESSAGE NOTIFY OPTIONS PRACK REFER REGISTER SUBSCRIBE UNKNOWN UPDATE |
| *sip-response-code* | 100-999 |
| *summery-period* | Values you can enter are *current5mins*, *current15mins*, *currenthour*, *currentday*, *previous5mins*, *previous15mins*, *previoushour*, or *previousday.* |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.4.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.5 | This command name was changed from **show sbc sbe sip-method-stats** to **show sbc sbe sip method-stats** (the hyphen between sip and method was removed). This command is obsolete in Cisco IOS XE Release 2.5 |

## Usage Guidelines

The **statistics-setting** command must be configured before using the **show sbc sbe sip method-stats** command to display SIP method statistics.

- Use the **statistics-setting summary** command to allow the **show sbc sbe sip method-stats** command to display statistics about SIP request names only.
- Use the **statistics-setting detail** command to allow the **show sbc sbe sip method-stats** command to display statistics about SIP response codes and SIP request names.

Summary statistics display all the response codes sent and received for a specific SIP method.

Detailed statistics display the statistics for specific SIP method and response code. You must use the *sip-response-code* string to view detailed statistics.

## Examples

The following example shows how the **show sbc sbe sip method-stats** command is used to display summary statistics for a specific SIP method. The **statistics-setting summary** command was configured on the adjacency before executing the **show sbc sbe sip method-stats** command.

```
Router# show sbc sbc sbe sip method-stats sip-41 invite currenthour
SBC Service "sbc"
  Adjacency sip-41 (SIP)
  Statistics for SIP method INVITE
    Total request received      :3
    Total request sent          :0
    Total 1xx response received :0
    Total 1xx response sent     :3
    Total 2xx response received :0
    Total 2xx response sent     :0
    Total 3xx response received :0
    Total 3xx response sent     :0
    Total 4xx response received :0
    Total 4xx response sent     :0
    Total 5xx response received :0
    Total 5xx response sent     :0
    Total 6xx response received :0
    Total 6xx response sent     :3
    Other response received     :0
    Other response sent         :0
```

The following example shows how the **show sbc sbe sip method-stats** command is used to display detailed statistics for a specific SIP method. The **statistics-setting detail** command was configured on the adjacency before executing the **show sbc sbe sip method-stats** command.

```
Router# show sbc sbc sbe sip method-stats sip-41 invite 604 currenthour
SBC Service "sbc"
  Adjacency sip-41 (SIP)
  Statistics for SIP method INVITE ,response 604
    Response received: 0
    Response sent    : 3
```

The following example shows that the **statistics-setting detail** command was not configured on the adjacency before executing the **show sbc sbe sip method-stats** command:

```
Router# show sbc sbc sbe sip method-stats sip-41 invite 604 currenthour
Statistics not available.
Set adjacency statistics-setting to detail to enable detailed statistics
```

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe adjacency statistics** | Clears the SIP method statistics counters and resets them to zero. |
| **show sbc sbe adjacencies** | Lists the adjacencies configured on signaling border elements (SBEs). |
| **show sbc sbe sip option-profiles** | Displays a list of all configured SIP option profiles. |
| **statistics-setting** | Configures an adjacency to support SIP method statistics. |

# show sbc sbe sip option-editor

To display all the SIP option editors or the details pertaining to a specific option editor, use the **show sbc sbe sip option-editor** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip option-editor** [*editor-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *editor-name* | Name of the editor. Also, displays details about the specified editor.<br>If omitted, information pertaining to all the SIP option editors is displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip option-editor** command is used to display the details of a specific option editor:

```
Router# show sbc test sbe sip option-editor editor1

option-editor "editor1"
    Description:
    Type:    Whitelist
    Options:
      No option editor elements found.
    Not in use with any adjacencies
```

The following example shows how the **show sbc sbe sip option-editor** command is used to display a list of all the configured option editors:

```
Router# show sbc test sbe sip option-editor

option editors for SBC service "test"
  Name                              In use
  ====================================
  TheHello                           No
  preset-acc-in-opt                  No
  preset-std-in-opt                  No
  preset-acc-out-opt                 No
  preset-core-in-opt                 No
  preset-std-out-opt                 No
  preset-core-out-opt                No
  preset-ipsec-in-opt                No
  preset-ipsec-out-opt               No
  default                            Yes
```

```
preset-ibcf-ext-in-opt          No
preset-ibcf-int-in-opt          No
preset-ibcf-utr-in-opt          No
preset-ibcf-ext-out-opt         No
preset-ibcf-int-out-opt         No
preset-ibcf-utr-out-opt         No
preset-std-block-in-opt         No
preset-std-block-out-opt        No
```

## Related Commands

| Command | Description |
|---|---|
| **sip option-editor** | Configures an option editor. |

# show sbc sbe sip option-profile

To display all SIP option profiles or to show details for a specified option profile, use the **show sbc sbe sip option-profile** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip option-profile** [*profile-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| *profile-name* | Optional. Specifies the name of the profile. If omitted, the command shows information about all SIP option profiles. |

## 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. |
| Cisco IOS XE Release 2.5 | The *profile-name* argument was changed from required to optional. The ability to list all SIP option profiles was added. |

## Examples

The following example shows how the **show sbc sbe sip option-profile** command is used to display details of the specified option profile:

```
Router# show sbc test sbe sip option-profile profile1

Option profile ''profile1''
Type: Whitelist
Options:
opt1
Adjacency: sip-60 (in-px)

Router# show sbc test sbe sip option-profile profile2

Option profile ''profile2''
Type: Whitelist
Options:
opt1
opt2
Not in use with any adjacencies
```

The following example shows how the **show sbc sbe sip option-profile** command is used to display details of the specified header profile:

```
Router# show sbc test sbe sip option-profile

Option profiles for SBC service "test":

  Name                  Description           In use
```

```
================================================
default               Default profile        Yes
OP1                   Option profile 1       Yes
OP2                   Option profile 2       Yes
OPTest                Unused profile         No
```

# show sbc sbe sip option-profiles

This command was deprecated in Cisco IOS XE Release 2.5.

To display a summary of the configured option profiles, use the **show sbc sbe sip option-profiles** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip option-profiles**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| *profile-name* | Specifies the name of the profile. |

## 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. |
| Cisco IOS XE Release 2.5 | This command was deprecated. Its functionality was added to the **show sbc sbe sip option-profile** command. |

## Examples

The following example shows how the **show sbc sbe sip option-profiles** command is used to display details of the specified header profile:

```
Router# show sbc test sbe sip option-profiles

Option profiles for SBC service "test":

  Name                  Description           In use
  ================================================
  default               Default profile       Yes
  OP1                   Option profile 1      Yes
  OP2                   Option profile 2      Yes
  OPTest                Unused profile        No
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip option-profile** | Displays a specified option profile. |

# show sbc sbe sip parameter-editor

To display all the SIP parameter editors or the details pertaining to a specific parameter editor, use the **show sbc sbe sip parameter-editor** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip parameter-editor** [*editor-name*]

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| *editor-name* | Name of the editor. Also, displays details about the specified editor.<br>If omitted, information pertaining to all the SIP parameter editors is displayed. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip parameter-editor** command is used to display the details of a specific parameter editor:

```
Router# show sbc test sbe sip parameter-editor Parameter1

parameter-editor "Parameter1"
    Description:
    Parameters:
      No parameters found.
    In use by header-editor:Head1, header:head3, entry:1
```

The following example shows how the **show sbc sbe sip parameter-editor** command is used to display a list of all the configured parameter editors:

```
Router# show sbc test sbe sip parameter-editor
parameter-editors for SBC service "sbc"

  Name                            In use
  ====================================
  Param1                           Yes
  param2                           No
  DoneHello                        No
```

## Related Commands

| Command | Description |
|---|---|
| **sip parameter-editor** | Configures a parameter editor. |

# show sbc sbe sip sdp-match-table

To show the SDP match table configured on the SBC, use the **show sbc sbe sip sdp-match-table** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip sdp-match-table [detail]**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| detail | Shows the SDP attribute configured on a given SDP match table. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip sdp-match-table** command is used to display SDP match table:

```
Router# show sbc pgw sbe sip sdp-match-table detail
      Name          :   m                        <--- table name
      Action        :   blacklist                <--- action: blacklist or whitelist
      Match String  :   ddd                      <--- several match string
                        ddf

-------------------------------------------------
      Name          :   n
      Action        :   whitelist
      Match String  :   2
                        3
                        4
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sdp-h245-mapping** | Displays the mapping for codec strings between SDP (SIP) and H245 (H323). |

# show sbc sbe sip sdp-media-profile

To show all SDP media profiles in an SBC service or details for a specified profile, use the **show sbc sbe sip sdp-media-profile** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip sdp-media-profile [***profile-name***]**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| *profile-name* | Specifies the name of the profile. If omitted, the command lists all profiles in the SBC service. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows a list of SDP media profiles configured under an SBC:

```
Router# show sbc test sbe sip sdp-media-profile
SDP Media profiles for SBC service "test"

  Name                            In use
  ====================================
  Mediaprofile                     No
```

The following example shows the contents of a named SDP media profile:

```
Router# show sbc test sbe sip sdp-media-profile Mediaprofile
 SDP media profile "Mediaprofile"
    Elements:
      Sequence Number : 1
          Line 1        : m=audio 0 RTP/AVP 31
          Line 2        : a=aaa:testing

Not in use by any CAC table entries
```

## Related Commands

| Command | Description |
|---|---|
| **sdp-media-profile** | Creates or modifies a customized SDP media profile. |

# show sbc sbe sip sdp-policy-table

To show the SDP policy table configured on the SBC, use the **show sbc sbe sip sdp-policy-table** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip sdp-policy-table**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Examples

The following example shows how the **show sbc sbe sip sdp-policy-table** command is used to display the SDP policy table:

```
Router# show sbc pgw sbe sip sdp-policy-table
      Name                                SDP Match Table
      --------------------------------------------------
      p                                   m            <--- "m" is sdp match table name
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe sip sdp-match-table** | Shows the SDP match table configured on the SBC. |

# show sbc sbe sip statistics

To display the aggregated SIP statistics handled by the Cisco Unified Border Element (SP Edition) process on the Cisco ASR 1000 Series Routers, use the **show sbc sbe sip statistics** command in Privileged EXEC mode.

**show sbc** ***service-name*** **sbe sip statistics** [ **global** | **adjacency** *adj-name* **method** *sip-req-name*] *sip-response-code period*

## Syntax Description

| | |
|---|---|
| *service-name* | Specifies the name of the Session Border Controller (SBC) service. |
| *adj-name* | Specifies the name of the adjacency. |
| *sip-req-name* | Specifies the request name: ACK BYE CANCEL INFO INVITE MESSAGE NOTIFY OPTIONS PRACK REFER REGISTER SUBSCRIBE UNKNOWN UPDATE |
| *sip-response-code* | 0-999 |
| *period* | Specifies the interval when the statistics display. The possible values are: current5mins, current15mins, currenthour, currentday, previous5mins, previous15mins, previoushour, or previousday. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.4.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.5 | Added new parameters to show the summary or detailed statistics for a SIP method. |

## Usage Guidelines

The **statistics-setting** command must be configured before using the **show sbc sbe sip statistics** command to display SIP method statistics.

- Use the **statistics-setting summary** command to allow the **show sbc sbe sip statistics** command to display statistics about SIP request names only.
- Use the **statistics-setting detail** command to allow the **show sbc sbe sip statistics** command to display statistics about SIP response codes and SIP request names.

Summary statistics display all the response codes sent and received for a specific SIP method.

Detailed statistics display the statistics for specific SIP method and response code. You must use the *sip-response-code* string to view detailed statistics.

## Examples

The following example shows the aggregated SIP statistics handled by the Cisco Unified Border Element (SP Edition) process on the Cisco ASR 1000 Series Routers:

```
Router# show sbc global sbe sip statistics

SIP Statistics
--------------
Total SIP Transactions: 6
                                              In          Out
                                      ----------  ----------
 Total SIP Requests                            4           4
 Total SIP Responses                           3           5

SIP Request Messages:
 SIP INVITEs                                   2           2
 SIP ACKs                                      1           1
 SIP BYEs                                      1           1
 SIP CANCELs                                   0           0
 SIP OPTIONS                                   0           0
 SIP REGISTERs                                 0           0
 SIP SUBSCRIBEs                                0           0
 SIP REFERs                                    0           0
 SIP NOTIFY                                    0           0

SIP Response Classes:
 SIP Info                  (1xx)               1           3
 SIP Success               (2xx)               2           2
 SIP Redirects             (3xx)               0           0
 SIP Client Errors         (4xx)               0           0
 SIP Server Errors         (5xx)               0           0
 SIP Global Errors         (6xx)               0           0

Internally Generated SIP Response Classes:
 SIP Info                  (1xx)                           0
 SIP Success               (2xx)                           0
 SIP Redirects             (3xx)                           0
 SIP Client Errors         (4xx)                           0
 SIP Server Errors         (5xx)                           0
 SIP Global Errors         (6xx)                           0

Transaction Manager (TM) Internal Statistics:
 Request/Response Congestion Failures   = 0
 Current Transactions awaiting response = 0
 Free Buffers in TM inbound pool        = 1200
 Free Buffers in TM outbound pool       = 20000
 TM Congestion Level (uncongested = 0)  = 0
 Congestion Queue - Packets Accepted    = 0
 Congestion Queue - Packets Rejected    = 0
 Congestion Queue - Length              = 0
 Congestion Queue - Time Since Reset(ms)= 904270
 Congestion Queue - Oldest Pkt Age (ms) = 0
 Congestion Queue - Max Pkt Delay (ms)  = 0

Control Block (CB) utilization:
 Server Location NAPTR CBs              = 0
 Server Location SRV CBs                = 0
 Server Location address CBs            = 2
 Server Location Cache CBs              = 0
 Server Location Alias CBs              = 0
 Call CBs                               = 0
 UA Dialog CBs                          = 0
 UA INVITE Dialog CBs                   = 0
 UA Subscription CBs                    = 0
```

```
Proxy Forking CBs                       = 0
Proxy Dialog CBs                        = 0
Proxy Proto Dialog CBs                  = 0
Proxy Server Transaction CBs            = 0
Proxy Client Transaction CBs            = 0
Transaction CBs                         = 0
Response CBs                            = 0
Extension Method CBs                    = 0
Status Code CBs                         = 0
```

Table 6 describes the important fields shown in the output of the command.

***Table 6 show sbc sbe sip statistics Field Descriptions***

| Field | Description |
|---|---|
| In | Counts of messages that have been received by the endpoints. These are messages received in the SBC by the Cisco IOS task running on the route processor. |
| Out | Counts of messages sent out of the SBC. The message count is an aggregation of the messages internally generated and generated in response to an external event. |
| SIP Request Messages | In and Out message counts of the Request classes for the SIP messages. Request classes are: SIP INVITES, SIP ACKs, SIP BYEs, SIP CANCELs, SIP OPTIONS, SIP REGISTERs, SIP SUBSCRIBEs, SIP REFERs, and SIP NOTIFY. |
| SIP Response Classes | In and Out message counts of the Response classes for the SIP messages. Response classes are: SIP Info, SIP Success, SIP Redirects, SIP Client Errors, SIP Server Errors, and SIP Global Errors. |
| Internally Generated SIP Response Classes | In and Out message counts generated by the SBC due to a decision that is outside the normal call flow. |
| Transaction Manager (TM) Internal Statistics | Describes statistics of the state of the dynamic message handling. |
| Control Block (CB) utilization | Count of the memory usage of the control blocks. |

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe sip statistics** | Clears aggregated SIP statistics handled by the Cisco Unified Border Element (SP Edition). |

# show sbc sbe sip subscribers

To display details of all SIP endpoints that have registered with the SBC, use the **show sbc sbe sip subscribers** command in Privileged EXEC mode.

**show sbc** *sbc-name* **sbe sip subscribers [filter** ***prefix*****] [adjacency** ***adj-name*****] [delegate]**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Specifies the name of the SBC service. |
| ***filter*** *prefix* | Match only subscribers whose address-of-record starts with the specified prefix. |
| **adjacency adj-name** | Match only subscribers registered on this adjacency. |
| delegate | Display subscribers that have provisioned delegate registration configured, and the associated Uniform Resource Identifier (URI) contact information for the subscribers. |

## 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 the **show sbc sbe sip subscribers** command is used to display details of the SIP endpoints that have registered with the SBC:

```
Router# show sbc node2 sbe sip subscribers

SBC Service ''node2''
SIP subscribers:

AOR: sip:4082230000@amd-ua3.amd.com
Subscriber location: sip:4082230000@103.2.192.1:5060;transport=UDP
SIP URI : sip:4082230000@102.102.102.45:5060
Subscriber adj: amd-ua3
Registrar adj: slt-csps4
Time left: 59 mins

AOR: sip:4082220000@amd-ua2.amd.com
Subscriber location: sip:4082220000@103.2.128.1:5060;transport=UDP
SIP URI : sip:4082220000@102.102.102.45:5060
Subscriber adj: amd-ua2
Registrar adj: slt-csps3
Time left: 59 mins
```

The following show example displays subscribers for which delegate registration have been configured. The **delegate** keyword displays the associated URI contact information for subscribers.

