deact-mode (billing)

To configure the deactivate mode for the billing method, use the **deact-mode** command in the packetcable-em configuration mode. To disable the deactivate mode, use the **no** form of this command.

deact-mode {abort | quiesce}

no deact-mode

Syntax Description

abort	Billing method is deactivated immediately. No further CDRs for existing calls and new calls are generated.
quiesce	Billing CDRs are not generated for new calls. CDRs continue to be generated for existing calls until the calls complete. This delays the deactivation of the method.

Command Default

The default is abort.

Command Modes

Packet-cable em configuration (config-sbc-sbe-billing-packetcable-em)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to delay the deactivation of the billing method:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# billing
(config-sbc-sbe-billing)# packetcable-em 4 transport radius test
(config-sbc-sbe-billing-packetcable-em)# batch-size 256
(config-sbc-sbe-billing-packetcable-em)# batch-time 22
(config-sbc-sbe-billing-packetcable-em)# attach
(config-sbc-sbe-billing-packetcable-em)# activate
(config-sbc-sbe-billing-packetcable-em)# deact-mode quiesce
```

Related Commands

Command	Description
activate (radius)	Activates the billing functionality after configuration is committed.
attach	activate the billing for a RADIUS client

Command	Description
batch-size	Configures the batching or grouping of RADIUS messages sent to a RADIUS server.
batch-time	Configures the maximum number of milliseconds for which any record is held in the batch before the batch is sent
deact-mode	Configures the deactivate mode for the billing method.
ldr-check	Configures the time of day (local time) to run the Long Duration Check (LDR).
local-address ipv4	Configures the local IPv4 address that appears in the CDR.
local-address ipv4 (packet-cable)	Configures the local address of the packet-cable billing instance.
method packetcable-em	Enables the packet-cable billing method.
packetcable-em *transport radius*	Configures a packet-cable billing instance.
show sbc sbe billing remote	Displays the local and billing configurations.

deact-mode (XML Billing)

To configure the deactivate mode for the XML billing method, use the **deact-mode** command in the SBE billing XML configuration mode. The **deact-mode** command defines the state after which the billing method will be deactivated. To disable the deactivate mode, use the **no** form of this command.

deact-mode {normal | quiesce | abort}

no deact-mode

Syntax Description

normal	Billing CDRs are generated for the existing calls before the billing method is deactivated. The calls that are still in progress and have not ended are not included in the CDR billing cycle. The default mode is normal.
quiesce	Billing CDRs are generated for the existing calls, and the CDRs continue to be generated for the calls that have still not ended. This delays the XML billing method from being deactivated.
abort	The billing method is deactivated immediately. No further CDRs are generated for the existing calls and new calls.

Command Default

By default, the deact-mode is normal.

Command Modes

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

Command History

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

Usage Guidelines

The XML billing method can be deactivated forcefully using the **deact-mode** command from SBE billing XML configuration mode.

Since the calls are still in progress, it is important to bill the calls that are completed before the XML billing method is deactivated. To bill the CDRs for the existing calls before deactivating the XMl billing method, use the **deact-mode normal** command.

As an option to wait for the calls that have still not ended, and to build the CDRs for the existing calls as well as the calls that are still in progress, use the **deact-mode quiesce** command.

To immediately abort the XML billing method without billing the CDRs, use the **deact-mode abort** command.

Examples

The following example shows how to set the deactivation mode to normal. This will process the CDRs for the existing calls:

```
Router(config)# sbc sbcbilling
Router(config-sbc)# sce
Router(config-sbc-sce)# billing
```

```
Router(config-sbc-sce-billing)# xml method
Router(config-sbc-sce-billing)# xml 1
Router(config-sbc-sce-billing-xml)# deact-mode normal
```

The following example shows how to bill CDRs for the existing calls and will continue to build the CDRs for the calls that are still in progress:

```
Router(config-sbc-sce-billing-xml)# deact-mode quiesce
```

The following example shows how to deactivate the XML billing method without building the CDRs:

```
Router(config-sbc-sce-billing-xml)# deact-mode abort
```

Related Commands

Command	Description
xml (billing)	Configures the method index for XML billing.
method xml	Configures the billing method as XML for the Billing Manager.
ldr-check	Configures the time at which long duration records are checked.

deactivation-mode (session border controller)

To specify the action to take upon DBE or SBE deactivation, use the **deactivation-mode** command in the appropriate configuration mode. To revert to the default value, use the **no** form of this command.

deactivation-mode *deact-type*

no deactivation-mode

Syntax Description

deact-type	Specifies the action to take upon DBE deactivation: • ***abort***: All calls dropped with no signaling. • ***normal***: Service change signaled to SBE, and all calls immediately terminated. • ***quiesce***: No new calls accepted. Deactivation occurs only after existing calls have terminated naturally. Specifies the action to take upon SBE deactivation: • ***abort***: All calls dropped with no signaling. • ***normal***: Existing calls are torn down gracefully. • ***quiesce***: No new calls accepted. Existing calls are allowed to terminate.

Command Default

By default, this command assumes the ***normal*** parameter.

Command Modes

SBC-DBE configuration (config-sbc-dbe)

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 2.1	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 2.4	Support for SBE was added for unified SBC.

Usage Guidelines

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

Examples

The following example shows how to set the DBE to deactivate in *quiesce* mode to prepare the device for hardware maintenance:

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# deactivation-mode quiesce
```

Related Commands

Command	Description
sbc dbe	Creates the DBE service on a SBC and enters into the DBE-SBE configuration mode.
activate	Initiates the DBE service of the Session Border Controller (SBC).

debug condition vrf

To limit debug output to a specific Virtual Routing and Forwarding (VRF) instance, use the **debug condition vrf** command in privileged EXEC mode. To remove the debug condition, use the **undebug** version of the command.

debug condition vrf *vrf-name*

undebug condition vrf *vrf-name*

Syntax Description

vrf-name	Name of a VRF.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced.

Usage Guidelines

Use this command to limit debug output to a single VRF.

Note EIGRP does not support the **debug condition vrf** command.

Examples

The following example shows how to limit debugging output to VRF red:

```
Router# debug condition vrf red
```

Related Commands

Command	Description
vrf definition	Defines a virtual routing and forwarding instance.

debug ip bgp igp-metric ignore

To display information related to the system ignoring the Interior Gateway Protocol (IGP) metric during best path selection, use the **debug ip bgp igp-metric ignore** command in privileged EXEC mode. To disable such debugging output, use the **no** form of the command.

debug ip bgp igp-metric ignore

no debug ip bgp igp-metric ignore

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.4S	This command was introduced.

Usage Guidelines

You might use this command if the path you expected to be chosen as the best path at the shadow RR was not chosen as such. That could be because the **bgp bestpath igp-metric ignore** command makes the best path algorithm choose the same best path as the primary RR if they are not co-located.

Examples

The following example turns on debugging of events related to the system ignoring the IGP metric during bestpath selection:

```
Router# debug ip bgp igp-metric ignore
```

Related Commands

Command	Description
bgp bestpath igp-metric ignore	Specifies that the system ignore the Interior Gateway Protocol (IGP) metric during best path selection.

debug ip bgp route-server

To turn on debugging for a BGP route server, use the **debug ip bgp route-server** command in privileged EXEC mode. To disable debugging output, use the **no** form of this command.

debug ip bgp route-server {**client** | **context** | **event** | **import** | **policy**} [**detail**]

no debug ip bgp route-server {**client** | **context** | **event** | **import** | **policy**} [**detail**]

Syntax Description

client	Displays information about BGP route server clients.
context	Displays information about BGP route server contexts.
event	Displays information about route server events, such as importing into the virtual RS table.
import	Displays information about BGP route server import maps.
policy	Displays information about the policy path process.
detail	(Optional) Displays detailed debugging information.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE 3.3S	This command was introduced.

