show platform hardware qfp active feature sbc sfx

To display the Cisco QuantumFlow Processor SIP Fast-Register (SFX) counters, use the **show platform hardware qfp active feature sbc sfx** command in Privileged EXEC mode.

show platform hardware qfp active feature sbc sfx [global]

Syntax Description

global	Specifies SIP Fast-Register (SFX) global state information.

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

Information about how SIP fast-register (SFX) messages are processed, that is, which SIP REGISTER request packets are punted to the Route Processor (RP) or dropped, may help explain why call rates are low and why the RP CPU load is high.

Examples

The following example shows information about the parsing of SIP fast-register (SFX) messages in the Cisco QuantumFlow Processor (QFP):

```
Router# show platform hardware qfp active feature sbc sfx global

SBC QFP SIP Fast Register Dataplane Information
-----------------------------------------------

  SIP 200 OK Replies generated                 = 0
  SIP REGISTER punts :
    No table entry                             = 0
    Fast Timer expiry                          = 0
    Expires=0                                  = 0
    SIP Syntax Error                           = 0
    QFP Out of Resources                       = 0
    QFP Internal Error                         = 0
  SIP REGISTER drops :
    QFP Internal Error                         = 0
    UDP Length Error                           = 0
    UDP Checksum Error                         = 0
```

Table 1 lists field descriptions for the **show platform hardware qfp active feature sbc sfx** command.

Table 1 show platform qfp active feature sbc sfx Field Descriptions

Field	Description
SIP 200 OK Replies generated	A SIP REGISTER request was replied to in the QFP fast path using a 200 OK success reply.
SIP REGISTER punts	
No table entry	A SIP REGISTER request could not be matched with a programmed SIP Fast-Register entry. This means that the combination of AoR (Address of Record, the To: field) and the Contact URI did not match any entry. The SIP REGISTER request is then punted to the Route Processor (RP).
Fast Timer expiry	When a SIP Fast-Register entry is added for fast-pathing the SIP REGISTER requests for the combination of AoR and Contact URI, a time limit for fast-pathing the re-REGISTER requests is set. When that time limit is exceeded, then the next SIP REGISTER request is punted to the RP.
Expires=0	A SIP REGISTER request was received with either an individual Contact specifying “expires=0” or with a SIP request global “Expires: 0” message header. The SIP REGISTER request is then punted to the RP.
SIP Syntax Error	A field in a SIP REGISTER message could not be parsed in the QFP fast path. The request is then punted to the RP.
QFP Out of Resources	A resource on the QFP could not be allocated to process a SIP REGISTER request. The request is then punted to the RP.
QFP Internal Error	An internal inconsistency in processing a SIP REGISTER request was encountered. The request is then punted to the RP for processing.
SIP REGISTER drops	
QFP Internal Error	A failure to format the reply packet or to send the reply packet back was encountered. The request packet is dropped.
UDP Length Error	A packet's UDP length did not match the IP total length and is dropped.
UDP Checksum Error	The UDP checksum was incorrect in the SIP REGISTER packet. The packet is dropped.

Related Commands

Command	Description
clear platform hardware qfp active feature sbc sfx	Clears information about SIP fast-register (SFX) messages in the Cisco QuantumFlow Processor (QFP).

show sbc

To list all the Session Border Controllers (SBCs) configured on the chassis, use the **show sbc** command in the Privileged EXEC mode.

show sbc

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 2.6.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.1S	The output of the command was changed to include the mode and status of the SBC.

Examples

The following example shows how the **show sbc** command displays the list of all SBCs configured on the chassis.

```
Router# show sbc
SBC name is asr1k-sbc
SBC mode is Unified
SBC is Active
```

Related Commands

Command	Description
show sbc services	Displays the list of all SBC services on the chassis.

show sbc dbe addresses (session border controller)

To list the H.248 control addresses and media addresses configured on data border elements (DBEs), use the **show sbc dbe addresses** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe addresses**

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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 3.1S	The format of the output displayed by this command was modified in a release earlier than Release 3.1S.

Examples

The following example shows the H.248 control and media addresses, VRF name, port ranges, and service class configured on a DBE that is on the mySbc SBC:

```
Router# show sbc mySbc dbe addresses

SBC Service "mySbc"
  H.248 control address:10.0.0.1

Media-Address:                    1.1.1.1
VRF:                              Global
Port-Range (Service-Class):       5-6 (signaling)
                                  16384-20000 (any)

Media-Address:                    1.1.1.2-1.1.1.3
VRF:                              Global
Port-Range (Service-Class):

Media-Address:                    1.1.1.5-1.1.1.6
VRF:                              Global
Port-Range (Service-Class):

Media-Address:
     6::2 - 6::3
VRF:                              Global
Port-Range (Service-Class):       4-6 (signaling)

Media-Address:
     6::5
VRF:                              Global
```

```
Port-Range (Service-Class):

Media-Address:
     1111:2222:3333:4444::1 -
     1111:2222:3333:4444::5
VRF:                              Global
Port-Range (Service-Class):       2-6 (signaling)

Media-Address:
     1111:2222:3333:4444::8
VRF:                              Global
Port-Range (Service-Class):
```

Related Commands

Command	Description
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe media-flow-stats	Displays the statistics about one or more media flows collected on the DBE.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc dbe controllers (session border controller)

To list the media gateway controllers (MGCs) and the controller address configured on each data border element (DBE), use the **show sbc dbe controllers** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe controllers**

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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	Output was modified to add Session Establishment Time, Transaction Long Timer, and TMAX Timeout fields.
Cisco IOS XE Release 2.4	This command was modified for distributed SBC—output was modified to show Service Change Cold Boot delay timer information.

Examples

The following example shows that the controller is detached and a new field indicating that a delay timer is set to delay generation of a Service Change Cold Boot for 112 seconds was added in Cisco IOS XE Release 2.4 for distributed SBC:

```
Router# show sbc global dbe controllers
SBC Service "global"
  vDBE in DBE location 1

   DBE Admin Status:    Activation Delayed 112 seconds
    Media gateway controller in use:
      H.248 controller address
        200.50.1.254:2970
      Status:   Detached

                  Sent        Received    Failed      Retried
      Requests    1           0           0           1
      Replies     0           0                       0

    Segmentation:
      MGC PDU Size:  N/A
      MG PDU Size:   N/A
      MGC Seg timer: N/A
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A
```

```
    Configured controllers:
      H.248 controller 2:
```

The following example shows that the controller is attached and a new field displaying the Session Establishment Time ("**since 2008/02/19 13:56:30**") that was added in Cisco IOS XE Release 2.2:

```
Router# show clock
*09:06:03.135 UTC Mon Feb 18 2008

Router# show sbc global dbe controllers
SBC Service "global"
  vDBE in DBE location 1

   DBE Admin Status:    Active
    Media gateway controller in use:
      H.248 controller address
        200.50.1.254:2970
      Status:   Attached, since 2008/02/19 13:56:30

                  Sent        Received    Failed      Retried
      Requests    1           0           0           1
      Replies     0           1                       0

    Segmentation:
      MGC PDU Size:  N/A
      MG PDU Size:   N/A
      MGC Seg timer: N/A
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A

    Configured controllers:
      H.248 controller 2:
```

The following example establishes controller connection prior to the TMAX timeout being changed:

```
Router# show sbc global dbe controller
SBC Service "global"
  vDBE in DBE location 1

   DBE Admin Status:    Active
   DBE Transaction Long Timer 15000 (ms)
   DBE TMAX Timeout 10000 (ms)

    Media gateway controller in use:
      H.248 controller address
        200.50.1.254:2970
      Status:   Attached, since 2008/02/22 17:35:43

                  Sent        Received    Failed      Retried
      Requests    1           0           0           3
      Replies     0           1                       0

    Segmentation:
      MGC PDU Size:  N/A
      MG PDU Size:   N/A
      MGC Seg timer: N/A
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A

    Configured controllers:
      H.248 controller 2:
```

```
        Remote address:    200.50.1.254:2970
        Transport:         UDP
```

The following example shows that the Tmax timeout has been changed to 20 seconds and entering the **show controller** command again displays the new fields, Transaction Long Timer and TMAX Timeout, added in Cisco IOS XE Release 2.2:

```
Router# show sbc global dbe controllers
SBC Service "global"
  vDBE in DBE location 1

   DBE Admin Status:    Active
   DBE Transaction Long Timer 25000 (ms)
   DBE TMAX Timeout 20000 (ms)

    Media gateway controller in use:
      H.248 controller address
        200.50.1.254:2970
      Status:   Detached

                  Sent        Received    Failed      Retried
      Requests    1           0           0           2
      Replies     0           0                       0

    Segmentation:
      MGC PDU Size:  N/A
      MG PDU Size:   N/A
      MGC Seg timer: N/A
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A

    Configured controllers:
      H.248 controller 2:
        Remote address:    200.50.1.254:2970
        Transport:         UDP
```

The following example shows the H.248 controllers configured on the virtual data border element (vDBE) with a location ID of 1 on an SBC called “mySbc.” In this example, the H.248 status is active.

```
Router# show sbc mySbc dbe controllers

SBC Service “mySbc”
  vDBE in DBE location 1

   DBE Admin Status:   Active
    Media gateway controller in use:
      H.248 controller address
        200.100.1.254:2991
      Status:            Detached

                  Sent        Received    Failed      Retried
      Requests    1           0           0           2
      Replies     0           0                       0

    Segmentation:
      MGC PDU Size:  33 bytes
      MG PDU Size:   N/A
      MGC Seg timer: 44 ms
      MG Seg timer:  N/A
      Segments Sent: N/A
      Segments Rcvd: N/A
```

```
    Configured controllers:
      H.248 controller 1:
        Remote address:    200.100.1.254:2991
        Transport:         UDP (with IAH)
```

The following example shows the H.248 controllers configured on the virtual data border element (vDBE) with a location ID of 1 on an SBC called “mySbc.” In this example, the H.248 status is inactive.

```
Router# show sbc mySbc dbe controllers

SBC Service "mySbc"
  vDBE in DBE location 1

   DBE Admin Status:    Inactive
    Media gateway controller in use:

    Configured controllers:
      H.248 controller 5:
        Remote address:    10.1.1.1:6
        Transport:         UDP
```

Table 2 describes the significant fields shown in the display.

Table 2 show sbc dbe controllers Field Descriptions

Field	Description
DBE Admin Status	Possible values are Active and Inactive.
Media gateway controller in use:	Statistics that follow are applicable to the MGC(s) in use.
H.248 controller address	H.248 controller address.
Status:	Status of the controller. Possible values are Attached and Detached.
Requests	Number of H.248 requests sent, received, failed, or retried.
Replies	Number of H.248 replies sent, received, failed, or retried.
Segmentation:	Statistics that follow are applicable to the H.248 Segmentation package.
MGC PDU Size	Maximum protocol data unit (PDU) size, in bytes, that the User Datagram Protocol (UDP) should use for H.248 control signaling.
MG PDU Size	Not applicable.
MGC Seg timer	Time interval, in milliseconds, on the segmentation timer.
MG Seg timer	Not applicable.
Segments Sent:	Number of segments sent.
Segments Rcvd:	Number of segments received**.**
Configured controllers:	Statistics that follow are applicable to configured H.248 controllers.
Remote address	Remote address of the configured controller.
Transport	Transport in use on the configured controller. Possible values are UDP, UDP (with IAH), TCP, and TCP (with IAH)

Table 2 show sbc dbe controllers Field Descriptions (continued)

Field	Description
Session Establishment Time	This has the format (YY/MM/DD hour/minute/second). If the router time is changed, the operator is expected to detect this from any console log, as the Session Establishment Time is not updated.
Transaction Long Timer	This timer determines the total time the DBE waits (and keep retrying) from initially sending a request until receiving a response. It is set to TMAX + MaxRTT, where TMAX is configurable and MaxRTT is hard coded to 0.5 seconds. The association to the MGC is lost if this timer expires before the transaction reply is received.
TMAX Timeout	This is the maximum delay in seconds. It is a parameter of the TMAX timer that limits the maximum delay of retransmissions by the DBE when sending messages to the MGC. The default is 10 seconds.

Related Commands

Command	Description
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe media-flow-stats	Displays the statistics about one or more media flows collected on the DBE.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc dbe flow-stats (session border controller)

To list all flow statistics, both signaling and media flows, collected on the data border element (DBE), use the **show sbc dbe flow-stats** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe flow-stats** [{**summary** | **detail**}] [**vrf** *vrf-name*] [{**ipv4** *A.B.C.D* | **ipv6** *ipv6-address*} [**port** *port-number*]] [**context** {*id*}| **termination** {*termination substring*}]]

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.
summary	(Optional) Displays a summary of all flow statistics, including pinhole flows, for the DBE.
detail	(Optional) Displays detailed flow statistics, including pinhole flows, for the DBE.
vrf *vrf-name*	(Optional) Displays only flows to or from the specified VPN routing and forwarding instance (VRF).
ipv4 *A.B.C.D*	(Optional) Displays only flows to or from the specified IPv4 media IP address.
ipv6 ipv6-address	(Optional) Displays only flows to or from the specified IPv6 media IP address.
port port-number	(Optional) Displays only flows to or from the specified port number.
context	(Optional) Shows summary or detailed display of all pinhole flows within the context ID.
id	(Optional) Specifies the context ID number.
termination	(Optional) Shows summary or detailed display of pinhole flows that match the termination substring.
termination substring	(Optional) Specifies the termination substring number.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 2.4	This command is supported for the unified model.

Usage Guidelines

The flow-stats per-flow counters are updated dynamically.

Not all endpoints report RTP Control Protocol (RTCP) endpoint statistics. In addition, not all endpoints that report RTCP statistics report all the fields shown.

When the "Media Flowing" field is reported as Yes, it either means that media has been observed flowing on the call within the media timeout period, or the call has failed over within the last media timeout period and the SBC has not yet had a chance to observe whether media is flowing or not.

Examples

The following example displays all the active flows, signaling and media flows:

```
Router# show sbc global dbe flow-stats
SBC Service "global"
Media flow statistics
  Media Flow:
    Context ID:          2
    Stream ID:           2
    State of Media Flow: Allocated
    Call Established Time: 15:27:27 PDT Apr 9 2008
    Flow Priority:       Unspecified
    Side A:
      Name                        mycompany/voice/gn/0/1/0/1/ac/3
      Reserved Bandwidth:         12600 (bytes/second)
      Status                      OutofService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.2.1
      Local Port:                 10002
      Remote Address:             10.10.127.22
      Remote Port:                17384
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      RTCP Packets Sent:          Not known
      RTCP Packets Received:      Not known
      RTCP Packets Lost:          Not known
      DTMF Interworking:          No
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Billing ID:                 00000000000000000000000000000000000000000000000000
      Media directions allowed:   inactive
      Max Burst size:             0 (bytes)
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No

    Side B:
      Name                        mycompany/voice/gn/0/2/0/1/bb/4
      Reserved Bandwidth:         12600 (bytes/second)
      Status                      OutofService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.2.1
      Local Port:                 10004
      Remote Address:             200.0.0.1
      Remote Port:                19384
      Packets Received:           0
      Packets Sent:               0
```

```
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      RTCP Packets Sent:          Not known
      RTCP Packets Received:      Not known
      RTCP Packets Lost:          Not known
      DTMF Interworking:          No
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Billing ID:                 00000000000000000000000000000000000000000000000000
      Media directions allowed:   inactive
      Max Burst size:             0 (bytes)
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No


SBC Service "global"
Signaling flow statistics
  Media Flow:
    Context ID:          2
    Stream ID:           1
    State of Signaling Flow: Allocated
    Call Established Time: 15:24:38 PDT Apr 9 2008
    Flow Priority:       Unspecified
    Side A:
      Name                        mycompany/sip4/gn/0/1/0/1/ac/1
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.2.1
      Local Port:                 10000
      Remote Address:             3.0.0.3
      Remote Port:                5000
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Max Burst size:             0 (bytes)
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No
Side B:
      Name                        mycompany/sip4/gn/0/1/0/1/bb/2
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
```

```
  Local Address:              202.50.2.1
  Local Port:                 10001
  Remote Address:             3.0.0.3
  Remote Port:                5000
  Packets Received:           0
  Packets Sent:               0
  Packets Discarded:          0
  Data Received:              0 (bytes)
  Data Sent:                  0 (bytes)
  Data Discarded:             0 (bytes)
  GM Discarded Packets:       0
  Time To Recovery:           Not known
  Media Flowing:              No
  Unexpected SrcAddr Packets: No
  Max Burst size:             0 (bytes)
  Delay variation tolerance:  0 (microseconds)
  SDP string:                 m=application $ udp 0
  Graceful deactivation:      No
  DiffServ Code Point:        B8
  Media Loss Event:           No
  NAT Latch Event:            No
```

The following example displays a summary of all flows with context ID number 1:

```
Router# show sbc global dbe flow-stats summary context 1
SBC Service "global"
Media flow statistics
    Context ID 1                Stream ID 2
    Side A:             Name mycompany/voice/gn/0/1/0/1/ac/3    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10002
      Remote Address/Port: 10.10.127.22/17384
      Status:              OutofService
    Side B:             Name mycompany/voice/gn/0/2/0/1/bb/4    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10004
      Remote Address/Port: 200.0.0.1/19384
      Status:              OutofService

SBC Service "global"
Signaling flow statistics
    Context ID 1                Stream ID 1
    Side A:             Name mycompany/sip4/gn/0/1/0/1/ac/1    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10000
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
    Side B:             Name mycompany/sip4/gn/0/1/0/1/bb/2    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10001
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
```

The following example displays a summary of flows with the termination string, mycompany:

```
Router# show sbc global dbe flow-stats summary termination mycompany
SBC Service "global"
Media flow statistics
    Context ID 1                Stream ID 2
    Side A:             Name mycompany/voice/gn/0/1/0/1/ac/3    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10002
      Remote Address/Port: 10.10.127.22/17384
      Status:              OutofService
    Side B:             Name mycompany/voice/gn/0/2/0/1/bb/4    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10004
      Remote Address/Port: 200.0.0.1/19384
```

```
      Status:              OutofService

SBC Service "global"
Signaling flow statistics
    Context ID 1                Stream ID 1
    Side A:             Name mycompany/sip4/gn/0/1/0/1/ac/1    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10000
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
    Side B:             Name mycompany/sip4/gn/0/1/0/1/bb/2    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10001
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
```

The following example displays a summary of flows with the combination of context ID 1 and the termination string, mycompany:

```
Router# show sbc global dbe flow-stats summary context 1 termination mycompany
SBC Service "global"
Media flow statistics
    Context ID 1                Stream ID 2
    Side A:             Name mycompany/voice/gn/0/1/0/1/ac/3    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10002
      Remote Address/Port: 10.10.127.22/17384
      Status:              OutofService
    Side B:             Name mycompany/voice/gn/0/2/0/1/bb/4    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10004
      Remote Address/Port: 200.0.0.1/19384
      Status:              OutofService

SBC Service "global"
Signaling flow statistics
    Context ID 1                Stream ID 1
    Side A:             Name mycompany/sip4/gn/0/1/0/1/ac/1    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10000
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
    Side B:             Name mycompany/sip4/gn/0/1/0/1/bb/2    Media Flowing:  No
      Local Address/Port:  202.50.2.1/10001
      Remote Address/Port: 3.0.0.3/5000
      Status:              InService
```

Table 3 describes the significant fields shown in the display.

Table 3 show sbc dbe flow-stats Field Descriptions

Field	Description
Context ID	The context ID to which the flow is associated.
Stream ID	Stream ID.

Table 3 show sbc dbe flow-stats Field Descriptions (continued)

Field	Description
State of Media Flow	Flow (or Termination) state (Active, Allocated, or Unknown). Active—The DBE has programmed the flow pair and media has started flowing in at least one direction. Allocated—The DBE has programmed the flow pair, but no media has started to flow. Unknown—The DBE has not yet been given enough information by the controller to be able to program the flow pair.
State of Signaling Flow	Flow state (Active, Allocated, or Unknown). • Active—DBE has programmed the flow pair and the media has started flowing in at least one direction. • Allocated—DBE has programmed the flow pair, but no media has started to flow. • Unknown—DBE has not yet been given enough information by the controller to be able to program the flow pair.
Call Established Time	Call established time in the format 23:51:29 UTC Jun 21 2007.
Flow Priority	Priority of the call (Routine or Urgent).
Side A	Information for the initiating side of the call.
Side B	Information for the terminating side of the call.
Name	Name of the flow.
Reserved Bandwidth	Bandwidth reserved for the call in bytes per second. (This value maps to the tman/sdr value.)
Status	Status is InService or OutofService. InService—Flow on this side is in service. OutofService—No media is forwarded.
VRF Name	Either the VRF name, or “Global” when there is no VRF.
VLAN Tags (Priorities)	VLAN tags and Ethernet priorities information.
Local Address	Local address on the DBE on which packets are received for this side of the call.
Local Port	Local port on the DBE on which packets are received for this side of the call.
Remote Address	Address of the remote endpoint from which packets are expected to be sent for this side of the call.
Remote Port	Port on the remote endpoint from which packets are expected to be sent for this side of the call.

Table 3 show sbc dbe flow-stats Field Descriptions (continued)

Field	Description
Remote Source Address Mask	If specified, all packets matching the Remote Source Address Mask are classified as belonging to this flow rather than just those matching the full remote and port. (This value maps to the gm/sam value.)
Packets Received	Number of packets received from the remote endpoint.
Packets Sent	Number of packets forwarded to the remote endpoint.
Packets Discarded	Number of packets dropped (due to bandwidth policing, for example).
Data Received	Number of bytes of data received from the remote endpoint.
Data Sent	Number of bytes of data forwarded to the remote endpoint.
Data Discarded	Number of bytes of data dropped (due to bandwidth policing, for example). (This value maps to the gm/sam value.)
GM Discarded Packets	This counter is always set to zero because it is not currently implemented. It will be the number of data packets received from the remote endpoint that have been discarded locally because of source address/port filtering.
Time To Recovery	The tsc/ttr value from Termination State Control (TSC) package, in milliseconds.
RTCP Packets Sent	If there are RTCP packets flowing in the call, the number of RTP packets (within the most recently received RTCP) that the endpoint reports as being sent.
RTCP Packets Received	If there are RTCP packets flowing in the call, the number of RTP packets (within the most recently received RTCP) that the endpoint reports as being received.
RTCP Packets Lost	If there are RTCP packets flowing in the call, the number of RTP packets (within the most recently received RTCP) that the endpoint reports as being lost.
DTMF Interworking	Indicates whether DTMF interworking is in operation for the flow.
Media Flowing	Indicates whether packets are flowing from the endpoint.
Unexpected SrcAddr Packets	If unexpected-source-alerting is switched on with the **unexpected-source-alerting** command, this counter records the number of alerts generated for the flow when media packets for a call are received from an unexpected source address and port. An unexpected source event happens when a packet is received, matched to a flow (but not by a full 5-tuple comparison), and found to have come from the wrong remote address.
Delay variation tolerance	The delay variation tolerance (tman/dvt) associated with the Tman package. Defines the delay variation tolerance for the stream in tenths of microseconds when enforcing the PDR value in the first leaky bucket.

Table 3 show sbc dbe flow-stats Field Descriptions (continued)

Field	Description
SDP string	The SDP string is that present on the H.248 ADD request to provision the call.
Graceful deactivation	Description to be added.
DiffServ Code Point	The Diffserv Code point is the (DSCP value) provided on the H.248 request to mark the media packets. This reflects the ds/dscp parameters.
Media Loss Event	Media Loss Event is “Yes” if the flow has the nt/qualert subscription.
NAT Latch Event	The NAT Latch Event is “Yes” if the flow has adr/rsac subscribed.
Billing ID	Signaling border element (SBE) billing ID for this side of the call.
Media directions allowed	Allowed directions of media flow for this side of the call (inactive, sendonly, recvonly, or sendrecv).

Related Commands

Command	Description
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc dbe forwarder-stats (session border controller)

To display the global list of statistics for the DBE forwarding process, use the **show sbc dbe forwarder-stats** command in user EXEC mode or privileged EXEC mode.

show sbc {*sbc-name*} **dbe forwarder-stats**

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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	Added "Packets violated" field.

Usage Guidelines

This command provides a live snapshot of the current state of the DBE forwarding process by showing low-level statistics on the packets processed by the process. This command is intended to be used by Cisco customer support engineers to diagnose media problems.

Because DBE forwarding statistics can overwrite after approximately 4 billion packets, overall packet counts might not be accurate. For more accurate statistics on completed calls, use the **show sbc dbe media-stats** command. For accurate information on active flows, use the **show sbc dbe media-flow-stats** command.