```
Router# show sbc mySBC sbe sip subscribers delegate

        0         1         2       3    4         5         6         7
012345789012345789012345789012345789012345789012345789012345789012345789


AOR:                    sip:steve1.cisco.com
Subscriber Location[s]: sip:contact@cisco.com -> CallMgrC
                        sip:contact2@cisco.com -> CallMgrD
Registrar adj:          CallMgrA
Registrar:              sip:myreg@172.18.52.148
Register Duration:      1800
Register Retries:       3
Retry Interval:         30
Refresh Buffer:         30
Time left:              0 days
```

# show sbc sbe sip timers

To show the current configuration of SIP-related timers, **use the show sbc sbe sip timers command in** Privileged EXEC **mode.**

**show sbc** *service-name* **sbe sip timers**

**Syntax Description**

| | |
|---|---|
| *service-name* | Specifies the name of the SBC. |

**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 list the configurations of SIP-related timers:

```
Router# show sbc test sbe sip timers

SBC Service ''test''

IP timer configuration:
TCP connect timeout: 0 ms
TCP idle timeout: 120000 ms
TLS idle timeout: 3600000 ms
INVITE timeout: 180 s
UDP first retransmit interval: 500 ms
UDP max retransmit interval: 4000 ms
UDP response linger period: 5000 ms
```

# show sbc sbe stream-list

To list the stream lists on the signaling border element (SBE), use the **show sbc sbe stream-list** command in Privileged EXEC configuration mode.

**show sbc** *service-name* ***sbe stream-list*** *[stream-list-name* **detail***]*

## Syntax Description

| | |
|---|---|
| *service-name* | The name of the SBC. |
| *stream-list-name* | The name of the stream list. |
| **detail** | Displays detailed configuration information about a stream list. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## 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.

## Examples

The following example shows how to display the stream lists on the SBE:

```
Router# show sbc mysbc sbe stream-list my-stream
SBC Service "sbc"

  Stream list: my-stream
    Description This is my first stream list
    Media-type application Transport udp protocol BFCP
    Media-type message Transport udp protocol Streambased
```

## Related Commands

| Command | Description |
|---|---|
| **generic-stream media-type** | Configures the media type for a generic stream. |
| **stream-list** | Configures a stream list. |

# show sbc sbe subscriber-stats

To display the statistics pertaining to the subscribers registered on an SBC, use the **show sbc sbe subscriber-stats** command in the privileged EXEC mode.

**show sbc** *sbc-name* **sbe subscriber-stats** {**all** | **dst-account** *name* | **dst-adjacency** *name* | **global** | **src-account** *name* | **src-adjacency** *name* | } **[current15mins | current5mins | currentday | currenthour | currentindefinite | previous15mins | previous5mins | previousday | previoushour]**

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| name | Name of the adjacency or account for which you want the statistics to be displayed. |
| **all** | Displays the global statistics and the subscriber statistics on each source adjacency, destination adjacency, source account, and destination account on the SBC. |
| **dst-account** | Displays statistics for the specified destination account. |
| **dst-adjacency** | Displays statistics for the specified destination adjacency. |
| **global** | Displays globally scoped statistics for the entire SBC. |
| **src-adjacency** | Displays statistics for the specified source adjacency. |
| **src-account** | Displays statistics for the specified source account. |
| **current15mins** | Displays the statistics pertaining to the current 5-minute interval and the two 5-minute intervals prior to this. |
| **current5mins** | Displays the statistics pertaining to the current 5-minute interval. |
| **currentday** | Displays the statistics pertaining to the current 5-minute interval and the two hundred eighty seven 5-minute intervals prior to this. |
| **currenthour** | Displays the statistics pertaining to the current 5-minute interval and the eleven 5-minute intervals prior to this. |
| **currentindefinite** | Displays the statistics pertaining to the period since the last explicit reset. |
| **previous15mins** | Displays the statistics pertaining to the previous 5-minute interval and the two 5-minute intervals prior to this. |
| **previous5mins** | Displays the statistics pertaining to the 5-minute interval prior to this. |
| **previousday** | Displays the statistics pertaining to the previous 5-minute interval and the two hundred eighty seven 5-minute intervals prior to this. |
| **previoushour** | Displays the statistics pertaining to the previous 5-minute interval and the eleven 5-minute intervals prior to this. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## Command History

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

## Usage Guidelines

The statistics are collected at 5-minute intervals past the hour, that is, 0, 5, 10, 15, and so on. The system maintains a bucket for each of the over 5-minutes counts. Each bucket is started at 0, 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, and 55-minutes past the hour according to the system clock. The **show sbc sbe call-stats** command then combines a number of these buckets and displays the sum of these buckets.

For example, if the current time is 12:34, ***currenthour*** will apply to the statistics collected since 11:35, and ***current15mins*** will apply to the statistics collected since 12:20. In this example, ***previoushour*** would be 10:35 to 11:35, and ***previous15mins*** would be 12:05 to 12:20.

**Note** Call statistics for rejection of calls based on the memory threshold is not tracked based on time intervals.

## Examples

The following example shows how to display all the subscriber statistics for the current day:

```
Router# show sbc mySbc sbe subscriber-stats all currentday

Subscribe count totals:
Active subscribers           =  10
Subscriber high water mark   =  15
Subscriber low water mark    =  3

Stats Reset Timestamp:
  Timestamp when stats for this summary period were reset =      2011/01/25 23:26:03
```

Table 7 describes the important fields shown in the output of the command.

***Table 7 show sbc sbe subscriber-stats Field Descriptions***

| Field | Description |
|---|---|
| Active subscribers | Number of subscribers who are currently active. |
| Subscriber high water mark | Highest number of subscribers who are active at any given point in time during the period specified in the command. |
| Subscriber low water mark | Lowest number of subscribers who are active at any given point in time during the period specified in the command. |

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe call-stats** | Clears the call statistics on the SBE. |
| **reject-threshold** | Configures the memory threshold and reject rate for new calls. |
| **sbc mysbc sbe call-stats** | Lists all the calls on the SBE. |

| Command | Description |
|---|---|
| **show sbc mysbc sbe call-rate-stats** | Lists the call rate on the SBE. |
| **show sbc mysbc sbe sip subscribers** | Lists details of the subscribers on the SBE. |

# show sbc sbe transcoding-stats

To display the voice transcoding-related statistics pertaining to the Session Border Controller (SBC), use the **show sbc sbe transcoding-stats** command in the Privileged EXEC mode.

**show sbc** *sbc-name* **sbe transcoding-stats** {**adjacency** *adjacency-name* | **global**} {**current15mins** | **current5mins** | **currentday** | **currenthour** | **currentindefinite** | **previous15mins** | **previous5mins** | **previousday** | **previoushour**}

## Syntax Description

| | |
|---|---|
| *sbc-name* | Name of the SBC service. |
| **adjacency** | Displays the transcoding-related statistics pertaining to the specified adjacency. |
| *adjacency-name* | Name of the specified adjacency. |
| **global** | Displays globally scoped statistics for the SBC. |
| **current15mins** | Displays statistics pertaining to the current 15-minute interval. |
| **current5mins** | Displays statistics pertaining to the current 5-minute interval. |
| **currentday** | Displays statistics pertaining to the current day, from midnight. |
| **currenthour** | Displays statistics pertaining to the current hour. |
| **currentindefinite** | Displays statistics pertaining to the period since the last explicit reset. |
| **previous15mins** | Displays statistics pertaining to the previous 15-minute interval. |
| **previous5mins** | Displays statistics pertaining to the previous 5-minute interval. |
| **previousday** | Displays statistics pertaining to the previous day. |
| **previoushour** | Displays statistics pertaining to the previous hour. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## 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.

## Examples

The following example shows how to display the voice transcoding-related statistics pertaining to the SIPP1 adjacency for the current 15-minute interval:

```
Router# show sbc mySBC sbe transcoding-stats adjacency SIPP1 current15mins

Codec1  Codec2  Transcoded Stream  HWM of TranscodedStream   Last Reset
G711A    G711U         4                      10           2010/09/10 19:27:15
```

Table 8 describes the significant fields shown in the display.

*Table 8 show sbc sbe transcoding-stats Field Descriptions*

| Field | Description |
|---|---|
| Codec1 and Codec 2 | The combination of codecs between which the active calls are transcoded. |
| Transcoded Stream | The number of active calls being transcoded. |
| HWM of TranscodedStream | The high water mark (HWM) of the transcoded stream. |
| Last Reset | Information about when the HWM was last reset. |

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe transcoding-stats** | Clears the voice transcoding-related statistics. |

# show sbc services

To display lists all of the SBC services on the chassis, use the **show sbc services** command in Privileged EXEC mode.

**show sbc services**

## Syntax Description

This command has no arguments or keywords.

## 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. |

## Usage Guidelines

Lists the high-level status and capabilities of each instantiated SBE or DBE.

## Examples

The following example shows how the **show sbc services** command is used to display lists of all the SBC services on the chassis.

```
Router# show sbc mysbc services

SBC Service "mySbc"
SBE capabilities
SIP Signaling
H.323 Signaling
H.248 media gateway control (MGC)

DBE capabilities
```

# signaling-address

To define the local signaling address of an H.323 or SIP adjacency, use the **signaling-address** command in the appropriate configuration mode. To return to the default behavior, use the **no** form of this command.

**signaling-address {ipv4** *ipv4_IP_address* **| ipv6** *ipv6_IP_address***}**

**no signaling-address**

## Syntax Description

| | |
|---|---|
| *ipv4_IP_address* | Specifies the IPv4 address for the signaling address of the SIP or H.323 adjacency. |
| *ipv6_IP_address* | Specifies the IPv6 address for the signaling address of the SIP adjacency. |

## Command Default

No default behavior or values are available.

## Command Modes

Adjacency H.323 configuration (config-sbc-sbe-adj-h323)—for IPv4 IP addresses only.

Adjacency SIP configuration (config-sbc-sbe-adj-sip)—for IPv4 and IPv6 IP addresses.

## 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 2.6 | Introduced IPv6 keyword. |

## 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.

When defined, the SBE listens on this address for inbound call signaling from the adjacency. If two adjacencies share the same signaling address, a different remote domain name must be specified for each one.

## Examples

The following example shows how to configure the H.323 adjacency h323ToIsp42 to listen on IPv4 signaling address 10.1.0.2:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# signaling-address ipv4 10.1.0.2
```

The following example shows how to configure the SIP adjacency adjSip1 to listen on IPv4 signaling address 10.10.10.10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adjSip1
Router(config-sbc-sbe-adj-sip)# signaling-address ipv4 10.10.10.10
```

The following example shows how to configure the SIP adjacency adjSip1 to listen on IPv6 signaling address 2001:A401::33:33:36:1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adjSip1
Router(config-sbc-sbe-adj-sip)# signaling-address ipv6 2001:A401::33:33:36:1
```

# signaling-peer-port

To configure an H.323 or SIP adjacency to use the given remote signaling-peer's port, use the **signaling-peer-port** command in the appropriate configuration mode. To remove this configuration, use the **no** form of this command.

**signaling-peer-port** *port-num*

**no signaling-peer-port**

## Syntax Description

| | |
|---|---|
| *port-num* | Specifies the number of the signaling port. Range is 1 to 65535. |

## Command Default

By default, this command assumes that *port-num* is 5060.

## Command Modes

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

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 H.323 adjacency h323ToIsp42 to use port 123 on the signaling peer:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# signaling-peer-port 123
```

The following example shows how to configure the SIP adjacency SipToIsp42 to port 123 as the signaling peer's port:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# signaling-peer-port 123
```

# signaling-peer-priority

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

**signaling-peer-priority** *priority*

**no signaling-peer-priority** *priority*

## Syntax Description

| | |
|---|---|
| *priority* | The priority of a signaling peer. The range is from 1 to 6. |

## 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.

**Note** The main peer address in an adjacency share the same priority values, ranging from 1 to 6, with the redundant peer addresses.

## Examples

The following example shows how the **signaling-peer-priority** command is used to configure the priority of a signaling 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)# signaling-peer-priority 6
```

## Related Commands

| Command | Description |
|---|---|
| **redundant peer** | Configures an alternative signaling peer for an adjacency. |

| Command | Description |
|---|---|
| **force-signaling-peer** | Forces SIP messages to go to a configured signaling peer. |
| **signaling-peer-switch** | Configures a SIP adjacency to switch a signaling peer to an available destination. |

# signaling-peer-switch

To configure a method for Session Initiation Protocol (SIP) adjacency, enabling it to switch a signaling peer to an available destination, use the **signaling-peer-switch** command in adjacency SIP configuration mode. To deconfigure a signaling peer from switching to an available destination, use the **no** form of this command.

**signaling-peer-switch** {**always** | **on-fail**}

**no signaling-peer-switch** {**always** | **on-fail**}

## Syntax Description

| | |
|---|---|
| always | Switches to a new destination with highest priority. |
| on-fail | Switches to a new destination when a current peer failure occurs. |

## Command Default

By default, the **always** keyword is enabled.

## 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 **signaling-peer-switch** command is used to configure a method for SIP adjacency, enabling it to switch the signaling peer to a destination having the highest priority:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbe-adj-sip)# signaling-peer-switch always
```

## Related Commands

| Command | Description |
|---|---|
| **force-signaling-peer** | Forces SIP messages to go to a configured signaling peer. |
| **redundant peer** | Configures an alternative signaling peer for an adjacency. |
| **signaling-peer-priority** | Configures the priority of a signaling peer in a SIP adjacency. |

# signaling-peer

To configure an H.323 or SIP adjacency to use the given remote signaling-peer, use the **signaling-peer** command in **the appropriate configuration** mode. To remove this configuration, use the **no** form of this command.

**signaling-peer gk** *peer-name*

**no signaling-peer**

## Syntax Description

| | |
|---|---|
| *peer-name* | Specifies the IPv4 address in dotted decimal format. |
| **gk** | Specifies the H.323 gatekeeper. |

## Command Default

No default behavior or values are available.

## Command Modes

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

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 H.323 adjacency h323ToIsp42 to use gatekeeper andrew:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# signaling-peer gk andrew
```

**Note** You can use the **signaling-peer** command to configure the SIP adjacency using the IP address or the host name of the given remote signaling-peer.

The following example shows how to configure SIP adjacency using the IP address of the given remote signaling-peer:

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

```
Router(config-sbc-sbe)# adjacency sip adjSip1
Router(config-sbc-sbe-adj-sip)# signaling-peer 10.1.2.3
```

The following example shows how to configure SIP adjacency using the hostname of the given remote signaling-peer:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# signaling-peer athene
```

## Related Commands

| Command | Description |
|---|---|
| **signaling-peer-port** | Configures an H.323 or SIP adjacency to use the given remote signaling-peer's port. |

# signaling-port

To define the local port of signaling address of an H.323 or SIP adjacency, use the **signaling-port** command in the appropriate configuration mode. To return to the default value, use the **no** form of this command.

**signaling-port** *port-num [max-port-num]*

no s**ignaling-port**

## Syntax Description

| | |
|---|---|
| *port-num* | Required for both H.323 and SIP adjacencies. Specifies the number of the signaling peer. Range is 1 to 65535. |
| max-port-num | Optional for SIP adjacencies. Specifies the maximum port number of the range (the upper boundary of the range) of local listen ports for the adjacency. Range is from 1 through 65535.<br><br>Configure both *port-num* and *max-port-num* if you want a range of local listen ports for a SIP adjacency.<br><br>*max-port-num* should not be specified if this is an IPsec-enabled adjacency. |

## Command Default

*port-num is* 5060.

## Command Modes

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

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. |
| Cisco IOS XE Release 2.5 | The *max-port-num* argument was added for SIP adjacencies. |

## Usage Guidelines

The SBE will listen on this port for inbound call signaling from the adjacency. The port will also be appended to the SBE's contact header on outbound SIP requests and responses.

If both *port-num* and *max-port-num* are specified, then the *port-num* indicates the lower boundary of the range and *max-port-num* indicates the upper boundary of the range. If no *max-port-num* is specified, then the adjacency listens only on the single *port-num*. *Max-port-num* only needs to be set if a range of local listen ports is required for this adjacency.

For the Contact Username Passthrough feature for non-IMS networks—the **signaling-port** command configures a range of valid signaling ports (on the same registrar-facing SIP adjacency where the **registration contact username passthrough** command was configured) to allow the SBC to disambiguate subscribers that register from different devices with the same username.

The *port-num* and *max-port-num* cannot be changed while the adjacency is active.

The number of ports in the range (*max-port-num* – *port-num* + 1) must be less than or equal to 10. Also *max-num-port* should not be specified if this is an IPsec-enabled adjacency.

## Examples

The following example shows how to configure the SIP adjacency SipToIsp42 to listen on signaling port 5000:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# signaling-port 5000
```

The following is an example showing that a signaling port range of 5060 to 5062 (3 local ports) is configured for a SIP adjacency where registration contact username passthrough is configured:

```
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
```

## Related Commands

| Command | Description |
|---|---|
| signaling-address ipv4 | Configures a SIP adjacency to use the given remote signaling-peer. |
| registration contact username | Specifies if the contact username in a SIP REGISTER request is passed through unchanged |

# sip-contact

To configure the SIP contact information for a specified Uniform Resource Identifier (URI) for a delegate subscriber, use the **sip-contact** command in subscriber-entry configuration mode. To remove the SIP contact information for an URI for a delegate subscriber, use the **no sip-contact** command.

**sip-contact** *{uri}*

**no sip-contact** *{uri}*

## Syntax Description

| | |
|---|---|
| *uri* | This is the Uniform Resource Identifier (URI) of the delegate subscriber for whom you want to configure Provisioned Delegate Registration.<br>It is an IP address. It is a string field of 62 characters maximum length. |

## Command Default

No default behavior or values are available.

## Command Modes

subscriber-entry configuration (config-sbc-sbe-subscriber-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

This command configures the SIP contact information for a specified URI IP address location or address of record. The contact information is used to provision the SBC with client device information, so the SBC can register the device.

A delegate subscriber must have one or more SIP contacts or Uniform Resource Identifiers (URIs) associated with it. For every delegate registration configured with the **delegate-registration** *hostname* command, one or more SIP contacts/URIs must be configured in the SIP Contacts table (amb_mw_sudb_local_id). After a SIP contact is configured, the client adjacency is also defined in a subsequent step.

The following rules apply to configuring SIP contact information:

- The subscriber detail table must exist before contacts can be created.
- Contacts in a currently active subscriber cannot be created, modified, or deleted.
- A contact cannot be deactivated while the parent subscriber is active.

## Examples

The following example configures a SIP contact information for a subscriber, for whom a subscriber detail table exists, and for whom, after the SIP contact is configured, delegate registration can be configured:

```
sbc mySbc
 sbe
  subscriber sip:bob@isp.example
```

```
sip-contact sip:steve@10.1.1.2
 adjacency CallMgrB
 exit
```

The following example configures a SIP contact information for a delegate subscriber at the address of record, where aor= sip:bob@isp.example, and configures delegate registration for the subscriber:

```
(config)# sbc mySbc
(config)# sbe
(config-sbc-sbe)# subscriber sip:bob@isp.example
(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
(config-sbc-sbe-subscriber-contact)# exit
(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
(config-sbc-sbe-subscriber-delegate)# profile my-profile
(config-sbc-sbe-subscriber-delegate)# activate
```

## Related Commands

| Command | Description |
|---|---|
| subscriber | Defines a unique subscriber for whom you want to configure Provisioned 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. |
| adjacency | Configures the adjacency facing the registrar. |
| profile | Applies a delegate registration profile to a delegate registration subscriber. |
| show sbc sbe sip delegate-profile | Displays subscriber profiles for whom Provisioned Delegate Registration has been configured. |
| show sbc sbe sip subscribers | Displays subscribers for whom Provisioned Delegate Registration has been provisioned. |

# sipi

To configure the SIP-I commands on a SIP adjacency, use the **sipi** command in adjacency SIP configuration mode. To deconfigure the SIP-I commands, use the **no** form of this command.

**sipi passthrough**

**no sipi passthrough**

## Syntax Description

| | |
|---|---|
| **passthrough** | Configures a SIP adjacency for SIP-I passthrough. |

## 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 **sipi** command is used to configure a SIP adjacency for SIP-I passthrough:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbe-adj-sip)# sipi passthrough
```

## Related Commands

| Command | Description |
|---|---|
| **show sbcs sbe adjacencies** | Lists the adjacencies configured on the SBE. |

# sip adjacency

To configure a SIP adjacency for a Session Border Controller (SBC) service, use the **sip adjacency** command in the SBE configuration mode. To deconfigure the SIP adjacency, use the **no** form of this command.