Usage Guidelines

Use this command to turn on debugging of a BGP router server.

Caution The **detail** keyword is used for complex issues and should only be turned on when you are debugging with a Cisco representative.

Examples

In the following example, BGP route server client debugging is turned on:

```
Router# debug ip bgp route-server client
```

Related Commands

Command	Description
import-map	Configures flexible policy handling by a BGP route server.
neighbor route-server-client	Specifies on a BGP route server that a neighbor is a route server client.
route-server-context	Creates a route-server context in order to provide flexible policy handling for a BGP route server.

debug ip multicast topology

To enable debugging output for IP multicast stream topology creation events, deletion events, and IP multicast stream access control list (ACL) matching events, use the **debug ip multicast topology** command in privileged EXEC mode. To disable debugging output, use the **no** form of this command.

debug ip multicast topology

no debug ip multicast topology

Syntax Description

This command has no arguments or keywords.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced.

Usage Guidelines

Use this command when IP multicast stream topology creation, IP multicast stream topology deletion, or IP multicast stream ACL matching appears not to be functioning.

Examples

The following example shows how to enable debugging output for IP multicast stream topology creation events, IP multicast stream topology deletion events, and IP multicast stream ACL matching events:

```
Router# debug ip multicast topology
```

Related Commands

Command	Description
ip multicast rpf select topology	Associates a multicast topology with a multicast group with a specific mroute entry.
ip multicast topology	Configures topology selection for multicast streams.
show ip multicast topology	Displays IP multicast topology information.

debug ip wccp

To display information about Web Cache Control Protocol (WCCP) services, use the **debug ip wccp** command in privileged EXEC mode. To disable debugging output, use the **no** form of this command.

debug ip wccp {**default** | **vrf** *vrf-name* {**events** | **packets** [**control**]} | **events** | **packets** [**bypass** | **control** | **redirect**] | **platform** | **subblocks**}

no debug ip wccp {**default** | **vrf** *vrf-name* {**events** | **packets** [**control**]} | **events** | **packets** [**bypass** | **control** | **redirect**] | **platform** | **subblocks**}

Syntax Description

default	Displays information about default WCCP services.
vrf *vrf-name*	Specifies a virtual routing and forwarding instance (VRF) to associate with a service group.
events	Displays information about significant WCCP events.
packets	Displays information about every WCCP packet received or sent by the router.
control	(Optional) Displays information about WCCP control packets.
bypass	(Optional) Displays information about WCCP bypass packets.
redirect	(Optional) Displays information about WCCP redirect packets.
platform	Displays information about WCCP platform API.
subblocks	Displays information about WCCP subblocks.

Command Default

Debug information is not displayed.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
15.0(1)M	This command was introduced. This command replaces the **debug ip wccp packets** and **debug ip wccp events** commands.
12.2(33)SRE	This command was integrated into Cisco IOS Release 12.2(33)SRE.
Cisco IOS XE Release 3.1S	This command was integrated into Cisco IOS XE Release 3.1S.

Usage Guidelines

When the **vrf** keyword is not used, the command displays debug information about all WCCP services on the router. The **default** keyword is used to specify default WCCP services.

Examples

The following is sample output from the **debug ip wccp events** command when a Cisco Cache Engine is added to the list of available Web caches:

```
Router# debug ip wccp events

WCCP-EVNT: Built I_See_You msg body w/1 usable web caches, change # 0000000A
WCCP-EVNT: Web Cache 192.168.25.3 added
WCCP-EVNT: Built I_See_You msg body w/2 usable web caches, change # 0000000B
WCCP-EVNT: Built I_See_You msg body w/2 usable web caches, change # 0000000C
```

The following is sample output from the **debug ip wccp packets** command. The router is sending keepalive packets to the Cisco Cache Engines at 192.168.25.4 and 192.168.25.3. Each keepalive packet has an identification number associated with it. When the Cisco Cache Engine receives a keepalive packet from the router, it sends a reply with the identification number back to the router.

```
Router# debug ip wccp packets

WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.4 w/rcvd_id 00003532
WCCP-PKT: Sending I_See_You packet to 192.168.25.4 w/ rcvd_id 00003534
WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.3 w/rcvd_id 00003533
WCCP-PKT: Sending I_See_You packet to 192.168.25.3 w/ rcvd_id 00003535
WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.4 w/rcvd_id 00003534
WCCP-PKT: Sending I_See_You packet to 192.168.25.4 w/ rcvd_id 00003536
WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.3 w/rcvd_id 00003535
WCCP-PKT: Sending I_See_You packet to 192.168.25.3 w/ rcvd_id 00003537
WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.4 w/rcvd_id 00003536
WCCP-PKT: Sending I_See_You packet to 192.168.25.4 w/ rcvd_id 00003538
WCCP-PKT: Received valid Here_I_Am packet from 192.168.25.3 w/rcvd_id 00003537
WCCP-PKT: Sending I_See_You packet to 192.168.25.3 w/ rcvd_id 00003539
```

Related Commands

Command	Description
clear ip wccp	Clears the counter for packets redirected using WCCP.
ip wccp	Enables support of the specified WCCP service for participation in a service group.
ip wccp redirect	Enables packet redirection on an outbound or inbound interface using WCCP.
show ip interface	Lists a summary of the IP information and status of an interface.

debug platform hardware qfp active feature wccp

To enable debug logging for the Web Cache Communication Protocol (WCCP) client in the Cisco Quantum Flow Processor (QFP), use the **debug platform hardware qfp active feature wccp** command in privileged EXEC mode. To disable WCCP QFP debug logging, use the **no** form of this command.

debug platform hardware qfp active feature wccp {{**client** | **lib-client** {**all** | **error** | **info** | **trace** | **warning**}} | **datapath all**}

no debug platform hardware qfp active feature wccp {{**client** | **lib-client** {**all** | **error** | **info** | **trace** | **warning**}} | **datapath all**}

Syntax Description

client	Enables WCCP QFP client debug logging.
lib-client	Enables WCCP QFP client-library debug logging.
all	Enables all logs.
error	Enables error logs.
info	Enables info logs.
trace	Enables trace logs.
warning	Enables warning logs.
datapath all	Enables all WCCP QFP datapath debug logging.

Command Default

WCCP QFP debug logging is disabled.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.1S	This command was introduced.

Usage Guidelines

When the **debug platform hardware qfp active feature wccp** command is configured, QFP client debugs are enabled and can be collected from the forwarding processor (FP) from the file cpp_cp_F0-0.log.

When the **debug platform hardware qfp active feature wccp lib-client all** command is configured, QFP lib-client debugs are enabled and can be collected from the FP from the file fman-fp_F0-0.log.

When the **debug platform hardware qfp active feature wccp datapath all** command is configured, QFP datapath debugs are enabled and can be collected from the FP from the file cpp_cp-F0-0.log.