Examples

The following example shows the list of statistics for the DBE forwarding process:

```
Router# show sbc global dbe forwarder-stats

IOSd MPF Stub Message statistics
--------------------------------
Total global PMI messages received         = 1
Total global PMI messages transmitted      = 1
Total call PMI messages received           = 0
Total call PMI messages transmitted        = 0
Total global PMI message handling failures = 0
Total call PMI message handling failures   = 0
Total global TDL messages received         = 1
Total global TDL messages transmitted      = 1
Total call TDL messages received           = 0
Total call TDL messages transmitted        = 0
Total global TDL message handling failures = 0
Total call TDL message handling failures   = 0
```

```
Total packets injected                    = 0
Total packets punted                      = 0
Total injected packets dropped            = 0
Total punted packets dropped              = 0
Total global message timeouts             = 0
Total call message timeouts               = 0

Call ID database is NOT Initialised

IOSd MPF Stub Call statistics
-----------------------------
Number of currently in-use Calls          = 0
High-water number of in-use Calls         = 0
Maximum number of in-use Calls supported  = 0

SBC Media Forwarder Statistics
------------------------------
Summary information:
  Total packets received                      = 28416
  Total packets forwarded                     = 14336
  Total packets dropped                       = 14080
  Total packets punted                        = 0
  Incoming packets diverted to SBC subsystem  = 0
  Outgoing packets inserted by SBC subsystem  = 0

Detailed breakdown of statistics:

Dropped packets:
  IP TTL expired                              = 0
  No associated flow                          = 0
  Wrong source for flow                       = 0
  Ingress flow receive disabled               = 0
  Egress flow send disabled                   = 0
  Not conforming to flowspec                  = 14080
  Badly formed RTP                            = 0
  Badly formed RTCP                           = 0
  Excessive RTCP packet rate                  = 0
  Borrowed for outgoing DTMF                  = 0
  Unknown destination address                 = 0
  Misdirected                                 = 0
  Feature disabled                            = 0
  Reprocess limit exceeded                    = 0

Punted packets:
  H.248 control packets                       = not implemented
  Packets containing options                  = 0
  Fragmented packets                          = 0
  Unexpected IP protocol                      = 0
  Packets from invalid port range             = 0

Punted packets dropped through rate limiting  = 0
Packets colored with configured DSCP          = 0

Diverted DTMF packets dropped:
  Excessive DTMF packet rate                  = 0
  Bad UDP checksum                            = 0
  Diverted packet queue full                  = not implemented
  Other                                       = not implemented

Inserted packets dropped:
  Flow inactive or disabled                   = 0
  No outgoing packet buffer available         = 0
  Outgoing Queue full                         = 0
  Other                                       = 0
```

```
Generated event information:
  Number of media UP events                  = 0
  Number of media DOWN events                = 0
  Number of unexpected source events         = 0

Platform specific statistics:
  Packets learn source address               = 0
  Packets Learn source address timed out     = 0
  Packets conformed                          = 1982
  Packets violated                           =   18
  Packets exceed                             = 0
  Packets RTCP receive                       = 0

SBC Media Forwarder statistics can wrap after
approximately 18 quintillion packets.  For more accurate
statistics on completed calls, please use
  show sbc ... dbe media-stats
```

Table 4 describes the significant fields shown in the display.

Table 4 show sbc dbe forwarder-stats Field Descriptions

Field	Description
IOSd MPF Stub Message statistics	
`Total global PMI messages received`	Total global packet management interface (PMI) messages received by the DBE forwarding process. This counter increments during normal operation.
`Total global PMI messages transmitted`	Total global packet management interface (PMI) messages transmitted by the DBE forwarding process. This counter increments during normal operation.
`Total call PMI messages received`	Total packet management interface (PMI) messages related to calls received by the DBE forwarding process. This counter increments during normal operation.
`Total call PMI messages transmitted`	Total packet management interface (PMI) messages related to calls transmitted by the DBE forwarding process. This counter increments during normal operation.
`Total global PMI message handling failures`	Failure counters indicating that something has gone wrong with handling total global packet management interface (PMI) messages. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
`Total call PMI message handling failures`	Failure counters indicating that something has gone wrong with handling total packet management interface (PMI) messages related to calls. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
`Total global TDL messages received`	Total global type definition language (TDL) messages received by the DBE forwarding process. This counter increments during normal operation.

Table 4 show sbc dbe forwarder-stats Field Descriptions (continued)

Field	Description
Total global TDL messages transmitted	Total global type definition language (TDL) messages transmitted by the DBE forwarding process. This counter increments during normal operation.
Total call TDL messages received	Total type definition language (TDL) messages related to calls received by the DBE forwarding process. This counter increments during normal operation.
Total call TDL messages transmitted	Total type definition language (TDL) messages related to calls transmitted by the DBE forwarding process. This counter increments during normal operation.
Total global TDL message handling failures	Failure counters indicating that something has gone wrong with handling total global type definition language (TDL) messages. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
Total call TDL message handling failures	Failure counters indicating that something has gone wrong with handling total type definition language (TDL) messages related to calls. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
Total packets injected	Total dual-tone multifrequency (DTMF) packets inserted into the Real-time Transport Protocol (RTP) stream. If DTMF interworking is configured, then these counters are expected to increase.
Total packets punted	Total dual-tone multifrequency (DTMF) packets removed from the Real-time Transport Protocol (RTP) streams. If DTMF interworking is configured, then these counters are expected to increase.
Total injected packets dropped	Failure counters indicating that something has gone wrong—total DTMF packets inserted into RTP streams that have dropped. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
Total punted packets dropped	Failure counters indicating that something has gone wrong—total DTMF packets removed from RTP streams that have dropped. The suggested action is to monitor the counters and if they are increasing or are associated with another failure, then call TAC.
IOSd MPF Stub Call statistics	
Number of currently in-use Calls	Number of calls currently in use.
High-water number of in-use Calls	The maximum number of calls that have ever been in use.
Maximum number of in-use Calls supported	This will only be filled in once the Call IS database moves to initialized state.
SBC Media Forwarder Statistics	
Summary information	

Table 4 show sbc dbe forwarder-stats Field Descriptions (continued)

Field	Description
Total packets received	Total packets received by the DBE forwarding process.
Total packets forwarded	Total packets forwarded by the DBE forwarding process.
Total packets dropped	Total packets dropped by the DBE forwarding process for any reason.
Total packets punted	Total packets punted to the IP stack by the DBE forwarding process.
Incoming packets diverted to SBC subsystem	Number of incoming packets diverted to the Media Gateway Manager (MGM).
Outgoing packets inserted by SBC subsystem	Number of outgoing packets inserted by MGM.
Detailed breakdown of statistics	
Dropped packets	
IP TTL expired	Number of packets rejected by DBE forwarding process and dropped because the IP time to live (TTL) has expired.
No associated flow	Number of packets rejected by DBE forwarding process and dropped because they do not correspond to a matching media flow.
Wrong source for flow	Number of packets rejected by DBE forwarding process and dropped because the source IP address and source port do not match the expected source address and source port for the flow.
Ingress flow receive disabled	Number of packets rejected by DBE forwarding process and dropped because receiving packets from the remote endpoint is disabled.
Egress flow send disabled	Number of packets rejected by DBE forwarding process and dropped because sending packets to the remote endpoint is disabled.
Not conforming to flowspec	Number of packets rejected by DBE forwarding process and dropped because they do not conform according to flowspec traffic policing for the flow. A flowspec is the traffic parameters of a stream of IP packets between two applications in IPv6 or IPv4.
Badly formed RTP	Number of packets rejected by DBE forwarding process and dropped due to Real Time Protocol (RTP) errors.
Badly formed RTCP	Number of packets rejected by DBE forwarding process and dropped due to Real Time Control Protocol (RTCP) errors.
Excessive RTCP packet rate	Number of RTCP packets rejected by DBE forwarding process and dropped because too many RTCP packets were sent on a given flow; policer indicated violated the flow specifier. The DBE forwarding process allows two RTCP packets per second for each flow.

Table 4 show sbc dbe forwarder-stats Field Descriptions (continued)

Field	Description
Borrowed for outgoing DTMF	Number of packets rejected by DBE forwarding process and dropped because they were borrowed from their own flow in order to allow an outgoing packet to be inserted into a flow.
Unknown destination address	Number of packets rejected by DBE forwarding process and dropped because the destination address is unknown.
Misdirected	Number of packets that was dropped due to having an address that would have caused the packets to be punted.
Feature disabled	Number of packets that was received while SBC was in the process of being deactivated. Depending on the volume of traffic, this number will remain small. This counter only increments during the deactivation process. Once the feature (SBC) is fully deactivated (with the **no activate** command), this counter will no longer increment.
Reprocess limit exceeded	Error condition counter. Counts errors when an SBC packet is re-processed too many times because the destination address was changed to be a local address on the DBE. After the destination address is translated and forwarded, the packet ends up in the SBC path again. This counter does not typically increase.
Punted packets	
H.248 control packets	Not implemented in command output.
Packets containing options	Number of packets rejected by DBE forwarding process and punted because the IP header contains IP options.
Fragmented packets	Number of packets rejected by DBE forwarding process and punted to the IP stack because the IP datagram is fragmented.
Unexpected IP protocol	Number of packets rejected by DBE forwarding process and punted because they are neither UDP nor TCP, or they are TCP but they are not destined for a signaling pinhole.
Packets from invalid port range	Number of packets rejected by DBE forwarding process and punted because the destination UDP port is outside the VoIP UDP port range.
Punted packets dropped through rate limiting	Number of packets not punted to the IP stack and dropped due to rate limiting.
Packets colored with configured DSCP	Number of packets colored with configured marker DSCP value by Two-Rate-Three-Color Marker feature.
Diverted DTMF packets dropped	
Excessive DTMF packet rate	Number of incoming packets diverted to MGM but dropped due to rate limiting. These packets are included in the divert count and drop count.
Bad UDP checksum	The UDP checksum was incorrect in the DTMF packet. The packet is dropped.
Diverted packet queue full	Not implemented in command output.
Other	Not implemented in command output.

Table 4 show sbc dbe forwarder-stats Field Descriptions (continued)

Field	Description
Inserted packets dropped	
Flow inactive or disabled	Number of outgoing packets inserted by MGM but dropped because the request is invalid. These packets are included in the insert count and drop count.
No outgoing packet buffer available	Number of outgoing packets inserted by MGM but dropped because no packet buffers are available. These packets are included in the insert count and drop count.
Outgoing Queue full	Number of outgoing packets inserted by MGM but dropped because the outgoing packet queue is full. These packets are included in the insert count and drop count.
Other	Number of outgoing packets inserted by MGM but dropped for other reasons. These packets are included in the insert count and drop count.
Generated event information	
Number of media UP events	Number of media UP events generated.
Number of media DOWN events	Number of media DOWN events generated.
Number of unexpected source events	Number of unexpected source address events generated.
Platform specific statistics	
Packets learn source address	For flows that have source address latching configured, a count of the number of packets that are latched.
Packets Learn source address timed out	If a flow has be programmed to relatch the source address and a new source address was not received in the specified timeframe, then this counts the timeout.
Packets conformed	Count of the number of packets that the policer indicated conformed to the flow specifier.
Packets violated	Count of the number of packets that the policer indicated violated the flow specifier.
Packets exceed	Count of the number of packets that the policer indicated exceeded the flow specifier
Packets RTCP receive	Count of the number of RTCP packets received.

Related Commands

Command	Description
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe media-flow-stats	Displays the statistics about one or more media flows collected on the DBE.
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.

show sbc dbe h248-profile

To list the information on the specified H.248 profile, including transport, H.248 form, and active packages, use the **show sbc dbe h248-profile** command in the Privileged EXEC mode.

show sbc *sbc-name* **dbe h248-profile**

Syntax Description

sbc-name	Defines the name of the 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 the defaults and configured options for the H.248 profile:

```
Router# show sbc mysbc dbe h248-profile
Transport UDP IAH
H.248 Version 3
Packages:
Generic(g)
Base Root(root): Max Terminations per context 10
Network(l)
DiffServ(ds)
Gate Management(gm)
Traffic Management(tman)
IP NAPT(ipnapt)
Segment(seg): Max PDU Size 4096 bytes
```

Related Commands

Command	Description
h248-profile	Configures the vDBE H.248 profile name to interoperate with the MGC.
h248-profile-version	Configures the vDBE H.248 profile version to interoperate with the MGC. This command is used after you have defined the name of the profile using the **h248-profile** command.

show sbc dbe media-flow-stats (session border controller)

To list the media flow statistics collected on the data border element (DBE), use the **show sbc dbe media-flow-stats** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe media-flow-stats** [{**summary** | **detail**}] [**vrf** *vrf-name*] [{**ipv4** *A.B.C.D* | **ipv6** *ipv6-address*} [**port** *port-number*]] [**context** {*id*}| **termination** {*termination substring*}]]

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.
summary	(Optional) Displays a summary of the media flow statistics, including pinhole flows, for the DBE.
detail	(Optional) Displays detailed media statistics, including pinhole flows, for the DBE.
vrf *vrf-name*	(Optional) Displays only media flows to or from the specified VPN routing and forwarding instance (VRF).
ipv4 *A.B.C.D*	(Optional) Displays only media flows to or from the specified IPv4 media IP address.
ipv6 ipv6-address	(Optional) Displays only media flows to or from the specified IPv6 media IP address.
port port-number	(Optional) Displays only media flows to or from the specified port number.
context	(Optional) Shows summary or detailed display of all pinhole flows within the context ID.
id	(Optional) Specifies the context ID number.
termination	(Optional) Shows summary or detailed display of pinhole flows. that match the termination substring.
termination substring	(Optional) Specifies the termination substring number.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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 **context** and **termination** keywords were added. New fields (Max Burst size, Delay variation tolerance, SDP string, Graceful deactivation, DiffServ Code Point, Media Loss Event, and NAT Latch Event) were added to the output display.
Cisco IOS XE Release 2.4	This command is supported for the unified model.

Usage Guidelines

Not all endpoints report RTP Control Protocol (RTCP) endpoint statistics. In addition, not all endpoints that report RTCP statistics report all the fields shown.

When the "Media Flowing" field is reported as Yes, it either means that media has been observed flowing on the call within the media timeout period, or the call has failed over within the last media timeout period and the SBC has not yet had a chance to observe whether media is flowing or not.

Examples

The following example displays signaling and media flow pairs and additional fields added in Cisco IOS XE Release 2.2:

```
Router# show sbc global dbe media-flow-stats
SBC Service "global"
  Media Flow:
    Context ID:          6
    Stream ID:           2
    State of Media Flow: Allocated
    Call Established Time: 16:54:29 UTC Feb 20 2008
    Flow Priority:       Unspecified
    Side A:
      Name                          mycompany/voice/gn/0/1/0/1/ac/3
      Reserved Bandwidth:           12600 (bytes/second)
      Status                        OutofService
      VRF Name:                     Global
      VLAN Tags(Priorities):        0(0), 0(0)
      Local Address:                202.50.2.1
      Local Port:                   10002
      Remote Address:               10.10.127.22
      Remote Port:                  17384
      Packets Received:             0
      Packets Sent:                 0
      Packets Discarded:            0
      Data Received:                0 (bytes)
      Data Sent:                    0 (bytes)
      Data Discarded:               0 (bytes)
      GM Discarded Packets:         0
      Time To Recovery:             Not known
      EndPoint Packets sent:  Not known
     EndPoint Packets received: Not known
     EndPoint Packets Lost: Not known
      DTMF Interworking:            No
      Media Flowing:                No
      Unexpected SrcAddr Packets: No
      Billing ID:                   00000000000000000000000000000000000000000000000000
      Media directions allowed:   inactive
      Max Burst size:               3250 (bytes)          <===== additional fields for side A
      Delay variation tolerance:  0 (ms)
      SDP string:                   m=audio $ RTP/AVP 0
      Graceful deactivation:        No
      DiffServ Code Point:          0
      Media Loss Event:             No
      NAT Latch Event:              No
Side B:
      Name                          mycompany/voice/gn/0/2/0/1/bb/4
      Reserved Bandwidth:           12600 (bytes/second)
      Status                        OutofService
      VRF Name:                     Global
      VLAN Tags(Priorities):        0(0), 0(0)
      Local Address:                202.50.2.1
      Local Port:                   10004
      Remote Address:               200.0.0.1
      Remote Port:                  19384
```

```
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      EndPoint Packets Sent:          Not known
      EndPoint Packets Received:      Not known
      EndPoint Packets Lost:          Not known
      DTMF Interworking:          No
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Billing ID:                 00000000000000000000000000000000000000000000000000
      Media directions allowed:   inactive
      Max Burst size:             3250 (bytes)         <===== additional fields for Side B
      Delay variation tolerance:  0 (ms)
      SDP string:                 m=audio $ RTP/AVP 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No
```

The following example shows detailed statistics from an IPv4 media flow collected on the DBE:

```
Router# show sbc mySbc dbe media-flow-stats detail

SBC Service "mySbc"
  Media Flow:
    Context ID:          1
    Stream ID:           2
    State of Media Flow: Active
    Call Established Time: 23:50:20 UTC Jun 21 2007
    Flow Priority:       Routine
    Side A:
      Name                        abc/voice/gn/0/1/0/1/ac/3
      Reserved Bandwidth:         12 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.255.113
      Local Port:                 20000
      Remote Address:             100.50.255.110
      Remote Port:                20000
      Remote Source Address Mask: 100.50.255.0/24
      Packets Received:           2272
      Packets Sent:               1784
      Packets Discarded:          0
      Data Received:              266 (bytes)
      Data Sent:                  209 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      EndPoint Packets Sent: Not known
      EndPoint Packets Received: Not known
      EndPoint Packets Lost: Not known
      DTMF Interworking:          No
      Media Flowing:              Yes
      Unexpected SrcAddr Packets: No
      Billing ID:                 00000000000000000000000000000000000000000000000000
      Media directions allowed:  sendrecv
```

```
    Max Burst size:              3250 (bytes)         <===== additional fields for side A
    Delay variation tolerance:  0 (ms)
    SDP string:                  m=audio $ RTP/AVP 0
    Graceful deactivation:       No
    DiffServ Code Point:         0
    Media Loss Event:            No
    NAT Latch Event:             No

  Side B:
    Name                         abc/voice/gn/0/1/0/1/bb/4
    Reserved Bandwidth:          23 (bytes/second)
    Status                       InService
    VRF Name:                    Global
    VLAN Tags(Priorities):       0(0), 0(0)
    Local Address:               202.50.255.113
    Local Port:                  20002
    Remote Address:              200.50.255.110
    Remote Port:                 30000
    Packets Received:            2249
    Packets Sent:                2272
    Packets Discarded:           465
    Data Received:               263 (bytes)
    Data Sent:                   266 (bytes)
    Data Discarded:              54 (bytes)
    GM Discarded Packets:        0
    Time To Recovery:            Not known
    EndPoint Packets Sent: Not known
    EndPoint Packets Received: Not known
    EndPoint Packets Lost: Not known
    DTMF Interworking:           No
    Media Flowing:               Yes
    Unexpected SrcAddr Packets: No
    Billing ID:                  00000000000000000000000000000000000000000000000000
    Media directions allowed:  sendrecv
    Max Burst size:              3250 (bytes)         <===== additional fields for side B
    Delay variation tolerance:  0 (ms)
    SDP string:                  m=audio $ RTP/AVP 0
    Graceful deactivation:       No
    DiffServ Code Point:         0
    Media Loss Event:            No
    NAT Latch Event:             No
```

The following example shows detailed statistics from an IPv6 media flow collected on the DBE:

```
Router# show sbc mySbc dbe media-flow-stats detail

SBC Service "mySbc"
  Media Flow:
    Context ID:          13
    Stream ID:           2
    State of Media Flow: Allocated
    Call Established Time: 23:51:29 UTC Jun 21 2007
    Flow Priority:       Routine
    Side A:
      Name                         abc/voice/gn/0/1/0/1/ac/1
      Reserved Bandwidth:          23 (bytes/second)
      Status                       InService
      VRF Name:                    Global
      VLAN Tags(Priorities):       0(0), 0(0)
      Local Address:           3333:1111:1111:2222:3333:4444:5555:7777
      Local Port:                  30000
      Remote Address:          2222:1111:1111:2222:3333:4444:5555:7777
      Remote Port:                 20000
```

```
  Packets Received:           0
  Packets Sent:               0
  Packets Discarded:          0
  Data Received:              0 (bytes)
  Data Sent:                  0 (bytes)
  Data Discarded:             0 (bytes)
  GM Discarded Packets:       0
  Time To Recovery:           Not known
  EndPoint Packets Sent: Not known
  EndPoint Packets Received: Not known
  EndPoint Packets Lost: Not known
  DTMF Interworking:          No
  Media Flowing:              No
  Unexpected SrcAddr Packets: No
  Billing ID:                 00000000000000000000000000000000000000000000000000
  Media directions allowed:  sendrecv
  Max Burst size:             3250 (bytes)         <===== additional fields for side A
  Delay variation tolerance:  0 (ms)
  SDP string:                 m=audio $ RTP/AVP 0
  Graceful deactivation:      No
  DiffServ Code Point:        0
  Media Loss Event:           No
  NAT Latch Event:            No

Side B:
  Name                        abc/voice/gn/0/1/0/1/bb/2
  Reserved Bandwidth:         12 (bytes/second)
  Status                      InService
  VRF Name:                   Global
  VLAN Tags(Priorities):      0(0), 0(0)
  Local Address:           2222:1111:1111:2222:3333:4444:5555:7777
  Local Port:                 20000
  Remote Address:          3333:1111:1111:2222:3333:4444:5555:7777
  Remote Port:                30000
  Packets Received:           0
  Packets Sent:               0
  Packets Discarded:          0
  Data Received:              0 (bytes)
  Data Sent:                  0 (bytes)
  Data Discarded:             0 (bytes)
  GM Discarded Packets:       0
  Time To Recovery:           Not known
  EndPoint Packets Sent: Not known
  EndPoint Packets Received: Not known
  EndPoint Packets Lost: Not known
  DTMF Interworking:          No
  Media Flowing:              No
  Unexpected SrcAddr Packets: No
  Billing ID:                 00000000000000000000000000000000000000000000000000
  Media directions allowed:  sendrecv
  Max Burst size:             3250 (bytes)         <===== additional fields for side B
  Delay variation tolerance:  0 (ms)
  SDP string:                 m=audio $ RTP/AVP 0
  Graceful deactivation:      No
  DiffServ Code Point:        0
  Media Loss Event:           No
  NAT Latch Event:            No
```

The following example shows summary statistics collected for media flows on the DBE:

```
Router# show sbc mySbc dbe media-flow-stats summary

SBC Service "mySbc"
    Context ID 1                Stream ID 2
    Side A:             Name abc/voice6/gn/0/1/0/1/ac/3    Media Flowing:  No
      Local Address/Port:  3:100:1:1:1:1:1:1/30000
      Remote Address/Port: 2:100:1:1:1:1:1:1/20000
      Status:               In Service
    Side B:             Name abc/voice6/gn/0/1/0/1/bb/4    Media Flowing:  No
      Local Address/Port:  2:100:1:1:1:1:1:1/20000
      Remote Address/Port: 3:100:1:1:1:1:1:1/30000
      Status:               In Service
    Context ID 2                Stream ID 2
    Side A:             Name abc/voice4/gn/0/1/0/1/ac/7    Media Flowing:  No
      Local Address/Port:  202.100.1.3/20002
      Remote Address/Port: Not known
      Status:               In Service
    Side B:             Name abc/voice4/gn/0/1/0/1/bb/8    Media Flowing:  No
      Local Address/Port:  202.100.1.3/20000
      Remote Address/Port: 200.100.1.1/30000
      Status:               In Service
```

The following command lists the statistics for media flows collected on the DBE associated with a VRF vpn1:

```
Router# show sbc dmsbc-node9 dbe media-flow-stats summary/detail vrf vpn1 ipv4
88.88.110.100 port 20000
SBC Service ''dmsbc-node9''
Media Flow:
State of Media Flow: Active
Call Age: 3850390 ms
Call Priority: Routine
Reserved Bandwidth: 10 (kilobytes/second)
No media timeout remaining: 2741
Class of service: Any
Side A:
VRF Name: vpn1
Local Address: 88.88.110.100
Local Port: 20000
Remote Address: 200.200.200.172
Remote Port: 17488
RTP Packets Received: 140134
RTP Packets Sent: 140131
RTP Packets Discarded: 0
```

The following command lists the statistics about one or more media flows collected on the DBE for a port with an IPv4 address associated with a specific VRF instance:

```
Router# show sbc j dbe media-flow-stats detail vrf vpn1 ipv4 10.127.3.1 port 16526
SBC Service "j"
  Media Flow:
    State of Media Flow: Active
    Call Priority:       Routine
    ContextID:           12
    StreamID:            49153
    Reserved Bandwidth:  10500 (bytes/second)
    No media timeout remaining: 30
    Class of service:    Voice
    Side A:
      VRF Name:                  vpn1
```

```
      Local Address:              88.102.9.100
      Local Port:                 16384
      Remote Address:             10.127.3.1
      Remote Port:                16526
      RTP Packets Received:       2119
      RTP Packets Sent:           2096
      RTP Packets Discarded:      0
      RTP Data Received:          423800 (bytes)
      RTP Data Sent:              419200 (bytes)
      RTP Data Discarded:         0 (bytes)
      End Point Packets Sent:     Not known
      End Point Packets Received: Not known
      End Point Packets Lost:     Not known
      DTMF Interworking:          No
      Media Flowing:              Yes
      Affected by Routing Error:  No
      Unexpected SrcAddr Packets: No
      Billing ID:                 0x47B507DF2020202020202030302B3030303030300000
0018
      Media directions allowed:  sendrecv
    Side B:
      VRF Name:                   vpn2
      Local Address:              88.102.10.100
      Local Port:                 16384
      Remote Address:             10.127.4.1
      Remote Port:                19566
      RTP Packets Received:       2096
      RTP Packets Sent:           2119
      RTP Packets Discarded:      0
      RTP Data Received:          419200 (bytes)
      RTP Data Sent:              423800 (bytes)
      RTP Data Discarded:         0 (bytes)
      End Point Packets Sent:     Not known
      End Point Packets Received: Not known
      End Point Packets Lost:     Not known
      DTMF Interworking:          No
      Media Flowing:              Yes
      Affected by Routing Error:  No
      Unexpected SrcAddr Packets: No
      Billing ID:                 0x47B507DF2020202020202030302B3030303030300000
0017
      Media directions allowed:  sendrecv
```

Table 5 describes the significant fields shown in the display.