**sip adjacency** *adjacency-name*

**no sip adjacency** *adjacency-name*

## Syntax Description

| | |
|---|---|
| *adjacency-name* | Specifies the name of the SIP adjacency.<br><br>The *adjacency-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br><br>**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. |

## Examples

The following example shows how to configure a SIP adjacency named sipGW:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip adjacency sipGW
```

## Related Commands

| Command | Description |
|---|---|
| **adjacency** | Configures a H.323 adjacency. |

# sip body-editor

To create a body editor to filter the non-SDP message bodies from the incoming and outgoing SIP messages, use the **sip body-editor** command in the Signaling Border Element (SBE) configuration mode. To remove a body editor, use the **no** form of this command.

**sip body-editor** *editor-name*

**no sip body-editor** *editor-name*

## Syntax Description

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

## Command Default

No default behavior or values

## Command Modes

SBE configuration (config-sbc-sbe)

## 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

When you use this command to create a body editor, you must also use the **body** and the **description** commands under the SIP Body Editor configuration mode to complete the configuration.

## Examples

The following example shows how to create a body editor named bodyeditor1 in the SBE configuration mode:

```
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip body-editor bodyeditor1
Router(config-sbc-sbe-mep-bdy)#
```

## Related Commands

| Command | Description |
|---|---|
| **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. |

# sip body-profile

To create a body profile to filter non-SDP message bodies from incoming and outgoing SIP messages, use the **sip body-profile** command in SBE configuration mode. To remove the body profile, use the **no sip body-profile** command.

**sip body-profile** *{profile_name}*

**no sip body-profile** *{profile_name}*

## Syntax Description

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

## Command Default

No default behavior or values

## Command Modes

SBE configuration (config-sbc-sbe)

## 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

When you use this command to create a body profile under the SBE mode, you must also use the **body** {*body_name*} and the **action** commands to complete the configuration.

After creating a body profile with the **sip body-profile** {*profile_name*} command, you can associate the body profile at the following levels and configuration modes:

- At the SIP signaling entity level (ingress or egress), under SBE mode, using the **sip default body-profile** [[**inbound**|**outbound**] {*profle_name*}] command. The body profile is associated for the entire signaling instance (that is all messages, either ingress or egress, passing through the SBC).
- SIP adjacency level, under SIP adjacency mode, using the **body-profile** [[**inbound**|**outbound**] {*profle_name*}] command. The body profile is associated to an adjacency.
- At SIP method profile level, under method profile mode, using the **body-profile** {*profle_name*} command. The body profile is associated to a method profile.

The SBC uses a body profile that you create and associate to filter non-SDP bodies from incoming and outgoing SIP messages, based on the Content-Type header field. A body profile allows a message containing a specific non-SDP body to be either passed (without altering the message), stripped of the body (and pass the rest of the message), or be rejected.

## Examples

The following example does the following: creates a body profile named bodyprofile1; associates the body profile at the SIP signaling level for all inbound calls passing through the SBC; describes the body type, that is to act on messages with Content-Type header “application/ISUP”; and instructs SBC to strip that particular message body and pass the rest of the message:

```
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip body-profile bodyprofile1
Router(config-sbc-sbe)# sip default body-profile inbound bodyprofile1
Router(config-sbc-sbe-sip-body)# body application/ISUP
Router(config-sbc-sbe-sip-body-ele)# action strip
Router(config-sbc-sbe-sip-body-ele)#
```

## Related Commands

| Command | Description |
|---|---|
| **sip default body-profile** | To associate a body profile at the SIP signaling level under the SBE mode. |
| **body-profile** | To associate a body profile to a method profile under the method profile mode. |
| **body-profile (sip adj)** | To associate a body profile at the SIP adjacency level, to an adjacency, under SIP adjacency mode. |
| **body** | To name a body type or content header type for a non-SDP message body that is part of the body profile. |
| **action** | To set the action to take on a body type in a SIP body profile for a non-SDP message body. |

# sip default body-profile

To associate a body profile at the SIP signaling level and for the entire signaling instance, use the **sip default body-profile** command in SBE configuration mode. To remove the body profile, use the **no sip default body-profile** command.

**sip default body-profile [*inbound* | *outbound*] {*profile_name*}**

**no sip default body-profile *[inbound* | *outbound]* {*profile_name*}**

## Syntax Description

| | |
|---|---|
| inbound | Sets the inbound path for the body profile. Select inbound or outbound for the path. |
| outbound | Sets the outbound path for the body profile. Select inbound or outbound for the path. |
| *profile_name* | Describes the body profile name.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 2.6 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |

## Usage Guidelines

"For the entire signaling instance" means all messages, either ingress or egress, passing through the SBC.

After creating a body profile with the **sip body-profile** {*profile_name*} command, you can associate the body profile at the following additional levels and configuration modes:

- SIP adjacency level, under SIP adjacency mode, using the **body-profile** [[**inbound**|**outbound**] {*profle_name*}] command. The body profile is associated to an adjacency.
- At SIP method profile level, under method profile mode, using the **body-profile** {*profle_name*} command. The body profile is associated to a method profile.

SBC uses a body profile that you create and associate to filter non-SDP bodies from incoming and outgoing SIP messages, based on the Content-Type header field. A body profile allows a message containing a specific non-SDP body to be either passed (without altering the message), stripped of the body (and pass the rest of the message), or be rejected.

## Examples

The following example does the following: creates a body profile named bodyprofile1; describes the body type, that is to act on messages with Content-Type header “application/ISUP”; instructs SBC to strip that particular message body and pass the rest of the message; and associates the body profile at the SIP signaling level for all inbound calls passing through the SBC:

```
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip body-profile bodyprofile1
Router(config-sbc-sbe-sip-body)# body application/ISUP
Router(config-sbc-sbe-sip-body-ele)# action strip
Router(config-sbc-sbe-sip-body-ele)# exit
Router(config-sbc-sbe-sip-body)# exit
Router(config-sbc-sbe)# sip default body-profile inbound bodyprofile1
```

## Related Commands

| Command | Description |
|---|---|
| **body-profile** | To associate a body profile to a method profile under the method profile mode. |
| **body-profile (sip adj)** | To associate a body profile at the SIP adjacency level, to an adjacency, under SIP adjacency mode. |
| **sip body-profile** | To create a body profile used to filter non-SDP bodies from incoming and outgoing SIP messages. |
| **body** | To name the body type or content header type for a non-SDP message body that is part of the body profile. |
| **action** | To set the action to take on a body type in a SIP body profile for a non-SDP message body |

# sip dns

To enter the SIP DNS configuration mode, use the **sip dns** command in the SBE configuration mode. To exit this mode, use the **exit** command.

**sip dns**

## Syntax Description

This command has no arguments or keywords.

## 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 configure limits on DNS entries:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip dns
Router(config-sbe-dns)#
```

## Related Commands

| Command | Description |
|---|---|
| **cache-lifetime** | Configures the lifetime of any DNS entry. |
| **cache-limit** | Configures the maximum number of entries that are permitted in the DNS cache. |

# sip editor-type

To set a default editor type to be applied to an adjacency that has not been explicitly set, use the **sip editor-type** command in the SBE configuration mode. To remove the default editor type, use the **no** form of this command.

**sip editor-type** {**editor** | **profile**}

**no sip editor-type**

## Syntax Description

| | |
|---|---|
| **editor** | Sets the default to use the method, header, option, parameter, or body editor. |
| **profile** | Sets the default to use the method, header, option, parameter, or body profile. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.3S | 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 set a default editor type:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip editor-type editor
```

## 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. |
| **sip option-editor** | Configures an option editor. |

# sip encryption key

To configure a global encryption key on a SIP Interconnection Border Control Function (IBCF) adjacency, use the **sip encryption key** command in the SIP adjacency mode. To deconfigure the global encryption key, use the **no** form of this command.

**sip encryption key** *key*

**no sip encryption key** *key*

## Syntax Description

| | |
|---|---|
| *key* | Specifies the encryption key. |

## 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 **sip encryption key** command is used to configure a global encryption key on a SIP IBCF adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbe-adj-sip)# encryption key mykey
```

## Related Commands

| Command | Description |
|---|---|
| **sip inherit profile** | Configures a global inherit profile in the SIP adjacency mode. |

# sip error-profile

To create an error profile and enter error profile configuration mode, use the **sip error-profile** command in SBE configuration mode. To remove an error profile, use the no form of this command.

**sip error-profile** *profile-name*

**no sip error-profile** *profile-name*

## Syntax Description

| | |
|---|---|
| *profile-name* | Specifies the name of the error profile.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 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

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip error-profile Error_profile_1
Router(config-sbc-sbe-err)
```

## Related Commands

| Command | Description |
|---|---|
| **error-profile** | Configures an existing error profile as the outbound SIP error profile. |
| **sip error-profile** | Creates an error profile and enters error profile configuration mode. |
| **cause** | Configures the cause of an internal error for an error profile. |
| **show sbc sbe sip error-profile** | Displays the configuration information of an error profile. |

# sip header-editor

To configure a header editor in the mode of an signaling border element (SBE) entity, use the **sip header-editor** command in the SBE configuration mode. To remove a header editor, use the **no** form of this command.

**sip header-editor** {*editor-name* | **default**}

**no sip method-editor** {*editor-name* | **default**}

## Syntax Description

| | |
|---|---|
| *editor-name* | Specifies the name of the header editor. If you enter the name **default**, the default editor is configured.<br>The *editor-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names. |
| **default** | Configures the default header editor. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.3S | 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 **sip header-editor** command to enter the SBE SIP header configuration mode.

If you use the **default** keyword, the default editor is configured. This editor is used for all the adjacencies that do not have a specific editor configured.

## Examples

The following example shows how the **sip header-editor** command configures a header editor named test1:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-editor test1
Router(config-sbc-sbe-mep-hdr)#
```

**Related Commands**

| Command | Description |
|---|---|
| **sip body-editor** | Creates a body editor to filter the non-SDP message bodies from the incoming and outgoing SIP messages. |
| **sip method-editor** | Configures a method editor. |
| **sip option-editor** | Configures an option editor. |
| **sip parameter-editor** | Configures a parameter editor. |

# sip header-profile

To configure a header profile in the mode of an SBE entity, use the **sip header-profile** command in SBE configuration mode. To remove the method profile, use the **no** form of this command.

**sip header-profile** *profile-name*

**no sip method-profile**

## Syntax Description

| | |
|---|---|
| *profile-name* | Specifies the name of the method profile.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names.<br>**Note** If you enter the *name* **default**, the default profile is configured. |

## 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 the **sip header-profile** command configures a method profile with the name of test1:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-profile test1
```

# sip home network identifier

To configure a home network identifier on all IBCF adjacencies, use the **sip home network identifier** command in the SBE configuration mode. To deconfigure the home network identifier, use the **no** form of this command.

**sip home network identifier** *network-name*

**no sip home network identifier**

## Syntax Description

| | |
|---|---|
| *network-name* | Specifies the name of the home network identifier.<br>The *network-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 the **home network identifier** command is used to configure a home network identifier on all IBCF adjacencies:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip home network identifier myhome.com
```

## Related Commands

| Command | Description |
|---|---|
| **sip visited network identifier** | Configures a visited network identifier on a SIP Proxy-Call Session Control Function (P-CSCF) adjacency. |

# sip hunting-trigger

To configure failure return codes to trigger hunting in SBE configuration mode, use the **sip hunting-trigger** command in SBE configuration mode.

The **no** form of the command clears all error codes.

If you specify **no sip hunting-trigger x y**, then just codes x and y are removed from the configured list.

***sip hunting-trigger {error-codes | disable}*** *error-codes*

***no sip hunting-trigger {error-codes | disable}*** *error-codes*

## Syntax Description

| | |
|---|---|
| *error-codes* | Signifies a space-separated list of SIP numeric error codes. |

## 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

If you enter **sip hunting-trigger x** followed by **sip hunting-trigger y**, the value of **x** is replaced with **y**.

To set both x and y to be hunting triggers, you must enter **sip hunting-trigger x y**.

The related command **hunting-trigger** is used to configure failure return codes to trigger hunting in H.323 (global H.323 scope), adjacency SIP (destination SIP adjacency), and adjacency h323 (destination H.323 adjacency) modes. The **hunting-trigger** command does not apply in global SIP mode; instead the **sip hunting-trigger** command is used in global SIP mode.

## Examples

**The following example shows how to configure SIP to retry routing if it receives a 415 (media unsupported) or 480 (temporarily unavailable) error:**

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router (config-sbc-sbe)# sip hunting-trigger 416 480
```

## Related Commands

| Command | Description |
|---|---|
| **show sbc sbe hunting-trigger** | Shows the H.323 or SIP hunting triggers at the global level. |

# sip inherit profile

To configure a global inherit profile, use the **sip inherit profile** command in the SBE configuration mode. To deconfigure the global inherit profile, use the **no** form of this command.

**sip inherit profile {preset-access | preset-core | preset-ibcf-ext-untrusted | preset-ibcf-external | preset-ibcf-internal | preset-p-cscf-access | preset-p-cscf-core | preset-peering | preset-standard-non-ims}**

**no sip inherit profile**

## Syntax Description

| | |
|---|---|
| preset-access | Specifies a preset access profile. |
| preset-core | Specifies a preset core profile. |
| **preset-ibcf-ext-untrusted** | Specifies a preset IBCF external untrusted profile. |
| **preset-ibcf-external** | Specifies a preset IBCF external profile. |
| **preset-ibcf-internal** | Specifies a preset IBCF internal profile. |
| **preset-p-cscf-access** | Specifies a preset P-CSCF-access profile. |
| **preset-p-cscf-core** | Specifies a preset P-CSCF-core profile. |
| preset-peering | Specifies a preset peering profile. |
| **preset-standard-non-ims** | Specified a preset standard-non-IMS profile. |

## 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 | The 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 **sip inherit profile** command is used to configure a P-CSCF-access inherit profile on a SBE configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip inherit profile preset-p-cscf-access
```

**Related Commands**

| Command | Description |
|---|---|
| **sip timer** | Enters the mode of a SIP timer function. |

# sip ip-fqdn-mapping

To configure SIP IP-to-FQDN mapping on signaling border elements (SBEs), use the **sip ip-fqdn-mapping** command in the SBE configuration mode.

**sip ip-fqdn-mapping** *index* **{ ipv4 | ipv6 }** *ip-address fqdn* **{both-ways | ip-to-fqdn}**

## Syntax Description

| | |
|---|---|
| *index* | Index number that uniquely identifies this mapping |
| *ip-address* | Specifies the IPv4 or IPv6 address for the signaling address of the SIP |
| *fqdn* | Fully qualified domain name |
| **both-ways** | Both ways mapping between IP address and FQDN |
| **ip-to-fqdn** | Only maps IP address to FQDN |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.5 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.6 | The ***ipv6*** keyword was added. |

## 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 both ways mapping between IP and FQDN for IPv4 address:

```
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)# sip ip-fqdn-mapping 1 ipv4 11.22.33.41 example.sbc1.com both-ways
Router(config-sbc-sbe)#
```

The following example shows how to configure the one way IP-to-FQDN mapping for IPv4 address:

```
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)# sip ip-fqdn-mapping 2 ipv4 11.22.33.44 example2.sbc1.com
ip-to-fqdn
Router(config-sbc-sbe)#
```

# sip max-connections

To configure the maximum number of SIP connections that will be made to each remote address, use the **sip max-channels** command in SBE configuration mode. To set this to an unlimited number of connections, use the **no** form of this command.

**sip max-connections** *number-of-connections*

**no sip max-connections** *number-of-connections*

## Syntax Description

| | |
|---|---|
| number-of-connections | The maximum number of connections. |

## 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 command configures the maximum number of connections to each remote address to 1:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip max-connections 1
```

## Related Commands

| Command | Description |
|---|---|
| **max-bandwidth** | Configures the maximum bandwidth for an entry in an admission control table. |
| **max-regs-rate** | Configures the maximum call number of subscriber registrations for an entry in an admission control table. |
| **max-updates** | Configures the maximum call updates for an entry in an admission control table. |

# sip method-editor

To configure a method editor in the mode of an SBE entity, use the **sip method-editor** command in the Signaling Border Element (SBE) configuration mode. To remove a method editor, use the **no** form of this command.

**sip method-editor** {*editor-name* | **default**}

**no sip method-editor** {*editor-name* | **default**}

## Syntax Description

| | |
|---|---|
| *editor-name* | Specifies the name of the method editor.<br>The *editor-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names. |
| **default** | Configures the default method editor. This editor is used for all the adjacencies that do not have a specific method editor configured. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.3S | 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 **sip method-editor** command to enter the SIP method configuration mode.

## Examples

The following example shows how the **sip method-editor** command configures a method editor named test1:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-editor test1
```

**Related Commands**

| Command | Description |
|---|---|
| **blacklist** | Configures the SIP header or a method blacklist editor on a SIP message. |
| **description** | Configures the description for the SIP header editor or SIP method editor. |
| **sip body-editor** | Creates a body editor to filter the non-SDP message bodies from the incoming and outgoing SIP messages. |
| **sip header-editor** | Configures a header editor. |
| **sip option-editor** | Configures an option editor. |
| **sip parameter-editor** | Configures a parameter editor. |

# sip method-profile

To configure a method profile in the mode of an SBE entity, use the **sip method-profile** command in SBE configuration mode. To remove the method profile, use the **no** form of this command.

**sip method-profile** *profile-name*

**no sip method-profile**

## Syntax Description

| | |
|---|---|
| *profile-name* | Specifies the name of the method profile. If you enter the *name* **default**, the default profile is configured. This profile is used for all adjacencies that do not have a specific profile configured.<br><br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br><br>**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 the **sip method-profile** command configures a method profile with the name of test1:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-profile test1
```

# sip option-editor

To configure an option editor in the mode of an Signaling Border Element (SBE) entity for a Session Initiation Protocol (SIP) option whitelist editor or blacklist editor, use the **sip option-editor** command in the SBE configuration mode. To remove an option editor, use the **no** form of this command.

**sip option-editor** {*editor-name* | **default**}

**no sip option-editor** {*editor-name* | **default**}

## Syntax Description

| | |
|---|---|
| *editor-name* | Specifies the name of the option editor.<br>The *editor-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names. |
| **default** | Configures the default option editor. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.3S | 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 **sip option-editor** command to enter the SBE SIP option configuration mode.

If you use the **default** keyword, the default editor is configured. This editor is used for all the adjacencies that do not have a specific editor configured.

## Examples

The following example shows how to configure an option editor named test1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip option-editor test1
Router(config-sbc-sbe-mep-opt)#
```

**Related Commands**

| Command | Description |
|---|---|
| **blacklist** | Configures the SIP header or a method blacklist editor on a SIP message. |
| **description** | Configures the description for the SIP header editor or SIP method editor. |
| **sip body-editor** | Creates a body editor to filter the non-SDP message bodies from the incoming and outgoing SIP messages. |
| **sip header-editor** | Configures a header editor. |
| **sip option-editor** | Configures an option editor. |
| **sip parameter-editor** | Configures a parameter editor. |

# sip option-profile

To configure a option profile in the mode of an SBE entity for a SIP option whitelist or blacklist profile, use the **sip option-profile** command in SBE configuration mode. To remove the option profile, use the **no** form of this command.

**sip option-profile** {*profile-name* | **default**}

**no sip option-profile** {*profile-name* | **default**}

## Syntax Description

| | |
|---|---|
| *profile name* | Specifies the name of the method profile.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names. |
| **default** | Configures the default option profile. |

## 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.

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.

Use the **sip option-profile** command to enter SBE SIP option configuration mode.

If you use the **default** keyword, the default profile is configured. This profile is used for all adjacencies which do not have a specific profile configured.

## Examples

The following example shows how to configure a option profile with the name of 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-opt)#
```

**Related Commands**

| Command | Description |
|---|---|
| **blacklist** | Configures SIP header or method blacklist profiles on a Session Initiation Protocol (SIP) message. |
| **description** | Configures the description for the SIP header-profile or SIP method-profile. |
| **method** | Adds a method with a specified name to a SIP message profile. |
| **pass-body** | Permits 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. |

# sip parameter-editor

To configure a parameter editor in the signaling border element (SBE) entity mode, use the **sip parameter-editor** command in the SBE configuration mode. To remove a parameter editor, use the **no** form of this command.

**sip parameter-editor** *editor-name*

**no sip parameter-editor** *editor-name*

## Syntax Description

| | |
|---|---|
| *editor-name* | Specifies the name of the parameter editor.<br>The *editor-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 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 **sip parameter-editor** command to enter the SBE SIP parameter configuration mode.

## Examples

The following example shows how to configure a parameter editor named paramedit1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-editor paramedit1
Router(config-sbc-sbe-mep-prm)#
```

## Related Commands

| Command | Description |
|---|---|
| **sip body-editor** | Creates a body editor to filter the non-SDP message bodies from the incoming and outgoing SIP messages. |
| **sip header-editor** | Configures a header editor. |

| Command | Description |
|---|---|
| **sip method-editor** | Configures a method editor. |
| **sip option-editor** | Configures an option editor. |

# sip parameter-profile

To configure a parameter profile for a method profile in the mode of an SBE entity, use the **sip parameter-profile** command in SBE configuration mode. To remove the parameter profile, use the **no** form of this command.

**sip parameter-profile** *profile-name*

**no sip parameter-profile** *profile-name*

## Syntax Description

| | |
|---|---|
| *profile name* | Specifies the name of the parameter profile.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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.

The following example shows how to configure a parameter profile with the name of paramprof1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-profile paramprof1
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 |
|---|---|
| **sip-method profile** | Configures a method-profile. |

# sip sdp-match-table

To create an SDP match table, use the **sip sdp-match-table** command in SBE configuration mode. To remove an SDP match table, use the **no** form of this command.