Examples

The following is sample output from the **debug platform hardware qfp active feature wccp** command:

```
Router# debug platform hardware qfp active feature wccp
```

A WCCP service is configured:

```
06/17 10:48:15.980 [(null)]: (debug): cpp_wccp_service_add_handler: service_params::: type
=0 id = 0priority = 240  is_closed = 0 assign = 0
06/17 10:48:15.980 [(null)]: (debug): cpp_wccp_dplane_init dplane cpp-init for all cpps
06/17 10:48:15.980 [(null)]: (debug): cpp_wccp_dplane_init_cpp Enter: cpp_info =
0x1027b970:
.
.
.
```

The sequence of messages repeats for each access control entry (ACE) of a merged access control list (ACL):

```
06/17 10:53:38.792 [(null)]: (debug): cpp_wccp_update_bind_obj_list:idx = 63
bind-info:no.lvl = 1 fobj = 80024000 bind-id = 0
06/17 10:53:38.792 [(null)]: (debug): cpp_wccp_update_bind_obj_list fobj:service-id = 0
type = 0 cache-id = 9action = 2 acl-log = 0
06/17 10:53:38.792 [(null)]: (debug): cpp_wccp_add_dplane_cache_desc service-index = 0,
cache_id = 9
06/17 10:53:38.792 [(null)]: (debug): cpp_wccp_get_dplane_cache_index service-index = 0,
cache_id = 9
06/17 10:53:38.792 [(null)]: (debug): cpp_wccp_create_dplane_cache_index Cache index = 0
exists for cache-id = 9,service-index  = 0
.
.
.
```

WCCP redirection is configured on an interface:

```
06/17 13:15:44.655 [(null)]: (debug): cpp_wccp_intf_attach_msg req = 0x13116848, msg-len =
36
06/17 13:15:44.655 [(null)]: (debug): cpp_wccp_intf_attach_handler: type = 0 id = 0 ifh =
17dir = 0 vrfid = 0
06/17 13:15:44.655 [(null)]: (debug): cpp_wccp_get_service_index WCCP: service_id 0 vrfid
0service_desc_index 0
06/17 13:15:44.655 [(null)]: (debug): cpp_wccp_get_service_desc: service-id: 0  type = 0
index = 0
.
.
.
```

Debug messages appear for each ACE of the merged ACL for a service group:

```
06/17 13:15:44.670 [(null)]: (debug): cpp_wccp_translate_fobj_to_cce_result Entry
06/17 13:15:44.670 [(null)]: (debug): cpp_wccp_get_service_index WCCP: service_id 0 vrfid
0service_desc_index 0
06/17 13:15:44.670 [(null)]: (debug): cpp_wccp_get_service_desc: service-id: 0  type = 0
index = 0
06/17 13:15:44.670 [(null)]: (debug): cpp_wccp_get_dplane_cache_index service-index = 0,
cache_id = 9
.
.
.
```

Redirection is removed from an interface:

```
06/17 13:24:54.617 [(null)]: (debug): cpp_wccp_intf_detach_handler: type = 0 id = 0 ifh =
17dir = 0 vrfid = 0
06/17 13:24:54.617 [(null)]: (debug): cpp_wccp_get_service_index WCCP: service_id 0 vrfid
0service_desc_index 0
```

```
06/17 13:24:54.617 [(null)]: (debug): cpp_wccp_get_service_desc: service-id: 0  type = 0
index = 0
06/17 13:24:54.617 [(null)]: (debug): cpp_wccp_intf_detach_handler:hw_cg_node, ifh = 17
dir = 0vrfid = 0 service-index = 0 exists
.
.
```

A service group is unconfigured:

```
06/17 13:29:41.828 [(null)]: (debug): cpp_wccp_cache_delete_handler: cache-desc ip-addr =
5a140102 id-addr = 0cache-id = 9  cef_handle = 0x112d3b68 cef-obj-type = 10router-id =
42424242 ce_mac_addr  fwd-method = 0 hw-addr = 0x11188f78
06/17 13:29:41.828 [(null)]: (debug): cpp_wccp_remove_dplane_ip_hash_entry cache_id= 9:
06/17 13:29:41.828 [(null)]: (debug): cpp_wccp_remove_dplane_ip_hash_entry ip-hash-index =
6934:
.
.
.
```

The following is sample output from the **debug platform hardware qfp active feature wccp lib-client all** command:

```
Router# debug platform hardware qfp active feature wccp lib-client all
```

A WCCP service group is configured:

```
06/17 13:47:00.158 [buginf]: (debug): cpp_wccp_service_group_add_a: API call from PAL
service-type = 0 id = 0vrfid = 0, priority = 240 is_closed = 0 has_ports = 1 assign-method
= 0
06/17 13:47:00.158 [buginf]: (debug): cpp_wccp_api_async_msg_send: data size = 28 for this
3message
06/17 13:47:00.158 [buginf]: (debug): cpp_wccp_api_async_send_cb: SMC async send call-back
.
.
.
```

The set of debug messages repeats for each ACE of the merged ACL of the WCCP service group:

```
06/17 13:47:29.474 [buginf]: (debug):   Notification from CGM to WCCP, op:13, tid:0,async:
0, ctx: (nil)
06/17 13:47:29.474 [buginf]: (debug): cpp_wccp_cgm_notif_handler:cgm BIND num_lvl = 1,
bind-id = 0 fobj = 80028000
06/17 13:47:29.474 [buginf]: (debug):   Notification from CGM to WCCP, op:2, tid:0,async:
1,ctx: 0x77
.
.
.
```

WCCP redirection is configured on an interface:

```
06/17 13:52:05.841 [buginf]: (debug):   Notification from CGM to WCCP, op:1, tid:0,async:
0,ctx: (nil)
06/17 13:52:05.841 [buginf]: (debug): cpp_wccp_attach_service_to_intf_a: API call from PAL
service-type = 0 id = 0 vrfid = 0 if_h = 11 dir = 0
06/17 13:52:05.841 [buginf]: (debug): cpp_wccp_attach_service_to_intf_a:tid el= 0x11347470
ifh = 17, dir = 0 id = 0 type = 0 vrfid = 0
.
.
.
```

WCCP is unconfigured on an interface:

```
06/17 13:54:30.544 [buginf]: (debug):   Notification from CGM to WCCP, op:1, tid:0,async:
0,ctx: (nil)
```

```
06/17 13:54:30.544 [buginf]: (debug): cpp_wccp_detach_service_from_intf_a: API call from
PALservice-type = 0 id = 0 vrfid = 0 if_h = 11 dir = 0
06/17 13:54:30.544 [buginf]: (debug): cpp_wccp_detach_service_from_intf_a:tid el=
0x11338890ifh = 17, dir = 0 id = 0 type = 0
06/17 13:54:30.544 [buginf]: (debug):   Notification from CGM to WCCP, op:2, tid:0,async:
1,ctx: 0x79
.
.
.
```