Table 5 show sbc dbe media-flow-stats Field Descriptions

Field	Description
Context ID	The context ID to which the flow is associated.
Stream ID	Stream ID.

Table 5 show sbc dbe media-flow-stats Field Descriptions (continued)

Field	Description
State of Media Flow	Flow (or Termination) state (Active, Allocated, or Unknown). Active—The DBE has programmed the flow pair and media has started flowing in at least one direction. Allocated—The DBE has programmed the flow pair, but no media has started to flow. Unknown—The DBE has not yet been given enough information by the controller to be able to program the flow pair.
Call Established Time	Call established time in the format 23:51:29 UTC Jun 21 2007.
Flow Priority	Priority of the call (Routine or Urgent).
Side A	Information for the initiating side of the call.
Side B	Information for the terminating side of the call.
Name	Name of the flow.
Reserved Bandwidth	Bandwidth reserved for the call in bytes per second. (This value maps to the tman/sdr value.)
Status	Status is InService or OutofService. InService—Flow on this side is in service. OutofService—No media is forwarded.
VRF Name	Either the VRF name, or “Global” when there is no VRF.
VLAN Tags (Priorities)	VLAN tags and Ethernet priorities information.
Local Address	Local address on the DBE on which packets are received for this side of the call.
Local Port	Local port on the DBE on which packets are received for this side of the call.
Remote Address	Address of the remote endpoint from which packets are expected to be sent for this side of the call.
Remote Port	Port on the remote endpoint from which packets are expected to be sent for this side of the call.
Remote Source Address Mask	If specified, all packets matching the Remote Source Address Mask are classified as belonging to this flow rather than just those matching the full remote and port. (This value maps to the gm/sam value.)
Packets Received	Number of packets received from the remote endpoint.
Packets Sent	Number of packets forwarded to the remote endpoint.
Packets Discarded	Number of packets dropped (due to bandwidth policing, for example).
Data Received	Number of bytes of data received from the remote endpoint.
Data Sent	Number of bytes of data forwarded to the remote endpoint.

Table 5 show sbc dbe media-flow-stats Field Descriptions (continued)

Field	Description
Data Discarded	Number of bytes of data dropped (due to bandwidth policing, for example). (This value maps to the gm/sam value.)
GM Discarded Packets	This counter is always set to zero because it is not currently implemented. It will be the number of data packets received from the remote endpoint that have been discarded locally because of source address/port filtering.
Time To Recovery	The tsc/ttr value from Termination State Control (TSC) package, in milliseconds.
EndPoint Packets Sent	If there are EndPoint packets flowing in the call, the number of RTP packets (within the most recently received EndPoint) that the endpoint reports as being sent.
EndPoint Packets Received	If there are EndPoint packets flowing in the call, the number of RTP packets (within the most recently received EndPoint) that the endpoint reports as being received.
EndPoint Packets Lost	If there are EndPoint packets flowing in the call, the number of RTP packets (within the most recently received EndPoint) that the endpoint reports as being lost.
DTMF Interworking	Indicates whether DTMF interworking is in operation for the flow.
Media Flowing	Indicates whether packets are flowing from the endpoint.
Unexpected SrcAddr Packets	If unexpected-source-alerting is switched on with the **unexpected-source-alerting** command, this counter records the number of alerts generated for the flow when media packets for a call are received from an unexpected source address and port. An unexpected source event happens when a packet is received, matched to a flow (but not by a full 5-tuple comparison), and found to have come from the wrong remote address.
Billing ID	Signaling border element (SBE) billing ID for this side of the call.
Media directions allowed	Allowed directions of media flow for this side of the call (inactive, sendonly, recvonly, or sendrecv).
Max Burst size	The maximum burst size (tman/mbs) associated with the Tman package.
Delay variation tolerance	The delay variation tolerance (tman/dvt) associated with the Tman package. Defines the delay variation tolerance for the stream in tenths of microseconds when enforcing the PDR value in the first leaky bucket.
SDP string	The SDP string is that present on the H.248 ADD request to provision the call.
Graceful deactivation	Description to be added.

Table 5 show sbc dbe media-flow-stats Field Descriptions (continued)

Field	Description
DiffServ Code Point	The Diffserv Code point is the (DSCP value) provided on the H.248 request to mark the media packets. This reflects the ds/dscp parameters.
Media Loss Event	Media Loss Event is “Yes” if the flow has the nt/qualert subscription.
NAT Latch Event	The NAT Latch Event is “Yes” if the flow has adr/rsac subscribed.

Related Commands

Command	Description
show sbc dbe flow-stats	Lists all flow statistics, both signaling and media flows, collected on the data border element (DBE).
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc dbe media-stats (session border controller)

To list general data border element (DBE) statistics, use the **show sbc dbe media- stats** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe media-stats**

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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.
Cisco IOS XE Release 3.2S	The output of the command was updated to include information about the transcoded calls.

Usage Guidelines

The **show sbc dbe media- stats** statistics do not include data from active calls. The global counters keep track of packets received and sent on calls that have already ended.

The Active Flows statistic counts the number of flows for which media has been observed within the media-timeout period, or where the call has failed over within the last media-timeout period and the Session Border Controller (SBC) has not yet had a chance to observe whether media is flowing or not.

The Unclassified Pkts statistic includes all packets received on the VLAN interface that are not matched to a valid media flow. This includes media packets not matched to a flow, signaling packets, and any other traffic.

Examples

The following example shows general DBE statistics on a DBE that is on an SBC called “mySbc.” These DBE statistics do not include data from active calls.

```
Router# show sbc mySbc dbe media-stats

SBC Service "MySBC"
  Available Bandwidth     = Unlimited
  Available Flows         = 131072
  Available Packet Rate   = Unlimited
  Active Media Flows      = 0
  Peak Media Flows        = 0
  Total Media Flows       = 0
  Active Transcoded Flows = 1
```

```
Peak Transcoded Flows   = 1
Total Transcoded Flows  = 1
Active Signaling Flows  = 0
Peak Signaling Flows    = 0
Total Signaling Flows   = 0
SBC Packets Received    = 0
SBC Octets Received     = 0
SBC Packets Sent        = 0
SBC Octets Sent         = 0
SBC Packets Discarded   = 0
SBC Octets Discarded    = 0
No Media Count          = 0
```

Table 6 describes the significant fields shown in the display.

Table 6 show sbc dbe media-stats Field Descriptions

Field	Description
Max Term per Context	Maximum number of terminations per context.
Available Bandwidth	Total amount of bandwidth available for new calls.
Available Flows	Total amount of flows available for new calls.
Available Packet Rate	Amount of media packets per second available to new calls.
Active Media Flows	Current number of active calls.
Peak Media Flows	Maximum number of concurrent calls recorded.
Total Media Flows	Total number of calls set up on the DBE since the statistics were last cleared.
Active Transcoded Flows	Current number of active transcoded calls.
Peak Transcoded Flows	Maximum number of transcoded calls recorded.
Total Transcoded Flows	Total number of transcoded calls on the DBE.
Active Signaling Flows	Current number of flows that are actively forwarding signaling traffic.
Peak Signaling Flows	Peak number of active signaling flows since the statistics were last reset.
Total Signaling Flows	Accumulated total number of signaling flows. This count contains both active signaling flows and signaling flows that were allocated but never connected.
SBC Packets Received	Total number of SBC packets received by the DBE for completed calls.
SBC Octets Received	Number of octets of SBC data received by the DBE for completed calls.
SBC Packets Sent	Total number of SBC packets sent by the DBE for completed calls.
SBC Octets Sent	Number of octets of SBC data sent by the DBE for completed calls.
SBC Packets Discarded	Number of SBC packets discarded on completed calls.

Table 6 show sbc dbe media-stats Field Descriptions (continued)

Field	Description
SBC Octets Discarded	Number of SBC octets discarded on completed calls.
No Media Count	Number of calls that have been dropped because there was no media flowing on the call.

Related Commands

Command	Description
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.
show sbc dbe media-flow-stats	Displays the statistics about one or more media flows collected on the DBE.
show sbc dbe signaling-flow-stats	Displays the statistics about one or more signaling flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc dbe signaling-flow-stats (session border controller)

To list the signaling flow statistics collected on the data border element (DBE), use the **show sbc dbe signaling-flow-stats** command in user EXEC or privileged EXEC mode.

show sbc *{sbc-name}* **dbe signaling-flow-stats** [{**summary** | **detail}** [**vrf** *vrf-name*] [{**ipv4** *A.B.C.D* | **ipv6** *ipv6-address*} [**port** *port-number*]] [**context** {*id*}| **termination** {*termination substring*}]]

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.
summary	(Optional) Displays a summary of the signaling flow statistics, including pinhole flows, for the DBE.
detail	(Optional) Displays detailed signaling flow statistics, including pinhole flows, for the DBE.
vrf *vrf-name*	(Optional) Displays only signaling flows to or from the specified VPN routing and forwarding instance (VRF).
ipv4 *A.B.C.D*	(Optional) Displays only signaling flows to or from the specified IPv4 media IP address.
ipv6 ipv6-address	(Optional) Displays only signaling flows to or from the specified IPv6 media IP address.
port port-number	(Optional) Displays only signaling flows to or from the specified port number.
context	(Optional) Shows summary or detailed display of all pinhole flows within the context ID.
id	(Optional) Specifies the context ID number.
termination	(Optional) Shows summary or detailed display of pinhole flows. that match the termination substring.
termination substring	(Optional) Specifies the termination substring number.

Command Default

No default behavior or values are available.

Command Modes

User EXEC (>)

Privileged EXEC (#)

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 **context** and **termination** keywords were added. New fields (Max Burst size, Delay variation tolerance, SDP string, Graceful deactivation, DiffServ Code Point, Media Loss Event, and NAT Latch Event) were added to the output display.
Cisco IOS XE Release 2.4	This command is supported in the unified model.

Usage Guidelines

When the "Media Flowing" field is reported as Yes, it either means that media has been observed flowing on the call within the media timeout period, or the call has failed over within the last media timeout period and the SBC has not yet had a chance to observe whether media is flowing or not.

Examples

The following example displays signaling and media flow pairs and additional fields added in Cisco IOS XE Release 2.2:

```
Router# show sbc global dbe signaling-flow-stats
SBC Service "global"
  Media Flow:
    Context ID:          6
    Stream ID:           1
    State of Signaling Flow: Allocated
    Call Established Time: 16:53:58 UTC Feb 20 2008
    Flow Priority:       Unspecified
    Side A:
      Name                        mycompany/sip4/gn/0/1/0/1/ac/1
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.2.1
      Local Port:                 10000
      Remote Address:             3.0.0.3
      Remote Port:                5000
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Max Burst size:             0 (bytes)            <===== additional fields for Side A
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No
    Side B:
      Name                        mycompany/sip4/gn/0/1/0/1/bb/2
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.2.1
      Local Port:                 10001
      Remote Address:             3.0.0.3
      Remote Port:                5000
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      Media Flowing:              No
```

```
    Unexpected SrcAddr Packets: No
    Max Burst size:             0 (bytes)            <===== additional fields for side B
    Delay variation tolerance:  0 (microseconds)
    SDP string:                 m=application $ udp 0
    Graceful deactivation:      No
    DiffServ Code Point:        B8
    Media Loss Event:           No
    NAT Latch Event:            No
```

The following example displays detailed statistics from an IPv4 signaling flow collected on the DBE:

```
Router# show sbc mySbc dbe signaling-flow-stats detail

SBC Service "mySbc"
  Media Flow:
    Context ID:          2
    Stream ID:           1
    State of Signaling Flow: Active
    Call Established Time: 12:55:11 UTC Aug 11 2007
    Flow Priority:       Routine
    Side A:
      Name                        abc/sip/gn/0/1/0/1/ac/1
      Reserved Bandwidth:         43 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.255.110
      Local Port:                 5000
      Remote Address:             100.50.255.110
      Remote Port:                5000
      Remote Source Address Mask: 100.50.255.0/24
      Packets Received:           1344
      Packets Sent:               0
      Packets Discarded:          444
      Data Received:              885 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             292 (bytes)
      GM Discarded Packets:       0
      Time To Recovery:           Not known
      Media Flowing:              Yes
      Unexpected SrcAddr Packets: No
      Max Burst size:             0 (bytes)            <===== additional fields for Side A
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        0
      Media Loss Event:           No
      NAT Latch Event:            No

    Side B:
      Name                        abc/sip/gn/0/1/0/1/bb/2
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:              202.50.255.110
      Local Port:                 5001
      Remote Address:             200.50.255.110
      Remote Port:                10000
      Packets Received:           1335
      Packets Sent:               900
      Packets Discarded:          1335
```

```
    Data Received:              880 (bytes)
    Data Sent:                  593 (bytes)
    Data Discarded:             880 (bytes)
    GM Discarded Packets:       0
    Time To Recovery:           Not known
    Media Flowing:              No
    Unexpected SrcAddr Packets: No
    Max Burst size:             0 (bytes)           <===== additional fields for side B
    Delay variation tolerance:  0 (microseconds)
    SDP string:                 m=application $ udp 0
    Graceful deactivation:      No
    DiffServ Code Point:        B8
    Media Loss Event:           No
    NAT Latch Event:            No
```

The following example displays detailed statistics from an IPv6 signaling flow collected on the DBE:

```
Router# show sbc global dbe signaling-flow-stats detail

SBC Service "global"
  Media Flow:
    Context ID:          2
    Stream ID:           1
    State of Signaling Flow: Allocated
    Call Established Time: 12:55:11 UTC Aug 11 2007
    Flow Priority:       Routine
    Side A:
      Name                        abc/sip/gn/0/1/0/1/ac/1
      Reserved Bandwidth:         23 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address:           1111:2222:3333:4444:5555:6666:7777:3331
      Local Port:                 5000
      Remote Address:             Not known
      Remote Port:                Not known
      Remote Source Address Mask: 2222:1111:1111:2222:3333:4444:5555:7777/48
      Packets Received:           0
      Packets Sent:               0
      Packets Discarded:          0
      Data Received:              0 (bytes)
      Data Sent:                  0 (bytes)
      Data Discarded:             0 (bytes)
      GM Discarded Packets:       Not known
      Time To Recovery:           Not known
      Media Flowing:              No
      Unexpected SrcAddr Packets: No
      Max Burst size:             0 (bytes)           <===== additional fields for side A
      Delay variation tolerance:  0 (microseconds)
      SDP string:                 m=application $ udp 0
      Graceful deactivation:      No
      DiffServ Code Point:        B8
      Media Loss Event:           No
      NAT Latch Event:            No

    Side B:
      Name                        abc/sip/gn/0/1/0/1/bb/2
      Reserved Bandwidth:         0 (bytes/second)
      Status                      InService
      VRF Name:                   Global
      VLAN Tags(Priorities):      0(0), 0(0)
      Local Address Mask:  2222:1111:1111:2222:3333:4444:5555:7777/48
```

```
  Local Port:                 0
  Remote Address:          3333:1111:1111:2222:3333:4444:5555:7777
  Remote Port:                10000
  Packets Received:           0
  Packets Sent:               0
  Packets Discarded:          0
  Data Received:              0 (bytes)
  Data Sent:                  0 (bytes)
  Data Discarded:             0 (bytes)
  GM Discarded Packets:       0
  Time To Recovery:           Not known
  Media Flowing:              No
  Unexpected SrcAddr Packets: No
  Max Burst size:             0 (bytes)            <===== additional fields for side B
  Delay variation tolerance:  0 (microseconds)
  SDP string:                 m=application $ udp 0
  Graceful deactivation:      No
  DiffServ Code Point:        B8
  Media Loss Event:           No
  NAT Latch Event:            No
```

The following example shows summary statistics collected for signaling flows on the DBE:

```
Router# show sbc mySbc dbe signaling-flow-stats summary

SBC Service "mySbc"
    Context ID 1                Stream ID 1
    Side A:             Name abc/sip6/gn/0/1/0/1/ac/1    Media Flowing:  Yes
      Local Address/Port:  1:100:1:1:1:1:1:1/5060
      Remote Address/Port: 2:100:1:1:1:1:1:1/5000
      Status:              In Service
    Side B:             Name abc/sip6/gn/0/1/0/1/bb/2    Media Flowing:  Yes
      Local Address/Port:  2:100:1:1:1:1:1:1/5000
      Remote Address/Port: 3:100:1:1:1:1:1:1/5060
      Status:              In Service
    Context ID 2                Stream ID 1
    Side A:             Name abc/sip4/gn/0/1/0/1/ac/5    Media Flowing:  Yes
      Local Address/Port:  202.100.1.1/5000
      Remote Address/Port: 100.100.1.1/5000
      Status:              In Service
    Side B:             Name abcsip4/gn/0/1/0/1/bb/6    Media Flowing:  Yes
      Local Address/Port:  202.100.1.1/5001
      Remote Address/Port: 200.100.1.1/5000
      Status:              In Service
```

Table 7 describes the significant fields shown in the display.

Table 7 show sbc dbe signaling-flow-stats Field Descriptions

Field	Description
Context ID	Context ID to which the flow is associated.
Stream ID	Stream ID.

Table 7 show sbc dbe signaling-flow-stats Field Descriptions (continued)

Field	Description
State of Signaling Flow	Flow state (Active, Allocated, or Unknown). • Active—DBE has programmed the flow pair and the media has started flowing in at least one direction. • Allocated—DBE has programmed the flow pair, but no media has started to flow. • Unknown—DBE has not yet been given enough information by the controller to be able to program the flow pair.
Call Established Time	Call established time in the format 23:51:29 UTC Jun 21 2007.
Flow Priority	Priority of the call (Routine or Urgent).
Side A	Information for the initiating side of the call
Side B	Information for the terminating side of the call
Name	Name of the flow.
Reserved Bandwidth	Bandwidth reserved for the call in bytes per second.
Status	Status is InService or OutofService. InService—Flow on this side is in service. OutofService—No media is forwarded.
VRF Name	Either the VRF name, or “Global” when there is no VRF.
VLAN Tags (Priorities)	VLAN tags and Ethernet priority information.
Local Address	Local address on the DBE on which packets are received for this side of the call.
Local Port	Local port on the DBE on which packets are received for this side of the call.
Remote Address	Address of the remote endpoint from which packets are expected to be sent for this side of the call.
Remote Port	Port on the remote endpoint from which packets are expected to be sent for this side of the call.
Remote Source Address Mask	If specified, all packets matching the Remote Source Address Mask are classified as belonging to this flow rather than just those matching the full remote and port.
Packets Received	Number of packets received from the remote endpoint.
Packets Sent	Number of packets forwarded to the remote endpoint.
Packets Discarded	Number of packets dropped (due to bandwidth policing, for example).
Data Received	Number of bytes of data received from the remote endpoint.
Data Sent	Number of bytes of data forwarded to the remote endpoint.
Data Discarded	Number of bytes of data dropped (due to bandwidth policing, for example).

Table 7 show sbc dbe signaling-flow-stats Field Descriptions (continued)

Field	Description
GM Discarded Packets	This counter is always set to zero because it is not currently implemented. It will be the number of data packets received from the remote end point and discarded locally because of source address/port filtering.
Time To Recovery	The tsc/ttr value from Termination State Control (TSC) package, in milliseconds.
Media Flowing	Indicates whether packets are flowing from the endpoint.
Unexpected SrcAddr Packets	If unexpected-source-alerting is switched on with the **unexpected-source-alerting** command, this counter records the number of alerts generated for the flow when media packets for a call are received from an unexpected source address and port. An unexpected source event happens when a packet is received, matched to a flow (but not by a full 5-tuple comparison), and found to have come from the wrong remote address.
Max Burst size	The maximum burst size (tman/mbs) associated with the Tman package.
Delay variation tolerance	The delay variation tolerance (tman/dvt) associated with the Tman package. Defines the delay variation tolerance for the stream in tenths of microseconds when enforcing the PDR value in the first leaky bucket.
SDP string	The SDP string is that present on the H.248 ADD request to provision the call.
Graceful deactivation	Description to be added.
DiffServ Code Point	The Diffserv Code point is the (DSCP value) provided on the H.248 request to mark the media packets. This reflects the ds/dscp parameters.
Media Loss Event	Media Loss Event is “Yes” if the flow has the nt/qualert subscription.
NAT Latch Event	The NAT Latch Event is “Yes” if the flow has adr/rsac subscribed.

Related Commands

Command	Description
show sbc dbe flow-stats	Lists all flow statistics, both signaling and media flows, collected on the data border element (DBE).
show sbc dbe addresses	Displays the H.248 control addresses and media addresses configured on DBEs.
show sbc dbe controllers	Displays the media gateway controllers and the controller address configured on each DBE.
show sbc dbe forwarder-stats	Displays the global list of statistics for the DBE forwarding process.

Command	Description
show sbc dbe media-stats	Displays general DBE statistics. These statistics do not include data from active calls.
show sbc dbe media-flow-stats	Displays the statistics about one or more media flows collected on the DBE.
unexpected-source-alerting	Enables the generation of alerts when media packets for a call are received from an unexpected source address and port.

show sbc h248 bac

To display the H.248 Border Access Controller (BAC) configuration on the Session Border Controller (SBC), use the **show sbc h248 bac** command in the privileged EXEC mode.

show sbc h248 bac {adjacencies [*adj-name*]**} | call contexts | iad {active-number | sessions [filter] | [mid]} | trace-filter**

Syntax Description

adjacencies	Displays information pertaining to all the H.248 BAC adjacencies on the SBC or a specific H.248 BAC adjacency when the *adj-name* is configured.
adj-name	Specific name of an SBC H.248 BAC adjacency.
call contexts	Displays call information pertaining to the SBC H.248 BAC.
iad	Displays Integrated Access Device (IAD) information pertaining to the SBC H.248 BAC.
active-number	Displays the active number of the SBC H.248 BAC IAD.
sessions	Displays the SBC H.248 BAC IAD registry.
filter	Specifies the Message Identifier (MID) filter.
mid	Specifies the MID.
trace-filter	Displays the SBC H.248 BAC trace filter.

Command Modes

Privileged EXEC (#)

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

There is no **no** form of this command.

Examples

The following is a sample output of the **show sbc h248 bac adjacencies** command:

```
H.248 Bac Service
      Name                        Type    State     Description
      ------------------------------------------------------------
      core_spec2                  Core    Detached
      iad_80                      Access   Detached
      iad_80_123                  Access   Detached
```

Table 8 describes the significant fields shown in the display.

Table 8 show sbc h248 bac adjacencies Field Descriptions

Field	Description
Name	Name of the H.248 adjacency.
Type	Type of the H.248 adjacency. The valid values are Core or Access.
State	State of the H.248 adjacency. The valid values are Attached or Detached.
Description	Description for the adjacency provided by customers.