**sip sdp-match-table** *table-name*

**no sip sdp-match-table** *table-name*

## Syntax Description

| | |
|---|---|
| *table-name* | Specifies the user name to fill in on generated SDPs.<br><br>The *table-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br><br>**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 | The **sdp-match-table** command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.5 | This command was modified to be **sip sdp-match-table**. |

## Usage Guidelines

One policy can only hold one sdp-match-table.

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 the SDP match table foo:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip sdp-match-table foo
Router(config-sbc-sbe-sip)#
```

## Related Commands

| Command | Description |
|---|---|
| **action (sdp)** | Configures an SDP policy table action. |
| match-string | Configure an SDP attribute matching string. |
| sip sdp-policy-table | **Configure** an SDP policy table. |

# sip sdp-media-profile

To create or modify an SDP media profile, or to associate an SDP media profile to a CAC policy, use the **sip sdp-media-profile** command in SBE configuration mode or in SBE CAC policy CAC table entry mode. Use the **no** form of the command to remove an SDP media profile.

**sip sdp-media-profile** *profile-name*

**no sip sdp-media-profile** *profile-name*

## Syntax Description

| | |
|---|---|
| *profile-name* | Specifies the name of profile to create or modify.<br>The *profile-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**Note** Except for the underscore character, do not use any special character to specify field names. |

## Command Default

The global default is used.

## Command Modes

SBE configuration (config-sbc-sbe)

SBE CAC policy CAC table entry (sbc-sbe-cacpolicy-cactable-entry)

## 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

Use the **sip sdp-media-profile** command to configure media descriptions for customized offers for late-to-early media interworking. After creating an SDP media profile, associate the profile to a signal by adding the profile name to a CAC policy. You can add a maximum of ten entries for each sdp-media-profile.

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 create a new SDP profile for customizing media descriptions in late-to-early interworking offers:

```
Router# configure terminal
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip sdp-media-profile Mediaprofile
Router(config-sbc-sbe-sip-sdp-media)# entry 1
Router(config-sbc-sbe-sip-sdp-media-ele)# line 1 "m=audio 0 RTP/AVP 31"
Router(config-sbc-sbe-sip-sdp-media-ele)# line 2 "a=aaa:testing"
Router(config-sbc-sbe-sip-sdp-media-ele)# Ctrl Z
```

The following example associates the profile to an existing CAC policy:

```
Router# configure terminal
Router(config)# sbc test
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table testpolicytable
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# sip sdp-media-profile Mediaprofile
Router(config-sbc-sbe-cacpolicy-cactable-entry)
```

## Related Commands

| Command | Description |
|---|---|
| **entry** | Creates or modifies an entry in a table or an SDP media profile. |
| **media-line** | Adds a media description line to an entry in an SDP media profile. |
| **show sbc sbe sip sdp-media-profile** | Shows all SDP media profiles in an SBC service or details for a specified profile. |

# sip sdp-policy-table

To **configure** an SDP policy table, use the **sip sdp-policy-table** command in the SBE configuration mode. To de**configure** an SDP policy table, use the **no** form of this command.

**sip sdp-policy-table** *table_name*

**no sip sdp-policy-table** *table_name*

## Syntax Description

| | |
|---|---|
| *table_name* | Specifies the name of the SDP policy.<br>The *table_name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 | The **sdp-policy-table** command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.5 | This command modified to be **sip sdp-policy-table**. |

## 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 configures the SDP policy table foo:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip sdp-policy-table foo
Router(config-sbc-sbe-sip)#
```

## Related Commands

| Command | Description |
|---|---|
| **sip sdp-match-table** | Creates an SDP match table. |
| **action (sdp)** | Configures an SDP policy table action. |
| **match-string** | Configure an SDP attribute matching string. |

# sip sdp origin-user-name

To **configure** the originating user name that is filled in generated SDPs, use the **sdp origin-user-name** command in the SBE configuration mode. To reset this user name such that received user name from an SDP is the user name used on the generated SDP, use the **no** form of this command.

**sip sdp origin-user-name** *user-name*

**no sip sdp origin-user-name** *user-name*

## Syntax Description

| | |
|---|---|
| *user-name* | Specifies the user name to be filled in on generated SDPs.<br>The *user-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 | The **sdp origin-user-name** command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.5 | This command was modified to be **sip sdp origin-user-name**. |

## 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 configures the SDP username to use on generated SDPs to foo:

```
Router# configure
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip sdp origin-user-name foo
Router(config-sbc-sbe-sip)#
```

# sip timer

To enter the mode of the SIP timer function, use the **sip timer command in SBE configuration mode.** To return to the default value, use the **no** form of this command.

**sip timer**

**no sip timer**

## Syntax Description

This command has no arguments or keywords.

## 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 SIP timer mode:

```
Router# config
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)
```

# sip visited network identifier

To configure a visited network identifier on a SIP P-CSCF adjacency, use the **sip visited network identifier** command in SBE configuration mode. To deconfigure the visited network identifier, use the **no** form of this command.

**sip visited network identifier** *network-name*

**no sip visited network identifier**

## Syntax Description

| | |
|---|---|
| *network-name* | Specifies the name of the visited network identifier. |

## 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 to use the **sip visited network identifier** command to configure a visited network identifier on a P-CSCF-access adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbe-adj-sip)# sip visited network identifier cisco.com2
```

## Related Commands

| Command | Description |
|---|---|
| **sip home network identifier** | Configures a home network identifier on all IBCF adjacencies. |

# snmp-server enable traps sbc

To enable SBC notification types, use the **snmp-server enable traps sbc** command in global configuration mode without keywords. To disable all SBC notification types, use the **no** form of this command without keywords.

**snmp-server enable traps sbc** [adj-status | blacklist | congestion-alarm | h248-ctrlr-status | media-source | qos-statistics | radius-conn-status | sla-violation | svc-state]

**no snmp-server enable traps sbc [adj-status | blacklist | congestion-alarm | h248-ctrlr-status | media-source | qos-statistics | radius-conn-status | sla-violation | svc-state]**

## Syntax Description

| | |
|---|---|
| adj-status | Enables the SNMP SBC Adjacency Status traps. |
| blacklist | Enables the SNMP SBC Blacklist traps. |
| congestion-alarm | Enables the SNMP SBC Congestion Alarm traps. |
| h248-ctrlr-status | Enables the SNMP SBC H.248 Controller Status traps. |
| media-source | Enables the SNMP SBC Media Source Alert traps. |
| qos-statistics | Enable the SNMP SBC QoS Statistics traps. |
| radius-conn-status | Enable the SNMP SBC Radius Connect Status traps. |
| sla-violation | Enable the SNMP SBC Sla Violation traps. |
| *svc-state* | Enable the SNMP SBC Service state traps. |

## Command Default

All the SBC-related traps are disabled.

## Command Modes

Global configuration (config)

## 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 3.4 | The **qos-statistics** keyword was added to this command. |

## 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 **snmp-server enable traps sbc** command to enable or disable all of the SNMP traps. Use specific keywords to enable or disable specific SNMP traps.

After you enable a trap, specify the recipient of a SNMP notification operation by using the **snmp-server host** command.

## Examples

The following example shows how to enable only SNMP blacklist notification:

```
Router# configure terminal
Router(config)# snmp-server enable traps sbc blacklist
```

## Related Commands

| Command | Description |
|---|---|
| **calc-moscqe** | Specifies the percentage of calls that must be used to calculate the MOS-CQE score. |

# softswitch-shield

To enable the softswitch shielding on the SIP, use the **softswitch-shield** command in adjacency SIP configuration mode. To diable the softswitch shielding, use the no form of this command.

**softswitch-shield**

**no softswitch-shield**

## 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 3.2S | 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 enable the softswitc shielding on the SIP adjacency:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency  sip  test
Router(config-sbc-sbe-adj-sip) softswitch-shield
Router(config-sbc-sbe-adj-sip)
```

## Related Commands

| Command | Description |
|---|---|
| **expires-header** | Configures the expires parameter in the SIP contact header. |
| **show sbc sbe adjacencies** | Displays all the detailed field output pertaining to a specified Session Initiation Protocol (SIP) adjacency. |

# src-address

To enter the source address mode to set the priority of the header or headers from which to derive a calling party address (inbound only), use the **src-address** command in SIP header configuration mode. To exit the source address mode, use the **no** form of this command or the **exit** command.

**src-address**

**no src-address**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## Command Modes

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

## 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.

This command puts you in the source address mode where you use the **header-prio header-name** command to set the priority of the header or headers from which a calling party address is derived.

**Note** The header list is for inbound calls only.

## Examples

The following example shows how to enter the source address mode:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-profile HP1
Router(config-sbc-sbe-sip-hdr) src-address
Router(config-sbc-sbe-sip-hdr-scr)#
```

## 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. |

# src-address (editor)

To enter the Source address mode to set the priority of the header or headers from which to derive a calling party address (inbound only), use the **src-address** command in the SIP Header Editor configuration mode. To exit the Source address mode, use the **no** form of this command or the **exit** command.

**src-address**

**no src-address**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## 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 that follows shows the hierarchy of the modes required to run the command.

This command puts you in the Source address mode from where you can use the **header-prio header-name** command to set the priority of the header or headers from which a calling party address is derived.

**Note** The header list is for inbound calls only.

## Examples

The following example shows how to enter the Source address mode:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-editor HP1
Router(config-sbc-sbe-mep-hdr) src-address
Router(config-sbc-sbe-mep-hdr-src)#
```

## Related Commands

| Command | Description |
|---|---|

| | |
|---|---|
| **div-address** | Enables entry into 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** | Enables entry into the Destination address mode to set the priority of the header or headers from which to derive a called party address (inbound only). |
| **header-prio header-name** | Configures the priority of a header that is used to derive a source, destination, or diverted-by address. |
| **sip header-editor** | Configures a header editor. |
| **src-address** | Enables entry into the Source address mode to set the priority of the header or headers from which to derive a calling party address (inbound only). |

# srtp-fallback

To configure support for the Session Initiation Protocol (SIP) X-cisco-srtp-fallback header, use the **srtp-fallback** command in SBE configuration mode.

**srtp-fallback**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.1.1S | 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.

## Examples

The following example shows how the **srtp-fallback** command is used to configure support for SIP X-cisco-srtp-fallback header in SBE configuration mode:

```
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 pc-150
Router(config-sbc-sbe-adj-sip)# srtp-fallback
```

# srtp branch

To configure SRTP for a caller or a callee in a CAC policy, use the **srtp branch** command in the CAC table entry configuration mode. To unconfigure SRTP for a caller or a callee, use the **no** form of this command.

**srtp branch forbid | mandate | allow | prefer**

**no srtp branch forbid | mandate | allow | prefer**

## Syntax Description

| | |
|---|---|
| **forbid** | Specifies that SRTP is not supported on the caller side of the call. Any incoming signaling from the caller side that proposes SRTP is rejected. All outbound signaling on the caller side containing media descriptions proposes RTP. |
| **mandate** | Specifies that SRTP is mandatory on the caller side of the call. Any incoming signaling from the caller side of the call with media descriptions that do not propose SRTP is rejected. All outbound signaling on the caller side of the call containing media descriptions proposes SRTP. |
| **allow** | Allows the caller or callee to use SRTP optionally. No incoming signaling is rejected as a result of the presence or absence of SRTP proposal in any media description. Outbound signaling may or may not propose SRTP in media descriptions according to the requirements of the call. |
| **prefer** | Specifies that SRTP is preferred on this adjacency. SBC accepts either RTP or SRTP from inbound offers, but only offers SRTP outbound. |

## Command Default

No default behavior or values are available.

## Command Modes

CAC table entry configuration (config-sbc-sbe-cacpolicy-cactable-entry)

## 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

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 SRTP in a CAC policy:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp branch allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP-to-RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP-to-RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP-to-RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures a SIP endpoint to support a nonstandard offer and answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp callee

To configure SRTP for the callee in a CAC policy, use the **srtp callee** command in CAC table entry configuration mode. To remove the SRTP configuration, use the no form of this command.

**srtp callee forbid | mandate | allow**

**no srtp callee forbid | mandate | allow**

## Syntax Description

| | |
|---|---|
| **forbid** | SRTP is not supported on the callee side of the call. Any incoming signaling from the callee side that proposes SRTP is rejected. All outbound signaling on the callee side containing media descriptions proposes RTP. |
| **mandate** | SRTP is mandatory on the callee side of the call. Any incoming signaling from the callee side of the call with media descriptions that do not propose SRTP is rejected. All outbound signaling on the callee side of the call containing media descriptions proposes SRTP. |
| **allow** | Allows the callee to use SRTP optionally. No incoming signaling is rejected as a result of the presence or absence of SRTP proposal in any media description. Outbound signaling may or may not propose SRTP in media descriptions according to the requirements of the call. |

## Command Default

No default behavior or values are available.

## 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 SRTP for the callee in a CAC policy:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
```

```
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp callee allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp caller

To configure SRTP for the caller in a CAC policy, use the **srtp caller** command in CAC table entry configuration mode. To remove the SRTP configuration, use the no form of this command.

**srtp caller forbid | mandate | allow | prefer**

**no srtp caller forbid | mandate | allow | prefer**

## Syntax Description

| | |
|---|---|
| **forbid** | SRTP is not supported on the caller side of the call. Any incoming signaling from the caller side that proposes SRTP is rejected. All outbound signaling on the caller side containing media descriptions proposes RTP. |
| **mandate** | SRTP is mandatory on the caller side of the call. Any incoming signaling from the caller side of the call with media descriptions that do not propose SRTP is rejected. All outbound signaling on the caller side of the call containing media descriptions proposes SRTP. |
| **allow** | Allows the caller to use SRTP optionally. No incoming signaling is rejected as a result of the presence or absence of SRTP proposal in any media description. Outbound signaling may or may not propose SRTP in media descriptions according to the requirements of the call. |
| **prefer** | SRTP is preferred on this adjacency. SBC accepts either RTP or SRTP from inbound offers, but it only offers SRTP outbound. |

## Command Default

No default behavior or values are available.

## 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 SRTP for the caller in a CAC policy:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
```

```
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp caller allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp interworking

To configure SRTP to RTP interworking in a CAC policy, use the **srtp interworking** command in CAC table entry configuration mode. To remove the SRTP interworking configuration, use the no form of this command.

**srtp interworking forbid | allow**

**no srtp interworking forbid | allow**

## Syntax Description

| | |
|---|---|
| forbid | Forbid SRTP to RTP interworking on this call. |
| allow | Allow SRTP to RTP interworking on this call. |

## Command Default

No default behavior or values are available.

## 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 SRTP to RTP interworking in a CAC policy:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp interworking allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

**Related Commands**

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp media interworking

To configure SRTP to RTP media interworking in a CAC policy, use the **srtp media interworking** command in CAC table entry configuration mode. To remove the SRTP media interworking configuration, use the no form of this command.

**srtp media interworking forbid | allow**

**no srtp media interworking forbid | allow**

## Syntax Description

| | |
|---|---|
| forbid | Prohibits SRTP to RTP media interworking on a call. |
| allow | Allows SRTP to RTP media interworking on a call. |

## Command Default

No default behavior or values are available.

## 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 SRTP to RTP media interworking in a CAC policy:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp media interworking allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

**Related Commands**

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp response downgrade

To configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade (in which an SRTP offer is responded to with an RTP answer), use the **srtp response downgrade** command in CAC table entry configuration mode. To remove the SRTP response downgrade configuration, use the no form of this command.

**srtp {callee | caller} response downgrade**

**no srtp {callee | caller} response downgrade**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## 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.

If this is set, SBC may respond to an SRTP (RTP/SAVP) offer with an RTP (RTP/AVP) answer. If this is not set, SBC will provide strict adherence to the offer/answer protocol and reject an SRTP offer that is not supported.

## Examples

The following example shows how to configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp caller response downgrade
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

**Related Commands**

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp retry rtp

To configure SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer, use the **srtp retry rtp** command in CAC table entry configuration mode. To remove the SRTP retry configuration, use the no form of this command.

**srtp** {**callee** | **caller**} **retry rtp**

**no srtp** {**callee** | **caller**} **retry rtp**

## Syntax Description

| | |
|---|---|
| **callee** | |
| **caller** | |

## Command Default

No default behavior or values are available.

## 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.

If this is set on the side that has generated a 415/488 Reject to an SRTP (RTP/SAVP) offer, SBC reissues the offer using RTP (RTP/AVP) enabling RTP/SRTP interworking (as long as the SRTP configuration allows this.

## Examples

The following example shows how to configure SBC to retry to enable SRTP to RTP interworking on the callee side after it has rejected an SRTP offer:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# srtp callee retry rtp
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

**Related Commands**

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# srtp support allow

To configure SRTP support in a CAC policy, use the **srtp caller** command in CAC table entry configuration mode. To remove the SRTP support configuration, use the no form of this command.

**srtp support allow**

**no srtp support allow**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## 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 SRTP support:

```
Router# configure terminal
Router(config)# sbc mine
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)# first-cac-scope call
Router(config-sbc-sbe-cacpolicy)# cac-table my_table
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)# srtp support  allow
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **srtp support allow** | Configures SRTP support in a CAC policy. |
| **srtp caller** | Configures SRTP for the caller in a CAC policy. |
| **srtp callee** | Configures SRTP for the callee in a CAC policy. |
| **srtp media interworking** | Configures SRTP to RTP media interworking in a CAC policy. |
| **srtp interworking** | Configures SRTP to RTP interworking in a CAC policy. |

| Command | Description |
|---|---|
| **srtp retry rtp** | Configures SBC to retry to enable SRTP to RTP interworking after it has rejected an SRTP offer. |
| **srtp response downgrade** | Configures configure a SIP endpoint to support a non-standard offer/answer SRTP downgrade. |
| **show sbc sbe call-stats** | Lists the statistics for all the calls on the specified SBE. |
| **show sbc sbe calls (srtp)** | Displays all the calls on the SBEs. |

# standard

To define a standard codec variant name, use the **standard** command in the Codec variant configuration mode. To remove a standard codec variant name, use the **no** form of this command.

**standard** *standard-codec-name*

**no standard**

## Syntax Description

| | |
|---|---|
| *standard-codec-name* | Describes the standard system codec name.<br>The *standard-codec-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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

Codec variant configuration (config-sbc-sbe-codec-var-codec)

## 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 that follows shows the hierarchy of the modes required to run the command.

## Examples

The following example shows how to define the standard codec variant name using the **standard** command in the Codec variant configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec variant codec G723-H-1
Router(config-sbc-sbe-codec-var-codec)# standard G723
```

# start

To configure either the H.323 slow start or H.323 fast start mode of operation for an adjacency, use the **start** command in adjacency h323 configuration mode. The **no** form of the command resets to the default of outgoing call start mode is the same as the incoming call start mode.

***start [ fast | slow ]***

***no start***

## Syntax Description

| | |
|---|---|
| *fast* | Specifies H.323 fast start mode of operation where the SBC only uses the fast start mode for outgoing calls on the adjacency. However, incoming slow start calls are converted to fast start mode as they cross the SBC. |
| slow | Specifies H.323 slow start mode of operation where the SBC only uses the slow start mode for outgoing calls on the adjacency. However, incoming fast start calls are converted to slow start as they cross the SBC. |

## Command Default

Default is outgoing call start mode is the same as the incoming call start mode

## Command Modes

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

## 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

When the fast start mode is configured, the SBC only uses the fast start mode for outgoing calls. However, incoming slow start calls are converted to fast start mode as they cross the SBC.

When the slow start mode is configured, the SBC only uses the slow start mode for outgoing calls. However, incoming fast start calls are converted to slow start as they cross the SBC.

If neither fast start nor slow start mode is configured on the adjacency, the default is that the outgoing call start is the same as the incoming call start. The mode of operation can be modified while the adjacency is active but the change will only affect new calls.