A WCCP service group is unconfigured:

```
06/17 13:56:14.492 [buginf]: (debug): cpp_wccp_cache_delete_a: API call from PAL cache-id=
10
06/17 13:56:14.492 [buginf]: (debug): cpp_wccp_api_async_msg_send: data size = 2 for this
6 message
06/17 13:56:14.492 [buginf]: (debug): cpp_wccp_api_async_send_cb: SMC async send call-back
06/17 13:56:14.492 [buginf]: (debug):  cpp_wccp_api_async_msg_send successfully sent
msg-type 6 to server.
06/17 13:56:14.492 [buginf]: (debug):   Notification from CGM to WCCP, op:1, tid:0,async:
0,ctx: (nil)
06/17 13:56:14.492 [buginf]: (debug):   Notification from CGM to WCCP, op:14, tid:0,async:
0, ctx: (nil)
06/17 13:56:14.493 [buginf]: (debug): cpp_wccp_cgm_notif_handler:cgm BIND num_lvl = 1,
bind-id = 0 fobj = 80028000
.
.
.
```

The debug messages repeat for each ACE of the merged ACL for the WCCP service group:

```
06/17 13:56:14.500 [buginf]: (debug):   Notification from CGM to WCCP, op:14, tid:0,async:
0, ctx: (nil)
06/17 13:56:14.500 [buginf]: (debug): cpp_wccp_cgm_notif_handler:cgm BIND num_lvl = 1,
bind-id = 0 fobj = 80028000
06/17 13:56:14.501 [buginf]: (debug):   Notification from CGM to WCCP, op:2, tid:0,async:
1,ctx: 0x7a
.
.
.
```

The following is sample output from the **debug platform hardware qfp active feature wccp datapath all** command:

```
Router# debug platform hardware qfp active feature wccp datapath all
```

A packet is successfully redirected:

```
06/17 14:49:28.935 [(null)]: (debug):
QFP:00 Thread:090 TS:00003918904609765795
##########################################################################################
06/17 14:49:28.936 [(null)]: (debug):
QFP:00 Thread:090 TS:00003918904609777642 CCE IPV4 PKT
(src:3.3.3.2,dst:2.2.2.2,sprt:0000,dprt:0050,prot:06,tos:00,len:0014,ttl:3f) , intf:3f3
06/17 14:49:28.936 [(null)]: (debug):
QFP:00 Thread:090 TS:00003918904609814715
##########################################################################################
06/17 14:49:28.936 [(null)]: (debug):
QFP:00 Thread:090 TS:00003918904609825865 CCE IPV4 UIDB_INFO W0:00000004, W1:00084441,
tcam_region_index:0004, key_index:00, cmd:00084441
06/17 14:49:28.936 [(null)]: (debug):
.
.
.
```

Related Commands

Command	Description
clear ip wccp	Removes WCCP statistics (counts) maintained on the router for a particular service.
ip wccp	Enables support of the specified WCCP service for participation in a service group.
ip wccp check services all	Enables enable all WCCP services.
ip wccp outbound-acl-check	Enables execution of ACL applied on the actual outgoing interface of a packet before a decision is taken to redirect a packet.
ip wccp redirect	Enables packet redirection on an outbound or inbound interface using WCCP.

debug platform hardware qfp feature sbc

To enable debug logging for signaling border element (SBE) or the data border element (DBE) logs in the Cisco QuantumFlow Processor (QFP), use the **debug platform hardware qfp feature sbc** command in Privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug platform hardware qfp {active | standby} feature sbc {sbe {pfilter | sfx {datapath}} | dbe {client {all | clear | error | informational | trace | warning} | datapath {all | drop | dtmf | error | events | find | latch | proxy | rtcp}}

no debug platform hardware qfp {active | standby} feature sbc {sbe {pfilter | sfx {datapath}} | dbe {client {all | clear | error | informational | trace | warning} | datapath {all | drop | dtmf | error | events | find | latch | proxy | rtcp}}

Syntax Description

active	Enables debug logging for the active processor.
standby	Enables debug logging for the standby processor.
sbe	SBC signaling border element. Enables SBE debug logging.
pfilter	Specifies SBC SBE packet filter.
sfx	Specifies SBC SIP Fast Register (SFX).
datapath	Specifies SBC datapath SIP Fast Register (SFX).
dbe	SBC data border element. Enables DBE debug logging.
client	Enables SBC DBE client debugging.
all	Specifies all client debugging.
clear	Specifies Clear the forwarding counters.
error	Specifies Client error debugging.
informational	Specifies Client informational debugging.
trace	Specifies Client trace debugging.
warning	Specifies Client warning debugging.
datapath	Enables SBC DBE datapath debugging.
all	Specifies datapath all debugs.
drop	Specifies datapath drop debugs.
dtmf	Specifies datapath DTMF debugs.
error	Specifies datapath errors debugs.
events	Specifies datapath events debugs.
find	Specifies datapath find debugs.
latch	Specifies datapath latch events debugs.
proxy	Specifies datapath proxy debugs.
rtcp	Specifies datapath RTCP debugs.

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

The output of the debugs is stored in the harddisk:tracelog/ directory.

Examples

The following example turns on debugging of SBE logs for SIP fast-register (SFX) datapath messages residing on the active processor in the Cisco QuantumFlow Processor (QFP):

```
Router# debug platform hardware qfp active feature sbc sbe sfx datapath
```

The following example turns on debugging of DBE logs for datapath DTMF debugs residing on the active processor in the Cisco QuantumFlow Processor (QFP):

```
Router# debug platform hardware qfp active feature sbc dbe datapath dtmf
```

Related Commands

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

debug platform software wccp

To enable Web Cache Control Protocol (WCCP) platform debug messages, use the **debug platform software wccp** command in privileged EXEC mode. To disable WCCP platform debug messages, use the **no** form of this command.

debug platform software wccp {**configuration** | **counters** | **detail** | **messages**}

no debug platform software wccp {**configuration** | **counters** | **detail** | **messages**}

Syntax Description

configuration	Enables configuration related debugs.
counters	Enables statistics collection related debugs.
detail	Enables detailed debugs for all WCCP related configurations.
messages	Enables debugs related to type definition language (TDL) messages being exchanged.

Command Default

Debugging is disabled.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 2.2	This command was introduced.
Cisco IOS XE Release 3.1S	This command was modified. The **counters** keyword was added.

Examples

The following is sample output from the **debug platform software wccp configuration** command:

```
Router# debug platform software wccp configuration
```

A WCCP service is configured:

```
*Jun 17 15:41:04.816: FMANRP-WCCP: Config Service Group (0, 0, 0)
                        acl = , propagate_tos = TRUE, mode_is_closed = FALSE
                        definition_is_valid = TRUE, protocol = 6, priority = 240
                        ass_method = Unknown, fwd_method = Unknown, ret_method = Unknown
                        num_mv_sets = 0, redirection_is_active = FALSE, num_wcs = 0
                        use_source_port = FALSE, ports_defined = TRUE
                        ports[0] = 80
                        ports[1] = 0
                        ports[2] = 0
                        ports[3] = 0
                        ports[4] = 0
                        ports[5] = 0
                        ports[6] = 0
                        ports[7] = 0
*Jun 17 15:41:24.827: FMANRP-WCCP: create ce adjacency: CE = 90.20.1.2, fwd_method = GRE
oce= 0x30692230 adj = 0x306921C0 handle = 0x30692230 obj_id = 135
```

```
*Jun 17 15:41:24.827: FMANRP-WCCP: adjacency 90.20.1.2 (4500.0000.0000), router_id
66.66.66.66 proto=47
*Jun 17 15:41:39.807: FMANRP-WCCP: update mask data, Service Group (0, 0, 0)
                        acl = , propagate_tos = TRUE, mode_is_closed = FALSE
                        definition_is_valid = TRUE, protocol = 6, priority = 240
                        ass_method = Mask, fwd_method = GRE, ret_method = L2
                        num_mv_sets = 1, redirection_is_active = TRUE, num_wcs = 1
                        use_source_port = FALSE, ports_defined = TRUE
                        wc[0] = 90.20.1.2
                        ports[0] = 80
                        ports[1] = 0
                        ports[2] = 0
                        ports[3] = 0
                        ports[4] = 0
                        ports[5] = 0
                        ports[6] = 0
                        ports[7] = 0
*Jun 17 15:41:39.808: FMANRP-WCCP: Service Group (0, 0, 0) generate merged acl from IOS
*Jun 17 15:41:39.808: FMANRP-WCCP: wccp merged_acl(acl=), p=64 t=64 MCP wccp merged_acl,
num_port=1 result_len=64
```