The following is a sample output of the **show sbc h248 bac adjacencies core_spec** command:

```
Adjacency core_spec2 (CORE)
   Status:                 Detached
   Control Address: 192.168.102.222
   Control Port Type: PORT-RANGE
   Control Port-Range Start: 2944
   Control Port-Range End: 2945
   Remote Address: 192.168.102.14
   Remote Port: 2944
   VRF: Global
   Reaml ID: 1
```

Table 9 describes the significant fields shown in the display.

Table 9 show sbc h248 bac adjacencies core_spec Field Descriptions

Field	Description
Status	State of the H.248 adjacency. The valid values are Attached or Detached.
Control Address	IP address assigned to the H.248 adjacency.
Control Port Type	Control port type of the H.248 adjacency. The valid values are Port Binding Type, Port for Static Binding, or Port Range for Dynamic Binding.
Control Port-Range Start	Start port number.
Control Port-Range End	End port number.
Remote Address	IP address of the Media Gateway Controller(MGC).
Remote Port	Listening port of the MGC.

Table 9 show sbc h248 bac adjacencies core_spec Field Descriptions (continued)

Field	Description
VRF	Virtual routing and forwarding (VRF) in which the adjacency resides.
Realm ID	ID for binding with the reserved IP address pool of media flow.

The following is a sample output of the **show sbc h248 bac adjacencies access_spec** command:

```
Adjacency access (ACCESS)
   Status: Attached
   Control Address: 3.3.3.3
   Control Port Type: PORT
   Control Port: 2944
   VRF: Global
   Realm ID: 0
   Binding Core Adjacency: core
   H.248 BAC Domain Name: tt
   Heart Beat Terminate: 60
   Retry: 3
   Audit Interval: 60
   Audit: Auto (Default)
   Register Rate: 100
   Media Bypass: FALSE
   Media Down: FALSE
   NAT: Force-off (Default)
```

Table 10 describes the significant fields shown in the display.

Table 10 show sbc h248 bac adjacencies access_spec Field Descriptions

Field	Description
Status	State of the H.248 adjacency. The valid values are Attached or Detached.
Control Address	IP address assigned to the H.248 adjacency.
Control Port Type	Only PORT is supported for access adjacency.
Control Port	Port number assigned to the access adjacency.
VRF	VRF the adjacency resides in.
Realm ID	ID for binding with the reserved IP address pool of media flow.
Binding Core Adjacency	Core adjacency that the access adjacency binds.
H.248 BAC Domain Name	Domain name specified by customers.
Heart Beat Terminate	The terminate interval. BAC blocks the heartbeat from the endpoints within the terminate interval.
Retry	Retry number.
Audit Interval	Interval between BAC's endpoint audits.
Audit	Audit type for the H.248 adjacency. The valid values are Auto or Force.
Register Rate	Maximum register rate for the access adjacency.

Table 10 show sbc h248 bac adjacencies access_spec Field Descriptions (continued)

Field	Description
Media Bypass	Value shows whether media bypass is enabled or not.
Media Down	Value shows whether media down detection is enabled or not.
NAT	Value shows whether the endpoints reside behind the NAT device.

The following is a sample output of the **show sbc h248 bac call contexts** command:

```
Context ID: 51957
  MGM correlator: 4
  MPF correlator: 1
  State: CONNECTED
  RTP term id: RTP/00000
  Access side RTP addr:
    src: 9.9.9.9/40000 VRF 0
    dst: 9.9.9.9/40000 VRF 0
  Core side RTP addr:
    src: 8.8.8.8/40000 VRF 0
    dst: 192.168.102.81/4006 VRF 0
  IAD mid: [192.168.102.80]:2944
------------------------------------------
```

Table 11 describes the significant fields shown in the display.

Table 11 show sbc h248 bac call contexts Field Descriptions

Field	Description
Context ID	Context ID of the active call.
MGM correlator	ID of the MGM correlator.
MPF correlator	ID of the MPF correlater.
State	Call state. The valid values are IDLE, ALLOCATING, ALLOCATED, CONNECTED, MODIFYING, or DELETING.
RTP term id	RTP termination ID.
Access side RTP addr	Source or destination IP address, port, and VRF of media flow on the access side.
Core side RTP addr	Source or destination IP address, port, and VRF of media flow on the core side.
IAD mid	The MID for IAD.

The following is a sample output of the **show sbc h248 bac iad active-number 1** command:

```
H.248 bac active iad number: 1
H.248 bac active call context numbers: 47
```

Table 12 describes the significant fields shown in the display.

Table 12 show sbc h248 bac iad active-number 1 Field Descriptions

Field	Description
H.248 bac active iad number	Number of registered IADs.
H.248 bac active call context number	Number of active call contexts.

The following is a sample output of the **show sbc h248 bac iad sessions** command:

```
IAD Session:
  Access side remote address:  172.16.104.13  port 2944
  Core side local address:  172.16.104.178  port 3000
 IAD mid:  [172.16.104.13]:2944
 BAC mid:  [172.16.104.178]:2944
 IAD domain name:
```

Table 13 describes the significant fields shown in the display.

Table 13 show sbc h248 bac iad sessions Field Descriptions

Field	Description
Access side remote address	IP address and port number of the remote endpoint.
Core side local address	IP address and port number of the local core adjacency.
IAD mid	MID of the IAD.
BAC mid	MID of the BAC.
IAD domain name	Domain name of the IAD if the domain name is used for the MID.

show sbc rg

To list the transport and statistical information pertaining to the Session Border Controller (SBC) redundancy group, use the **show sbc rg** command in Privileged EXEC mode.

show sbc ***sbc-name*** **rg {transport | statistics}**

Syntax Description

sbc-name	The name of the SBC service.
statistics	Displays the SBC redundancy group statistics.
transport	Displays the SBC redundancy group transport information.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

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 the SBC redundancy group statistics:

```
Router# show sbc MySBC rg statistics
SBC HA B2B statistics
---------------------
Number of messages successfully queued          = 99901
Number of messages successfully requeued        = 3875
Number of messages successfully sent            = 99901
Number of IPS messages sent                     = 99628
Number of messages queue failures               = 0
Number of messages send throttles               = 0
Number of messages send full throttles          = 0
Number of messages requeue failures             = 0
Number of attempted-send message failures       = 45
Number of message header malloc failures        = 0
Number of no packet available failures          = 0
Number of high watermark of queued messages     = 43
Number of high watermark of recv messages       = 0

Number of messages received                     = 1621
Number of received IPS messages                 = 1389
Number of received messages discarded           = 0
Number of received messages dropped(no group)   = 0
Number of received large IPS messages           = 0
Number of large message send failures           = 0
Number of large message send total              = 0
Number of large message recv failures           = 0
Number of large message not sent, unsupp by peer = 0
Slow start avoidance counter                    = 50/50
Send message size high watermark                = 7820
```

The following example shows the SBC redundancy group transport information:

```
Router# show sbc MySBC rg transport
SBC HA RG connection parameters for domain 2/2
-----------------------------------------------
  Application Type        1
  Handler                 8
  My IP address           3.3.3.6
  My L4 Port              4027
  L3 Protocol             1
  L4 Protocol             6
  Peer IP address         3.3.3.8
  Peer L4 Port            4027
  My MTU                  16336
  My L4 Offset            0
```

show sbc rsrcmon

To show congestion states and statistics during switchover, **use the show sbc rsrcmon command in the Privileged EXEC mode**.

show sbc *sbc-name* **rsrcmon**

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 the addresses that are configured on mySBC:

```
Router# show sbc test rsrcmon
  Resource Monitoring                          :  Enabled
  Congestion Status                            :  Normal
    CPU Congestion Status                      :  Normal
    Mem Congestion Status                      :  Normal
    Calls Rejected Due to Congestion           :  0
    CPU Congestion Count                       :  0
    Mem Congestion Count                       :  0
  CPU Congestion Threshold                     :  91 %
  CPU Congestion Clear Threshold               :  80 %
  Top Procs Frequency                          :  200 ms
  CPU Probe Duration during Congestion         :  1000 ms
  CPU Probe Duration during Normal Operation :  3000 ms
  Avg CPU Utilization in last  500 msec        :   0%(cpu0)  7%(cpu1)
                              1500 msec        :   0%(cpu0) 10%(cpu1)
  SBC Memory Allocation Limit                  :    No Limit
      Current Allocation                       :    78466149 bytes
      Peak Allocation                          :    78466149 bytes
      Allocation Failure Count                 :           0
      Buffer Pool Usage                        :       67413 bytes
      CB Pool Usage                            :    37464456 bytes
      Free Memory SBC Holding                  :    40934280 bytes
      Memory Usage Ceiling                     :   180000000 bytes
      Last Monitored Usage                     :  37533189 bytes (20 %)


Here is info on malloc:
Total memory for dynamic memory allocation (arena) --    440040 bytes
Number of ordinary blk not in use (ordblks) ---------         4
Number of small blk not in use (smblks) -------------         0
Number of blks allocated w/ mmap (hblks) ------------       300
```

```
Sum of memory allocated with mmap (hblkhd) ----------  78798848 bytes
Space in small blks in use (usmblks) -----------------         0 bytes
Space in free small blks (fsmblks) -------------------         0 bytes
Space in ordinary blocks in use (uordblks) ----------    434736 bytes
Space in free ordinary blocks  (fordblks) -----------      5304 bytes
keepcost ---------------------------------------------      5168

Here is OS memory info
Total   =  844869632 bytes
Used    =  470876160 bytes (321875968 bytes after minus buffers/cached)
Free    =  373993472 bytes (522993664 bytes after adding buffers/cached)
Shared  =          0 bytes
Buffers =    1130496 bytes
Cached  =  147869696 bytes
```

show sbc sbe aaa

To list the AAA status and configuration on each SBE, **use the show sbc sbe aaa command in the Privileged EXEC mode**.

show sbc *sbc-name* **sbe aaa**

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 the addresses that are configured on mySBC:

```
Router# show sbc sbe aaa

SBC Service "mySbc"
  AAA control address: 10.1.0.1
  Accounting server: 10.2.0.1
  Authentication server: 172.19.5.1
  Authentication server: 172.19.5.2
```

show sbc sbe addresses

To list the addresses configured on SBEs, **use the show sbc sbe addresses command in the Privileged EXEC mode**.

show sbc *sbc-name* **sbe addresses**

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 2.6	The command output was modified.

Examples

The following example shows the addresses that are configured on mySBC:

```
Router# show sbc mySBC sbe addresses

SBC Service "mySbc"
  Control Addresses
    AAA control address:            10.1.0.1
    H.248 control address:            10.1.0.1

  Signaling Addresses
    H.323 adjacency h323ToIsp42:     10.1.0.2:1720, VRF vpn3
    SIP adjacency SipToIsp42:        10.1.0.2:5060, VRF vpn3
```

The following example shows the addresses that are configured on asr1:

```
Router# show sbc asr1 sbe addresses
SBC Service "asr1"
  Control Addresses
    AAA control address:         33.33.36.1
    No Media Gateway Controller Listen information found.
  Signaling Addresses
    No H323 adjacency information found.
    SIP adjacency UEV6:  2001:A401::33:33:36:1:4060
    SIP adjacency CCM134:        33.33.36.1:5060
    SIP adjacency CCM135:        33.33.36.1:5060
    SIP adjacency CCM136:        33.33.36.1:5060
    SIP adjacency CSPS23:        33.33.36.1:0
    SIP adjacency OpensipsV6:    2001:A401::33:33:36:1:7060
    SIP adjacency CCM135-IPV6:   2001:A401::33:33:36:1:5060
    SIP adjacency CCM135-vrfb:   10.190.7.97:5060, VRF h323-vrf-b
    SIP adjacency CCM136-IPv6:   2001:A401::33:33:36:1:5060
    SIP adjacency SIPP81-IPv6:   2001:A401::33:33:36:1:5060
```

show sbc sbe adjacencies

To display the details of the adjacencies configured on the signaling border element (SBE), use the **show sbc sbe adjacencies** command in the privileged EXEC mode.

show sbc *sbc-name* **sbe adjacencies {*adjacency-name*} [detail | authentication-realms | peers]**

Syntax Description

sbc-name	Name of the SBC.
adjacency-name	Name of the adjacency.
detail	Displays all the detailed field output pertaining to a specified Session Initiation Protocol (SIP) adjacency.
authentication-realms	Lists the configured authentication realms pertaining to a specified adjacency.
peers	Lists the peers configured for a specified adjacency.

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 2.4.1	This command's output was modified to show whether an adjacency is configured to support the SIP method statistics.
Cisco IOS XE Release 2.5	This command's output was modified to show the IP realm information, contact username information, IP-FQDN translation parameters, and 100rel interworking parameters.
Cisco IOS XE Release 2.6	This command's output was modified to show the IPv6 details, and indicate whether TLS Mutual Authentication is enabled.
Cisco IOS XE Release 3.1S	This command was modified. The **peers** keyword was added. The command output was modified to show IMS Rx information: Ims rx, Ims realm, Ims rx pcrf, and Ims pani. The **show sbc sbe adjacencies detail** command output was modified to show the peer status and the current peer index.
Cisco IOS XE Release 3.2S	This command was modified. The output of the **show sbc sbe adjacencies detail** command was updated to include detailed information about the Multiple SBC Media Bypass feature.
Cisco IOS XE Release 3.3S	This command was modified. The output of the **show sbc sbe adjacencies detail** command was updated to include detailed information about the H.225 messages, whether the contact username in a SIP REGISTER request is in a rewrite mode or passthrough mode, and the local jitter ratio.

Release	Modification
Cisco IOS XE Release 3.4S	This command was modified. The output of the **show sbc sbe adjacencies detail** command was updated to display the percentage of calls specified for use in the calculation of the Mean Opinion Score; Conversational Quality, Estimated (MOS-CQE) score and the value specified for the Advantage factor.
Cisco IOS XE Release 3.5S	This command was modified. The output of the **show sbc sbe adjacencies detail** command was updated to display information about the phone proxies associated with the adjacencies.
Cisco IOS XE Release 3.7S	This command was modified. The output of the **show sbc sbe adjacencies detail** command was updated to display information about value of the IMS Rf interface state for the adjacency.

Usage Guidelines

The **statistics-setting** command must be configured in an adjacency before using the **show sbc sbe sip-method-stats** command to display the SIP method statistics. Use the **show sbc sbe adjacencies** command to verify that the **statistics-setting** command is configured in an adjacency.

Examples

The following example shows how, in Cisco IOS XE Release 2.5 and later, the **show sbc sbe adjacencies detail** command lists the adjacency information, including the IP realm information, configured on an SBE:

```
Router# show sbc global sbe adjacencies Cisco-gw detail
SBC Service "global"
Adjacency Cisco-gw (SIP)
Status: Detached
Signaling address: 111.45.103.119:default
Signaling-peer: :5060 (Default)
Force next hop: No
Account:
Group: None
In header profile: Default
Out header profile: Default
In method profile: Default
Out method profile: Default
In body profile: None
Out body profile: None
In UA option prof: Default
Out UA option prof: Default
In proxy opt prof: Default
Out proxy opt prof: Default
Priority set name: None
Local-id: None
Rewrite REGISTER: Off
Target address: None
NAT Status: Auto Detect
Reg-min-expiry: 3000 seconds
Fast-register: Enabled
Fast-register-int: 30 seconds
Register aggregate: Disabled
Registration Required: Disabled
Register Out Interval: 0 seconds
Parse username params: Disabled
Supported timer insert:Disabled
Suppress Expires: Disabled
p-asserted-id header-value: not defined
p-assert-id assert: Disabled
```

```
Authenticated mode: None
Authenticated realm: None
Auth. nonce life time: 300 seconds
IMS visited NetID: None
Inherit profile: Default
Force next hop: No
Home network Id: None
UnEncrypt key data: None
SIPI passthrough: No
Passthrough headers:
Media passthrough: No
Client authentication: No
Incoming 100rel strip: No
Incoming 100rel supp: No
Out 100rel supp add: No
Out 100rel req add: No
Parse TGID parms: No
IP-FQDN inbound:
IP-FQDN outbound:
FQDN-IP inbound:
FQDN-IP outbound:
Outbound Flood Rate: None
Hunting Triggers: Global Triggers
Add transport=tls param: Disabled
Redirect mode: Pass-through
Security: Untrusted-Unencrypted
Ping: Disabled
Ping Interval: 32 seconds
Ping Life Time: 32 seconds
Ping Peer Fail Count: 3
Ping Trap sending: Enabled
Ping Peer Status: Not Tested
Rewrite Request-uri: Disabled
Registration Monitor: Disabled
DTMF SIP NOTIFY Relay: Enabled
DTMF SIP NOTIFY Interval: 2000
DTMF SIP default duration: 200
DTMF Preferred Method: SIP NOTIFY
Realm : cisco.com
Statistics setting: Disabled
```

The following example shows how, in Cisco IOS XE Release 2.5 and later, the **show sbc sbe adjacencies detail** command displays the Register contact username information:

```
Router# show sbc test sbe adjacencies SIPP1Reg detail
SBC Service "test"
  Adjacency SIPP1Reg (SIP)
    Status:                Attached
    Signaling address:     10.10.100.140:default
    Signaling-peer:        10.10.100.12:7068
    Force next hop:        No
    Account:
    Group:                 SIPP1Reg
    .
    .
    .
Rewrite REGISTER:      Off
    Register contact username: Rewrite
    Target address:        10.10.100.12:7069
    NAT Status:            Auto Detect
    Reg-min-expiry:        3000 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
```

```
    Register aggregate:    Disabled
    Registration Required: Disabled
    Register Out Interval: 0 seconds
    ..
```

The following example shows how, in Cisco IOS XE Release 3.1.0S and later, the **show sbc sbe adjacencies detail** command lists peer information, including the current peer index, configured on an SBE:

```
Router# show sbc mat sbe adjacencies SIPPA detail
SBC Service "mat"
  Adjacency SIPPA (SIP)
    Status:                Attached
    Signaling address:     1.0.0.10:5068
    IPsec server port:     0
    Signaling-peer:        1.0.0.3:5068
    Signaling-peer status: Down
    Signaling-peer priority: 6
    Signaling-peer switch: on-fail
    Peer status: Down
    Current peer index:        0
    Force next hop:        Yes
    Force next hop select: Out-of-dialog
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
    Out method profile:    Default
    Out error profile:     Default
    In body profile:       None
    Out body profile:      None
    In UA option prof:     Default
    Out UA option prof:    Default
    In proxy opt prof:     Default
    Out proxy opt prof:    Default
    Priority set name:     None
    Local-id:              None
    Rewrite REGISTER:      On
    Register contact username: Rewrite
    Target address:        1.0.0.3:5068
    NAT Status:            Auto Detect
    Reg-min-expiry:        3000 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
    Register aggregate:    Disabled
    Registration Required: Disabled
    Register Out Interval: 0 seconds
    Parse username params: Disabled
    Supported timer insert:Disabled
    Suppress Expires:      Disabled
    p-asserted-id header-value: not defined
    p-assert-id assert:    Disabled
    Authenticated mode:    None
    Authenticated realm:   None
```

In Cisco IOS XE Release 3.2S, the output of the **show sbc sbe adjacency detail** command was updated to include details about multiple SBC media bypass:

```
Router# show sbc MySBC sbe adjacencies ADJ1 detail
SBC Service MySBC
  Adjacency ADJ1 (SIP)
    Status:                Attached
```

```
    Signaling address:    192.0.2.36.1:5060, VRF sidd_sipp1
    IPsec server port:    0
    Signaling-peer:       192.0.2.37.1:5060 (Default)
.
.
.

      Media Bypass Tag List:
       Tag 1:                     tag1
       Tag 2:                     tag2
       Media Bypass Max Out Data Length:        1024
       Register unencrypted covert: Enabled
```

In Cisco IOS XE Release 3.3S, the output of the **show sbc sbe adjacency detail** command was updated to include details about the H.225 messages, whether the contact username in a SIP REGISTER request is in a rewrite mode or passthrough mode, and the local jitter ratio:

```
Router# show sbc MySBC sbe adjacencies ADJ1 detail
SBC Service "MySBC"
  Adjacency h323adj (H.323)
    Status:                     Detached
    Signaling address:          0.0.0.0:1720 (default)
    Signaling-peer:             0.0.0.0:1720 (default)
    Admin Domain:               None
    Account:
    Media passthrough:          Yes
    Group:
    Hunting triggers:           Global Triggers
    Hunting mode:               Global Mode
    Techology Prefix:
    H245 Tunnelling:            Enabled
    Fast-Slow Interworking:     None
    Trust-level:                Untrusted
    Call-security:              Insecure
    Realm:                      None
    Warrant Match-Order:        None
    Local Jitter Ratio:         0/1000
    H225 address block:         Enabled
    H225 address usage:         h323id (default)
    .
    .
    .
    Rewrite REGISTER:      Off
    Register contact username: Rewrite as userid and digits
    Target address:         None
    NAT Status:             Auto Detect
    Reg-min-expiry:         3000 seconds
    Local Jitter Ratio:     0/1000
    .
    .
    .
```

The following example shows the adjacencies that are configured on the SBE:

```
Router# show sbc mysbc sbe adjacencies

SBC Service ''mysbc''
Name Type State Description
---------------------------------------------
h323-7206-CG H.323 Attached
h323-ixvoice H.323 Attached
sip-60 SIP Attached
7600-phone1 SIP Attached
```

```
7600-phone2 SIP Attached
sip-ixvoice SIP Attached
sip-7206-CG- SIP Attached
```

The following example shows the detailed output for the SoftSwitch adjacency, in which softswitch shielding is enabled. The Register Out Timer: field shows the time interval, in seconds, at which the SBC forwards the next REGISTER messages to the softswitch.

```
Router# show sbc mySbc sbe adjacencies SoftSwitch detail
SBC Service "mySbc"
  Adjacency SoftSwitch (SIP)
    Status:                Attached
    Signaling address:     100.100.100.100:5060, VRF Admin
    Signaling-peer:        10.10.51.10:5060
    Force next hop:        No
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
    Out method profile:    Default
    In UA option prof:     Default
    Out UA option prof:    Default
    In proxy opt prof:     Default
    Out proxy opt prof:    Default
    Priority set name:     None
    Local-id:              None
    Rewrite REGISTER:      Off
    Target address:        None
    Register Out Timer:    36000 seconds
    Register Aggregate:    Disabled
    NAT Status:            Auto Detect
    Reg-min-expiry:        30 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
    Authenticated mode:    None
    Authenticated realm:   None
    Auth. nonce life time: 300 seconds
    IMS visited NetID:     None
    Inherit profile:       Default
    Force next hop:        No
    Home network Id:       None
    UnEncrypt key data:    None
    SIPI passthrough:      No
    Rewrite from domain:   Yes
    Rewrite to header:     Yes
    Media passthrough:     No
    Preferred transport:   UDP
    Hunting Triggers:      Global Triggers
    Redirect mode:         Pass-through
    Security:              Untrusted
    Outbound-flood-rate:   None
    Ping-enabled:          No
    Signaling Peer Status: Not Tested
```

The following example displays the detailed output for the Cary-IP-PBX adjacency, including the Register Aggregate: field, which shows that aggregate registration is enabled:

```
Router# show sbc mySbc sbe adjacencies Cary-IP-PBX detail
SBC Service "mySBC"
  Adjacency Cary-IP-PBX (SIP)
    Status:                Attached
    Signaling address:     100.100.100.100:5060, VRF Admin
```

```
    Signaling-peer:        10.10.51.10:5060
    Force next hop:        No
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
    Out method profile:    Default
    In UA option prof:     Default
    Out UA option prof:    Default
    In proxy opt prof:     Default
    Out proxy opt prof:    Default
    Priority set name:     None
    Local-id:              None
    Rewrite REGISTER:      Off
    Target address:        None
    Register Out Timer:    1800 seconds
    Register Aggregate:    Enabled
    NAT Status:            Auto Detect
    Reg-min-expiry:        30 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
    Authenticated mode:    None
    Authenticated realm:   None
    Auth. nonce life time: 300 seconds
    IMS visited NetID:     None
    Inherit profile:       Default
    Force next hop:        No
    Home network Id:       None
    UnEncrypt key data:    None
    SIPI passthrough:      No
    Rewrite from domain:   Yes
    Rewrite to header:     Yes
    Media passthrough:     No
    Preferred transport:   UDP
    Hunting Triggers:      Global Triggers
    Redirect mode:         Pass-through
    Security:              Untrusted
    Outbound-flood-rate:   None
    Ping-enabled:          No
    Signaling Peer Status: Not Tested
    Rewrite Request-uri:   Enabled
    Registration Monitor:  Disabled
```