## Examples

**The following example shows how to configure slow start mode of operation on the adjacency h323:**

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router (config-sbc-sbe)# adjacency h323
Router (config-sbc-sbe-adj-h323)# start slow
```

**Related Commands**

| Command | Description |
|---|---|
| **adjacency** | Configures an adjacency on the SBC. |

# statistics-setting

To configure an adjacency to support SIP method statistics, use the **statistics-setting** command in adjacency SIP configuration mode. To return to the default behavior, use the **no** form of this command.

**statistics-setting** {**detail** | **summary**}

**no statistics-setting** {**detail** | **summary**}

## Syntax Description

| | |
|---|---|
| **detail** | Allows the **show sbc sbe sip-method-stats** command to display statistics about SIP response codes and SIP request names, such as INVITE. |
| **summary** | Allows the **show sbc sbe sip-method-stats** command to display statistics about SIP request names only, such as INVITE. |

## Command Default

Adjacencies are not configured to support SIP method statistics.

## Command Modes

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

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.4.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |

## Usage Guidelines

The **statistics-setting** command must be configured on an adjacency before using the **show sbc sbe sip-method-stats** command to display SIP method statistics.

## Examples

The following example configures the sipGW adjacency to support detailed SIP method statistics:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip sipGW
Router(config-sbc-sbe-adj-sip)# statistics-setting detail
```

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe adjacency statistics** | Clears the SIP method statistics counters and resets them to zero. |
| **show sbc sbe sip-method-stats** | Displays summary or detailed statistics for a SIP method. |

# statistics

To specify the QoS statistic for which alert levels must be set, use the **statistics** command in the SBE configuration mode. To remove this configuration, use the **no** form of this command.

**statistics {lcl-jit | mos-cqe | mpd-pct | mpl-pct | rmt-jit | rtd | ucr}**

**no statistics [lcl-jit | mos-cqe | mpd-pct | mpl-pct | rmt-jit | rtd | ucr]**

## Syntax Description

| | |
|---|---|
| lcl-jit | Specifies the average local packet jitter. |
| mos-cqe | Specifies the MOS-CQE score. |
| mpd-pct | Specifies the ratio of media packets that are dropped to the total number of media packets received. |
| mpl-pct | Specifies the ratio of media packets that are lost to the total number of media packets sent. |
| rmt-jit | Specifies the average remote media packet jitter. |
| rtd | Specifies the average round trip delay. |
| ucr | Specifies the ratio of unanswered calls to the total number of calls. |

## 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 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

In the following example, the **statistics** command is used to specify that you want to configure alert levels for the average local packet jitter:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# statistics lcl-jit
```

**Related Commands**

| Command | Description |
|---|---|
| **calc-moscqe** | Specifies the percentage of calls that must be used to calculate the MOS-CQE score. |
| **current15minutes** | Specifies that QoS statistics must be calculated for 15-minute intervals. |
| **current5minutes** | Specifies that QoS statistics must be calculated for 5-minute intervals. |
| **currentday** | Specifies that statistics must be calculated for 24-hour intervals. |
| **currenthour** | Specifies that QoS statistics must be calculated for 60-minute intervals. |
| **currentindefinite** | Specifies that statistics must be calculated indefinitely, starting from the last explicit reset. |
| **g107 bpl** | Sets a value for the Packet-Loss Robustness (Bpl) factor. |
| **g107 ie** | Sets a value for the Equipment Impairment (Ie) factor. |
| **g107a-factor** | Sets a value for the Advantage (A) factor. |
| **local-jitter-ratio** | Specifies the percentage of calls that must be used to calculate the local jitter ratio. |
| **show sbc sbe adjacencies** | Displays details of the adjacencies configured on the SBE. |
| **show sbc sbe call-stats** | Displays the statistics pertaining to all the calls on a the SBE. |
| **snmp-server enable traps sbc** | Enables SBC notification types. |

# store-rule

To create a store rule to extract variables from headers, use the **store-rule** command in the SIP Header Editor configuration mode. To remove a store rule, use the **no** form of this command.

**store-rule** [**entry** *entry-number*]

**no store-rule** [**entry** *entry-number*]

## Syntax Description

| | |
|---|---|
| **entry** | Specifies the filtered entry number. By default, it is 1. |
| entry-number | Entry number that 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 create a store rule:

```
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)# store-rule
```

## Related Commands

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

# stream-list

To configure a stream list, use the **stream-list** command in the signaling border element (SBE) configuration mode. To remove the stream list, use the **no** form of this command.

**stream-list** *stream-list-name*

**no stream-list** *stream-list-name*

## Syntax Description

| | |
|---|---|
| *stream-list-name* | Specifies the name of the stream list.<br>The *stream-list-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 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 a stream list:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)#
```

## Related Commands

| Command | Description |
|---|---|
| **generic-stream media-type** | Configures the media type for a generic stream. |
| **show sbc sbe stream-list** | Displays the stream lists that are present on the SBE. |

# subscriber

To define a unique subscriber for whom you want to configure Provisioned Delegate Registration, use the **subscriber** command in SBE configuration mode. To remove a subscriber for whom you have configured Provisioned Delegate Registration, use the **no subscriber** command.

**subscriber** *{aor}*

**no subscriber** *{aor}*

## Syntax Description

| | |
|---|---|
| *aor* | This is the address of record of the delegate client and defines the unique subscriber for whom you want to configure Provisioned Delegate Registration.<br>It is a string field with a 62 characters maximum length. |

## 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

Delegate registration is done underneath the SBE configuration for globally unique subscribers. The subscriber must have one or more SIP contacts or Uniform Resource Identifiers (URIs) associated with it.

## Examples

The following example configures a delegate registration profile that can be applied to a delegate registration subscriber:

```
sbc mySbc sbe
  delegate-profile my-profile
    dur 1000
    retry-cnt 5
    retry-interval 60
    refresh-timeout 200
```

The following example configures a SIP contact for a subscriber, for whom a subscriber detail table exists, and for whom, after the SIP contact is configured, Provisioned Delegate Registration can be configured:

```
sbc mySbc
 sbe
  subscriber sip:bob@isp.example
   sip-contact sip:steve@10.1.1.2
```

```
    adjacency CallMgrB
    exit
```

The following example configures a delegate registration aor= sip:bob@isp.example

```
(config)# sbc mySbc
(config)# sbe
(config-sbc-sbe)# subscriber sip:bob@isp.example
(config-sbc-sbe-subscriber-entry)# sip-contact sip:steve@10.1.1.2
(config-sbc-sbe-subscriber-contact)# adjacency CallMgrB
(config-sbc-sbe-subscriber-contact)# exit
(config-sbc-sbe-subscriber-entry)# delegate-registration sip:registrar@1.1.1.1
(config-sbc-sbe-subscriber-delegate)# adjacency CallMgrA
(config-sbc-sbe-subscriber-delegate)# profile my-profile
(config-sbc-sbe-subscriber-delegate)# activate
```

## 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. |
| **adjacency** | Configures the adjacency facing the registrar. |
| **profile** | Applies a delegate registration profile to a delegate registration subscriber. |
| **show sbc sbe sip delegate-profile** | Displays subscriber profiles for whom Provisioned Delegate Registration has been configured. |
| **show sbc sbe sip subscribers** | Displays subscribers for whom Provisioned Delegate Registration has been provisioned. |

# sync

To synchronize the configuration file from active box to standby box, use the **sync** command in inter-chassis redundancy mode.

**sync**

## Syntax Description

There is no keyword or argument.

## Command Default

No default behavior or values are available.

## Command Modes

SBC configuration mode (config-sbc)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.3.0 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |

## Usage Guidelines

Customer need to use **sync** command in the active box to sync the configuration file from active box to standby box in inter-chassis redundancy mode so that the latest configuration of CUBE-SP will be synchronized in the running configuration file in the standby box.

## Examples

The following example shows how to synchronize the configuration file from active box to standby box:

```
enable
configure terminal
sbc foo
sync
```

# table-type

To configure a Call Admission Control (CAC) table type that enables the priority of the call to be used as a criterion in CAC policy, use the **table-type** command in CAC table configuration mode. To delete the CAC Policy Set or Limit table, use the **no** form of this command.

**table-type {policy-set | limit {***list of limit tables}}*

**no table-type {policy-set | limit {***list of limit tables}}*

## Syntax Description

| | |
|---|---|
| policy-set | Specifies a Policy Set table type.<br><br>For a Policy Set table type, the event is applied ***to all entries*** in the CAC table. You can define the scope at which CAC policy limits are applied using the **cac-scope** command in each entry. |
| limit | Specifies a Limit table type.<br><br>For a Limit table type, the event matches a ***single, most specific entry***. Only one entry is matched in a limit table type. You can define the match-value within the entry in the Limit table using the **match-value** command. A limit table type inherits its scope from its parent table. |
| *list of limit tables* | Specifies the type of Limit table. This parameter governs the syntax of the match-value fields of the entries in the table.<br><br>The Limit table types are:<br>• *account*—Compare the name of the account.<br>• *adj-group*—Compare the name of the adjacency group.<br>• *adjacency*—Compare the name of the adjacency.<br>• *all*—No comparison type. All events match this type.<br>• *call-priority*—Compare with call priority.<br>• *category*—Compare the number analysis assigned category.<br>• *dst-account*—Compare the name of the destination account.<br>• *dst-adj-group*—Compare the name of the destination adjacency group.<br>• *dst-adjacency*—Compare the name of the destination adjacency.<br>• *dst-prefix*—Compare the beginning of the dialed digit string.<br>• *event-type*—Compare with CAC policy event types.<br>• *src-account*—Compare the name of the source account.<br>• *src-adj-group*—Compare the name of the source adjacency group.<br>• *src-adjacency*—Compare the name of the source adjacency.<br>• *src-prefix*—Compare the beginning of the calling number string.<br>• sub-category—Compare events sent to or received from members of the same subscriber category.<br>• sub-category-pfx—Compare events sent to or received from members of the same subscriber category prefix. |

**Command Default** No default behavior or values are available.

**Command Modes** CAC table configuration (config-sbc-sbe-cacpolicy-cactable)

**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 2.5 | The *sub-category* and *sub-category-pfx* Limit table types were added. |

**Usage Guidelines** When creating a CAC table, you must configure the table type parameter as a Policy Set table type or Limit table type.

You cannot modify the table type if entries are currently configured for a different table type. You will receive the error message "Cannot modify table-type with entries currently configured for previous type."

For Policy Set tables, the event is applied to all entries in the Policy Set table. You can define the scope at which CAC limits are applied within each entry with the **cac-scope** command. The **cac-scope** command is only available to entries defined within a Policy Set table type.

For Limit tables, the event matches only a single entry. With Limit tables, you can define the match-value within the entry with the **match-value** command. A Limit table inherits its scope from its parent table.

To define a CAC policy, you must define the limit and the scope at which the policy is applied. For example, you can define a policy such that not more than 10 concurrent calls (limit) could ever be made from a single account (scope).

**Examples** The following example shows how to configure the CAC policy-set table TAB1:

```
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 TAB1
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)# cac-scope call
Router(config-sbc-sbe-cacpolicy-cactable-entry)# max-num-calls 20
Router(config-sbc-sbe-cacpolicy-cactable-entry)# action cac-complete
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
Router(config-sbc-sbe-cacpolicy-cactable)# exit
Router(config-sbc-sbe-cacpolicy)# complete
```

**Related Commands**

| Command | Description |
|---|---|
| **cac-table** | Configures CAC tables. |

| Command | Description |
|---|---|
| **match-value** | Configures the match-value of an entry in a Limit table. |
| **cac-scope** | Allows you to choose a scope at which CAC limits are applied within each entry in a Policy Set table. |

# tcp-connect-timeout

To configure the time that SBC waits for a SIP TCP connection to a remote peer to complete before failing that connection, use the **tcp-connect-timeout** command in SIP timer mode. To return to the default value, use the **no** form of this command.

**tcp-connect-timeout** *interval*

**no tcp-connect-timeout**

## Syntax Description

| | |
|---|---|
| *interval* | Specifies the time, in milliseconds, that the SIP TCP connection to a remote peer stays alive before timing out. |

## Command Default

Default interval is 30000 milliseconds

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 TCP connection timeout to 30 seconds:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# tcp-connect-timeout 30000
```

# tcp-idle-timeout

To configure the length of time that the TCP connection should stay active when in the idle state, use the **tcp-idle-timeout** command in SIP timer mode. To return to the default value, use the no form of this command.

**tcp-idle-timeout** *interval*

**no tcp-idle-timeout**

## Syntax Description

| | |
|---|---|
| *interval* | Specifies the minimum time, in milliseconds, that the TCP connection stays active when it is not processing any traffic. After this time, the TCP connection closes. Range is 1 to 4294967295 ms.<br>**Note** The value for this command might not be precise since the idle timers are checked every 12 seconds. |

## Command Default

Default value is 120000 ms (2 minutes).

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 minimum TCP idle timeout value to 10000 ms:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# tcp-idle-timeout 10000
```

# tcp (blacklist)

To enter the mode for configuring blacklisting for TCP protocol only, use the **tcp** command in the SBE blacklist IPv4 configuration mode.

***tcp*** *port number*

## Syntax Description

| | |
|---|---|
| *port number* | Port number to blacklist. Range is *0-65535*. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE blacklist IPv4 configuration (config-sbc-sbe-blacklist-ipv4)

## 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 blacklisting for TCP protocol only:

```
Router# config
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# ipv4 1.1.1.1
Router(config-sbc-sbe-blacklist-ipv4)# tcp 1
Router(config-sbc-sbe-blacklist-ipv4-tcp)#
```

## Related Commands

| | |
|---|---|
| blacklist | Enters the mode for configuring the default event limits for the source addresses in a given VPN. |
| address-default | Enters the mode for configuring the default event limits for the source addresses in a given VPN. |
| clear sbc sbe blacklist | Clears the blacklist for the specified SBC service. |
| **reason** | Enters a mode for configuring a limit to a specific event type on the source. |

# tcp timer giveup

To configure a giveup time period that controls how long a TCP connection retries active connections, use the **tcp timer giveup** command in SBE configuration mode. To disable the giveup timer, use the **no** form of this command.

**tcp timer giveup {***1-2400}*

**no tcp timer giveup**

## Syntax Description

| | |
|---|---|
| 1-2400 | Specifies number of seconds that a TCP connection continues to retry on active connections. The TCP connection is dropped when the giveup time period is reached. |

## Command Default

By default, the giveup timer 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. |

## Usage Guidelines

You use the **tcp timer giveup** command to specify a time period in seconds that controls how long a TCP connection continues to retry on active connections before giving up. On the Cisco ASR 1000 Series Routers, TCP connections will retry for a few minutes due to excessive default retry counts and retry intervals. If the giveup time period is reached without a reply from the peer, the TCP connection is dropped. By default, the giveup timer is disabled which means TCP retries based on the platform default.

Because the TCP connection timeout may vary depending on the network, a recommended timeout value must be based on how the endpoints are configured. It is recommended that the timeout value is chosen, such that it is not less than the timer B value that is used by the endpoints and defined in section 17.1.1.2 of RFC3261.

## Examples

The following example shows that a giveup timer has been configured for 40 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# tcp timer giveup 40
Router(config-sbc-sbe)#
```

**Related Commands**

| Command | Description |
|---|---|
| **tcp-connect-timeout** | Configures the time that SBC waits for a SIP TCP connection to a remote peer to complete before failing that connection. |
| **tcp-idle-timeout** | Configures the length of time that the TCP connection should stay active when in the idle state. |

# tcs-extra-codecs

To configure a codec list used to announce media capabilities on behalf of either the SIP caller or callee in a SIP to H.323 or H.323 to SIP interworking call, use the **tcs-extra-codecs** command in CAC table entry configuration mode. To remove the codec list, use the **no tcs-extra-codecs** command.

**tcs-extra-codecs** *{code-list-name}*

**no tcs-extra-codecs** *{code-list-name}*

## Syntax Description

| | |
|---|---|
| *code-list-name* | This is a string text of a maximum length of 30 characters. Describes the extra codecs that a SIP callee or SIP caller can announce to the H.323 side. |

## Command Default

No default behavior or values are available.

## Command Modes

CAC table entry configuration (config-sbc-sbe-cacpolicy-cactable-entry)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.5.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |

## Usage Guidelines

This command configures a codec list and assigns the list to a CAC table.

Once a codec list has been assigned, it may not be deleted until it is removed from the CAC table entry. A codec list must exist before it can be assigned to an entry in a CAC table.

For a description of the "H.323 TCS Codecs" feature, see the "Codec Handling" chapter in the *Cisco Unified Border Element (SP Edition) Configuration Guide: Unified Model*.

## Examples

The following example configures a codec list called "tcs-extra-caps-list" and assigns that list to the CAC table "cac-tbl-1" in entry 1 to announce extra codecs capability on behalf of the SIP side, whether it is the SIP caller or callee:

```
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec list tcs-extra-caps-list
Router(config-sbc-sbe-codec-list)# exit
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)# tcs-extra-codecs tcs-extra-caps-list
```

**Related Commands**

| Command | Description |
|---|---|
| **caller-media-caps** | Configures a codec list used to announce media capabilities on behalf of a SIP caller in a SIP to H.323 or H.323 to SIP interworking call. |
| **callee-media-caps** | Configures a codec list used to announce media capabilities on behalf of a SIP callee in a SIP to H.323 or H.323 to SIP interworking call. |

# tech-prefix (session border controller)

To configure the RAS tech prefix on an H.323 adjacency, use the **tech-prefix** command in adjacency H.323 configuration mode. To deconfigure RAS Tech Prefix, use the **no** form of this command.

**tech-prefix** *tech-prefix name*

**no tech-prefix** *tech-prefix name*

## Syntax Description

| | |
|---|---|
| *tech-prefix name* | Specifies the name of the tech prefix. Use a combination of the numbers from 0-9 and the special characters star (*), hash (#), and comma (,). |

## 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 **tech-prefix** command is used to configure RAS tech prefix on an H.323 adjacency named H323ToIsp42:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 H323ToIsp42
Router(config-sbc-sbe-adj-h323)# tech-prefix 2334
```

# test sbc message sip filename script-set editors

To test the message editing functionality of the SBC, use the **test sbc message sip filename script-set editors** command in the privileged EXEC mode.

**test sbc message sip filename** *device-type:file-name* **script-set** *script-set-number* **{after-send | before-receive} editors {***editor1-name* **[***editor2-name***] [***editor3-name***] . . . [***editor8-name***]}**

## Syntax Description

| | |
|---|---|
| *device-type* | One of the following or any other storage device installed on the router:<br>• **bootflash:**<br>• **flash:**<br>• **fpd:**<br>• **nvram:**<br>• **obfl:**<br>The list of file system devices is dynamically generated and displayed. Other devices, such as a hard disk, that are available on the platform can also be used in this command. |
| *file-name* | Name of the file containing the SIP message on which you want to test the editors. |
| *script-set-number* | Number of the script set containing the editors that you want to test. |
| **after-send** | Specifies that the outgoing message must be edited after the message is processed by the adjacency and just before it is forwarded from the adjacency. |
| **before-receive** | Specifies that the incoming message must be edited just after it is received on the adjacency and before the adjacency begins processing it. |
| *editor1-name . . . editor8-name* | Names of the editors. You can specify up to eight editors. You must specify at least one editor. |

## Command Default

No default behavior or values are available.