A WCCP service is configured on an interface:

```
*Jun 17 15:45:17.083: FMANRP-WCCP: Config Service Group (0, 0, 0) to interface
GigabitEthernet0/3/1, direction = IN
*Jun 17 15:45:17.084: FMANRP-WCCP: Attach GigabitEthernet0/3/1 interface info for Service
group (0, 0, 0) if_handle 20, direction Input(0x2)
```

A WCCP service is removed from an interface:

```
*Jun 17 15:46:29.815: FMANRP-WCCP: Unconfig Service Group (0, 0, 0) to interface
GigabitEthernet0/3/1, direction = IN
*Jun 17 15:46:29.815: FMANRP-WCCP: Detach GigabitEthernet0/3/1 interface info for Service
group (0, 0, 0) if_handle 20, direction Input(0x2)
```

A WCCP service group is unconfigured:

```
*Jun 17 15:48:17.224: FMANRP-WCCP: (0 0 0) Delete ce = 90.20.1.2
*Jun 17 15:48:17.225: Failed to retrieve service group params while removing ce
*Jun 17 15:48:17.241: FMANRP-WCCP: Unconfig Service Group (0, 0, 0)
```

The following is sample output from **debug platform software wccp messages** command:

```
Router# debug platform software wccp messages
```

A WCCP service is configured:

```
*Jun 17 15:50:57.796: FMANRP-WCCP: send out (0, 0, 0) wccp_svc_cfg (ADD) to fman-rp
                        pri=0, ce_num=0, ass=Unknown, fwd=Unknown, ret=Unknown
                        protocol=6 use_source_port=0 is_closed=0
                        ports[0] = 80
                        ports[1] = 0
                        ports[2] = 0
                        ports[3] = 0
                        ports[4] = 0
                        ports[5] = 0
                        ports[6] = 0
                        ports[7] = 0
*Jun 17 15:51:14.864: FMANRP-WCCP: send out (0, 0, 0) wccp_ce_cfg (ADD) to fman-rp,
ce=90.20.1.2 ce_id=0.0.0.0 rtr_id=66.66.66.66 fwd_method=GRE obj_id=141
*Jun 17 15:51:29.846: FMANRP-WCCP: send out (0, 0, 0) wccp_svc_cfg (MODIFY) to fman-rp
                        pri=0, ce_num=1, ass=Mask, fwd=GRE, ret=L2
                        protocol=6 use_source_port=0 is_closed=0
                        ports[0] = 80
```

```
                        ports[1] = 0
                        ports[2] = 0
                        ports[3] = 0
                        ports[4] = 0
                        ports[5] = 0
                        ports[6] = 0
                        ports[7] = 0
*Jun 17 15:51:29.847: FMANRP-WCCP: send out (0, 0, 0) wccp_acl_begin to fman-rp
*Jun 17 15:51:29.886: FMANRP-WCCP:   Service Group (0, 0, 0) send out ACL=WCCP_ACL_0x0, 64
ACEs to fman-rp
*Jun 17 15:51:29.886: FMANRP-WCCP: send out (0, 0, 0) wccp_acl_end to fman-rp
```

A WCCP service is removed from an interface:

```
*Jun 17 15:53:40.710: FMANRP-WCCP: send out (0, 0, 0) wccp_if_svc_bind (ADD) to fman-rp
if_handle=20 dir=IN
```

A WCCP service is removed from an interface:

```
*Jun 17 15:54:36.924: FMANRP-WCCP: send out (0, 0, 0) wccp_if_svc_bind (DELETE) to fman-rp
if_handle=20 dir=IN
```

A WCCP service group is unconfigured:

```
*Jun 17 15:55:13.117: FMANRP-WCCP: send out (0, 0, 0) wccp_ce_cfg (DELETE) to fman-rp,
ce=90.20.1.2 ce_id=0.0.0.0 rtr_id=0.0.0.0 fwd_method=Unknown obj_id=0
*Jun 17 15:55:13.128: FMANRP-WCCP: send out (0, 0, 0) wccp_svc_cfg (DELETE) to fman-rp
                        pri=0, ce_num=0, ass=Unknown, fwd=Unknown, ret=Unknown
                        protocol=0 use_source_port=0 is_closed=0
                        ports[0] = 0
                        ports[1] = 0
                        ports[2] = 0
                        ports[3] = 0
                        ports[4] = 0
                        ports[5] = 0
                        ports[6] = 0
                        ports[7] = 0
```

The following is sample output from the **debug platform software wccp detail** command:

```
Router# debug platform software wccp detail
```

WCCP service is configured:

```
*Jun 17 18:42:15.491: FMANRP-WCCP: create ce adjacency: CE = 90.20.1.2, fwd_method = GRE
oce= 0x30692230 adj = 0x306921C0 handle = 0x30692230 obj_id = 181
*Jun 17 18:42:30.472: FMANRP-WCCP: Converted adjacency (0x30692230), to ce_addr
(90.20.1.2)
*Jun 17 18:42:30.473: FMANRP-WCCP:  Service Group (0, 0, 0) send out ACL=WCCP_ACL_0x0,
ACE=1, obj_id=181 PERMIT, srcopr 5, dstopr 3 to fman-rp
*Jun 17 18:42:30.473: FMANRP-WCCP: oce 0x30692230 adj 0x306921C0 handle 0x30692230
```

The debug messages appear for each access control entry (ACE) of the merged access control list (ACL) for the service group:

```
*Jun 17 18:42:30.487: FMANRP-WCCP: Converted adjacency (0x30692230), to ce_addr
(90.20.1.2)
*Jun 17 18:42:30.487: FMANRP-WCCP:  Service Group (0, 0, 0) send out ACL=WCCP_ACL_0x0,
ACE=64, obj_id=181 PERMIT, srcopr 5, dstopr 3 to fman-rp
*Jun 17 18:42:30.487: FMANRP-WCCP: oce 0x30692230 adj 0x306921C0 handle 0x30692230
```

A WCCP service group is unconfigured:

```
*Jun 17 18:46:34.316: FMANRP-WCCP: (0 0 0) Delete ce = 90.20.1.2
*Jun 17 18:46:34.316: Failed to retrieve service group params while removing ce
```

The following is sample output from the **debug platform software wccp counters** command.

```
Router# debug platform software wccp counters
```

Statistics are collected for the first time on a WCCP-enabled interface:

```
*Jun 17 18:50:18.930: FMANRP-WCCP: Received wccp_if_stats intf 20, redirect(IN) 0 from
fman-fp
```