The following example displays the detailed output for the Cary-IP-PBX adjacency, including the Registration Monitor: field, which shows that registration monitoring is enabled:

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

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

The following example displays the detailed output for the CCM135-IPV6 adjacency. This example also contains a new field, TLS Mutual Authentication, to indicate whether TLS Mutual Authentication is enabled on the adjacency.

```
Router# show sbc asr1 sbe adjacencies CCM135-IPV6 detail
SBC Service "asr1"
  Adjacency CCM135-IPV6 (SIP)
    Status:                Attached
    Signaling address:     2001:A401::33:33:36:1:5060
    Signaling-peer:        2001::10:0:50:135:5060 (Default)
    Force next hop:        Yes
    Account:
    Group:                 v6
    In header profile:     ccmpf1
    Out header profile:    ccmpf1
    In method profile:     ccmmethod2
    Out method profile:    ccmmethod2
    In body profile:       None
    Out body profile:      None
    In UA option prof:     Default
    Out UA option prof:    Default
    In proxy opt prof:     Default
    Out proxy opt prof:    Default
    Priority set name:     None
    Local-id:              None
    Rewrite REGISTER:      Off
    Register contact username: Rewrite
    Target address:        None
    NAT Status:            Force off
    Reg-min-expiry:        3000 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
```

```
Register aggregate:    Disabled
Registration Required: Disabled
Register Out Interval: 0 seconds
Parse username params: Disabled
Supported timer insert:Disabled
Suppress Expires:      Disabled
p-asserted-id header-value: not defined
p-assert-id assert:    Disabled
Authenticated mode:    None
Authenticated realm:   None
Auth. nonce life time: 300 seconds
IMS visited NetID:     None
Inherit profile:       Default
Force next hop:        Yes
Home network Id:       None
UnEncrypt key data:    None
SIPI passthrough:      No
Passthrough headers:
Media passthrough:     No
Preferred transport:   UDP
Incoming 100rel strip: No
Incoming 100rel supp:  No
Out 100rel supp add:   No
Out 100rel req add:    No
Parse TGID parms:      No
IP-FQDN inbound:
IP-FQDN outbound:
FQDN-IP inbound:
FQDN-IP outbound:
Outbound Flood Rate:   None
Hunting Triggers:      Global Triggers
Add transport=tls param:   Disabled
Redirect mode:         Pass-through
Security:              Untrusted-Unencrypted
TLS mutual authentication: No
Ping:                  Disabled
Ping Interval:         32 seconds
Ping Life Time:        32 seconds
Ping Peer Fail Count:  3
Ping Trap sending:     Enabled
Ping Peer Status:      Not Tested
Rewrite Request-uri:   Disabled
Registration Monitor:  Disabled
DTMF SIP NOTIFY Relay:     Enabled
DTMF SIP NOTIFY Interval:  2000
DTMF SIP default duration: 200
DTMF Preferred Method:     SIP NOTIFY
Realm :     None
Statistics setting:    Summary
```

The following example shows the output of the **show sbc sbe adjacencies peers** command. The command lists all the peers configured on the SBEs for a specified adjacency:

```
Router# show sbc mat sbe adjacencies SIPPA peers
Configured peers
--------------------------------
Index Priority Status                Address:Port                      Network
    1        2 Down                    5.5.5.5:5060                  5.5.5.5/32
    2        3 Down                22.22.22.22:2222              22.22.22.22/32
```

The following example shows the output of the **show sbc sbe adjacencies detail** command for an adjacency with IMX Rx settings:

```
Router# show sbc mySBC sbe adjacencies A_1 detail

SBC Service "mySBC"
  Adjacency A_1 (SIP)
    Status:                Detached
    Signaling address:     0.0.0.0:default
    IPsec server port:     0
    Signaling-peer:        :5060 (Default)
    Signaling-peer status: Not Tested
    Signaling-peer priority: 2147483647
    Signaling-peer switch: always
    Peer status: Not Tested
    Force next hop:        No
    Force next hop select: Out-of-dialog
    Account:
    Group:                 None
    In header profile:     Default
    Out header profile:    Default
    In method profile:     Default
    Out method profile:    Default
    Out error profile:     Default
    In body profile:       None
    Out body profile:      None
    In UA option prof:     Default
    Out UA option prof:    Default
    In proxy opt prof:     Default
    Out proxy opt prof:    Default
    Priority set name:     None
    Local-id:              None
    Rewrite REGISTER:      Off
    Register contact username: Rewrite
    Target address:        None
    NAT Status:            Auto Detect
    Reg-min-expiry:        3000 seconds
    Fast-register:         Enabled
    Fast-register-int:     30 seconds
    Register aggregate:    Disabled
    Registration Required: Disabled
    Register Out Interval: 0 seconds
    Parse username params: Disabled
    Supported timer insert:Disabled
    Suppress Expires:      Disabled
    p-asserted-id header-value: not defined
    p-assert-id assert:    Disabled
    Authenticated mode:    None
    Authenticated realm:   None
    Auth. nonce life time: 300 seconds
    IMS visited NetID:     None
    Inherit profile:       Default
    Force next hop:        No
    Home network Id:       None
    UnEncrypt key data:    None
    SIPI passthrough:      No
    Passthrough headers:
    Media passthrough:     Yes
    Incoming 100rel strip: No
    Incoming 100rel supp:  No
    Out 100rel supp add:   No
    Out 100rel req add:    No
    Parse TGID parms:      No
```

```
    IP-FQDN inbound:
    IP-FQDN outbound:
    FQDN-IP inbound:
    FQDN-IP outbound:
    Outbound Flood Rate:   None
    Hunting Triggers:      Global Triggers
    Add transport=tls param:   Disabled
    Redirect mode:         Pass-through
    Security:              Untrusted-Unencrypted
    TLS mutual authentication: No
    Ping:                  Disabled
    Ping Interval:         32 seconds
    Ping Life Time:        32 seconds
    Ping Peer Fail Count:  3
    Ping Trap sending:     Enabled
    Ping Peer Status:      Not Tested
    Rewrite Request-uri:   Disabled
    Registration Monitor:  Disabled
    DTMF SIP INFO Relay:       Auto_detect
    DTMF SIP NOTIFY Relay:     Enabled
    DTMF SIP NOTIFY Interval:  2000
    DTMF SIP default duration: 200
    DTMF Preferred Method:     SIP NOTIFY
    Realm:                     None
    Statistics setting:    Summary
    IMS Rx:              Enabled
    IMS Rx pcrf host:    None
    IMS Nass:  Disabled
    IMS realm name:    Realm_1
    PANI:
    Warrant Match-Order:       None
```

The following example shows how, in Cisco IOS XE Release 3.4S and later, the output of the **show sbc sbe adjacencies detail** command includes the percentage of calls that has been set for use in the calculation of the MOS-CQE score. The output also includes the value that has been set for the Advantage factor.

```
Router# show sbc mySbc sbe adjacencies adj1 detail

SBC Service "mySbc"
  Adjacency adj1 (H.323)
    Status: Attached
    Signaling address: 1.0.0.3:1720 (default)
    Signaling-peer: 40.40.40.4:1720 (default)
    Admin Domain: None
    Account:
    Media passthrough: Yes
    Group:
    Hunting triggers: Global Triggers
    Hunting mode: Global Mode
    Technology Prefix:
    H245 Tunnelling: Enabled
    Fast-Slow Interworking: None
    Trust-level: Untrusted
    Call-security: Insecure
    Realm: None
    Warrant Match-Order: None
    Local Jitter Ratio: 1000/1000
    Calc Moscqe: 305/1000
    G107A factor: 10
    H225 address block: Disabled (default)
    H225 address usage: h323id (default)
```

The following is a sample output of the **show sbc asr sbe adjacency mySBC detail** command in Cisco IOS XE Release 3.7S and later:

```
Router# show sbc asr sbe adjacency mySBC detail

Ims rf:          Enabled
```

Table 14 describes the significant field shown in the display.

Table 14 show sbc asr sbe adj mySBC detail Field Descriptions

Field	Description
Ims rf	Value of the IMS Rf interface state for the adjacency. The valid values are Enabled or Disabled.

Related Commands

Command	Description
calc-moscqe	Specifies the percentage of calls that must be used to calculate the MOS-CQE score.
g107a-factor	Sets the Advantage (A) factor.
g107 bpl	Set the Packet-Loss Robustness (Bpl) factor.
g107 ie	Sets the Equipment Impairment (Ie) factor.
local-jitter-ratio	Specifies the percentage of calls that must be used to calculate the local jitter ratio.
show sbc sbe sip-method-stats	Displays either a summary of statistics or detailed statistics pertaining to a SIP method.
statistics-setting	Configures an adjacency to support the SIP method statistics.
tls mutual-authentication	Enables TLS Mutual Authentication on an adjacency.

show sbc sbe adjacencies authentication-realms

To display authentication realm on the specified adjacency, use the **show sbc sbe adjacencies authentication-realms** command in Privileged EXEC mode.

show sbc *sbc-name* ***sbe adjacencies*** *adjacency-name* ***authentication-realms***

Syntax Description

sbc-name	Specifies the name of the SBC service.
adjacency-name	The name of the SIP adjacency whose details are to be displayed.

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 display all currently configured authentication-realms for all SIP adjacencies:

```
Router# show sbc mysbc sbe adjacencies sipAdjacency authentication-realms

Configured authentication realms
--------------------------------
Domain Username Password
abcdef.com abc abc
```

show sbc sbe admin-domain

To list the administrative domains on the Session Border Controller (SBC) and per adjacency, use the **show sbc sbe admin-domain** command in the Privileged EXEC mode.

show sbc *sbc-name* **sbe admin-domain** [**adjacency**]

Syntax Description

sbc-name	The name of the SBC service.
adjacency	Displays a list of the administrative domains on an adjacency.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

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 a list of the administrative domains on an SBC:

```
Router# show sbc mySBC sbe admin-domain
SBC Service "mySBC"
Global cac-policy-set:             2
Default call-policy-set/priority:  1/6

                                   cac              call-policy-set/priority
Administrative Domain          policy-set    inbound-na       routing   outbound-na
------------------------------ ---------- ------------- ------------- -------------
DOMAIN1                                 2          2/1           2/1           2/1
```

The following example shows a list of the administrative domains on the adjacency:

```
Router# show sbc mySBC sbe admin-domain adjacency
SBC Service "mySBC"
Adjacency Name                 Type  State       Admin-domain
------------------------------ ----  ----------  ------------------------------
SIPP1A                         SIP   Attached    DOMAIN1
```

Related Commands

Command	Description
admin-domain	Configures an administrative domain.
cac-policy-set global	Activates the global CAC policy set within an SBE entity.
cac-policy-set (admin-domain)	Configures the call admission control (CAC) policy set for an administrative domain.

call-policy-set (admin-domain)	Configures the inbound and outbound number analysis and routing policy set for an administrative domain.
call-policy set default	Configures a default policy set on the signaling border element (SBE) entity.

show sbc sbe all-authentication-realms

To display all currently configured authentication-realms for all SIP adjacencies, use the **show sbc sbe all-authentication-realms** command in Privileged EXEC mode.

show sbc sbe all-authentication-realms

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.

Examples The following example shows how to display all currently configured authentication realms for all SIP adjacencies:

```
Router# show sbc mySbc sbe all-authentication-realms

Configured authentication realms
--------------------------------
Adjacency: SipToIsp42
Domain Username Password
Example.com usersbc passwordsbc
```

show sbc sbe all-peers

To display peer information of all the adjacencies on an SBE, use the **show sbc sbe all-peers** command in privileged EXEC mode.

show sbc *sbc-name* **sbe all-peers**

Syntax Description

sbc-name	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 3.1S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows how the **show sbc sbe all-peers** command displays peer information of all the adjacencies on an SBE:

```
Router# show sbc mat sbe all-peers
Configured peers
--------------------------------

Adjacency: SIPPA
Index Priority Status                Address:Port                      Network
    1        2 Down                   5.5.5.5:5060                 5.5.5.5/32
    2        3 Down                22.22.22.22:2222                22.22.22.22/32

Adjacency: SIPPB
No peers specified for this adjacency.

Adjacency: server
No peers specified for this adjacency.
```

show sbc sbe billing

To display the remote billing configuration, use the **show sbc sbe billing** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe billing instance** [*instance-index*] [**rf** {**realms** [*realm-name* **current5mins**] | **cdfs** *cdf-name*}]

Syntax Description

sbc-name	Specifies the name of the SBC service.
instance	Displays the billing details for a specific sbe instance.
instance-index	Method for instance. Range: 0 to 7.
rf	Displays the Rf information.
realms	Displays all the Rf billing realms configurations, or a specific Rf billing realm configuration if the *realm-name* is configured.
realm-name	Name of the realm.
current5mins	Displays the stats for current 5-minute interval.
cdfs	Displays all the Rf billing Charging Data Function (CDF) configurations, or a specific Rf billing CDF configuration if the *cdf-name* is configured.
cdf-name	Name of the CDF.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.4S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.7S	This command was modified to display the billing information for an Rf billing instance.

Examples

The following shows how to display the billing information for a packetcable billing instance:

```
Router# show sbc mySBC sbe billing instance

Billing Manager Information:
  Local IP address:            172.18.53.179
  LDR check time:              0:0
  Method                       packetcable-em
  Method                       packetcable-li
  Admin Status:                DOWN
  Operation Status:            DOWN
  Cache path:                  usb0:billing_cache/
  Cache max size:              0 Kilobytes
  Cache minor-alarm:           97656 Kilobytes
  Cache major-alarm:           488281 Kilobytes
```

```
  Cache critical-alarm:         976562 Kilobytes
  Retry-interval:               20 secs
  CDR Media-Info:               Not Included
  CDR Endpoint-Info:            Addressing

Billing Methods:
  Radius client name:           ssss
  Instance:                     0
  Type:                         PACKET-CABLE
  Transport Mechanism Status:   DOWN
  Active Calls Billed:          0
  Local IP Address:             172.18.53.179
  Deact-mode:                   abort
  Admin Status:                 DOWN
  Operation Status:             DOWN
  LDR check time:               0 :0
  Batch size:                   0
  Batch time:                   1000 ms
```

The following shows how to display the billing information for an Rf billing instance:

```
Router# show sbc asr sbe billing instance

Billing Manager Information:
Local IP address: 0.0.0.0
LDR check time: 0 :0
Method rf
Admin Status: UP
Operation Status: UP

Billing Methods:
Instance: 1
Type: 3GPP-RF
Transport Mechanism Status: UP
Active Calls Billed: 0
Local IP Address: 0.0.0.0
Deact-mode: abort
Admin Status: UP
Operation Status: UP
LDR check time: 24:0
Origin Host: yfasr.open-ims.test
Origin Realm: open-ims.test
```

Table 15 describes the significant fields shown in the display.

Table 15 show sbc asr sbe billing instance Field Descriptions

Field	Description
Local IP address	IP address of the local billing manager.
LDR check time	Check time for LDR.
Operation Status	Operation status of the billing manager: UP or DOWN.
Instance	Instance for billing configuration.
Type	Billing type.
Transport Mechanism Status	Transport mechanism status of the billing methods: UP or DOWN.
Active Calls Billed	Active calls for billing.
Local IP Address	IP address of the local billing host.

Table 15 show sbc asr sbe billing instance Field Descriptions (continued)

Field	Description
Deact-mode	Deactive mode of the billing method.
Admin Status	Administrator status of the billing methods: UP or DOWN.
Operation Status	Operation status of the billing methods: UP or DOWN.
LDR check time	Check time for Long Duration Check (LDR).
Origin Host	DNS address or IP address of the origin host.
Origin Realm	DNS address or IP address of the origin realm.

show sbc sbe blacklist

To list the limits in force for a particular source, whether from defaults or explicitly configured, in a form in which they can be entered into the command, use the **show sbc sbe blacklist** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe blacklist [***source] {**ipv4** IP address* | ***ipv6** IP address}*

Syntax Description

sbc-name	Specifies the name of the SBC.
source	Specifies the source for which you want to display blacklisting information. This source is one of the following values: • VPN ID (Only VPN ID is permitted in the present implementation.)
***ipv4** IP address*	Shows configured blacklisting for a single IPv4 address.
***ipv6** IP address*	Shows configured blacklisting for a single IPv6 address.

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 2.6	The ***ipv6*** keyword was added.

Usage Guidelines

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.

Examples

The following example shows how to list blacklisting information for a specific VPN with a valid IPv4 address:

```
Router# show sbc mySbc sbe blacklist vpn3 ipv4 172.19.12.12

SBC Service mySbc SBE dynamic blacklist vpn3 172.19.12.12

vpn3 172.19.12.12
=================
Reason          Trigger          Trigger      Blacklisting
                   Size           Period            Period
------          -------          -------      ------------
Authentication     (20)            10 ms          (1 hour)
Bad address        (20)            10 ms          (1 hour)
Routing            (20)            10 ms          (1 hour)
Registration        (5)           100 ms        (10 hours)
Policy             (20)            10 ms           (1 day)
```

```
Corrupt              40            10 ms          (1 hour)
Spam                  2            10 secs         1 mins


Default for ports of vpn3 172.19.12.12
=======================================
Reason          Trigger          Trigger      Blacklisting
                   Size           Period            Period
------          -------          -------      ------------
Authentication       20            1 sec            1 hour
Bad address          20            1 sec            1 hour
Routing              20            1 sec            1 hour
Registration          5           30 sec           10 hours
Policy               20            1 sec              1 day
Corrupt              20           100 ms            1 hour
Spam                  2           10 secs           1 mins

The following example shows the blacklist information for an IPv6 address:

Router# show sbc asr1 sbe blacklist ipv6 2001::10:0:0:1
SBC Service "asr1"

VRF:  2001::10:0:0:1
=====================
Reason            Trigger            Trigger      Blacklisting
                     Size             Period            Period
Authentication        (4)           (100 ms)         (10 mins)
Bad-Address           (4)           (100 ms)         (10 mins)
Routing               (4)           (100 ms)         (10 mins)
Registration          (4)           (100 ms)         (10 mins)
Policy                (4)           (100 ms)         (10 mins)
Corruption         65535             1 mins          (10 mins)
Spam                 (30)           (100 ms)         (10 mins)

-------------------------------------------------------------

Default for all ports of 2001::10:0:0:1
=======================================
Reason            Trigger            Trigger      Blacklisting
                     Size             Period            Period
```

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.
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 current-blacklisting	Lists the limits causing sources to be blacklisted.

show sbc sbe blacklist configured-limits

To list the explicitly configured limits, showing only the configured sources, use the **show sbc sbe blacklist configured-limits** command in Privileged EXEC mode.

Values that are not explicitly configured and therefore inherited from other defaults, are within brackets.

show sbc *sbc-name* **sbe blacklist configured-limits**

Syntax Description

sbc-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.
Cisco IOS XE Release 3.2S	The output of this command was updated to include the blacklist alerts.

Examples

The following command displays explicitly configured limits, displaying only the sources. Nonexplicitly configured values are displayed withing brackets:

```
Router(config-sbc-sbe)# show sbc mySbc sbe blacklist configured-limits
SBC Service "mySBC"

Blacklist Defaults
====================
Reason            Trigger     Trigger  Blacklisting    Minor    Major  Critical
                     Size      Period        Period    Alert    Alert     Alert
Auth-failure          (4)    (100 ms)     (10 mins)  not set  not set   not set
Bad-address           (4)    (100 ms)     (10 mins)  not set  not set   not set
RTG-policy-rejection  (4)    (100 ms)     (10 mins)  not set  not set   not set
Endpoint-registration (4)    (100 ms)     (10 mins)  not set  not set   not set
CAC-policy-rejection  (4)    (100 ms)     (10 mins)  not set  not set   not set
Corrupt-message       (4)    (100 ms)     (10 mins)  not set  not set   not set
Spam                 (30)    (100 ms)     (10 mins)  not set  not set   not set
NA-policy-rejection   (4)    (100 ms)     (10 mins)  not set  not set   not set

-------------------------------------------------------------

VRF:  172.18.53.56
====================
Reason            Trigger     Trigger  Blacklisting    Minor    Major  Critical
                     Size      Period        Period    Alert    Alert     Alert
NA-policy-rejection   (4)    (100 ms)     (10 mins)        2  not set   not set

-------------------------------------------------------------
```

Related Commands

Command	Description
critical-alert-size	Configures the number of specified events that must occur before a critical alert is triggered.
major-alert-size	Configures the number of specified events that must occur before a major alert is triggered.
minor-alert-size	Configures the number of specified events that must occur before a minor alert is triggered.
reason	Enables the entry of a user into a mode for configuring a limit to a specific event type on the source (in other words, a port, IP address, VPN, and global address space).
trigger-size	Defines the number of specified events from the specified source that are allowed before blacklisting is triggered, and blocks all the packets from the source.
trigger-period	Defines the period over which events are considered. For details, see the description of the **trigger-size** command.
timeout	Defines the length of time for which packets from the source are blocked, should the limit be exceeded.
show sbc sbe blacklist	Lists the limits in force for a particular source (whether they are from defaults or are explicitly configured) in a form in which they can be entered in the CLI. Also listed are any defaults for a smaller scope configured at this address.
show sbc sbe blacklist current-blacklisting	Lists the limits that cause sources to be blacklisted.

show sbc sbe blacklist critical

To show all configured critical blacklists for IPv4 and IPv6 addresses, use the **show sbc sbe blacklist critical** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe blacklist** [**critical**] {**WORD**} **ipv4** *addr* [**tcp** *tcp-port* | **udp** *udp-port*]

show sbc *sbc-name* **sbe blacklist critical { *ipv4* *addr* | *ipv6* *addr* } [tcp** *tcp-port* | **udp** *udp-port]*

Syntax Description

sbc-name	Specifies the name of the SBC.
WORD	Specifies the VPN ID for which you want to display critical blacklisting information.
ipv4	Shows configured critical blacklisting for a single IPv4 address.
ipv6	Shows configured critical blacklisting for a single IPv6 address.
addr	IPv4 or IPv6 address.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.4.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 2.6	The ***ipv6*** keyword was added.

Examples

The following example shows critical blacklist information for VPN ID 600 for a specific IPv4 address:

```
Router# show sbc test sbe blacklist critical 600 ipv4 10.0.120.12
SBC Service "test"
600 10.0.120.12
=================
Reason Trigger Trigger Blacklisting
Size Period Period
-----------------------------------------------------------------
Authentication (4) (100 ms) (10 mins)
Bad-Address (4) (100 ms) (10 mins)
Routing (4) (100 ms) (10 mins)
Registration (4) (100 ms) (10 mins)
Policy (4) (100 ms) (10 mins)
Corruption 2 1 secs (10 mins)
Spam 2 1 secs (10 mins)
Default for all ports of 600 10.0.120.12
=========================================
Reason Trigger Trigger Blacklisting
Size Period Period
-----------------------------------------------------------------
Authentication (4) (100 ms) (10 mins)
```

```
Bad-Address (4) (100 ms) (10 mins)
Routing (4) (100 ms) (10 mins)
Registration (4) (100 ms) (10 mins)
Policy (4) (100 ms) (10 mins)
Corruption (4) (100 ms) (10 mins)
Spam (30) (100 ms) (10 mins)
```

The following example shows critical blacklist information for a specific IPv6 address:

```
Router# show sbc asr1 sbe blacklist critical ipv6 2001::10:0:0:1
SBC Service "asr1"

VRF:  2001::10:0:0:1
=====================
Reason            Trigger            Trigger      Blacklisting
                     Size             Period            Period
Authentication      65535             1 mins         (10 mins)

------------------------------------------------------------

Default for all ports of 2001::10:0:0:1
=======================================
Reason            Trigger            Trigger      Blacklisting
                     Size             Period            Period
```

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.
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 current-blacklisting	Lists the limits causing sources to be blacklisted.

show sbc sbe blacklist critical configured-limits

To show all configured blacklisting limits for critical blacklists, use the **show sbc sbe blacklist critical configured-limits** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe blacklist critical configured-limits**

Syntax Description

sbc-name	Specifies the name of the SBC.
configured-limits	Shows all configured blacklisting limits for critical blacklists.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.4.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows the configured blacklisting limits for critical blacklists:

```
Router# show sbc test sbe blacklist critical configured-limits
```

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.
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 current-blacklisting	Lists the limits causing sources to be blacklisted.

show sbc sbe blacklist critical current-blacklisting

To show all currently blacklisted addresses for critical blacklists, use the **show sbc sbe blacklist critical** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe blacklist critical current-blacklisting**

Syntax Description

sbc-name	Specifies the name of the SBC.
current-blacklisting	Shows the currently blacklisted addresses for critical blacklists.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.4.2	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Examples

The following example shows the currently blacklisted addresses for critical blacklists:

```
Router# show sbc test sbe blacklist critical current-blacklisting
SBC Service "test" SBE dynamic blacklist current members
VRF: 600
=========
Source Source Blacklist Time
Address Port Reason Remaining
-------------------------------------------------------------
10.0.120.12 All Corruption 585 secs
```

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.
timeout	Defines the length of time that packets from the source are blocked, should the limit be exceeded.