## Command Modes

Privileged EXEC (#)

## 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 privileged EXEC mode.

## Examples

In the following **test sbc message sip filename script-set editors** command, sdp_add_after has been defined in script-set 123 and my_header_editor has been configured by using the **sip header-editor** command. In the output of this command, the lines highlighted in bold show the actions performed by the editors.

```
Router# test sbc message sip filename bootflash:inv script-set 123 after-send editors
sdp_add_after my-header-editor

INVITE sip:john@example.com:55060 SIP/2.0
Via: SIP/2.0/UDP 192.0.2.195;branch=z9hG4bKff9b46fb055c0521cc24024da96cd290
Via: SIP/2.0/UDP 192.0.2.195:55061;branch=z9hG4bK291d90e31a47b225bd0ddff4353e9c
c0
From: <sip:192.0.2.195:55061;user=phone>;tag=GR52RWG346-34
To: "john@example.com" <sip:john@example.com:55060>
Call-ID: 12013223@192.0.2.195
CSeq: 1 INVITE
Contact: <sip:192.0.2.195:5060>
Content-Type: application/sdp
Content-Length:   229

v=0
o=Clarent 120386 120387 IN IP4 192.0.2.196
s=Clarent C5CM
c=IN IP4 192.0.2.196
t=0 0
m=audio 40376 RTP/AVP 8 18 4 0
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=rtpmap:4 G723/8000
a=rtpmap:0 PCMU/8000
a=SendRecv

%Test successful, edited message:
INVITE sip:john@example.com:55060 SIP/2.0
Via: SIP/2.0/UDP 192.0.2.195;branch=z9hG4bKff9b46fb055c0521cc24024da96cd290
Via: SIP/2.0/UDP 192.0.2.195:55061;branch=z9hG4bK291d90e31a47b225bd0ddff4353e9c
c0
From: <sip:192.0.2.195:55061;user=phone>;tag=GR52RWG346-34
To: "john@example.com" <sip:john@example.com:55060>
Call-ID: 12013223@192.0.2.195
CSeq: 1 INVITE
Contact: <sip:192.0.2.195:5060>
Content-Type: application/sdp
Content-Length: 258
name: cisco

v=0
o=Clarent 120386 120387 IN IP4 192.0.2.196
s=Clarent C5CM
c=IN IP4 192.0.2.196
t=0 0
m=audio 40376 RTP/AVP 8 18 4 0
a=rtpmap:8 PCMA/8000
a=rtpmap:18 G729/8000
a=rtpmap:4 G723/8000
a=rtpmap:0 PCMU/8000
a=SendRecv
Editor after adds this line
```

**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. |
| **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. |
| **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 script-set** | Tests the working of a script set. |
| **type** | Specifies the type of a script written using the Lua programming language. |

# test sbc profile-to-editor sip

To display the editor that is inherited from a Session Initiation Protocol (SIP) profile when the SIP profile is enabled instead of the SIP editor, use the **test sbc profile-to-editor** command in the privileged EXEC mode.

**test sbc profile-to-editor sip** *profile-type profile-name*

## Syntax Description

| | |
|---|---|
| *profile-type* | Type of SIP profile. It can be one of the following values:<br>• body-profile<br>• default-profiles<br>• header-profile<br>• method-profile<br>• option-profile<br>• parameter-profile |
| *profile-name* | Name of SIP profile. |

## Command Modes

Privileged EXEC (#)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.7.3S | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |

## Usage Guidelines

We recommend that you enable SIP editor instead of SIP profile. Customers who have already deployed SIP profile can use the **test sbc profile-to-editor sip** command during the transition from SIP profile to SIP editor.

**Note** The **test sbc profile-to-editor sip** command only displays the editor that is inherited from the SIP profile for customers' reference when migrating from SIP profile to SIP editor. Customers must configure the editor manually using the **sip** *editor-type* command.

## Examples

The following is a sample output of the **test sbc profile-to-editor sip** command:

```
Router# test sbc profile-to-editor sip header-profile dtmf-notify

whitelist
   header event entry 1
    action pass
   header call-info entry 1
action pass
```

**Related Commands**

| Command | Description |
|---|---|
| **sip** *editor-type* | Sets a default editor type to be applied to an adjacency that has not been explicitly set. |

# test script-set

To perform live testing of script-based editors, use the **test script-set** command in the adjacency SIP configuration mode.

**test script-set** *script-set-number*

## Syntax Description

| | |
|---|---|
| *script-set-number* | Script set number. |

## 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 3.4S | 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.

The script set on which you run this command need not be the one that is currently active. The only criterion is that the script set must be one that is operational. In other words, when the **show sbc sbe script-set** command is run on the script set, the Status field must display `ok`.

## Examples

In the following example, the **test script-set** command is run on script set 10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip my_adjacency
Router(config-sbc-sbe-adj-sip)# test script-set 10
```

## 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. |

| Command | Description |
|---|---|
| **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. |
| **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. |
| **type** | Specifies the type of a script written using the Lua programming language. |

# tgid-context

To define trunk-group ID context and trunk-group ID values to match the entries of the routing table, use the **tgid-context** command in RTG routing table configuration mode. To delete the TGID values of the given entry in the routing table, use the no form of this command.

**tgid-context** *tgid-context-name* {**tgid** *tgid-name*}

**no tgid-context** *tgid-context-name* {**tgid** *tgid-name*}

## Syntax Description

| | |
|---|---|
| *tgid-context-name* | Specifies trunk-group ID context to match on. |
| *tgid-name* | Specifies trunk-group ID to match on complete. |

## Command Default

No default behavior or values are available.

## Command Modes

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

## 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 example configures the trunk-group ID context and trunk-group ID to match in the new routing table MyRtgTable:

```
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)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# action complete
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency SIP-AS540-PSTN-GW2
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# match-type tgid
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# tgid-context example-domain tgid
trunkgroup1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)#
```

**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. |
| **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. |

# tgid-routing

To enable parsing the trunk-group identifier for call routing, use the **tgid-routing** command in adjacency SIP configuration mode. Use the **no** form of this command to disable the parsing.

**tgid-routing**

**no tgid-routing**

## 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 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 enables parsing the trunk-group identifier for call routing.

```
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)#
```

## Related Commands

| Command | Description |
|---|---|
| **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. |
| **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. |

# time-offset

Use the time-offset specified by the **timezone-offset** command. To disable using the time-offset specified by the **timezone-offset** command, use the **no** form of this command.

**time-offset hour** *hr* **min** *min [negative]*

**no** ***time-offset***

## Syntax Description

| | |
|---|---|
| **hr:hour_offset** | Range: h: -23 to +23 |
| **min: minute_offset** | Range: m:-59 to +59 |
| negative | Specifies behind the local time. |

## Command Default

No default behavior or values are available.

## 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

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.

Without this command the time-offset specified by the **timezone-offset** command under the SBE configuration mode is unused.

## Examples

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
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)# use-time-offset
```

## Related Commands

| Command | Description |
|---|---|
| **timezone-offset** | Configures the number of hours and minutes that the desired time zone is ahead of or behind the local time. |

# timeout

To define the length of time that packets from the source are blocked if the number of authentication requests exceed the set limit, use the **timeout** command in blacklist reason mode. The **no** form of this command releases the limit duration for blacklisting the source.

**timeout** *time-period*

**no timeout**

## Syntax Description

| | |
|---|---|
| *time-period* | Duration for which the source is blacklisted after activation of blacklisting.<br>• *0* = source not blacklisted<br>• *never* = blacklisting is permanent<br>• *number* {**milliseconds** \| **seconds** \| **minutes** \| **hours** \| **days**}<br>**Note** Period must be less than 23 days. |

## Command Default

- The address-default value defaults to its initial settings. The port-default values default to zero.
- If this field is omitted on explicit ports, it defaults to the value given in the port-default for this address.
- If this field is omitted on explicit addresses, this field defaults to the value in the address-default for this address.
- If this field is omitted for VPN, it defaults to the value for global addresses.
- If this field is omitted for the global address space, it defaults to the initial settings.

## Command Modes

Blacklist address-default mode (config-sbc-sbe-blacklist-addr-default-reason)

Blacklist global mode (config-sbc-sbe-blacklist-global-reason)

Blacklist ipv4 mode (config-sbc-sbe-blacklist-ipv4-reason)

Blacklist vpn mode (config-sbc-sbe-blacklist-vpn-reason)

## 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 configures a new blacklist on the SBE to affect all packets arriving from address 125.12.12.15 for three minutes:

```
Router# configure terminal
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
Router(config-sbc-sbe-blacklist-ipv4-reason)# timeout 180 seconds
Router(config-sbc-sbe-blacklist-ipv4-reason)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **reason** | Enters a mode for configuring a limit to a specific event type on the source (in other words, a port, IP address, VPN, global address space). |
| **trigger-size** | Defines the number of the specified events from the specified source that are allowed before the blacklisting is triggered, and blocks all packets from the source. |
| **trigger-period** | Defines the period over which events are considered. For details, see the description of the trigger-size command. |
| **show sbc sbe blacklist configured-limits** | Lists the explicitly configured limits, showing only the sources configured. Any values not explicitly defined for each source are in brackets. |
| **show sbc sbe blacklist** | Lists the limits in force for a particular source (whether they are from defaults or explicitly configured) in a form in which they can be entered into the CLI. Also listed are any defaults for a smaller scope configured at this address. |
| **show sbc sbe blacklist current-blacklisting** | Lists the limits causing sources to be blacklisted. |

# timezone-offset

To configure the number of hours and minutes that the desired time zone is ahead of or behind the local time, use the **timezone-offset** command in SBE configuration mode. To remove the time-zone offset, use the **no** form of this command.

**timezone-offset h:*hour_offset* m: *minute_offset* {positive | negative}**

**no timezone-offset h:*hour_offset* m: *minute_offset***

## Syntax Description

| | |
|---|---|
| **h:hour_offset** | Range: h: -23 to +23 |
| **m: minute_offset** | Range: m:-59 to +59 |
| positive | Specifies ahead of the local time. |
| negative | Specifies behind the local time. |

## Command Default

*Zero is the default.*

## 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 offset timezone to 11 hours and 45 minutes behind the local time:

```
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-domain-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable# timezone-offset 11 45 negative
```

## Related Commands

| Command | Description |
|---|---|
| **use-time-offset** | Uses the time-offset specified by the **timezone-offset** command. |

# tls mutual authentication

To enable TLS Mutual Authentication on a SIP adjacency, use the *tls mutual-authentication* command. Use the **no** form of this command to disable TLS Mutual Authentication on a SIP adjacency.

**tls mutual-authentication**

**no tls mutual-authentication**

## Syntax Description

This command does not have any syntax or keywords.

## Command Default

TLS Mutual Authentication is disabled.

## Command Modes

Configure 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

This command helps the SBC to decide whether to send a CertificateRequest message to the client side to get the client's certificate for client authentication.

This configuration is valid only when the SBC acts as the TLS Server Side. When SBC acts as a TLS Client Side, you need not configure the SBC explicitly to respond to mutual authentication request.

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 enables TLS mutual-authentication on the SIP adjacency adj1:

```
Router# configure terminal
Router# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip adj1
Router(config-sbc-sbe-adj-sip)# tls mutual-authentication
Router(config-sbc-sbe)# exit
Router(config-sbc)# exit
```

# total resource maximum

To specify the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources, use the **total resource maximum** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**total resource maximum** *number*

## Syntax Description

| | |
|---|---|
| *number* | Maximum total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption. |

## Command Default

The default weighted number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption at any point of time is 4294967295. When you use the **no** form of this command, any maximum limit set earlier is changed to this default value.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.4S | This command was introduced on the Cisco ASR 1000 Series 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

In the following example, the total resource number is set to 800. The maximum number of calls that can use audio transcoding, video transcoding, and SRTP interworking are also set in this example.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-policy my_media_policy
Router(config-sbc-sbe-media-pol)# type cac-policy
Router(config-sbc-sbe-media-pol)# transcode audio maximum 200
Router(config-sbc-sbe-media-pol)# transcode video maximum 200
Router(config-sbc-sbe-media-pol)# interwork srtp maximum 500
Router(config-sbc-sbe-media-pol)# total resource maximum 800
```

**Related Commands**

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# trace filter endpoint address ipv4 (session border controller)

To configure the trace filter for the H.248 Border Access Controller (BAC) on the Session Border Controller (SBC), use the **trace filter endpoint address ipv4** command in the H248 BAC configuration mode. To unconfigure the trace filter for the H.248 BAC, use the **no** form of this command.

**trace filter endpoint address ipv4** *ip-address port* [**vrf** *vrf-name*]

**no trace filter endpoint address ipv4** *ip-address port* [**vrf** *vrf-name*]

## Syntax Description

| | |
|---|---|
| *ip-address* | IPv4 address of the endpoint for the trace filter on the SBC. |
| *port* | Port number of the endpoint for the trace filter on the SBC. Range: 1 to 65535. |
| **vrf** | Specifies virtual routing and forwarding (VRF) for the endpoint for the trace filter on the SBC. |
| *vrf-name* | Name of VRF. |

## Command Default

None

## Command Modes

H248 BAC configuration (config-h248-bac)

## Command History

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

## Usage Guidelines

The *vrf-name* should match the name configured using the **ip vrf** command or the **ip vrf** forwarding command in the Gi interface.

To support VRF, enable Cisco Express Forwarding (CEF) switching on the router, using the **ip cef** command.

If you are also configuring the DHCP services at the access point name (APN), use the **dhcp-server ip-address vrf** command.

## Examples

The following example shows how to configure the trace filter for the H.248 BAC on the SBC:

```
Router> enable
Router# configure terminal
Router(config)# sbc h248 bac
Router(config-h248-bac)# trace filter endpoint address ipv4 10.0.0.1 245 vrf vrfex
```

# transcode-deny

To forbid transcoding for an entry in the admission control table, use the **transcode-deny** command in CAC table entry configuration mode. To allow transcoding for this entry in the admission control table, use the **no** form of this command.

**transcode-deny**

**no transcode-deny**

## Syntax Description

This command has no arguments or keywords.

## Command Default

By default, transcoding for this entry in the admission control table is allowed.

## Command Modes

CAC table entry configuration (config-sbc-sbe-cacpolicy-cactable-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 the entry to forbid transcoding in the new admission control table MyCacTable:

```
Router# config
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy)# table-type limit dst-prefix
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# transcode-deny
```

# transcoder

To configure that the media gateway is a **transcoder**, use the **transcoder** command in media gateway codecs configuration mode. To return to the default behavior, use the **no** form of this command.

**transcoder**

**no transcoder**

## Syntax Description

This command has no arguments or keywords.

## Command Default

By default, this command assumes the media gateway has no transcoding features.

## Command Modes

Media gateway codecs configuration (config-sbc-sbe-mg-codecs)

## 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 media gateway 10.0.0.1 to be a transcoder:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-gateway ipv4 10.0.0.1
Router(config-sbc-sbe-mg)# codecs m=audio 1234 RTP/AVP 0 2 8 18,a=rtpmap:0
PCMU/8000,a=rtpmap:a=rtpmap:8 PCMA/8000,a=rtpmap:18 G729/80002 G72 6-32/8000,a=rtpmap:8
PCMA/8000,a=rtpmap:18 G729/8000
Router(config-sbc-sbe-mg-codecs)# transcoder
```

# transcode cost

To specify the resource cost for transcoding an audio or video stream, use the **transcode cost** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**transcode {audio | video} cost** *number*

**no transcode {audio | video} cost**

## Syntax Description

| | |
|---|---|
| **audio** | Specifies that the resource cost is to be set for an audio stream. |
| **video** | Specifies that the resource cost is to be set for an video stream. |
| *number* | Resource cost. The range is from 1 to 4294967295. |

## Command Default

The default resource cost for transcoding an audio stream is 10. Similarly, the default resource cost for transcoding a video stream is 50. When you use the **no** form of this command, the resource cost is changed to the default value.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## 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 the command.

## Examples

In the following example, the **transcode cost** command is used to set the resource cost for transcoding audio and video to 5 and 15, respectively.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-gateway policy type remote ipv4 192.0.2.26 6886
Router(config-sbc-sbe-media-pol)# transcode audio cost 5
Router(config-sbc-sbe-media-pol)# transcode video cost 15
```

**Related Commands**

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# transcode maximum

To specify the maximum number of audio or video streams that can use the transcoding resource, use the **transcode maximum** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**transcode {audio | video} maximum** *number*

**no transcode {audio | video} maximum**

## Syntax Description

| | |
|---|---|
| *number* | Maximum number of audio or video streams that can use the transcoding resource at any point of time. |

## Command Default

The default number of audio or video streams that can use the transcoding resource, at any point of time, is 4294967295. When you use the **no** form of this command, any maximum limit set earlier is changed to this default value.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## 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 the command.

## Examples

In the following example, the maximum number of media streams that can use audio transcoding is set to 200. Similarly, the maximum number of media streams that can use video transcoding is also set to 200.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-policy my_media_policy
Router(config-sbc-sbe-media-pol)# type cac-policy
Router(config-sbc-sbe-media-pol)# transcode audio maximum 200
Router(config-sbc-sbe-media-pol)# transcode video maximum 200
```

## Related Commands

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# transcoding-stats enable

To enable the transcoding-related statistics on a router, use the **transcoding-stats enable** command in the Signaling Border Element (SBE) configuration mode. To disable the transcoding-related statistics, use the **no** form of this command.

**transcoding-stats enable**

**no transcoding-stats enable**

## Syntax Description

This command has no arguments or keywords.

## Command Default

By default, the transcoding-related statistics are enabled.

## Command Modes

SBE configuration mode (config-sbc-sbe)

## 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 disable the transcoding-related statistics:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# no transcoding-stats enable
```

## Related Commands

| Command | Description |
|---|---|
| **clear sbc sbe transcoding-stats** | Clears the voice transcoding-related statistics. |
| **show sbc sbe transcoding-stats** | Displays the voice transcoding-related statistics. |

# transcoding

To configure the transcoding options, use the **transcoding** command in virtual data border element (VDBE) configuration mode. To prevent the Session Border Controller (SBC) from performing a transcoding check of the incoming Session Description Protocol (SDP) and to disable the configuration, use the **no** form of this command.

**transcoding check** *{***match | none | overlap***}*

**no transcoding check**

## Syntax Description

| | |
|---|---|
| **check** | Enables transcoding checking. |
| **match** | Specifies the exact codec matching check. |
| **none** | Specifies no codec matching check. |
| **overlap** | Specifies overlapping codec matching check. |

## Command Default

By default, the **transcoding check overlap** command is configured.