The following debug messages are displayed every 10 seconds:

```
*Jun 17 18:51:18.929: FMANRP-WCCP: Received (0, 0, 0) svc_grp_stats from fman-fp
  unassigned_count = 0, dropped_closed_count = 0
  bypass_count = 0, bypass_failed_count = 0
  denied_count = 0, redirect_count = 0
  num_entries = 0
*Jun 17 18:51:18.929: FMANRP-WCCP: Received wccp_if_stats intf 20, redirect(IN) 0 from
fman-fp
*Jun 17 18:51:28.929: FMANRP-WCCP: Received (0, 0, 0) svc_grp_stats from fman-fp
  unassigned_count = 0, dropped_closed_count = 0
  bypass_count = 0, bypass_failed_count = 0
  denied_count = 0, redirect_count = 0
  num_entries = 0
```

Related Commands

Command	Description
clear ip wccp	Removes WCCP statistics (counts) maintained on the router for a particular service.
ip wccp	Enables support of the specified WCCP service for participation in a service group.
ip wccp check services all	Enables all WCCP services.
ip wccp outbound-acl-check	Enables execution of ACL applied on the actual outgoing interface of a packet before a decision is taken to redirect a packet.
ip wccp redirect	Enables packet redirection on an outbound or inbound interface using WCCP.
show platform software wccp	Displays global statistics related to WCCP on Cisco ASR 1000 Series Routers.

debug sbc alarm-filter

To configure the alarm types for which alarm logs must be generated, use the **debug sbc alarm-filter** command in the privileged EXEC mode. To unconfigure generation of alarm logs for a specified alarm type, use the **no** form of this command.

debug sbc *sbc-name* **alarm-filter** *alarm-type*

no debug sbc *sbc-name* **alarm-filter** *alarm-type*

Syntax Description

sbc-name	Name of the SBC.
alarm-filter *alarm-type*	Specifies that logs must be generated for one of the following alarm types: • **audit-congestion**—Call audit congestion. • **blacklist-alert**—Blacklist alert. • **blacklist-event**—Blacklist event. • **h248**—H248 connection failed. • **handled-exception**—Handled exception. • **routing-component**—Routing component set not active. • **routing-config**—Routing config set not active. • **routing-invalid**—Invalid routing configuration. • **sip-congestion**—Session Initiation Protocol (SIP) congestion detection. • **sip-peer**—SIP peer unavailable. • **vqm**—Voice Quality metrics (VQM) threshold exceeded.

Command Default

The default is that alarm logs are generated for all alarm types.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.5S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Run this command for each alarm type for which you want logs to be generated. You can use the **show debugging** command to display the debugging settings created by running the **debug sbc alarm-log-level** command.

Examples

The following example shows how the **debug sbc alarm-filter** command is used to configure the generation of alarm logs for call audit congestion alarms:

```
Router# debug sbc MySbc alarm-filter audit-congestion
```

The following example shows how the **show debugging** command displays the configuration settings created by running the **debug sbc alarm-filter** command. For example:

```
Router# show debugging

SBC:
  SBC alarm filter 1 : AUDIT CONGESTION
```

Related Commands

Command	Description
debug sbc alarm-log-level	Specifies the output mode for and the alarm severity level at which alarms must be logged.
sbc dump-alarms	Moves alarm logs from the buffer to a file system.
sbc periodic-dump-alarms	Configures periodic movement of alarm logs from the buffer to a file system.
show debugging	Displays information about the types of debugging that are enabled for the router.

debug sbc alarm-log-level

To configure the output mode and the alarm severity level at which alarms must be logged, use the **debug sbc alarm-log-level** command in the privileged EXEC mode. To unconfigure the display and storage of alarm logs, use the **no** form of this command.

debug sbc *sbc-name* **alarm-log-level [buffer | console]** *severity-level*

no debug sbc *sbc-name* **alarm-log-level [buffer | console]**

Syntax Description

sbc-name	Name of the SBC.
alarm-log-level	Specifies that logs must be displayed or stored for alarms of the specified alarm severity level.
buffer	Specifies that alarm logs must be stored in the buffer.
console	Specifies that logging output must be displayed on the console.
severity-level	Alarm severity level for which logs must be generated. The range is from 0 to 100. For alarm logs stored in the buffer, the default is 40. For alarm logs displayed on the console, the default is 80. To disable logging, set the value to 100. If you set the value to 0, logs are generated for all levels of alarm severity.

Command Default

This command applies to all the alarms for which you configure logging by running the **debug sbc alarm-filter** command.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.5S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

If you specify buffer as the output mode for the alarm logs, note that the logs are moved to a file in the specified file system when the capacity of the buffer is exceeded. The size of a single log file created on the file system cannot exceed 2 MB. When the size of a particular log file reaches 2 MB, a new file is created and logging output is stored in the new file. Use the **show debugging** command to display the debug settings created by running the **debug sbc alarm-log-level** command.

Examples

In the following example, the **debug sbc alarm-log-level** command is run twice. The first run of this command is used to specify that logs must be generated for alarms that are of severity 20 or higher and that these logs must be stored in the buffer. The second run of the command is used to specify that logs must be generated for alarms that are of severity 40 or higher and that these logs must be displayed on the console.

```
Router# debug sbc MySbc alarm-log-level buffer 20
Router# debug sbc MySbc alarm-log-level console 40
```

The **show debugging** command shows the configuration settings created by running the **debug sbc alarm-log-level** command. For example:

```
Router# show debugging

SBC:
  SBC buffer alarm-log-level : 20
  SBC console alarm-log-level : 40
```

Related Commands

Command	Description
debug sbc alarm-filter	Specifies the alarm types for which alarm logs must be generated.
sbc dump-alarms	Moves alarm logs from the buffer to a file system.
sbc periodic-dump-alarms	Configures periodic movement of alarm logs from the buffer to a file system.
show debugging	Displays information about the types of debugging that are enabled for the router.

debug sbc asr log-level filter

To set the problem determination (PD) log level at which filtering occurs, use the **debug sbc asr log-level filter** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc asr log-level filter *level*

no debug sbc asr log-level filter *level*

Syntax Description

level	The level to set. Range is 0 to 100. The default is 50. 0 applies filtering to all PD logs. Setting a filter log level of 60 will only apply filtering to logs 60 and above. For example, if you set the console log level to 100, set a SIP filter, and set the filter log level to 60, then only logs matching the SIP filter *and* above level 60 will output to the screen. Logs with severity greater than the specified threshold, matching the include/exclude filter set, or the log group filter are output regardless of the configured unconditional log levels for the buffer, file and console output streams. They are output to all three of those streams.

Command Default

No default behavior or values are available.

Command Modes

Exec (#)

Command History

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

Usage Guidelines

Logs with severity greater than the specified threshold, matching the include/exclude filter set, or the log group filter are output regardless of the configured unconditional log levels for the buffer, file and console output streams. They are output to all three of those streams.

Use the **show debug** command to see debug information.