Command	Description
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 current-blacklisting	Lists the limits causing sources to be blacklisted.

show sbc sbe blacklist current-blacklisting

To list the limit causing sources to be blacklisted, use the **show sbc sbe blacklist current-blacklisting** command in the Privileged EXEC mode.

show sbc *sbc-name* **sbe blacklist current-blacklisting**

Syntax Description

sbc-name	Defines the name of the 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 the current blacklisting information for the SBC:

```
Router# show sbc mySbc sbe blacklist current-blacklisting

SBC Service mySbc SBE dynamic blacklist current members

Global addresses
================
Source           Source   Blacklist       Time
Address          Port     Reason          Remaining
-------          ------   ---------       ---------
125.125.111.123  All      Authentication  15 mins
125.125.111.253  UDP 85   Registration    10 secs
144.12.12.4      TCP 80   Corruption      Never ends
192.169.0.9      All      Spam            49 secs

VRF: vpn3
=========
Source           Source   Blacklist       Time
Address          Port     Reason          Remaining
-------          ------   ---------       ---------
132.15.1.2       TCP 285  Registration    112 secs
172.23.22.2      All      Policy          10 hours
192.169.0.9      All      Spam            49 secs
```

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.
timeout	Defines the length of time that packets from the source are blocked, should the limit be exceeded.
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 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 cac-policy-set

To list detailed information pertaining to a given entry in a call admission control (CAC) policy table, use the **show sbc sbe cac-policy-set** command in the privileged EXEC mode.

show sbc *name* **sbe cac-policy-set [***id [***table** *name* [**entry** *id]]* | ***global [*****table** *name* [**entry** *id]*]] [**detail**]

Syntax Description

name	Name of the Session Border Controller (SBC) service.
id	CAC policy set ID, that is, the numeric identifier of the CAC policy set to which the table belongs. Valid range is 1 through 2147483647.
table *name*	**table** specifies the table in a CAC policy set. *name* is the name of a table.
entry *id*	**entry** specifies the numeric identifier of the CAC entry you want to display. It displays the output in detail. *id* is the CAC entry ID.
global	Displays the global CAC policy sets.
detail	Displays information pertaining to the CAC policy sets in detail format.

Command Default

Brief output format is the default.

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 modified. Callee Bandwidth-Field and Caller Bandwidth-Field were added to the output.
Cisco IOS XE Release 2.5.1	This command was modified. The output of this command was modified to show the caller and callee media capabilities and extra terminal capability exchange message capabilities.
Cisco IOS XE Release 2.6	This command was modified. The output of this command was modified to show IPv6 call type and the caller and callee secure media.
Cisco IOS XE Release 3.1S	This command was modified. The command output was modified to display: • IMS Rx information: Ims rx preliminary-aar • Ims media-service • Asymmetric payload types that are allowed or disallowed

Release	Modification
Cisco IOS XE Release 3.2S	This command was modified. The **active** keyword was replaced with the **global** keyword. The output of the **show sbc sbe cac-policy-set table entry detail** command was updated to include details about multiple SBC media bypass.
Cisco IOS XE Release 3.3S	This command was modified. The output of the **show sbc sbe cac-policy-set** command was updated to include information about the billing filter and the rejection counts of the failed CAC policies.
Cisco IOS XE Release 3.5S	This command was modified. The output of the **show sbc sbe cac-policy-set** command was updated to include information about the **branch** command settings.

Usage Guidelines

There are two output formats, brief (default) and detail. The brief version displays important high-level information for each entry on a single line. The detail version displays the policy sets, tables, and entry values in detail.

This command allows filters according to the policy set IDs, the active policy sets, table names, and entry IDs. The default displays all the policy sets, tables, and entries.

If the entry option is specified, the information is displayed in the detail format.

Examples

The following example shows the output of the **show sbc sbe cac-policy-set table entry** command that was updated in Cisco IOS XE Release 3.3S to include information about the billing filter and the rejection counts of the failed CAC policies:

```
Router# show sbc mySBC sbe cac-policy-set 1 table t1 entry 1

SBC Service "mySBC"
CAC Averaging period 1: 60 sec
CAC Averaging period 2: 0 sec

CAC Policy Set 1
  Global policy set: Yes
  Description:
  First CAC table: t1
  First CAC scope: global

  Table name: t1
    Description:
    Table type: policy-set
    Total call setup failures (due to non-media limits): 0

    Entry 1
    CAC scope:
    CAC scope prefix length: 0
    Action: CAC complete
    Number of call setup failures (due to non-media limits): 0
    No. of registrations rejected (due to registration limits): 0

    Max calls per scope:                                Unlimited
    No. of events rejected due to Max Call Limit:       0

    Max reg. per scope:                                 Unlimited
    No. of events rejected due to Max Reg limit:        0

    Max channels per scope:                             Unlimited
```

```
    Max updates per scope:                                Unlimited
    Max bandwidth per scope:                              Unlimited


                                                  Averaging-period 1      Averaging-period
2

    Max call rate per scope:                          Unlimited               Unlimited
    No. of events rejected due to Max call rate:      0                       0

    Max reg. rate per scope:                          Unlimited               Unlimited
    No. of events rejected due to Max reg rate:       0                       0

    Max in-call message rate:                         Unlimited               Unlimited
    No. of events rejected due to Max in-call rate:   0                       0

    Max out-call message rate:                        Unlimited               Unlimited
    No. of events rejected due to Max Out call rate: 0                        0


    Timestamp when the rejection counts were last reset: 2011/03/07 04:38:24

……
media bandwidth policing:        Degrade
Media policy limit:               mp1
IPsec maximum registers:          10
IPsec maximum calls:              5
Billing filter :                  enable
Billing filter methods:           xml
```

The following example shows the output of the **show sbc sbe cac-policy-set table entry detail** command that was updated in Cisco IOS XE Release 3.2S to include details about multiple SBC media bypass:

```
Router# show sbc asr8 sbe cac-policy-set 1 table table1 entry 1 detail
    SBC Service "asr8"

    CAC Policy Set 1
        Active policy set: No
        Description:
        Averaging period: 60 sec
        First CAC table:
        First CAC scope: global

        Table name: table1
        Description:
        Table type: policy-set

        Entry 1
        Action: CAC Complete
        …
        Media Bypass Type: Full Partial
        Caller Media Bypass: Enabled
        Callee Media Bypass: Enabled
```

In Cisco IOS XE Release 2.6, the command output was modified to show the caller and callee media capabilities and extra TCS message capabilities, and the caller and callee sides configured with granular secure media:

```
Router# show sbc mySBC sbe cac-policy-set 2 table table2 entry 1
SBC Service "mySBC"

CAC Policy Set 2
```

```
  Active policy set: No
  Description:
  Averaging period: 60 sec
  First CAC table: 1
  First CAC scope: global
  First CAC prefix length: 4294967256

  Table name: table2
    Description:
    Table type: policy-set
    Total call setup failures (due to non-media limits): 0

    Entry 1
    CAC scope:
    CAC scope prefix length: 0
    Action: CAC complete
    Number of call setup failures (due to non-media limits): 0
    Max calls per scope:    Unlimited       Max call rate per scope: Unlimited
    Max in-call rate:       Unlimited       Max out-call rate:       Unlimited
    Max reg. per scope:     Unlimited       Max reg. rate per scope: Unlimited
    Max channels per scope: Unlimited       Max updates per scope:   Unlimited
    Early media:            Allowed         Early media direction:   Both
    Early media timeout:    None            Transcoder per scope:    Allowed
    Callee Bandwidth-Field: None            Caller Bandwidth-Field:  None
    Media bypass:                 Allowed
    Renegotiate Strategy:            Delta
    Max bandwidth per scope:         Unlimited

    …

    Caller media capabilities:       <codec-list-name>
    Callee media capabilities:       <codec-list-name>
    Extra TCS capabilities:          <codec-list-name>

    Caller unsignaled secure media:  Allowed
    Callee unsignaled secure media:  Allowed
    Caller tel-event payload type:   Default
    Callee tel-event payload type:   Default
    Media flag:
      Ignore bandwidth-fields (b=), Telephone Event Interworking
    Restrict codecs to list:         Default
    Restrict caller codecs to list:  Default
    Restrict callee codecs to list:  Default
    Maximum Call Duration:           Unlimited
```

The following example displays in detail format the output for CAC policy set 10, table 10, and entry 1 with the IPv6 details included in Cisco IOS XE Release 2.6:

```
Router# show sbc asr1 sbe cac-policy-set 10 table table10 entry 1 detail

SBC Service "asr1"

CAC Policy Set 10
  Active policy set: Yes
  Description:
  Averaging period: 60 sec
  First CAC table: table10
  First CAC scope: global

  Table name: table10
    Description:
    Table type: limit dst-adjacency
    Total call setup failures (due to non-media limits): 0
```

```
Entry 1
Match value: CCM135-IPV6
Match prefix length: 0
Action: CAC complete
Number of call setup failures (due to non-media limits): 0
Max calls per scope:    Unlimited       Max call rate per scope: Unlimited
Max in-call message rate:  Unlimited       Max out-call message rate:   Unlimited
Max reg. per scope:     Unlimited       Max reg. rate per scope: Unlimited
Max channels per scope: Unlimited       Max updates per scope:   Unlimited
Early media:            Allowed         Early media direction:   Both
Early media timeout:    None            Transcoder per scope:    Allowed
Callee Bandwidth-Field: None            Caller Bandwidth-Field:  None
Media bypass:                     Allowed
Renegotiate Strategy:             Delta
Max bandwidth per scope:          Unlimited
SRTP Transport:                   Trusted-Only (by default)
Caller hold setting:              Standard
Callee hold setting:              Standard
Caller privacy setting:           Never hide
Callee privacy setting:           Never hide
Caller voice QoS profile:         Default
Callee voice QoS profile:         Default
Caller video QoS profile:         Default
Callee video QoS profile:         Default
Caller sig QoS profile:           Default
Callee sig QoS profile:           Default
Caller inbound SDP policy:        None
Callee inbound SDP policy:        None
Caller outbound SDP policy:       None
Callee outbound SDP policy:       None
SDP Media Profile         :       None
Caller media disabled:            None
Callee media disabled:            None
Caller unsignaled secure media:   Not Allowed
Callee unsignaled secure media:   Not Allowed
Caller tel-event payload type:    Default
Callee tel-event payload type:    Default
Media flag:                       None

Restrict codecs to list:          Default
Restrict caller codecs to list:   Default
Restrict callee codecs to list:   Default
Caller media caps list:           None
Callee media caps list:           None
TCS extra codec list:             None
Caller media-type:                Inherit (default)
Callee media-type:                Ipv6
Maximum Call Duration:            Unlimited
```

The following example displays in detail format the output for CAC policy set 1, table 1, and entry 1, including the Callee Bandwidth-Field and Caller Bandwidth-Field introduced in Cisco IOS XE Release 2.5:

```
Router# show sbc SBC1 sbe cac-policy-set 1 table 1 entry 1
SBC Service "SBC1"

CAC Policy Set 1
  Active policy set: No
  Description: This is a description for cac-policy-set 1
  Averaging period: 60 sec
  First CAC table: 1
  First CAC scope: call
```

```
  Table name: 1
    Description:
    Table type: policy-set                      Total call failures: 0

    Entry 1
    CAC scope: call
    Action: CAC complete                    Number of calls rejected: 0
    Max calls per scope:    Unlimited       Max call rate per scope: Unlimited
    Max in-call rate:       Unlimited       Max out-call rate:       Unlimited
    Max reg. per scope:     Unlimited       Max reg. rate per scope: Unlimited
    Max channels per scope: Unlimited       Max updates per scope:   1
    Early media:            Allowed         Early media direction:   Both
    Early media timeout:    None            Transcoder per scope:    Allowed
    Callee Bandwidth-Field: TIAS-to-AS      Caller Bandwidth-Field:  AS-to-TIAS
    Media bypass:                       Allowed
    Media flag:                         Not Set
    Renegotiate Strategy:               Delta
    Max bandwidth per scope:            Unlimited
    SRTP Transport:                     Trusted-Only (by default)
    Caller hold setting:                Standard
    Callee hold setting:                Standard
    Caller privacy setting:             Never hide
    Callee privacy setting:             Never hide
    Caller voice QoS profile:           Default
    Caller video QoS profile:           Default
    Caller sig QoS profile:             Default
    Callee voice QoS profile:           Default
    Callee video QoS profile:           Default
    Callee sig QoS profile:             Default
    Restrict codecs to list:            Default
    Restrict caller codecs to list:     Default
    Restrict callee codecs to list:     Default
    Caller inbound SDP policy:          None
    Caller outbound SDP policy:         None
    Callee inbound SDP policy:          None
    Callee outbound SDP policy:         None
```

The following example displays in brief format the information pertaining to global CAC policy set 6:

```
Router# show sbc SBC1 sbe cac-policy-set global
SBC Service "SBC1"

CAC Policy Set 6
  Global policy set: Yes
  First CAC table: white-list1
  First CAC scope: category

  Table name: white-list1
    Table type: limit category                  Total call failures: 0
    Entry   Match value                        Action                  Failures
    -----   -----------                        ------                  --------
    2       non-emergency                      white-list2                    0

  Table name: white-list2
    Table type: policy-set                      Total call failures: 0
    Entry   Scope                              Action                  Failures
    -----   -----                              ------                  --------
    1       call                               Complete                       0
```

The following example displays the detailed output for global CAC policy set 2:

```
Router# show sbc mySBC sbe cac-policy-set global detail
```

```
SBC Service "mySBC"
CAC Averaging period 1: 100 sec
CAC Averaging period 2: 1500 sec

CAC Policy Set 2
  Global policy set: Yes
  Description:
  First CAC table: 1
  First CAC scope: src-adjacency

  Table name: 1
    Description:
    Table type: limit adjacency
    Total call setup failures (due to non-media limits): 0

    Entry 1
    Match value: SIPP1A
    Match prefix length: 0
    Action: CAC complete
    Number of call setup failures (due to non-media limits): 0

    Max calls per scope:     1               Max reg. per scope:     Unlimited
    Max channels per scope:  Unlimited       Max updates per scope:  Unlimited
    Max bandwidth per scope: Unlimited
                                 Averaging-period 1    Averaging-period 2
    Max call rate per scope:     Unlimited             Unlimited
    Max reg. rate per scope:     Unlimited             Unlimited
    Max in-call message rate:    Unlimited             Unlimited
    Max out-call message rate:   Unlimited             Unlimited

    Early media:             Allowed         Early media direction:   Both
    Early media timeout:     None            Transcoder per scope:    Allowed
    Callee Bandwidth-Field:  None            Caller Bandwidth-Field:  None
    Media bypass:            Allowed         Asymmetric Payload Type: Not Set
    Renegotiate Strategy:            Delta
    SRTP Transport:                  Trusted-Only (by default)
    Caller hold setting:             Standard
    Callee hold setting:             Standard
    Caller limited-privacy-service:  Never hide identity
    Callee limited-privacy-service:  Never hide identity
    Caller privacy-service:  Not set
    Callee privacy-service:  Not set
    Caller edit-privacy-request:  Not set
    Callee edit-privacy-request:  Not set
    Caller edit-privacy-request sip strip:  Not set
    Callee edit-privacy-request sip strip:  Not set
    Caller edit-privacy-request sip insert:  Not set
    Callee edit-privacy-request sip insert:  Not set
    Caller voice QoS profile:        Default
    Callee voice QoS profile:        Default
    Caller video QoS profile:        Default
    Callee video QoS profile:        Default
    Caller sig QoS profile:          Default
    Callee sig QoS profile:          Default
    Caller inbound SDP policy:       None
    Callee inbound SDP policy:       None
    Caller outbound SDP policy:      None
    Callee outbound SDP policy:      None
    SDP Media Profile         :      None
    Caller media disabled:           None
    Callee media disabled:           None
    Caller unsignaled secure media:  Not Allowed
    Callee unsignaled secure media:  Not Allowed
    Caller response downgrade support:  No
```

```
Callee response downgrade support:  No
Caller retry rtp support:           No
Callee retry rtp support:           No
Resend sdp answer in 200ok:      No
Caller tel-event payload type:   Default
Callee tel-event payload type:   Default
Media flag:                      None
Restrict codecs to list:         Default
Restrict caller codecs to list:  Default
Restrict callee codecs to list:  Default
Codec preference list:           Default
Caller Codec profile:           None
Callee Codec profile:           None
Caller media caps list:          None
Callee media caps list:          None
TCS extra codec list:            None
Caller media-type:               Inherit (default)
Callee media-type:               Inherit (default)
Caller Media Bypass:             Inherit (default)
Callee Media Bypass:             Inherit (default)
Media Bypass Type:               Not set
Callee local transfer support:   Inherit (default)
Maximum Call Duration:           Unlimited
Caller SRTP support:             Inherit (default)
Callee SRTP support:             Inherit (default)
SRTP Interworking:               Inherit (default)
SRTP media Interworking:         Inherit (default)
Ims rx preliminary-aar:          Disabled(default)
Ims media-service:               None(default)
media bandwidth policing:        Inherit(default)
Caller ptime:                    None (default)
Callee ptime:                    None (default)
Caller codec variant conversion: Disabled (default)
Callee codec variant conversion: Disabled (default)
Caller inband DTMF mode:         Inherit(default)
Callee inband DTMF mode:         Inherit(default)
Caller Port Range Tag:           Inherit (default)
Callee Port Range Tag:           Inherit (default)
Session refresh renegotiation: Inherit(default)

Entry 2
Match value: SIPP1B
Match prefix length: 0
Action: CAC complete
Number of call setup failures (due to non-media limits): 0

Max calls per scope:     4               Max reg. per scope:     Unlimited
Max channels per scope:  Unlimited       Max updates per scope:  Unlimited
Max bandwidth per scope: Unlimited
                              Averaging-period 1    Averaging-period 2
Max call rate per scope:      Unlimited             Unlimited
Max reg. rate per scope:      Unlimited             Unlimited
Max in-call message rate:     Unlimited             Unlimited
Max out-call message rate:    Unlimited             Unlimited

Early media:             Allowed         Early media direction:   Both
Early media timeout:     None            Transcoder per scope:    Allowed
Callee Bandwidth-Field:  None            Caller Bandwidth-Field:  None
Media bypass:            Allowed         Asymmetric Payload Type: Not Set
Renegotiate Strategy:            Delta
SRTP Transport:                  Trusted-Only (by default)
Caller hold setting:             Standard
Callee hold setting:             Standard
Caller limited-privacy-service:  Never hide identity
```

```
Callee limited-privacy-service:  Never hide identity
Caller privacy-service:  Not set
Callee privacy-service:  Not set
Caller edit-privacy-request:  Not set
Callee edit-privacy-request:  Not set
Caller edit-privacy-request sip strip:  Not set
Callee edit-privacy-request sip strip:  Not set
Caller edit-privacy-request sip insert:  Not set
Callee edit-privacy-request sip insert:  Not set
Caller voice QoS profile:        Default
Callee voice QoS profile:        Default
Caller video QoS profile:        Default
Callee video QoS profile:        Default
Caller sig QoS profile:          Default
Callee sig QoS profile:          Default
Caller inbound SDP policy:       None
Callee inbound SDP policy:       None
Caller outbound SDP policy:      None
Callee outbound SDP policy:      None
SDP Media Profile         :      None
Caller media disabled:           None
Callee media disabled:           None
Caller unsignaled secure media:  Not Allowed
Callee unsignaled secure media:  Not Allowed
Caller response downgrade support:  No
Callee response downgrade support:  No
Caller retry rtp support:           No
Callee retry rtp support:           No
Resend sdp answer in 200ok:      No
Caller tel-event payload type:   Default
Callee tel-event payload type:   Default
Media flag:                      None
Restrict codecs to list:         Default
Restrict caller codecs to list:  Default
Restrict callee codecs to list:  Default
Codec preference list:           Default
Caller Codec profile:           None
Callee Codec profile:           None
Caller media caps list:          None
Callee media caps list:          None
TCS extra codec list:            None
Caller media-type:               Inherit (default)
Callee media-type:               Inherit (default)
Caller Media Bypass:             Inherit (default)
Callee Media Bypass:             Inherit (default)
Media Bypass Type:               Not set
Callee local transfer support:   Inherit (default)
Maximum Call Duration:           Unlimited
Caller SRTP support:             Inherit (default)
Callee SRTP support:             Inherit (default)
SRTP Interworking:               Inherit (default)
SRTP media Interworking:         Inherit (default)
Ims rx preliminary-aar:          Disabled(default)
Ims media-service:               None(default)
media bandwidth policing:        Inherit(default)
Caller ptime:                    None (default)
Callee ptime:                    None (default)
Caller codec variant conversion: Disabled (default)
Callee codec variant conversion: Disabled (default)
Caller inband DTMF mode:         Inherit(default)
Callee inband DTMF mode:         Inherit(default)
Caller Port Range Tag:           Inherit (default)
Callee Port Range Tag:           Inherit (default)
Session refresh renegotiation: Inherit(default)
```

The following command output shows that the SBC is configured to allow Asymmetric Payload Types:

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

SBC Service "RAND"

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

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

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

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

```
    Maximum Call Duration:                Unlimited
```

The following example shows the output of the **show sbc sbe cac-policy-set detail** command that was updated in Cisco IOS XE Release 3.5S to include information about the **branch** command settings:

```
Router# show sbc SBC2 sbe cac-policy-set 1 detail

SBC Service "SBC2"
CAC Averaging period 1: 60 sec
CAC Averaging period 2: 0 sec

CAC Policy Set 1
  Global policy set: Yes
  Description:
  First CAC table: 1
  First CAC scope: global

  Table name: 1
    Description:
    Table type: policy-set
    Total call setup failures (due to non-media limits): 0

    Entry 1
    CAC scope:
    CAC scope prefix length: 0
    Action: CAC complete
    Number of call setup failures (due to non-media limits): 0
    No. of registrations rejected (due to registration limits): 0

    Max calls per scope:                                Unlimited
    No. of events rejected due to Max Call Limit:       0

    Max reg. per scope:                                 Unlimited
    No. of events rejected due to Max Reg limit:        0

    Max channels per scope:                             Unlimited
    Max updates per scope:                              Unlimited
    Max bandwidth per scope:                            Unlimited


                                                 Averaging-period 1      Averaging-period
2

    Max call rate per scope:                        Unlimited               Unlimited
    No. of events rejected due to Max call rate:    0                       0

    Max reg. rate per scope:                        Unlimited               Unlimited
    No. of events rejected due to Max reg rate:     0                       0

    Max in-call message rate:                       Unlimited               Unlimited
    No. of events rejected due to Max in-call rate: 0                       0

    Max out-call message rate:                      Unlimited               Unlimited
    No. of events rejected due to Max Out call rate: 0                      0


    Timestamp when the rejection counts were last reset: 2011/10/11 04:40:42

    Early media:             Allowed         Early media direction:   Both
    Early media timeout:     None            Transcoder per scope:    Allowed
    Callee Bandwidth-Field:  None            Caller Bandwidth-Field:  None
    Branch Bandwidth-Field:  None
    Media bypass:            Allowed         Asymmetric Payload Type: Not Set
    Renegotiate Strategy:            Delta
```

```
SRTP Transport:                  Trusted-Only (by default)
Caller hold setting:             Standard
Callee hold setting:             Standard
Branch hold setting:             Standard
Caller limited-privacy-service:  Never hide identity
Callee limited-privacy-service:  Never hide identity
Caller privacy-service:  Not set
Callee privacy-service:  Not set
Branch privacy-service:  Not set
Caller edit-privacy-request:  Not set
Callee edit-privacy-request:  Not set
Branch edit-privacy-request:  Not set
Caller edit-privacy-request sip strip:  Not set
Callee edit-privacy-request sip strip:  Not set
Branch edit-privacy-request sip strip:  Not set
Caller edit-privacy-request sip insert:  Not set
Callee edit-privacy-request sip insert:  Not set
Branch edit-privacy-request sip insert:  Not set
Caller voice QoS profile:        Default
Callee voice QoS profile:        Default
Branch voice QoS profile:        Default
Caller video QoS profile:        Default
Callee video QoS profile:        Default
Branch video QoS profile:        Default
Caller sig QoS profile:          Default
Callee sig QoS profile:          Default
Branch sig QoS profile:          Default
Caller inbound SDP policy:       None
Callee inbound SDP policy:       None
Branch inbound SDP policy:       None
Caller outbound SDP policy:      None
Callee outbound SDP policy:      None
Branch outbound SDP policy:      None
SDP Media Profile         :      None
Caller Generic Stream:      Default
Callee Generic Stream:      Default
Branch Generic Stream:      Default
Caller media disabled:           None
Callee media disabled:           None
Branch media disabled:           None
Caller unsignaled secure media:  Not Allowed
Callee unsignaled secure media:  Not Allowed
Branch unsignaled secure media:  Not Allowed
Caller response downgrade support:  No
Callee response downgrade support:  No
Branch response downgrade support:  No
Caller retry rtp support:           No
Callee retry rtp support:           No
Branch retry rtp support:           No
Resend sdp answer in 200ok:      No
Caller tel-event payload type:   Default
Callee tel-event payload type:   Default
Branch tel-event payload type:   Default
Media flag:                      None
Restrict codecs to list:         Default
Restrict caller codecs to list:  Default
Restrict callee codecs to list:  Default
Restrict branch codecs to list:  Default
Codec preference list:           Default
Caller Codec profile:           None
Callee Codec profile:           None
Branch Codec profile:           None
Caller media caps list:          None
Callee media caps list:          None
```

```
Branch media caps list:          None
TCS extra codec list:            None
Caller media-type:               Inherit (default)
Callee media-type:               Inherit (default)
Branch media-type:               Inherit (default)
Caller Media Bypass:             Inherit (default)
Callee Media Bypass:             Disabled
Branch Media Bypass:             Inherit (default)
Media Bypass Type:               All (Hairpin, Partial, Full)
Callee local transfer support:   Inherit (default)
Maximum Call Duration:           Unlimited
Caller SRTP support:             Inherit (default)
Callee SRTP support:             Inherit (default)
Branch SRTP support:             Inherit (default)
SRTP Interworking:               Inherit (default)
SRTP media Interworking:         Inherit (default)
Ims rx preliminary-aar:          Disabled(default)
Ims media-service:               None(default)
media bandwidth policing:        Inherit(default)
Billing filter:                  Inherit(default)
Caller ptime:                    None (default)
Callee ptime:                    None (default)
Branch ptime:                    None (default)
Caller codec variant conversion: Disabled (default)
Callee codec variant conversion: Disabled (default)
Branch codec variant conversion: Disabled (default)
Caller inband DTMF mode:         Inherit(default)
Callee inband DTMF mode:         Inherit(default)
Branch inband DTMF mode:         Inherit(default)
Media policy limit table name:   None
IPsec maximum registers:         Unlimited (default)
IPsec maximum calls:             Unlimited (default)
Caller Port Range Tag:           Inherit (default)
Callee Port Range Tag:           Inherit (default)
Branch Port Range Tag:           Inherit (default)
Session refresh renegotiation: Inherit(default)
```