## Command Modes

VDBE configuration (config-sbc-dbe-vdbe)

## 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 disable the transcoding options in VDBE configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# transcoding check none
```

# translate (session border controller)

To configure IP-to-FQDN or FQDN-to-IP translation on signaling border elements (SBEs), use the **translate** command in the adjacency SIP configuration mode.

**translate {request-uri | to | from} {inbound | outbound} {ip-fqdn | fqdn-ip}**

## Syntax Description

| | |
|---|---|
| **request-uri** | Performs translation on Request-URI |
| **to** | Performs translation on To header |
| **from** | Performs translation on From header |
| **inbound** | Inbound direction |
| **outbound** | Outbound direction |
| **ip-fqdn** | Performs IP-to-FQDN translation |
| **fqdn-ip** | Performs FQDN-to-IP translation |

## Command Default

SIP IP-FQDN translation is disabled

## 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. |

## 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 IP-to-FQDN translation on Request-URI for inbound request:

```
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 adj1
Router(config-sbc-sbe-adj-sip)# translate request-uri inbound ip-fqdn
Router(config-sbc-sbe-adj-sip)#
```

The following example shows how to configure the FQDN-to-IP translation on To header for outbound request:

```
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 adj1
Router(config-sbc-sbe-adj-sip)# translate to outbound fqdn-ip
```

The following example shows how to configure the FQDN-to-IP translation on From header for inbound request:

```
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 adj1
Router(config-sbc-sbe-adj-sip)# translate from inbound fqdn-ip
```

# transport (session border controller)

To configure a data border element (DBE) to use either UDP or TCP for H.248 control signaling with the specified H.248 controller and to configure the Interim Authentication Header (IAH) to authenticate and check the integrity of packets, use the **transport** command in Controller H.248 configuration mode. To remove the configuration, use the **no** form of this command.

**transport** *{***udp** | **tcp***} [interim-auth-header]* [**ah-md5-hmac** | **ah-sha-hmac**]

**no transport**

## Syntax Description

| | |
|---|---|
| **udp** | Specifies UDP transport for H.248 signaling with the H.248 controller.<br>UDP is the default if the **transport** command is not used. |
| **tcp** | Specifies TCP transport for H.248 signaling with the H.248 controller. |
| *interim-auth-header* | (Optional) Specifies the H.248 controller should insert the interim authentication header into the H.248 messages to authenticate packets and provide security.<br>If you specify the **interim-auth-header** keyword, but do not specify either **ah-md5-hmac** or **ah-sha-hmac** type of authentication, then the DBE uses zero authentication where the interim authentication header is inserted in the packet and all fields in the IAH header are set to zeroes. The DBE checks the packet syntactically, however, the DBE does not authenticate whether there is an IAH header or if it's correct. |
| ah-md5-hmac | Specifies the DBE uses for packet authentication the hashing scheme, HMAC-MD5 (Hashing for Message Authentication-Message Digest 5). Enters into IAH Key configuration mode. MD5 produces a 128 bit hash value.<br>If you specify a hashing scheme, you need to configure **inbound** and **outbound** options for incoming and outgoing packets, as well as specify the Security Parameters Index (SPI) and hex-key. See the **inbound** and **outbound** commands for more details. |
| ah-sha-hmac | Specifies the DBE uses for packet authentication the hashing scheme, HMAC-SHA (Hashing for Message Authentication-Secure Hash Algorithm). Enters into IAH Key configuration mode. SHA-1 produces a message digest that is 160 bits long.<br>If you specify a hashing scheme, you need to configure **inbound** and **outbound** options for incoming and outgoing packets, as well as specify the Security Parameters Index (SPI) and hex-key. See the **inbound** and **outbound** commands for more details. |

## Command Default

If the **transport** command is not specified, UDP transport is used for H.248 signaling.

## Command Modes

Controller H.248 configuration (config-sbc-dbe-vdbe-h248)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.2 | The **ah-md5-hmac** and **ah-sha-hmac** keywords were added. |

## Usage Guidelines

The **transport (session border controller)** command is used in conjunction with the **inbound** and **outbound** commands. The three commands are used together to enable Interim Authentication Header (IAH) authentication of inbound and outbound call packets. If you specify a hashing scheme (**ah-md5-hmac** or **ah-sha-hmac** authentication) using the **transport (session border controller)** command, you need to configure incoming and outgoing call packets using both **inbound** and **outbound** commands. The **inbound** and **outbound** commands are used to specify the Security Parameters Index (SPI) and hex-key.

MD5 hashing is faster to calculate, but provides less secure authentication than SHA hashing does. The hash calculation includes a synthesized IP header consisting of a 32 bit source IP address, a 32 bit destination address, and a 16 bit UDP or TCP destination port encoded as 20 hexadecimal digits.

For the MD5 or SHA hashing scheme to work, both inbound and outbound SPI need to be configured. If only the inbound or outbound SPI key or neither inbound or outbound SPI key is configured, the authentication reverts back to zero authentication and the DBE issues a warning message “Both inbound and outbound keys must be configured to enable authentication.” In this event, the DBE sets all fields in the IAH header to zeroes and accepts any IAH without authentication.

## Examples

The following example creates a DBE service on an SBC called “mySbc,” enters into SBC-DBE configuration and VDBE configuration modes, creates an H.248 controller with index 1, enters into Controller H.248 configuration mode, and configures the H.248 controller to use TCP as the transport:

```
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# controller h248 1
Router(config-sbc-dbe-vdbe-h248)# transport tcp
Router(config-sbc-dbe-vdbe-h248)# end
```

The following example shows you how to configure the DBE to specify TCP for H.248 control signaling, and to configure the IAH to use the HMAC-SHA hashing scheme, set the inbound Security Parameters Index (SPI) to 300 and the outbound SPI to 400, and hash key to “myInboundKey45” and “myOutboundKey89” respectively:

```
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)# transport tcp interim-auth-header ah-sha-hmac
Router(config-sbc-dbe-vdbe-h248-iah)# inbound 300 myInboundKey45
Router(config-sbc-dbe-vdbe-h248-iah)# outbound 400 myOutboundKey89
Router(config-sbc-dbe-vdbe-h248)# exit
Router(config-sbc-dbe-vdbe)# attach-controllers
```

**Related Commands**

| Command | Description |
|---|---|
| **inbound** | Configures inbound call packets to use a specific Security Parameters Index (SPI) to identify the security association to which an incoming packet is bound when the Interim Authentication Header (IAH) is enabled. |
| **outbound** | Configures outbound call packets to use a specific Security Parameters Index (SPI) to identify the security association to which an outgoing packet is bound when the Interim Authentication Header (IAH) is enabled. |

# transport (SBE H.248)

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

**transport** [**tcp** | **udp**]

**no transport** [**tcp** | **udp**]

## Syntax Description

| | |
|---|---|
| **udp** | Configures the UDP transport for H.248 signaling. |
| **vrf** *vrf name* | Configures the VRF name for H.248 association. |

## 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 udp transport:

```
Router# configure terminal
Router(config)# sbc mySbc
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)# transport udp
```

## 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. |
| **port (SBE H.248)** | Configures an SBE to use a given IPv4 H.248 port. |

# transrate audio cost

To specify the resource cost for transrating an audio stream, use the **transrate audio cost** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**transrate audio cost** *number*

**no transrate audio cost**

## Syntax Description

| | |
|---|---|
| *number* | Resource cost. The range is from 1 to 4294967295. |

## Command Default

The default resource cost for transrating an audio stream is 6. Similarly, the default resource cost for transcoding a video stream is 50. When you use the **no** form of this command, the resource cost is changed to the default value.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## 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 the command.

## Examples

In the following example, the **transrate audio cost** command is used to set the resource cost for transrating audio to 10.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-gateway policy type local
Router(config-sbc-sbe-media-pol)# transrate audio cost 10
```

## Related Commands

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# transrate audio maximum

To specify the maximum number of audio streams that can use the transrating resource, use the **transrate** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**transrate audio maximum** *number*

**no transrate audio maximum**

## Syntax Description

| | |
|---|---|
| *number* | Maximum number of audio streams that can use the transrating resource at any point of time. |

## Command Default

The default number of audio streams that can use the transrating resource, at any point of time, is 4294967295. When you use the **no** form of this command, any maximum limit set earlier is changed to this default value.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## 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 the command.

## Examples

In the following example, the maximum number of audio streams that can use the transrating resource is set to 300:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-policy my_media_policy
Router(config-sbc-sbe-media-pol)# type cac-policy
Router(config-sbc-sbe-media-pol)# transrate audio maximum 300
```

## Related Commands

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# transrating

To configure the transrating options, use the **transrating** command in controller H.248 configuration mode. To prevent the Session Border Controller (SBC) from performing a transrating check of the incoming Session Description Protocol (SDP) to disable the configuration, use the **no** form of this command.

**transrating** *{***check** *[***none** | **remote***]* | **exit***}*

**no transrating check**

## Syntax Description

| | |
|---|---|
| **check** | Enables transrating checking. |
| **exit** | Exits from the sbc-dbe-vdbe-h248 configuration mode. |
| **none** | Specifies no transrating matching check. |
| **remote** | Specifies remote descriptor matching check. |

## Command Default

By default, the **transrating check none** command is configured. After the **associate dspfarm profile** command is also configured, transrating check remote becomes the default configuration.

## Command Modes

Controller H.248 configuration (sbc-dbe-vdbe-h248)

## 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 disable the transrating options in virtual data border element (VDBE) configuration mode:

```
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)# no transrating check
```

## Related Commands

| Command | Description |
|---|---|
| **controller h248** | Configures an H.248 controller for a data border element (DBE). |

# trigger-period

To define the period over which events are considered, use the **trigger-period** command in blacklist reason mode. For more detailed information, see the related **trigger-size** command description.

The **no** form of this command releases the previously configured trigger period in which events should be considered.

**trigger-period** *time*

**no trigger-period**

## Syntax Description

| | |
|---|---|
| *time* | The number of milliseconds for the trigger period. This can be any value from 0 to 65535. |

## Command Default

- The address-default value defaults to its initial settings. The port-default values default to zero.
- If this field is omitted on explicit ports, it defaults to the value given in the port-default for this address.
- If this field is omitted on explicit addresses, this field defaults to the value in the address-default for this address.
- If this field is omitted for VPN, it defaults to the value for global addresses.
- If this field is omitted for the global address space, it defaults to the initial settings.

## Command Modes

Blacklist address-default mode (config-sbc-sbe-blacklist-addr-default-reason)

Blacklist global mode (config-sbc-sbe-blacklist-global-reason)

Blacklist ipv4 mode (config-sbc-sbe-blacklist-ipv4-reason)

Blacklist vpn mode (config-sbc-sbe-blacklist-vpn-reason)

## 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 configures the source to be blacklisted if authentication failures have occurred at a recent steady rate of over 200 per second (or 40 in a 100-ms burst):

```
Router# configure terminal
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
Router(config-sbc-sbe-blacklist-ipv4-reason)# trigger-period 100 milliseconds
Router(config-sbc-sbe-blacklist-ipv4-reason)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **reason** | Enters a mode for configuring a limit to a specific event type on the source (in other words, a port, IP address, VPN, global address space). |
| **trigger-size** | Defines the number of the specified events from the specified source that are allowed before the blacklisting is triggered, and blocks all packets from the source. |
| **timeout** | Defines the length of time that 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 sources configured. Any values not explicitly defined for each source are in brackets. |
| **show sbc sbe blacklist** | Lists the limits in force for a particular source (whether they are from defaults or explicitly configured) in a form in which they can be entered into 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 bracketed. |
| **show sbc sbe blacklist current-blacklisting** | Lists the limits causing sources to be blacklisted. |

# trigger-size

To define the allowable number of events from the specified source before blacklisting is triggered, and to block all packets from reaching the source, use the **trigger-size** command in blacklist reason mode.

The **no** form of this command releases the previously configured number of allowable events before blacklisting is triggered.

**trigger-size** *number*

**no trigger-size**

## Syntax Description

| | |
|---|---|
| *number* | The minimum number of consecutive events that must occur faster on average than the trigger rate to activate the blacklist. Can be any value from 0 to 65535. |

## Command Default

- The address-default value defaults to its initial settings. The port-default values default to zero.
- If this field is omitted on explicit ports, it defaults to the value given in the port-default for the given address.
- If this field is omitted on explicit addresses, it defaults to the value given in the address-default for the given address.
- If this field is omitted for VPN, it defaults to the values of global addresses.
- If this field is omitted for the global address space, it defaults to the initial settings.

## Command Modes

Blacklist address-default mode (config-sbc-sbe-blacklist-addr-default-reason)

Blacklist global mode (config-sbc-sbe-blacklist-global-reason)

Blacklist ipv4 mode (config-sbc-sbe-blacklist-ipv4-reason)

Blacklist vpn mode (config-sbc-sbe-blacklist-vpn-reason)

## 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 number of events recorded decays linearly to zero to give a leaky bucket average over the trigger period. The steady-state maximum event rate therefore equals this trigger size divided by the trigger period. See also the description of the **trigger-period** command. The maximum number of events in a much shorter period is this trigger size.

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 the source to be blacklisted if a burst of more than 20 authentication failures enter within a time period smaller than the trigger period:

```
Router# configure terminal
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
Router(config-sbc-sbe-blacklist-ipv4-reason)# trigger-size 20
Router(config-sbc-sbe-blacklist-ipv4-reason)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **reason** | Enters a mode for configuring a limit to a specific event type on the source (in other words, a port, IP address, VPN, global address space). |
| **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 that 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 sources configured. Any values not explicitly defined for each source are in brackets. |
| **show sbc sbe blacklist** | Lists the limits in force for a particular source (whether they are from defaults or explicitly configured) in a form in which they can be entered into 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 bracketed. |
| **show sbc sbe blacklist current-blacklisting** | Lists the limits causing sources to be blacklisted. |

# trunk trusted

To configure an H.323 adjacency as trusted, use the **trunk trusted** command in the H.323 Adjacency configuration mode. To change an H.323 adjacency to untrusted, use the **no** form of this command.

**trunk trusted**

**no trunk trusted**

## Syntax Description

This command has no arguments or keywords.

## Command Default

By default, all the H.323 adjacencies are untrusted.

## Command Modes

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

## Command History

| Release | Modification |
|---|---|
| 3.2S | This command was introduced on the Cisco ASR 1000 Series Routers. |

## Usage Guidelines

The Secure SIP calls over an H.323 interface is implemented logically by defining the H.323 adjacency as trusted using the **trunk trusted** command in the H.323 Adjacency configuration mode. By default, all the H.323 adjacencies are untrusted.

**Note** SBC does not signal secure H.323 calls using the procedures described in H.235. Moreover, the SBC does not use a TLS or IPSec connection to send call signalling for the secure H.323 calls.

To mark an H.323 adjacency as untrusted, use the **no trunk trusted** command from the H.323 Adjacency configuration mode.

**Note** To change an H.323 adjacency from trusted to untrusted, configure the inbound calls as insecure using the **no inbound secure** command.

## Examples

The following example shows how to configure an H.323 adjacency as trusted, which is helpful to handle the Secure SIP calls received from a SIP adjacency and routed to an H.323 adjacency:

```
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h.323 trust-h323-adj
Router(config-sbc-sbe-adj-h323)# trunk trusted
```

**Related Commands**

| Command | Description |
|---|---|
| **inbound secure** | Configures the incoming calls from an H.323 adjacency as secure calls. |

# type (media policy)

To configure a media policy as a CAC-policy type policy or a gateway type policy, use the **type** command in the SBE media policy configuration mode. To remove this configuration, use the **no** form of this command.

**type {cac-policy | gateway}**

**no type {cac-policy | gateway}**

## Syntax Description

| | |
|---|---|
| **cac-policy** | Specifies that the media policy is a CAC-policy type policy. |
| **gateway** | Specifies that the media policy is a gateway type policy. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE media policy configuration (config-sbc-sbe-media-pol)

## 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 the command.

## Examples

In the following example, the **type** command is used to specify that the media policy table is of the gateway type:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# media-policy my_media_policy
Router(config-sbc-sbe-media-pol)# type gateway
```

## Related Commands

| Command | Description |
|---|---|
| **interwork maximum** | Specifies the maximum number of media streams that can use the inband DTMF interworking resource or the SRTP interworking resource at any point of time. |
| **interwork cost** | Specifies the resource cost for an audio stream using inband DTMF interworking or specifies the resource cost for an audio or video stream using SRTP encryption and decryption. |

| Command | Description |
|---|---|
| **ipsec maximum** | Specifies the maximum number of endpoint registrations that can use IPsec encryption and decryption on their signaling link to the SBC or the maximum number of calls that can use IPsec-protected signaling, at any point of time. |
| **media-gateway policy type** | Configures a media gateway policy. |
| **media limits** | Specifies the media policy to be associated with the CAC policy table entry or applied on the media gateway. |
| **media-policy** | Configures a media policy. |
| **show sbc sbe media-gateway-policy** | Displays the details of media gateway policies. |
| **show sbc sbe media-policy** | Displays the details of media policies. |
| **total resource maximum** | Specifies the total number of video and audio streams that can use transcoding, transrating, inband DTMF interworking, and SRTP encryption and decryption—weighted by the costs assigned to each of these resources. |
| **transcode cost** | Specifies the resource cost for transcoding an audio or video stream. |
| **transcode maximum** | Specifies the maximum number of audio or video streams that can use the transcoding resource at any point of time. |
| **transrate audio cost** | Specifies the resource cost for transrating an audio stream. |
| **transrate audio maximum** | Specifies the maximum number of audio streams that can use the transrating resource at any point of time. |
| **type** | Configures a media policy as a CAC-policy type policy or a gateway type policy. |

# type (script)

To specify the type of a script written using the Lua programming language, use the **type** command in the SBE script-set script configuration mode. To set the type to the default type (full), use the **no** form of this command.

**type {full | wrapped edit-point {after-send | before-receive | both}}**

**no type**

## Syntax Description

| | |
|---|---|
| **full** | Specifies a full script and that there is no autogeneration. |
| wrapped | Specifies that the script must be autogenerated from the file. |
| edit-point | Specifies the edit point that is used in autoregistration. |
| **after-send** | Specifies that the outgoing message must be edited after the message is processed by the adjacency and just before it is forwarded from the adjacency. |
| **before-receive** | Specifies that the incoming message must be edited just after it is received on the adjacency and before the adjacency begins processing it. |
| **both** | Enables editing of the SBC message both after it is sent and before it is received. |

## Command Default

The default type is full.

## Command Modes

SBE script-set script configuration (config-sbc-sbe-scrpset-script)

## 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 **type** command specifies that the script is to be autogenerated from the file and that the edit points for editing the message are both after the message is sent and before it is received:

```
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.lua
Router(config-sbc-sbe-scrpset-script)# load-order 2
Router(config-sbc-sbe-scrpset-script)# type wrapped edit-point both
```

**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. |
| **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. |
| **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. |

# udp-first-retransmit-interval

To configure the time that the SBC waits for a UDP response or ACK before sending a retransmission of the relevant signal, use the **udp-first-retransmit-interval** command in SIP timer mode. To return to the default value, use the **no** form of this command.

**udp-first-retransmit-interval** *interval*

**no udp-first-retransmit-interval** *interval*

## Syntax Description

| | |
|---|---|
| *interval* | Time to wait, in milliseconds, before sending the first retransmission of a UDP signal. |

## Command Default

Default interval is 500 milliseconds

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 3.1S | This command and the **udp-max-retransmit-interval** command were together replaced by the **udp-retransmit-interval** command on the Cisco ASR 1000 Series Aggregation Services Routers in a release earlier than Release 3.1S.<br><br>As mentioned in the Usage Guidelines section, the values of the **udp-first-retransmit-interval** command and the **udp-max-retransmit-interval** command are interdependent. There are defaults for these commands that are not at the extremes of the range of values for these commands. There may be valid combinations of these commands that would be rejected on reboot because the value of the first command in a pair of these commands may be configured beyond the default value of the other command. The introduction of the **udp-retransmit-interval** command addresses this issue. |

## Usage Guidelines

The interval set by the **udp-first-retransmit-interval** command corresponds to the T1 interval detailed in RFC 3261. Similarly, the interval set by the **udp-max-retransmit-interval** command corresponds to the T2 interval detailed in the same RFC. The SBC uses these two intervals as follows:

- If the SBC sends an INVITE request and does not receive a response, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches 64 times T1.
- If the SBC sends a non-INVITE request and does not receive a response, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches udp-max-retransmit-interval (T2).

- If the SBC sends 300(INVITE) to 699(INVITE) response and does not receive an ACK, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches udp-max-retransmit-interval (T2).