Examples

The following examples show various output for this command:

```
Router# show debug
   SBC: SBC buffer log-level is 100
   SBC console log-level is 100 SBC filter log-level is 2
   SBC log filter 1 - combination of: SIP components


Router# debug sbc asr log-level ?
```

```
   buffer Buffer log console
   Console log filter
   Filter log


Router# debug sbc asr log-level filter ?
   <0-100> Filter log level (default 50)
```

Related Commands

Command	Description
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc correlation-logs filter

To enable the correlation-logs filter, use the **debug sbc correlation-logs filter** command in the privileged EXEC mode. To disable the correlation-logs filter, use the **no** form of this command.

debug sbc *sbc-name* **correlation-logs filter** *filter-name* [**pdtrc-log-level** *value*]

no debug sbc *sbc-name* **correlation-logs filter** *filter-name*

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.
filter-name	Name of the filter used for filtering the correlation logs.
pdtrc-log-level *value*	(Optional) Specifies the value of the pdtrc log level. The range is from 0 to 100. The default is 60.

Command Default

No default behavior or values are available.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.5.0S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

Use the **show debugging** command to display the debug logs, filters, and log levels.

Examples

The following example shows the various filters available for filtering the correlation logs:

```
Router# debug sbc test correlation-logs filter ?
  adjacency                 Adjacency,matching calls to or from this adjacency
  dn                        Dialed/Dialing number,matching calls to or from this number
  remote-signalling-address  Remote signalling address matching to or from this address
  sip-uri                   SIP-URI,matching calls to or from this uri
  vrf                       VRF name
```

The following example shows the filtering of correlation logs based on the adjacency parameter:

```
Router# debug sbc test correlation-logs filter adjacency abc
    Debugging filter log-level set to default level 60

Router# show debugging
    SBC correlator filter Adjacency name is abc
    IpsTracing is enabled
```

The following example shows the filtering of correlation logs based on the remote signalling address parameter:

```
Router# debug sbc test correlation-logs filter vrf new ipv4 rsa 192.0.2.1 pdtrc-log-level
70
    Debugging filter log-level set to default level 60

Router# show debugging
    SBC correlator Filter Remote signalling-address ipv4 address is 192.0.2.1
    SBC correlator Filter VRF is new with Vpn(id) = 3
    Pd loglevel is 70
    IpsTracing is enabled
    SBC correlator Filter SIP-URI is 9.0.0.0
    Pd loglevel is 0
    IpsTracing is enabled
```

Related Commands

Command	Description
debug sbc pd log-level	Sets the file logging level.
show debugging	Displays the debug logs, filters, and log levels.

debug sbc errors

To debug sbc service errors, use the **debug sbc errors** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc errors

no ***debug sbc errors***

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following command turns on sbc error debugging:

```
Router# debug sbc errors
Router# 2007 May 13 04:24:50.902717 sbc:
(ctx:0)hmstub_proc_recv_hb_message:test_rcv_hb_failed = 1110000
2007 May 13 04:29:50.960623 sbc: (ctx:0)hmstub_proc_recv_hb_message:test_rcv_hb_failed =
1112000
2007 May 13 04:34:50.960631 sbc: (ctx:0)hmstub_proc_recv_hb_message:test_rcv_hb_failed =
1114000
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level console	Sets the console logging level.
debug sbc log-level file	Sets the file logging level.
debug sbc events	Enables debugging of sbc service events.
debug sbc ha	Enables debugging of sbc high availability.
debug sbc info	Enables debugging of sbc services information.
debug sbc nbase	Enables debugging of sbc services nbase.

debug sbc events

To debug sbc service events, use the **debug sbc events** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc events

no ***debug sbc events***

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

privileged EXEC (#)

Command History

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

Usage Guidelines

Use the **show debug** command to see debug information.

Examples

The following command turns on debugging for sbc events:

```
Router# debug sbc events
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level console	Sets the console logging level.
debug sbc log-level file	Sets the file logging level.
debug sbc errors	Enables debugging of sbc service errors.
debug sbc ha	Enables debugging of sbc high availability.
debug sbc info	Enables debugging of sbc services information.
debug sbc nbase	Enables debugging of sbc services nbase.

debug sbc filter

To enable logging based on a number of filters, use the **debug sbc filter** command in privileged EXEC mode. To disable logging based on these filters, use the **no** form of this command.

debug sbc {*sbc-name*} **filter** [**adjacency** {*adj-name*}] [**bill** {*billing-id*}] [**ipv4** {*ipv4-address*}] [**ipv6** {*ipv6-address*}] [**number** {*number*}] [**billing**] [**call**] [**media**] [**overview**] [**protocol**] [**bm** | **cac** | **control** | **h323** | **icc** | **radius** | **routing** | **sip** | **mgm**]

no debug sbc {*sbc-name*} **filter** [**adjacency** {*adj-name*}] [**bill** {*billing-id*}] [**ipv4** {*ipv4-address*}] [**ipv6** {*ipv6-address*}] [**number** {*number*}] [**billing**] [**call**] [**media**] [**overview**] [**protocol**] [**bm** | **cac** | **control** | **h323** | **icc** | **radius** | **routing** | **sip** | **mgm**]

Syntax Description

sbc-name	Name of the session border controller (SBC) service.
adjacency	Output of logs relating to this adjacency.
adj-name	Name of the adjacency.
bill	Log output of calls with a specified billing ID.
billing-id	Billing ID.
ipv4	Output logs that include the IPv4 IP address.
ipv4-address	IPv4 IP address.
ipv6	Output logs that include the IPv6 IP address.
ipv6-address	IPv6 IP address.
number	Output logs of calls with a specified number.
number	Either the caller number or dialed number.
billing	Logs about billing events.
call	Logs about call events.
media	Logs about media events.
overview	Logs showing the flow of control through the session border controller (SBC) components.
protocol	Logs showing protocol messages.
bm	Logs from the Bandwidth Manager (BM) component.
cac	Logs from the Call Admission Control (CAC) components.
control	Logs from the H.248 controller components.
h323	Logs from the H.323 components.
icc	Logs from the Interworking Call Control (ICC) components.
radius	Logs from the RADIUS components.
routing	Logs from the routing components.
sip	Logs from the Session Initiation Protocol (SIP) components.
mgm	Logs from the Media Gateway Manager (MGM) component.

Command Default

Debugging is off.

Command Modes 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.

Usage Guidelines You can specify any number of optional keywords, but each keyword can only be specified once. At least one keyword must be specified for the **debug sbc filter** command. You can issue multiple **debug sbc filter** commands.

Note The debug logs are only output if the appropriate filter keywords have been specified.

The keywords are composed of the following types of filters:

- String filters—Allow the user to turn on logs about common SBC objects such as adjacencies. An object matches the string filter if the object exactly matches the string or the prefix matches the string.

  String filters include the following keywords:

  - **adjacency** {*adj-name*}
  - **bill** {*billing-id*}
  - **ipv4** {*ipv4-address*}
  - **ipv6** {*ipv6-address*}
  - **number** {*number*}

- Component filters—Turn on logs from individual components (or groups of components) within the SBC service. Only one component filter may be specified per **debug sbc filter** command.

  Component filters include the following keywords:

  bm, **cac**, **control**, **h323**, **icc**, **radius**, **routing**, **sip**, **mgm**

- Cross-SBC filters—Turn on logs across all components of the SBC service.

  Cross-SBC filters include the following keywords:

  billing, **call**, **media**, **overview**, **protocol**

Caution Because debugging output is assigned high priority in the CPU process, it can render the system unusable. For this reason, use **debug** commands only to troubleshoot specific problems or during troubleshooting sessions with Cisco technical support personnel. Moreover, it is best to use **debug** commands during periods of lower network traffic and fewer users. Debugging during these periods decreases the likelihood that increased **debug** command processing overhead will affect system use.