Related Commands

Command	Description
cac-policy-set	Creates a new CAC policy set, copies an existing complete policy set, swaps the references of a complete policy set to another policy set, or sets the averaging period for rate calculations in a CAC policy set.
cac-policy-set global	Activates the global CAC policy set within an SBE entity.

show sbc sbe call-policy-set

To show the properties associated with a given policy set, use the **show sbc sbe call-policy-set** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set {***Routing-policy-set-ID* **{detail | number-analysis-tables {detail} | routing-tables {detail} | table** *table-name* **{detail | entry** *entry-id* **detail}} | default {detail | number-analysis-tables {detail} | routing-tables {detail} | table** *table-name* **{detail | entry** *entry-id* **detail}} | detail}**

Syntax Description

sbc-name	The name of the Session Border Controller (SBC) service.
Routing-policy-set-ID	ID of the routing-policy-set.
detail	Shows the detailed information for call policy set.
number-analysis-tables	Shows all number analysis tables.
routing-tables	Shows all routing policy tables.
table	Filters based on the call table.
table-name	Name of the call table to be displayed.
entry	Filters based on the call-table-entry ID.
entry-id	Entry ID of the call table.
default	Shows the default call policy set.
detail	Shows details of all the call-policy-sets.

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 3.2S	This command was modified. The output was updated with information about the first outbound number analysis table and the first inbound number analysis table. This command provides two forms of outputs: the brief (default) and the detailed. The brief version displays important high-level information for each entry on a single line. The detail version displays the entire policy-set, table, and entry values in detail.

Examples

The following example shows a sample output of the **show sbc sbe call-policy-set** command:

```
Router# show sbc mySBC sbe call-policy-set
SBC Service "mySBC"

Policy set 1
  Default policy set           : No
```

```
  First inbound NA table       :
  First call routing table     : TAB1
  First reg routing table      : TAB2
  First outbound NA table      :

  Table Name                   : TAB1
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               SIPP1B                 Routing complete
    2          SIPP1B               SIPP1A                 Routing complete

  Table Name                   : TAB2
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               Registrar              Routing complete
    2          SIPP1B               Registrar              Routing complete

Policy set 2
  Default policy set           : Yes (priority 1)
  First inbound NA table       :
  First call routing table     : TAB1
  First reg routing table      : TAB2
  First outbound NA table      :

  Table Name                   : TAB1
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               SIPP1B                 Routing complete
    2          SIPP1B               SIPP1A                 Routing complete

  Table Name                   : TAB2
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               Registrar              Routing complete
    2          SIPP1B               Registrar              Routing complete

Policy set 21
  Default policy set           : No
  First inbound NA table       :
  First call routing table     : TAB1
  First reg routing table      : TAB2
  First outbound NA table      :

  Table Name                   : TAB1
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               SIPP1B                 Routing complete
    2          SIPP1B               SIPP1A                 Routing complete
```

```
  Table Name                   : TAB2
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               Registrar              Routing complete
    2          SIPP1B               Registrar              Routing complete

Policy set 25
  Default policy set           : No
  First inbound NA table       : ADMINTable
  First call routing table     :
  First reg routing table      :
  First outbound NA table      : OutTable

Policy set 27
  Default policy set           : No
  First inbound NA table       :
  First call routing table     :
  First reg routing table      :
  First outbound NA table      :

Policy set 35
  Default policy set           : No
  First inbound NA table       :
  First call routing table     :
  First reg routing table      :
  First outbound NA table      :

*  Numbers in brackets refer to a call being rejected by a routing or number
analysis table because there were no matching entries in the table. This is
also included in the total figure.
```

Related Commands

Command	Description
call-policy-set	Creates a new policy set on the Session Border Controller (SBC).
call-policy set default	Configures a default policy set on the signaling border element (SBE) entity.
first-inbound-na-table	Configures the name of the first inbound policy table to be processed when performing the number analysis stage of a policy.
first-outbound-na-table	Configures the name of the first outbound policy table to be processed when performing the number analysis stage of a policy.
rtg-dst-address-table	Configures the name of the first policy table to be processed when performing the number analysis stage of a policy.

show sbc sbe call-policy-sets

To list all of the routing policy sets on the SBE, use the **show sbc sbe call-policy-sets** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-sets**

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.

Examples

The following example shows how to list the routing policy sets on the SBE with a configuration that has one call-policy-set:

```
Router# show sbc test sbe call-policy-sets

SBC Service ''test''
Policy Set Description
------------------------------------------------------------
1
Active policy set = 1
```

The following example shows how to list all of the routing policy sets on the SBE with multiple call-policy-sets with descriptions:

```
Router# show sbc a sbe call-policy-sets

SBC Service "a"
Policy Set     Description
------------------------------------------------------------
1           Call policy set for navtel
2           Call policy set for number analysis
3           Call policy set for h323
Active policy set = 1
Router#
```

show sbc sbe call-policy-set default

To display the summary of the default policy set, use the **show sbc sbe call-policy-set default** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set default**

Syntax Description

sbc-name	The name of the SBC service.
adjacency	Displays the list of administrative domains on the adjacency.

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.
Cisco IOS XE Release 3.2S	This command was modified. The **active** keyword was replaced with the **default** keyword.

Examples

The following example shows how to display a summary of the default call policy set:

```
Router# show sbc mySBC sbe call-policy-set default
SBC Service "mySBC"

Policy set 1
  Default policy set           : Yes (priority 6)
  First inbound NA table       :
  First call routing table     : TAB1
  First reg routing table      : TAB2
  First outbound NA table      :

  Table Name                   : TAB1
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               SIPP1B                 Routing complete
    2          SIPP1B               SIPP1A                 Routing complete

  Table Name                   : TAB2
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          SIPP1A               Registrar              Routing complete
    2          SIPP1B               Registrar              Routing complete
```

```
*  Numbers in brackets refer to a call being rejected by a routing or number analysis
table because there were no matching entries in the table. This is also included in the
total figure.
```

Related Commands

Command	Description
call-policy-set	Creates a new policy set on the Session Border Controller (SBC).
call-policy set default	Configures a default policy set on the signaling border element (SBE) entity.
first-inbound-na-table	Configures the name of the first inbound policy table to be processed when performing the number analysis stage of a policy.
first-outbound-na-table	Configures the name of the first outbound policy table to be processed when performing the number analysis stage of a policy.
show sbc sbe call-policy-set	Lists the details of the policy sets configured on the SBC.

show sbc sbe call-policy-set (enum)

To display configuration and status information about call policy sets, use the **show sbc sbe call-policy-set** command in privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set** [**active**] [**detail**] [*rps-id*]

Syntax Description

active	(Optional) Displays configuration information for active call policy sets.
detail	(Optional) Displays detailed configuration and status information for call policy sets.
rps-id	(Optional) Displays information for the specified routing policy set ID number. The range is 1 to 2147483647.

Command Default

If no parameters are given, information for all policies 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 information about call policy sets:

Example 1: Active

```
Router# show sbc test sbe call-policy-set default

SBC Service "test"

Policy set 1
  Active policy set            : Yes
  First Number Analysis table  :
  First call routing table     : rt1
  First reg routing table      :

  Table Name                   : rt1
    Class                      : Routing
    Table type                 : rtg-src-adj
    Total Call-policy Failures : 0 (0 *)
    Entry      Match Value          Destination Adjacency  Action
    -----      -----------          ---------------------  ------
    1          sip1                                        Next da1
    2          sip2                                        Routing complete
```

Example 2: Active with Detail

A number in parentheses indicates the number of calls being rejected by a routing table or by a number analysis table because no matching entries were found in the table. These rejected calls are included in the total number as well.

```
Router# show sbc test sbe call-policy-set default detail

SBC Service "test"

Policy set 1
  Description                 :
  Active policy set           : Yes
  First Number Analysis table  :
  First call routing table    : rt1
  First reg routing table     :

  Table Name                  : rt1
    Description               :
    Class                     : Routing
    Table type                : rtg-src-adj
    Total Call-policy Failures : 0 (0)
    Entry  : 1
      Match adjacency   sip1
      Action            Next-table da1
      ENUM ID           1
      ENUM entry        default-enum
      Failures          0
    Entry  : 2
      Match adjacency   sip2
      Action            Routing complete
      ENUM ID           1
      ENUM entry        cisco-enum
      Failures          0
```

Related Commands

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

Command	Description
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.

show sbc sbe call-policy-set tables

To list a summary of the call policy tables associated with the given policy set, use the **show sbc sbe call-policy-set tables** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set** *policy-set* ***tables***

Syntax Description

sbc name	This is the name of the SBC service.
policy-set	The numeric identifier of the call policy set whose tables are to be displayed.

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 display a summary of the routing policy tables associated with the given policy set:

```
Router# show sbc a sbe call-policy-set 2 tables

SBC Service "a"
Policy set 2 tables
Table name    Match type    Description     Total Failures
------------------------------------------------------------
start-table   rtg-src-adj                   0 (0 *)
na-table      na-dst-num                    0 (0 *)
* Numbers in brackets refer to a call being rejected by a
routing or number analysis table because there were no
matching entries in the table.  This is also included in
the total figure.
```

show sbc sbe call-policy-set table entries

To display a summary of the entries associated with a given table, use the **show sbc sbe call-policy-set table entries** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set** *id* **table** *name* **entries**

Syntax Description

id	Specifies the numeric identifier of the routing policy set to which the table belongs.
sbc name	This is the name of the SBC service.
name	Specifies the table whose entries are to be displayed.

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 display a summary of the entries associated with the given table:

```
Router# show sbc a sbe call-policy-set 1 table start-table entries

SBC Service ''a''
Policy set 1 table start-table entries
Table class Entry Match Value
-------------------------------------
Routing entry 1 navtel2
Routing entry 2 navtel1
Router#
```

show sbc sbe call-policy-set table entry

To display detailed information for a given entry in a CAC policy table, use the **show sbc sbe call-policy-set table entry** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-policy-set** *id* **table** *name* **entry**

Syntax Description

id	Specifies the numeric identifier of the routing policy set to which the table belongs.
name	Specifies the table whose entries are to be displayed.
sbc name	This is the name of the SBC service.
entry	Specifies the entry index of the 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.

Examples

The following example shows how to display a summary of the entries associated with the given table:

```
Router# show sbc mySbc sbe call-policy-set 1 table rtgTable entry 1
SBC Service ''mySbc''
Policy set 1 table rtgTable entry 1
Routing table entry
Match adjacency sipOrig
Action Routing complete
Dest Adjacency h323Term
Failures 0
```

show sbc sbe call-rate-stats

To list all of the current rate of attempted call setups per second over a short period of time (default to 3 seconds,. use the **show sbc sbe call-rate-stats** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe call-rate-stats**

Syntax Description

sbc name	This is the name of the SBC service.

Command Default

Default value is 3 seconds.

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 current rate of attempted call setups per second:

```
Router# show sbc sbc-1 sbe call-rate-stats
Calls Per Second:
-----------------
Current CPS  10
Maximum CPS  80
Minimum CPS  1
Average CPS 0
```

show sbc sbe call-stats

To display the statistics pertaining to all the calls on the SBE, use the **show sbc sbe call-stats** command in the privileged EXEC mode.

show sbc *sbc-name* **sbe call-stats** {**all** | **global** | **per-adjacency** *adjacency-name* | **src-account** *name* | **dst-account** *name* | **src-adjacency** *name* | **dst-adjacency** *name*} *period*

show sbc *sbc-name* **sbe call-stats** {**reject-threshold**}

show sbc *sbc-name* **sbe call-stats failures {detail | summary}** *period*

show sbc *sbc-name* **sbe call-stats** {**global | adjacency** *adjacency-name*} **emergence**

Syntax Description

sbc-name	Name of the SBC service.
name	Name of the account for which you want the statistics to be displayed. The maximum length of this value is 30 characters.
period	Interval at which the statistics are displayed. The possible values are: • *current5mins*—Shows the statistics pertaining to the current 5-minute interval. • *previous5mins*—Shows the statistics pertaining to the previous 5-minute interval. • *current15mins*—Shows the statistics pertaining to the current 5-minute interval and the previous two 5-minute intervals. • *previous15mins*—Shows the statistics pertaining to the previous 5-minute interval and the previous two 5-minute intervals. • *currenthour*—Shows the statistics pertaining to the current 5-minute interval and the previous eleven 5-minute intervals. • *previoushour*—Shows the statistics pertaining to the previous 5-minute interval and the previous eleven 5-minute intervals. • *currentday*—Shows the statistics pertaining to the current 5-minute interval and the previous two hundred eighty seven 5-minute intervals. • *previousday*—Shows the statistics pertaining to the previous 5-minute interval and the previous two hundred eighty seven 5-minute intervals. • *currentindefinite*—Shows the statistics pertaining to the period since the last explicit reset.
global	Displays the emergency call statistics globally for the entire SBC.
adjacency	Displays the emergency calls statistics for calls received and sent for the specified adjacency name.
adjacency-name	Name of the adjacency for which emergency calls belonging to that adjacency should be displayed.
emergence	*Displays the emergency call statistics for the entire SBC or for a specific adjacency name.*
failures	Displays the incremental failure counters of failed calls.

detail	Displays the detailed output of all the statistics containing incremental failure counters for the specified period.
summary	Displays the summary of all the statistics containing incremental failure counters for the specified period.
per-adjacency	Displays the QOS-related statistics for a single adjacency.
dst-adjacency	Displays the statistics for the destination adjacency.
src-adjacency	Displays the statistics for the source adjacency.
reject-threshold	Displays the rejection threshold statistics.
src-account	Displays the statistics for the source account.
dst-account	Displays the statistics for the destination account.

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, and failure statistics were added to the output.
Cisco IOS XE Release 2.5	This command was modified. New parameters were added to the command to list the statistics for all the policy failures.
Cisco IOS XE Release 2.6	The output of this command was modified to include the number of active IPv6 calls.
Cisco IOS XE Release 3.1S	The output of this command was modified to show Internet Mail Service (IMS) Rx statistics and Secure Real-Time Transport Protocol (SRTP) statistics. **The reject-threshold and failures keywords were added.**
Cisco IOS XE Release 3.2S	The command was modified. The **adjacency** keyword and the *adjacency-name* parameter were added to the **show sbc sbe call-stats** command. The **emergence** keyword was added to display the emergency call statistics globally or for a specified adjacency name. The output of the command was updated to list the count of the active transcoded and transrated calls.
Cisco IOS XE Release 3.3S	This command was modified. The **per-adjacency** keyword and the *currentindefinite* parameter were added to the command.
Cisco IOS XE Release 3.4S	The output of this command was modified to include the values of the QoS statistics and the current alert levels of the statistics.

Usage Guidelines

The statistics are collected at 5-minute intervals past the hour (that is, 0, 5, 10, 15, and so on). The system keeps a bucket that collects 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*** is 10:35 to 11:35, and ***previous15mins*** is 12:05 to 12:20.

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

Cisco IOS XE Release 3.2S

To display the emergency call statistics for calls belonging to a particular category and assigned a priority number globally, execute the **show sbc** *sbc-name* **sbe call-stats global emergence** command from the privileged EXEC mode. The command output displays the global call statistics for the entire SBC.

To display the emergency call statistics for calls belonging to a particular adjacency, run the **show sbc** *sbc-name* **sbe call-stats adjacency** *adjacency-name* **emergence** command. The command output displays the call statistics for calls that are both received and sent on the specified adjacency.

Examples

The following example shows how to list the complete call statistics for the current day:

```
Router# show sbc global sbe call-stats all currentday

statistics for the current day for global counters
Call count totals:
  Total call attempts =                                          0
  Total active calls =                                           0
  Total active IPv6 calls =                                      0
  Total activating calls =                                       0
  Total de-activating calls =                                    0
  Total active emergency calls =                                 0
  Total active e2 emergency calls =                              0
  Total IMS rx active calls =                                    0
  Total IMS rx call renegotiation attempts =                     0
  Total SRTP-RTP interworked calls =                             0
  Total active calls not using SRTP =                            0
  Total active transcoded calls =                                0
  Total active transrated calls =                                0
  Total calls completed =                                        0

General call failure counters:
  Total call setup failures =                                    0
  Total active call failures =                                   0
  Total failed call attempts =                                   0
  Total failed calls due to update failure =                     0
  Total failed calls due to resource failure =                   0
  Total failed calls due to congestion =                         0
  Total failed calls due to media failure =                      0
  Total failed calls due to signaling failure =                  0
  Total failed calls due to IMS rx setup failure =               0
  Total failed calls due to IMS rx renegotiation failure =       0
  Total failed calls due to RTP disallowed on call leg =         0
  Total failed calls due to SRTP disallowed on call leg =        0

Policy control failures:
  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 number of calls limit =                       0
  CAC fails due to call rate limit =                             0
  CAC fails due to bandwidth limit =                             0
```

```
  CAC fails due to number of media channels limit =                  0
  CAC fails due to number of media update limit =                    0
  CAC message drops due to mid call message rate limit =             0
  CAC message drops due to out of call message rate limit =          0

Stats Reset Timestamp:
  Timestamp when stats for this summary period were reset =      2010/10/21 20:30:21
```

Table 16 provides the descriptions for the important fields in the displayed example.

Table 16 show sbc sbe call-stats Field Descriptions

Field	Description
Active calls	If the period being queried is “current5mins”, this is the number of calls (IPv4 and IPv6) currently active at the instant that the query is issued. Otherwise, this is the average number of calls that have been active for the entire period. A call must have been active for at least half of the period in order to count as having been active on an average for the entire period. Therefore, this statistic is effectively a count of the number of calls that have been active for half the period or more.
Active Ipv6 calls	If the period being queried is “current5mins”, this is the number of IPv6 calls active at the instant the query is issued. Otherwise, this is the average number of calls that have been active for the entire period. A call must have been active for at least half of the period in order to count as having been active on an average for the entire period. Therefore, this statistic is effectively a count of the number of calls that have been active for half the period or more.
Activating calls	If the period being queried is “current5mins”, this is the number of calls currently activating at the instant that the query is issued. Otherwise, this is the average number of calls that have been activating for the entire period. A call must have been activating for at least half of the period in order to count as having been activating on average for the entire period. Therefore this statistic is effectively a count of the number of calls that have been activating for half the period or more.
Deactivating calls	If the period being queried is “current5mins,” this is the number of calls that are undergoing deactivation at the instant that the query is issued. Otherwise, this is the average number of calls that have been undergoing deactivation for the entire period. A call must have been undergoing deactivation for at least half of the period in order to count as having been undergoing deactivation on average for the entire period. Therefore, this statistic is effectively a count of the number of calls that have been undergoing deactivation for half the period or more.

Table 16 show sbc sbe call-stats Field Descriptions (continued)

Field	Description
Total call attempts	Call establishment attempts made. A call attempt may have failed in a later summary period. This counter may include failed calls which are not included in the failed call attempt count.
Failed call attempts	Indicates the calls that have failed to establish a successful call. A failed call attempt may result from a call that was started during a previous summary period. This counter may include call attempts that are not included in the total call attempt count.
Successful call attempts	Total call attempts minus failed call attempts.
Call routing failed	Call establishment attempts failed due to a routing failure.
Call resources failed	Call establishment attempts failed due to a resource failure.
Call media failed	Call establishment attempts failed due to a media failure.
Call signaling failed	Call establishment attempts failed due to a signaling failure.
Active call failures	Calls failed from an active state. This count includes all deactivation causes other than normal release.
Congestion failures	Call establishment attempts failed due to system congestion.
Total call setup failures	Total number of call setup failures due to Number Analysis, Routing, and Multiple CAC policies.
Total call update failures	Total number of call update failures due to Multiple CAC policies.
Call setup failed due to NA	Total number of call setup failures due to Number Analysis policies.
Call setup failed due to rtg	Total number of call setup failures due to routing policies.
Call setup failed due to CAC	Total number of call setup failures due to Multiple CAC policies.
CAC fails due to num call lim	Total number of call setup failures due to CAC call limit.
CAC fails due to call rate lim	Total number of call setup failures due to CAC call rate limit.
CAC fails due to num media channels lim	Total number of call setup failures due to CAC number of media channels limit.
CAC fails due to num media updates lim	Total number of call setup failures due to CAC number of media updates limit.
CAC fails due to bandwidth lim	Total number of call setup failures due to CAC Bandwidth limit.
CAC fails due to in-call rate lim	Total number of failures due to the CAC limit on the rate of in-call messages.
CAC fails due to out-call rate lim	Total number of failures due to the CAC limit on the rate of out-of-call requests.