To use the **udp-first-retransmit-interval** 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 the SBC to send the first UDP retransmission after waiting for 1000 milliseconds.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# udp-first-retransmit-interval 1000
Router(config-sbc-sbe-sip-tmr)# exit
```

# udp-max-retransmit-interval

To configure the maximum interval at which the SBC will retransmit, use the **udp-max-retransmit-interval** command in SIP timer mode. To return to the default value, use the **no** form of this command.

**udp-max-retransmit-interval** *interval*

**no udp-max-retransmit-interval** *interval*

## Syntax Description

| | |
|---|---|
| *interval* | Maximum retransmission interval, in milliseconds. |

## Command Default

Default interval is 4000 milliseconds.

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 3.1S | This command and the **udp-first-retransmit-interval** command were together replaced by the **udp-retransmit-interval** command on the Cisco ASR 1000 Series Aggregation Services Routers in a release earlier than Release 3.1S.<br><br>As mentioned in the Usage Guidelines section, the values of the **udp-first-retransmit-interval** command and the **udp-max-retransmit-interval** command are interdependent. There are defaults for these commands that are not at the extremes of the range of values for these commands. There may be valid combinations of these commands that would be rejected on reboot because the value of the first command in a pair of these commands may be configured beyond the default value of the other command. The introduction of the **udp-retransmit-interval** command addresses this issue. |

## Usage Guidelines

The interval set by the **udp-first-retransmit-interval** command corresponds to the T1 interval detailed in RFC 3261. Similarly, the interval set by the **udp-max-retransmit-interval** command corresponds to the T2 interval detailed in the same RFC. The SBC uses these two intervals as follows:

- If the SBC sends an INVITE request and does not receive a response, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches 64 times T1.
- If the SBC sends a non-INVITE request and does not receive a response, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches udp-max-retransmit-interval (T2).

- If the SBC sends 300(INVITE) to 699(INVITE) response and does not receive an ACK, the retransmission interval is first set to udp-first-retransmit-interval (T1) and then doubled each time until the interval reaches udp-max-retransmit-interval (T2).

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 maximum retransmission interval to 8000 milliseconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# udp-max-retransmit-interval 8000
Router(config-sbc-sbe-sip-tmr)# exit
```

# udp-response-linger-period

To configure the period for which SBC will retain negative UDP responses to INVITE requests, use the **udp-response-linger-period** command in SIP timer mode. To return to the default value, use the **no** form of this command.

**udp-response-linger-period** *interval*

**no udp-response-linger-period** *interval*

## Syntax Description

| | |
|---|---|
| *interval* | The time to retain negative INVITE responses, in milliseconds. |

## Command Default

Default interval is 32 seconds.

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 negative INVITE responses to be retained for 10 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# udp-response-linger-period 10000
Router(config-sbc-sbe-sip-tmr)# exit
```

# udp-retransmit-interval

To configure the time that the session border controller (SBC) waits for a UDP response or ACK before sending a retransmission of the relevant signal and the maximum interval up to which the SBC will retransmit, use the **udp-retransmit-interval** command in SIP timer mode. To return to the default value of the retransmit time and interval, use the **no** form of this command.

**udp-retransmit-interval [first** *first-interval***] [maximum** *max-interval***]**

**no udp-retransmit-interval [first] [maximum]**

## Syntax Description

| | |
|---|---|
| **first** | Specifies the time to wait before sending the first retransmission of a UDP signal. |
| *first-interval* | Time to wait, in milliseconds, before sending the first retransmission of a UDP signal. This interval corresponds to the T1 interval detailed in RFC 3261. The default is 500. |
| **maximum** | Specifies the maximum interval, in milliseconds, up to which the SBC will retransmit. |
| *max-interval* | Time to wait, in milliseconds, before sending the first retransmission of a UDP signal. This interval corresponds to the T2 interval detailed in RFC 3261. The default is 4000. |

## Command Default

The default is that the SBC waits for 500 milliseconds before first retransmitting and then continues retransmitting at every 500 milliseconds intervals for up to 4000 milliseconds.

## Command Modes

SIP timer (config-sbc-sbe-sip-tmr)

## 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 3.1S | This command was introduced in a release earlier than Release 3.1S. This command replaces the **udp-first-retransmit-interval** command and the **udp-max-retransmit-interval** command. |

## Usage Guidelines

The interval set by the *first-interval* argument of the command corresponds to the T1 interval detailed in RFC 3261. Similarly, the interval set by the *max-interval* argument of the command corresponds to the T2 interval detailed in the same RFC. The SBC uses these two intervals as follows:

- If the SBC sends an INVITE request and does not receive a response, the retransmission interval is first set to T1 and then doubled each time until the interval reaches 64 times T1.
- If the SBC sends a non-INVITE request and does not receive a response, the retransmission interval is first set to T1 and then doubled each time until the interval reaches T2.

- If the SBC sends 300(INVITE) to 699(INVITE) response and does not receive an ACK, the retransmission interval is first set to T1 and then doubled each time until the interval reaches T2.

To use the **udp-retransmit-interval** 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 the SBC to send the first UDP retransmission after waiting for 500 milliseconds and to continue retransmission up to 8000 milliseconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip timer
Router(config-sbc-sbe-sip-tmr)# udp-retransmit-interval first 500 maximum 8000
Router(config-sbc-sbe-sip-tmr)# exit
```

# udp (blacklist)

To enter the mode for configuring blacklisting for UDP protocol only, use the **udp** command in the SBE blacklist IPv4 configuration mode.

***udp*** *port number*

## Syntax Description

| | |
|---|---|
| *port number* | Port number to blacklist. Range is *0-65535*. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE blacklist IPv4 configuration (config-sbc-sbe-blacklist-ipv4)

## 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 blacklisting for UDP protocol only:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# ipv4 1.1.1.1
Router(config-sbc-sbe-blacklist-ipv4)# udp 1
Router(config-sbc-sbe-blacklist-ipv4-udp)#
```

## Related Commands

| Command | Description |
|---|---|
| **blacklist** | Enters the mode for configuring the default event limits for the source addresses in a given VPN. |
| **address-default** | Enters the mode for configuring the default event limits for the source addresses in a given VPN. |
| **clear sbc sbe blacklist** | Clears the blacklist for the specified SBC service. |
| **reason** | Enters a mode for configuring a limit to a specific event type on the source. |

# unexpected-source-alerting (session border controller)

To enable the generation of alerts when media packets for a call are received from an unexpected source address and port, use the **unexpected-source-alerting** command in VDBE configuration mode. Use the **no** form of this command to delete the unexpected-source-alerting.

**unexpected-source-alerting**

**no unexpected-source-alerting**

## Syntax Description

This command has no arguments or keywords.

## Command Default

If the **unexpected-source-alerting** command is not specified, unexpected source alerting is disabled.

## Command Modes

VDBE configuration (config-sbc-dbe-vdbe)

## 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 **vdbe unexpected-source-alerting** command should be enabled only on trusted networks, where any occurrence of packets from an unexpected source might indicate a threat to network security.

Alerts on the same flow and the total number of alerts reported at any one time are both rate-limited to ensure management systems are not flooded with reports. (As a result, there is not a one-to-one correspondence between alerts and incorrect packets.)

Diagnosing and resolving the issue of rogue packets is beyond the scope of SBC function; SBC simply serves as the messenger to notify you of the existence of the rogue packets.

Any and all packets from unexpected sources are dropped.

## Examples

The following example creates a DBE service on an SBC called mySbc, enters into DBE configuration and VDBE configuration modes, and enables the generation of alerts when unexpected source address packets are received by a virtual data border element (vDBE):

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# unexpected-source-alerting
Router(config-sbc-dbe-vdbe)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **vdbe** | Enters into VDBE configuration mode. |

# uri username parameters parse

To parse and search the user names in the SIP and SIPS URIs for the user name parameters, use the **uri username parameters parse** command in SBC SBE Adjacency SIP mode. Use the **no** form of this command to disable parsing.

**uri username parameters parse**

**no uri username parameters parse**

## 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

User name parameters in SIP and SIPS URIs in messages received on an adjacency are treated as regular URI parameters. The username is taken to exclude the username parameters. This applies to SIP and SIPS URIs within the Request-URI, and the To and From headers for INVITE requests and out-of-dialog requests.

## Examples

*The following command parses the SIP and SIPS URIs in messages received on the adjacency mySIP:*

```
Router# config terminal
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip mySIP
Router(config-sbc-sbe-adj-sip)# uri username parameters parse
```

# use-any-local-port

To configure a DBE to use any available local port when connecting to the default Media Gateway Control (MGC), use the **use-any-local-port** command in VDBE configuration mode. To disable this configuration, use the **no** form of this command.

**use-any-local-port**

**no use-any-local-port**

## Syntax Description

This command has no arguments or keywords.

## Command Default

The default behavior is to use any local port.

## Command Modes

VDBE configuration (config-sbc-dbe-vdbe)

## 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 cannot be modified once any controller has been configured on the vDBE. You must delete the controller before you can modify or configure the local port.

**Note** Do not use the **use-any-local-port** command when there is a redundant SBC because the connection to the MGC may be lost with an SBC switch over.

## Examples

The following example creates a DBE service on an SBC called "mySbc," enters into SBC-DBE configuration and VDBE configuration modes, and configures the DBE to use any local port:

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# use-any-local-port
Router(config-sbc-dbe-vdbe)# exit
```

## Related Commands

| Command | Description |
|---|---|
| **local-port** | Configures a DBE to use a specific local port when connecting to the default Media Gateway Control (MGC). |

# use-time-offset

Use the time-offset specified by the **timezone-offset** command. To disable using the time-offset specified by the **timezone-offset** command, use the **no** form of this command.

**use-time-offset time-offset**

**no use-time-offset**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## 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

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.

Without this command the time-offset specified by the **timezone-offset** command under the SBE configuration mode is unused.

## Examples

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
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)# use-time-offset
```

## Related Commands

| Command | Description |
|---|---|
| **timezone-offset** | Configures the number of hours and minutes that the desired time zone is ahead of or behind the local time. |

# variant

To define an encoded codec variant name, use the **variant** command in the Codec variant configuration mode. To remove an encoded codec variant name, use the **no** form of this command.

**variant** *variant-codec-encoded-name*

**no variant**

## Syntax Description

| | |
|---|---|
| *variant-codec-encoded-name* | The variant nonstandard codec string. |

## Command Default

No default behavior or values are available.

## Command Modes

Codec variant configuration (config-sbc-sbe-codec-var-codec)

## 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 that follows shows the hierarchy of the modes required to run the command.

**Note** # is reserved for base variants. Therefore, the variant name cannot start with #

## Examples

The following example shows how to define the codec variant using the **variant** command in the Codec variant configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec variant codec G723-H-1
Router(config-sbc-sbe-codec-var-codec)# variant G723-H-1
```

# variant (codec variant profile)

To add the variant name, use the **variant** command in the codec variant profile configuration mode. To remove the encoded codec variant name, use the **no** form of this command.

**variant** *variant-name*

**no variant** *variant-name*

## Syntax Description

| | |
|---|---|
| *variant-name* | The variant nonstandard codec string.<br>The *variant-name* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters.<br>**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

Codec variant profile configuration (config-sbc-sbe-codec-var-prf)

## 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.

**Note** '#' is reserved for base variants. Therefore, the variant name cannot start with '#'

## Examples

The following example shows how to add the codec variant using the **variant** command in the codec variant profile configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec variant profile profile-1
Router(config-sbc-sbe-codec-var-prof)# variant G723-H-1
```

# vdbe (session border controller)

To enter into VDBE configuration mode, use the **vdbe** command in SBC-DBE or SBE configuration mode. To delete the entire virtual data border element (vDBE) from the running configuration, use the **no** form of this command

vdbe [global]

no vdbe [global]

## Syntax Description

| | |
|---|---|
| global | The name of the DBE that is configured.<br>Only one DBE can be configured. This is given the name *global*. If specified, the DBE name must be *global*. If not specified, *global* is assumed. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE configuration (config-sbc-sbe)

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 2.1 | This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers. |
| Cisco IOS XE Release 2.4 | This command is supported in the unified model. |

## Usage Guidelines

In the initial release only one DBE (the global DBE) is supported, and DBE resources cannot be partitioned. As such, the vdbe name is not required. If specified it must be **global**.

## Examples

The following example enters into the VDBE configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# vdbe
Router(config-sbc-sbe-vdbe)# global
Router(config-sbc-sbe-vdbe-global)#
```

## Related Commands

| Command | Description |
|---|---|
| **sbe** | Creates the SBE on the SBC. |

# vpn (session border controller)

To enter the mode for configuring the event limits for a given VPN, use the **vpn** command in the SBE blacklist configuration mode.

***vpn*** *word*

## Syntax Description

| | |
|---|---|
| *word* | Optional. VPN name or *default* for the global VPN. Maximum size is 80 characters. |

## Command Default

No default behavior or values are available.

## Command Modes

SBE blacklist configuration (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. |

## 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 **vpn** command is used to enter the mode for configuring the event limits for a given VPN:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# vpn test
Router(config-sbc-sbe-blacklist-vpn)#
```

## Related Commands

| Command | Description |
|---|---|
| **address-default** | Enters the mode for configuring the default event limits for the source addresses in a given VPN. |
| **clear sbc sbe blacklist** | Clears the blacklist for the specified SBC service. |
| **reason** | Enters a mode for configuring a limit to a specific event type on the source. |
| **show sbc sbe blacklist configured-limits** | Lists the explicitly configured limits, showing only the sources configured. |
| **show sbc sbe blacklist current-blacklisting** | Lists the limits causing sources to be blacklisted. |

# vrf

To configure an H.323 or SIP adjacency as tied to a specific VPN, use the **vrf** command in the appropriate configuration mode. To remove this configuration, use the **no** form of this command.

**vrf** *vrf_name*

**no vrf**

## Syntax Description

| | |
|---|---|
| *vrf_name* | Specifies the VRF of this adjacency.<br>The *vrf_name* can have a maximum of 32 characters which can include the underscore character (_) and alphanumeric characters.<br>**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 H.323 configuration (config-sbc-sbe-adj-h323)

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.

The adjacency will only receive incoming signaling from this VPN. The adjacency's outgoing signaling is routed in the relevant VRF.

## Examples

The following example shows how to assign the H.323 adjacency h323ToIsp42 to VRF vpn3:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# vrf vpn3
```

The following example shows how to configure the SIP adjacency SipToIsp42 to VPN using VRF vpn3:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
```

```
Router(config-sbc-sbe-adj-sip)# vrf vpn3
```

# vrf (session border controller)

To configure virtual routing and forwarding (VRF) on a Border Access Controller (BAC) adjacency, use the **vrf** command in the H248 BAC adjacency configuration mode. To disable VRF on a BAC adjacency, use the **no** form of this command.

**vrf** *vrf-name*

**no vrf** *vrf-name*

## Syntax Description

| | |
|---|---|
| *vrf-name* | Name of VRF. |

## Command Default

None

## 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. |

## Usage Guidelines

The *vrf-name* should match the name configured using the **ip vrf** command or the **ip vrf** forwarding command in the Gi interface.

To support VRF, enable Cisco Express Forwarding (CEF) switching on the router, using the **ip cef** command.

If you are also configuring the DHCP services at the access point name (APN), use the **dhcp-server ip-address vrf** command.

## Examples

The following example shows how to configure VRF on a BAC 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)# vrf vrfex
```

# warrant match-order

To configure lawful inforcement warrant information in a Session Initiation Protocol (SIP) adjacency, and to specify the order of the fields used to match the corresponding warrant, use the **warrant match-order** command in adjacency SIP configuration mode. To deconfigure the lawful inforcement warrant information, use the **no** form of this command.

**warrant match-order** [ **destination** [ **source** [ **diverted-by** ] | **diverted-by** [ **source** ]]]

**warrant match-order** [ **source** [ **destination** [ **diverted-by** ] | **diverted-by** [ **destination** ]]]

**warrant match-order** [ **diverted-by** [ **destination** [ **source** ] | **source** [ **destination** ]]]

**no warrant**

## Syntax Description

| | |
|---|---|
| **destination** | Specifies the destination field to match the warrant. |
| **source** | Specifies the source field to match the warrant. |
| diverted-by | Specifies the diverted-by field to match the warrant. |

## Command Default

By default, the incoming Access adjacency matches the source information and the Core adjacency matches the destination information.

## 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 to configure lawful inforcement warrant information in a SIP adjacency, and specifies that the warrant will be matched to the destination field, a source field, and diverted-by field, in that order:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp4
Router(config-sbe-adj-sip)# warrant match-order destination source diverted-by
```

# warrant match-order (h323)

To configure lawful inforcement warrant information in an H.323 adjacency, and to specify the order of fields used for matching the corresponding warrant, use the **warrant match-order** command in adjacency H.323 configuration mode. To deconfigure the lawful inforcement warrant information, use the **no** form of this command.

**warrant match-order** [ **destination** [ **source** [ **destination** ]]]

**warrant match-order** [ **source** [ **destination** [ **source** ]]]

**no warrant**

## Syntax Description

| | |
|---|---|
| **destination** | Specifies the destination field for matching the warrant. |
| **source** | Specifies the source field for matching the warrant. |

## Command Default

By default, the incoming Access adjacency matches the source information, and the Core adjacency matches the destination information.

## Command Modes

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

## 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 to configure lawful inforcement warrant information in an H.323 adjacency, and specifies that the warrant will be matched first to the destination field, and then to the source field:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 adj1h323
Router(config-sbc-sbe-adj-h323)# warrant match-order destination source
```

# weight (session border controller)

To assign a weight to this route, use the **weight** command in RTG routing table configuration entry configuration mode. To remove this configuration, use the **no** form of this command.

***weight*** *weight*

**no** *weight weight*

## Syntax Description

| | |
|---|---|
| *weight* | Range: [1-65535] |

## Command Default

The default is 1.

## Command Modes

RTG routing table configuration 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.

```
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-least-cost-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable)# weight 33
Router(config-sbc-sbe-rtgpolicy)# end
```

## Related Commands

| Command | Description |
|---|---|
| **entry** | Creates or modifies an entry in a table. |

# whitelist (editor)

To set an editor to be whitelisted, use the **whitelist** command in the appropriate editor configuration mode. To remove whitelist from this editor, use the **no** form of this command.

**whitelist**

**no whitelist**

## Syntax Description

This command has no arguments or keywords.

## Command Default

No default behavior or values are available.

## Command Modes

SIP Method Editor configuration (config-sbc-sbe-mep-mth)

SIP Option Editor configuration (config-sbc-sbe-mep-opt)

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

## Command History

| Release | Modification |
|---|---|
| Cisco IOS XE Release 3.7S | 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 whitelist an option editor:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip option-editor option1
Router(config-sbc-sbe-mep-opt)# whitelist
```

The following example shows how to whitelist a method editor:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-editor Method1
Router(config-sbc-sbe-mep-mth)# whitelist
```

The following example shows how to whitelist a header editor:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-editor header1
Router(config-sbc-sbe-mep-hdr)# whitelist
```

## Related Commands

| Command | Description |
|---|---|
| **sip header-editor** | Configures a header editor. |
| **sip method-editor** | Configures a method editor. |
| **sip option-editor** | Configures an option editor. |

# xml (billing)

To configure an XML billing instance, use the **xml** *method-index* command in the SBE billing configuration mode. To disable an XML instance, use the **no** form of this command.

**xml** *method-index*

**no xml** *method-index*

## Syntax Description

| | |
|---|---|
| *method-index* | The number of the XML method instances to which other parameters such as cdr path, ldr-check, cdr alarm, deact-mode, flipped-interval, and flipped-size are attached. The range of valid values for method-index are 0 to 7.<br>**Note** Only one XML instance can be configured at a given time. If you try to configure more than one instance, the 'More than one XML instance cannot be configured' error message is displayed. |

## Command Default

No default behavior or values

## Command Modes

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

## Command History

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

## Usage Guidelines

After configuring an XML billing method, an XML instance is defined using the **xml** *method-index* command to attach the parameters to the XML instance. Configuring the XML method index changes the command mode to SBE XML billing (config-sbc-sbe-billing-xml) mode. If the Billing Manager does not have an XML method configured, **xml** *method-index* command will not succeed.

**Note** A maximum of only one XML instance can be defined.

## Examples

The following example defines an XML instance:

```
Router(config)# sbc sbcbilling
Router(config-sbc)# sce
Router(config-sbc-sce)# billing
Router(config-sbc-sce-billing)# xml method
Router(config-sbc-sce-billing)# xml 1
```

**Related Commands**

| Command | Description |
|---|---|
| **method xml** | Configures the billing method as XML. |
| **cdr path** | Indicates the path in which to store the CDR billing records. |
| **ldr-check** | Configures the time at which long duration records are checked. |