The following is an example of the **show** command output for reject threshold:

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

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

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

The following example shows the emergency call statistics globally for the entire SBC:

```
Router# show sbc mySBC sbe call-stats global emergence
SBC Service "md"
Emergence call statistics for global counters
Call count totals:
  Category ABCEMERGENCY active calls = 1
  Category ABCEMERGENCY unaudit calls = 0
  Category ABCHIGHPRIORITY active calls = 2
  Category ABCHIGHPRIORITY unaudit calls = 0
  Priority unspecified active calls = 3
  Priority unspecified unaudit calls = 0
```

The following example shows the emergency call statistics for calls belonging to a specified adjacency. The following **show** command output displays the per-adjacency count for calls received and sent on a specified adjacency name:

```
Router# show sbc mySBC sbe call-stats adjacency govt-adj emergence
Statistics for the current hour for source adjacency govt-adj
Call count totals:
    Total active calls =                   200
Category govtcalls incoming calls =       90
Category govtcalls outgoing calls =       90
Category sipheader incoming calls =       80
Category sipheader outgoing calls =       80
Priority routing incoming calls =       80
Priority routing outgoing calls =       80
Unaudited calles =                      100
```

The following example shows an output of the **show sbc sbe call-stats global current5min** command that lists the count of the active transcoded and transrated calls.

```
Router# show sbc mySBC sbe call-stats global current5min
SBC Service "mySBC"
Statistics for the current 5 mins for global counters
Call count totals:
  Total call attempts =                                          0
  Total active calls =                                           1
  Total active IPv6 calls =                                      0
  Total activating calls =                                       0
  Total de-activating calls =                                    0
  Total active emergency calls =                                 0
  Total active e2 emergency calls =                              0
  Total IMS rx active calls =                                    0
  Total IMS rx call renegotiation attempts =                     0
  Total SRTP-RTP interworked calls =                             0
  Total active calls not using SRTP =                            1
  Total active transcoded calls =                                1
  Total active transrated calls =                                0
General call failure counters:
  Total call setup failures =                                    0
  Total active call failures =                                   0
  Total failed call attempts =                                   0
  Total failed calls due to update failure =                     0
```

```
  Total failed calls due to resource failure =                      0
  Total failed calls due to congestion =                            0
  Total failed calls due to media failure =                         0
  Total failed calls due to signaling failure =                     0
  Total failed calls due to IMS rx setup failure =                  0
  Total failed calls due to IMS rx renegotiation failure =          0
  Total failed calls due to RTP disallowed on call leg =            0
  Total failed calls due to SRTP disallowed on call leg =           0
```

The following example shows how, in Release 3.4S and later, the output of the **show sbc sbe call-stats per-adjacency currentindefinite** command was modified to include the values of the QoS statistics and the current alert levels of the statistics:

```
Router# show sbc Mysbc sbe call-stats per-adjacency adj1 currentindefinite
…
Statistics for the current hour for adjacency adj1

Stats Reset Timestamp:
Timestamp when stats for this summary period were reset =   2011/04/08 04:05:09
Current count of Media Packets Lost =                       0
Current count of Media Packets Dropped =                    1
Current count of Media Packets Sent =                       116
Current count of Media Packets Received =                   116
Current count of RTCP Packets Sent =                        0
Current count of RTCP Packets Received =                    0
Average Call Duration =                                     21 secs 16 ms
Average of the Unanswered Call Ratio per thousand call =    0
Average of the Round Trip Delay =                           0 ms
Average of the locally calculated jitter =                  77 ms
Average of the remotely calculated jitter =                 0 ms
Average of the received media dropped per thousand pkts =   8
Average of the sent media lost per thousand pkts =          0
Average of Mean Opinion Score =                             20
Current alert level of the Unanswer Seizure Ratio =         NONE
Current alert level of the Round Trip Delay =               NORMAL
Current alert level of the locally calculated Jitter =      MINOR
Current alert level of the remotely calculated Jitter =     NORMAL
Current alert level of the media packet dropped =           MAJOR
Current alert level of the sent packets lost =              NORMAL
Current alert level of the Media Opinion Score =            MINOR
```

Related Commands

Command	Description
calc-moscqe	Specifies the percentage of calls that must be used to calculate the MOS-CQE score.
reject-threshold	Configures the memory threshold and reject rate for new calls.
show sbc sbe call-rate-stats	Lists all the calls on the SBE.

show sbc sbe calls

To list all the calls on the signaling border elemenst (SBEs), use the **show sbc sbe calls** command in privileged EXEC mode.

show sbc *sbc-name* **sbe calls** [**ipv6 | media-detail | srtp | srtp-iw**]

Syntax Description

sbc name	Name of the Session Border Controller (SBC) service.
ipv6	Displays the details of the IPv6 calls on the SBE.
media-detail	Displays details of the calls, including their media information.
srtp	Displays details of the calls with Secure Real-Time Transport Protocol (SRTP) media on the SBE.
srtp-iw	Displays details of the calls performing SRTP-to-Real-Time Transport Protocol interworking.

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 2.6	This command's output was modified to provide details of IPv6 calls.
Cisco IOS XE Release 3.1S	The **media-detail**, **srtp-iw**, and **srtp** optional keywords were added.

Examples

The following examples show how to display the call statistics for the current hour:

Example 1: Default

```
Router# show sbc a sbe calls

SBC Service ''a''
Call State Type Src Adjacency Dest Adjacency
------------------------------------------------------------------------------
393 Activating Audio navtel1 navtel2
394 Activating Audio navtel1 navtel2
```

Example 2: IPv6 Details

```
Router# show sbc test sbe calls ipv6
SBC Service "test"
  Call           State        Src Adjacency        Dest Adjacency
  ---------------------------------------------------------------
  923752             Active    CCM135             CCM136-IpV6
```

Example 3: Media Detail

```
Router# show sbc b2b1 sbe calls media-detail
SBC Service "b2b1"
  Call           State        Src Adjacency        Dest Adjacency
  ---------------------------------------------------------------
   1             Active           7200-1             7200-2
   Context ID 1Stream ID 49153
   Side A:     Media Flowing:  Yes
      Local Address/Port:  10.2.0.10/16384
      Remote Address/Port: 2.0.0.3/6000
   Side B:     Media Flowing: Yes
      Local Address/Port:  10.2.0.10/16386
      Remote Address/Port: 3.0.0.3/7000
```

Example 4: SRTP

```
Router# show sbc b2b1 sbe calls srtp
SBC Service "SBC1"
  Call           State        Src Adjacency        Dest Adjacency
  ---------------------------------------------------------------
   5             Active              UAS                UAC
```

Example 5: SRTP-to-RTP Interworking

```
Router# show sbc global sbe calls srtp-iw
SBC Service "global"
  Call           State        Src Adjacency        Dest Adjacency
  ---------------------------------------------------------------
   1             Active         Customer               CORE
```

Related Commands

Command	Description
srtp caller	Configures SRTP for a caller in a CAC policy.
srtp callee	Configures SRTP for a 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 the SBC to retry and enable SRTP-to-RTP interworking after it has rejected an SRTP offer.
srtp response downgrade	Configures a SIP endpoint to support a nonstandard offer/answer SRTP downgrade.

show sbc sbe call branches

To show all the branches on the specified call on SBEs, use the **show sbc sbe call branches** command in Privileged EXEC mode.

show sbc sbe call *call-num* branches

Syntax Description

call-num	Specifies the call to display information about.

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 display the branches associated with call 2:

```
Router# show sbc mySbc sbe call 2 branches

SBC Service "mySbc"
Call: 2
State: active
Type: video

Branch Calling Number Called Number Billing ID
1      102 789 767    -             DAB3C4D153624C7124E1234
2      -              05 659 896
```

show sbc sbe codec-list

To show information about the codec lists that are configured on the SBE, use the **show sbc sbe codec-list** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe codec-list** *list-name*

Syntax Description

sbc name	This is the name of the SBC service.
list-name	Specifies the name of the codec list.

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 display information about the codec list named my_codecs.

```
Router# show sbc mySbc sbe codec-list my_codecs

SBC Service "mySbc"

Codec list "my_codecs" (Legitimate codecs)
  Codec Name                Min Packetization Period
  ==========                ========================
  PCMU                      20ms
  G729                      10ms
```

show sbc sbe codecs

To view the codecs included in the Session Border Controller (SBC) and the codecs dynamically configured on the SBC, use the **show sbc sbe codecs** command in the Privileged EXEC configuration mode.

show sbc *sbcname* ***sbe codecs*** *[[**base** | **user** | **modified**] | [**name**] codec-name* | **variant** [**profiles**]*]*

Syntax Description

sbcname	The name of the SBC.
base	Displays codecs that have not been modified.
user	Displays the codecs defined by a user.
modified	Displays the codecs that have been modified.
name	Displays information about a specific codec.
codec-name	The unique name of a codec.
variant	Displays information about codec variants.
profiles	Displays information about codec variant 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.
Cisco IOS XE Release 3.2S	The command was modified. The **variant** and **profiles** keywords were added to this command.

Usage Guidelines

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

Examples

The following example shows how to display all the codecs on the *mySBC* SBC:

```
Router# show sbc mySBC sbe codecs
Codec Name: CN
Type                = Fixed Rate
Clock Rate          = 8000 Hz
Packet time         = 20 sec
Bandwidth           = 1
Sample Size         = 0
Number Channels     = 0
Max Frames Per Pkt = 0
Media Type          = Audio
Options             = Transcode
Configured State    = base
```

```
Codec Name: DV
-----------------------------------------
Type               = Variable Bitrate
Clock Rate         = 10000 Hz
Packet_Time        = 10
Bandwidth          = 1
Sample Size        = 0
Number Channels    = 0
Max Frames Per Pkt = 0
Media Type         = Video
Options            = None
Configured State   = modified
```

The following example shows how to display the details of a specific codec*:*

```
Router# show sbc mySBC sbe codecs name gsm-efr

Codec Name: GSM-EFR
-----------------------------------------
Type               = Fixed
Clock Rate         = 8000 Hz
Packet_Time        = 20
Bandwidth          = 1
Sample Size        = 0
Number Channels    = 0
Max Frames Per Pkt = 65535
Media Type         = Audio
Options            = Transcode
Configured State   = user defined
```

The following example shows how to display information about the codec variants:

```
Router# show sbc mySBC sbe codecs variant
Codec Variant Table:
**Note: base variants begin with '#'.

Variant Name         = #CCD
Variant Encoded name = CCD
Standard Codec Name  = CLEARMODE
FMTP String          =
Referenced Pofiles   =
-----------------------------------------
Variant Name         = #NSE
Variant Encoded name = NSE
Standard Codec Name  = X-NSE
FMTP String          =
Referenced Pofiles   =
-----------------------------------------
Variant Name         = #NTE
Variant Encoded name = NTE
Standard Codec Name  = telephone-event
FMTP String          =
Referenced Pofiles   =
-----------------------------------------
    .
    .
    .
```

The following example shows how to display information about the codec variant profiles:

```
Router# show sbc MySBC sbe codecs variant profiles
  Profile          Variant[s]
  codec_profile1  g711a
                  #G.722
    codec_profile2 #G.729
                  g711a
```

show sbc sbe diameter

To display the configuration information for the Diameter protocol, use the **show sbc sbe diameter** command in privileged EXEC mode.

show sbc *sbc-name* **sbe diameter**

Syntax Description

sbc-name	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 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 for the Diameter protocol.

```
Router# show sbc MySBC sbe diameter

SBC Service "MySBC"
Diameter information:
  Origin Realm:               Realm1
  Origin Host:                Cisco.com
  Admin Status:               DOWN
  Operation Status:           DOWN
```

Related Commands

Command	Description
diameter	Enables the Diameter protocol on a node and enter the Diameter configuration mode.
origin-realm	Configures the domain name of an IMS local realm.
origin-host	Configures the domain name of an IMS local host.
peer	Creates an IMS peer and configure the name and IPv4 address of the peer.
realm (diameter)	Configures a peer and assign the peer to a realm.
show sbc sbe diameter	Displays the configuration information for the Diameter protocol.
show sbc sbe diameter peers	Displays the configuration information for IMS peers.

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

show sbc sbe diameter peers

To display the configuration information for IMS peers, use the **show sbc sbe diameter peers** command in privileged EXEC mode.

show sbc *sbc-name* **sbe diameter peers** *peer-name*

Syntax Description

sbc-name	Name of the SBC service.
peer-name	Name of the IMS peer.

Command Default

If no peer name is given, brief information for all peers 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 for an IMS peer.

```
Router# show sbc MySBC sbe diameter peers Peer1

Diameter peer Peer1:
   State:               Closed
   DWR State:           Initial
   Origin:              Static
   VRF Name:            None
   Local Address:       0.0.0.0
   Local Port:          0
   Peer Address:        10.10.10.10
   Peer Port:           0
   Peer FQDN:
```

Related Commands

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

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

show sbc sbe diameter stats

To display the transport statistics for an IMS peer, use the **show sbc sbe diameter stats** command in privileged EXEC mode.

show sbc *sbc-name* **sbe diameter stats**

Syntax Description

sbc-name	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 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 transport statistics for an IMS peer.

```
Router# show sbc MySBC sbe diameter stats

Diameter statistics:
   Diameter up time:                                      0 seconds
   Diameter packets sent:                                 0
   Diameter packets received:                             0
   Diameter malformed packets received:                   0
   Diameter unknown indentifier answer messages received: 0
   Diameter protocol error answer messages received:      0
   Diameter unknown command code packets received:        0
   Diameter requests transient failures:                  0
   Diameter requests permanent failures:                  0
   Diameter requests unexpected transport failures:       0
```

Related Commands

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

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

show sbc sbe editors

To display a list of all the editors registered on the SBC, use the **show sbc sbe editors** command in the privileged EXEC mode.

show sbc *sbc-name* **sbe editors**

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

Usage Guidelines

There are no specific usage guidelines for using the **show sbc sbe editors** command. Note that the **clear sbc sbe script-set-stats** command can be used to clear the stored statistics from which the **show sbc sbe editors** command draws data.

Examples

In the following example, the **show sbc sbe editors** command is used to display a list of all the editors registered on the SBC:

```
Router# show sbc mySbc sbe editors

Editor                          Script-set   Type       Total executions
-----------------------------------------------------------------

my_body_editor                  n/a          profile    0
preset-call-tag                 n/a          profile    0
my_header_editor                n/a          profile    0
my_method_editor                n/a          profile    0
my_option_editor                n/a          profile    0
preset-acc-in-hdr               n/a          profile    0
preset-acc-in-mth               n/a          profile    0
preset-acc-in-opt               n/a          profile    0
preset-std-in-hdr               n/a          profile    0
preset-std-in-mth               n/a          profile    0
preset-std-in-opt               n/a          profile    0
preset-acc-out-hdr              n/a          profile    0
preset-acc-out-mth              n/a          profile    0
preset-acc-out-opt              n/a          profile    0
```

```
preset-core-in-hdr              n/a          profile    0
preset-core-in-mth              n/a          profile    0
preset-core-in-opt              n/a          profile    0
preset-std-out-hdr              n/a          profile    0
preset-std-out-mth              n/a          profile    0
preset-std-out-opt              n/a          profile    0
default-body-editor             n/a          profile    0
preset-core-out-hdr             n/a          profile    0
preset-core-out-mth             n/a          profile    0
preset-core-out-opt             n/a          profile    0
preset-ipsec-in-hdr             n/a          profile    0
preset-ipsec-in-mth             n/a          profile    0
preset-ipsec-in-opt             n/a          profile    0
preset-ipsec-out-hdr            n/a          profile    0
preset-ipsec-out-mth            n/a          profile    0
preset-ipsec-out-opt            n/a          profile    0
default-header-editor           n/a          profile    36
default-method-editor           n/a          profile    36
default-option-editor           n/a          profile    36
preset-ibcf-ext-in-hdr          n/a          profile    0
preset-ibcf-ext-in-mth          n/a          profile    0
preset-ibcf-ext-in-opt          n/a          profile    0
preset-ibcf-int-in-hdr          n/a          profile    0
preset-ibcf-int-in-mth          n/a          profile    0
preset-ibcf-int-in-opt          n/a          profile    0
preset-ibcf-utr-in-hdr          n/a          profile    0
preset-ibcf-utr-in-mth          n/a          profile    0
preset-ibcf-utr-in-opt          n/a          profile    0
preset-ibcf-ext-out-hdr         n/a          profile    0
preset-ibcf-ext-out-mth         n/a          profile    0
preset-ibcf-ext-out-opt         n/a          profile    0
preset-ibcf-int-out-hdr         n/a          profile    0
preset-ibcf-int-out-mth         n/a          profile    0
preset-ibcf-int-out-opt         n/a          profile    0
preset-ibcf-utr-out-hdr         n/a          profile    0
preset-ibcf-utr-out-mth         n/a          profile    0
preset-ibcf-utr-out-opt         n/a          profile    0
preset-std-block-in-hdr         n/a          profile    0
preset-std-block-in-mth         n/a          profile    0
preset-std-block-in-opt         n/a          profile    0
preset-std-block-out-hdr        n/a          profile    0
preset-std-block-out-mth        n/a          profile    0
preset-std-block-out-opt        n/a          profile    0
lcl_addr                        2            script     0
monitor_packetization           3            script     0
```

Table 17 describes the significant fields in the output of the **show sbc sbe editors** command.

Table 17 show sbc sbe editors Field Descriptions

Field	Description
Editor	Name of the editor.
Script-set	Number of the script set in which the editor has been configured.

Table 17 show sbc sbe editors Field Descriptions (continued)

Field	Description
Type	Type of editor. The type can be profile or script.
Total executions	Number of times the editor has been applied. The counter for tracking the number of times the editor has been applied is incremented even when a message that does not meet the criteria for applying the editor is processed.

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 script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
script-set lua	Configures a script set composed of scripts written using the Lua programming language.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

show sbc sbe enum

To display the configuration information about an ENUM client, use the **show sbc sbe enum** command in privileged EXEC mode.

show sbc *sbc-name* **sbe enum** *enum-id*

Syntax Description

sbc-name	Name of the SBC service.
enum-id	ENUM client ID number. Currently, only the number 1 is allowed.

Command Default

No default behavior or values are available.

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 about all currently configured ENUM Supplementary Routing Services (SRS):

```
Router# show sbc MySBC sbe enum 1

SBC Service enum
  Enum  1
    Supplementary routing service id        : 1
    Max recursive depth                     : 6
    Max responses                           : 6
    Request timeout                         : 60
    Status                                  : Up
    entry  enum
      Enum Server IPV4 Address                : 20.21.28.125
      Enum Server VPN ID                      : 5
      Dial plan suffix string                 : enum.com
    entry  default
      Enum Server IPV4 Address                : 20.21.28.125
      Enum Server VPN ID                      : 0
      Dial plan suffix string                 : e164.arpa
```

Related Commands

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

show sbc sbe enum entry

To display the contents of an ENUM client entry, use the **show sbc sbe enum entry** command in privileged EXEC mode.

show sbc *sbc-name* **sbe enum** *enum-id* **entry** *entry-name*

Syntax Description

sbc-name	Name of the SBC service.
enum-id	ENUM client ID number. Currently, only the number 1 is allowed.
entry-name	ENUM client entry name.

Command Default

No default behavior or values are available.

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 configure display the contents of an ENUM client entry:

```
Router# show sbc MySBC sbe enum 1 entry MyEntry
SBC Service MySBC
    entry MyEntry
      Enum Server IPV4 Address                : 10.10.10.10
      Enum Server VPN ID                      : 0
      Dial plan suffix string                 : e164.arpa
```

Related Commands

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

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

show sbc sbe h323 timers

To display a list of H.323 timer configuration, use the **show sbc sbe h323** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe h323 timers**

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 shows how the **show sbc sbe h323 timers** command is used to display a list of H.323 timer configuration:

```
Router# show sbc test sbe h323 timers

SBC Service ''test''
H.323 Timers
Global scope
adjacency retry timeout 30000
h225 timeout setup 4000
h225 timeout proceeding 10000
h225 timeout establishment 180000
ras rrq ttl 60
ras rrq keepalive 45000
ras retry count (arq) 2
ras timeout (arq) 5000
ras retry count (brq) 2
ras timeout (brq) 3000
ras retry count (drq) 2
ras timeout (drq) 3000
ras retry count (grq) 2
ras timeout (grq) 5000
ras retry count (rrq) 2
ras timeout (rrq) 3000
ras retry count (urq) 1
ras timeout (urq) 3000

Adjacency tekOrig
H225 Timeout Setup 4000
H225 Timeout Proceeding 10000
H225 Timeout Establishment 180000
RAS RRQ TTL 60
RAS RRQ Keepalive 45000
```

```
RAS Retry Count (arq) 2
RAS Timeout (arq) 5000
RAS Retry Count (brq) 2
RAS Timeout (brq) 3000
RAS Retry Count (drq) 2
RAS Timeout (drq) 3000
RAS Retry Count (grq) 2
RAS Timeout (grq) 5000
RAS Retry Count (rrq) 2
RAS Timeout (rrq) 3000
RAS Retry Count (urq) 1
RAS Timeout (urq) 3000
```

show sbc sbe hold-media-timeout

To show the configured duration of the media timeout timer for on-hold calls, use the **show sbc sbe hold-media-timeout** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe hold-media-timeout**

Syntax Description

sbc-name	Specifies 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 sample data for the media timeout timer for on-hold calls:

```
Router# show sbc mysbc sbe hold-media-timeout

SBC Service "mysbc"

SBE On-hold media timeout duration is: 10 seconds
Router#
```

show sbc sbe hunting-trigger

To show the H.323 or SIP hunting triggers at the global level, use the **show sbc sbe hunting-trigger** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe {*h323* | *sip*} hunting-trigger**

Syntax Description

sbc-name	Specifies the SBC service.
h323	Specifies H.323 hunting-trigger.
sip	Specifies SIP hunting-trigger.

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 sample data for the media timeout timer for on-hold calls:

```
Router# show sbc uut105-1 sbe h323 hunting-trigger

H.323 Hunting Triggers
----------------------
noBandwidth
unreachableDestination
destinationrejection
noPermission
badFormatAddress
securityDenied
```

Related Commands

Command	Description
hunting-trigger	Configures failure return codes to trigger hunting.

show sbc sbe media-gateway-associations

To list all the media gateways associated with this SBE and statistics associated with the media gateway, use the **show sbc sbe media-gateway-associations** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe media-gateway-associations**

Syntax Description

sbc-name	Specifies 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 to list all the media gateways associated with this SBE and statistics associated with the media gateway:

```
Router# show sbc test sbe media-gateway-associations

SBC Service ''test''
Media gateway 200.200.207.101:2944
Gateway Protocol = megaco
Transport Protocol = UDP
Local Address = 88.104.1.3:2944

Sent Received Failed Retried
Requests 3687 1 0 0
Replies 1 3686 - 0
```

show sbc sbe media-gateway-policy

To display the details of a media gateway policy, use the **show sbc sbe media-gateway-policy** command in the privileged EXEC mode.

show sbc *sbc-name* **sbe media-gateway-policy [stats | type {default | local | remote {ipv4 | ipv6}** *ip-address* **[port** *port-number***]}]**

Syntax Description

sbc-name	Name of the SBC.
stats	Specifies that the media gateway policy statistics must be displayed.
type	Specifies that the configuration and status of the specified media gateway policy type must be displayed. The type can be **default, local,** or **remote.**
default	Specifies that the configuration and status of the default media gateway policy must be displayed.
local	Specifies that the configuration and status of the local media gateway policy must be displayed.
remote	Specifies that the configuration and status of the remote media gateway policy must be displayed.
ipv4	Specifies that the remote media gateway has an IPv4 IP address.
ipv6	Specifies that the remote media gateway has an IPv6 IP address.
ip-address	IP address of the remote media gateway. The IP address can be in the IPv4 format or IPv6 format.
port	Specifies the port number of the remote media gateway.
port-number	Port number of the remote media gateway.

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 1000 Series Aggregation Services Routers.

Examples

The following command shows the output of the **show sbc sbe media-gateway-policy type** command for a remote type media gateway policy:

```
Router# show sbc mySbc sbe media-gateway-policy type remote ipv4 192.0.2.26 port 6886

Gateway Policy Type                =     REMOTE
_____________________________________________________
Remote vpn                         =     0
```

```
Remote address type             =     IPV4
Remote address                  =     192.0.2.26
Remote Port                     =     6886
Media Limit Table               =
Transcode Audio Cost            =     10
Transrate Audio Cost            =     6
```

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.

show sbc sbe media-gateways

To list the gateway configuration and attachment status on SBE, use the **show sbc sbe media-gateways** command in Privileged EXEC mode.

show sbc *sbc-name* **sbe media-gateways**

Syntax Description

sbc-name	Specifies 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 to list the gateway configuration and attachment status on SBEs:

```
Router# show sbc mySbc sbe media-gateways

SBC Service "mySbc"
  Configured Gateway 10.0.0.1
  Configured Gateway 100.1.0.1
  Configured Gateway 172.3.4.9
```

show sbc sbe media-policy

To display the details of media policies, use the **show sbc sbe media-policy** command in the privileged EXEC mode.

show sbc *sbc-name* **sbe media-policy** [*policy-name*]

Syntax Description

sbc-name	Name of the SBC.
policy-name	Name of the media policy. If you do not enter the name of a media policy, the command displays details of all media policies configured on the SBC.

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 1000 Series Aggregation Services Routers.

Examples

In the following example, the **show sbc sbe media-policy** command is used to display the details of the my_media_policy media policy:

```
Router# show sbc mySbc sbe media-policy my_media_policy

Policy Name:  my_media_policy
_____________________________________________________
Type                                    = gateway
Audio transcode limit                   = 30
Audio transrate limit                   = 30
Video transcode limit                   = 30
Inband-dtmf-iw  limit                   = 10
SRTP-iw         limit                   = 20
Total resource  limit                   = 40
```

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.