Examples

The following example shows all debug logs for the H.248 control channel to the SBE on an SBC called "mySbc":

```
Router# debug sbc mySbc filter control
```

The following example shows all debug logs relating to media flows on an SBC called "mySbc":

```
Router# debug sbc mySbc filter media
```

The following example shows all debug logs relating to media flows with a source or destination address of 10.0.1.1 on an SBC called "mySbc" including output logs for the specified IPv4 IP address:

```
Router# debug sbc mySbc filter media ipv4 10.0.1.1
```

The following example shows that if you want to show all debug logs that relate to media flowing to and from 10.0.1.1 *or* 10.0.1.2, you must issue the following two commands:

```
Router# debug sbc mySbc filter media ipv4 10.0.1.1
Router# debug sbc mySbc filter media ipv4 10.0.1.2
```

Related Commands

Command	Description
debug sbc log-level	Sets the debug logging level for logging to the cyclic buffer or to the system logger.
logging buffered	Logs messages to an internal buffer.
logging console	Logs messages to console connections.
logging host	Logs messages to a syslog server host.
logging monitor	Limits messages logged to the terminal lines (monitors) based on severity.
logging on	Enables logging of system messages.
logging synchronous	Synchronizes unsolicited messages and debug output with solicited Cisco IOS software output and prompts for a specific console port line, auxiliary port line, or vty.

debug sbc filter billing_id

To print log entries to the console and file based on a billing_id context, use the **debug sbc filter billing_id** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***filter billing_id*** *billing_id*

no ***debug sbc*** *sbc-name* ***filter billing_id*** *billing_id*

Syntax Description

sbc-name	This is the name of the SBC service.
billing_id	The billing ID to be filtered.

Command Default

None.

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

Use the **show debug** command to see debug information.

Examples

The following command prints log entries to the console and file based on a billing_id context:

```
Router# debug sbc test-sbc filter billing_id abc
Router# 2008 May 20 17:08:36.084825 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
Billing ID : abc
```

Related Commands

Command	Description
debug sbc filter adjacency	Prints log entries to the console and file based on an adjacency context.

Command	Description
debug sbc filter ipv4	Prints print log entries to the console and file based on an ipv4 address context.
debug sbc filter number	Prints log entries to the console and file based on a number context.

debug sbc filter bm

To print log entries to the console and file from the bandwidth manager component group, use the **debug sbc filter bm** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***filter bm***

no ***debug sbc*** *sbc-name* ***filter bm***

Syntax Description

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

Command Default

None.

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

Use the **show debug** command to see debug information.

Examples

The following command prints log entries to the console and file from the bandwidth manager component group:

```
Router# debug sbc test-sbc filter bm
Router# 2008 May 20 17:36:10.924908 sbc: (ctx:0) SBC: New log filter enabled.


The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    BM components
```

Related Commands

Command	Description
debug sbc filter cac	Prints log entries to the console and file from the call admission control (CAC) component group.
debug sbc filter control	

Command	Description
debug sbc filter h323	Prints log entries to the console and file from the h323 component group.
debug sbc filter hm	Prints log entries to the console and file from the hardware manager (hm) component group.
debug sbc filter icc	Prints log entries to the console and file from the Internetworking Call Control (ICC) component group.
debug sbc filter mgm	Prints log entries to the console and file from the media gateway manager (MGM) component group.
debug sbc filter radius	Prints log entries to the console and file from the RADIUS component group.
debug sbc filter routing	Prints log entries to the console and file from the routing component group.
debug sbc filter sip	Prints log entries to the console and file from the SIP component group.

debug sbc filter cac

To print log entries to the console and file from the call admission control (CAC) component group, use the **debug sbc filter cac** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***filter cac***

no ***debug sbc*** *sbc-name* ***filter cac***

Syntax Description

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

Command Default

None.

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

Use the **show debug** command to see debug information.

Examples

The following command prints log entries to the console and file from the CAC component group:

```
Router# debug sbc test-sbc filter cac
Router# 2008 May 20 17:39:18.748447 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    CAC components
```

Related Commands

Command	Description
debug sbc filter bm	Prints log entries to the console and file from the bandwidth manager component group.
debug sbc filter control	
debug sbc filter h323	Prints log entries to the console and file from the h323 component group.

Command	Description
debug sbc filter hm	Prints log entries to the console and file from the hardware manager (hm) component group.
debug sbc filter icc	Prints log entries to the console and file from the Internetworking Call Control (ICC) component group.
debug sbc filter mgm	Prints log entries to the console and file from the media gateway manager (MGM) component group.
debug sbc filter radius	Prints log entries to the console and file from the RADIUS component group.
debug sbc filter routing	Prints log entries to the console and file from the routing component group.
debug sbc filter sip	Prints log entries to the console and file from the SIP component group.

debug sbc filter call

To print log entries to the console and file from the call product group, use the **debug sbc filter call** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***filter call***

no ***debug sbc*** *sbc-name* ***filter call***

Syntax Description

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

Command Default

None.

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

Use the **show debug** command to see debug information.

Examples

The following command prints log entries to the console and file from the call product group:

```
Router# debug sbc test-sbc filter call
Router# 2008 May 20 17:43:16.078547 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Call Logging Group
```

Related Commands

Command	Description
debug sbc filter billing	Prints log entries to the console and file from the billing product group.
debug sbc filter media	Prints log entries to the console and file from the media product group.

Command	Description
debug sbc filter overview	Prints log entries to the console and file from the overview product group.
debug sbc filter protocol	Prints log entries to the console and file from the protocol product group.

debug sbc filter (session border controller)

To enable logging based on a number of filters, use the **debug sbc filter** command in privileged EXEC mode. To disable logging based on these filters, use the **no** form of this command.

debug sbc {*sbc-name}* **filter [adjacency** {***adj-name***}**] [bill** {***billing-id***}**] [ipv4** {***ipv4-address***}**] [ipv6** {***ipv6-address***}**] [number** {***number***}**] [billing] [call] [media] [overview] [protocol] [bm | cac | control | h323 | icc | radius | routing | sip | mgm]**

no debug sbc {*sbc-name}* **filter [adjacency** {***adj-name***}**] [bill** {***billing-id***}**] [ipv4** {***ipv4-address***}**] [ipv6** {***ipv6-address***}**] [number** {***number***}**] [billing] [call] [media] [overview] [protocol] [bm | cac | control | h323 | icc | radius | routing | sip | mgm]**

Syntax Description

sbc-name	Name of the Session Border Controller (SBC) service.
adjacency	Output of logs relating to this adjacency.
adj-name	Name of the adjacency.
bill	Log output of calls with a specified billing ID.
billing-id	Billing ID.
ipv4	Output logs that include the IPv4 IP address.
ipv4-address	IPv4 IP address.
ipv6	Output logs that include the IPv6 IP address.
ipv6-address	IPv6 IP address.
number	Output logs of calls with a specified number.
number	Either the caller number or dialed number.
billing	Logs about billing events.
call	Logs about call events.
media	Logs about media events.
overview	Logs showing the flow of control through the Session Border Controller (SBC) components.
protocol	Logs showing protocol messages.
bm	Logs from the Bandwidth Manager (BM) component.
cac	Logs from the Call Admission Control (CAC) components.
control	Logs from the H.248 controller components.
h323	Logs from the H.323 components.
icc	Logs from the Interworking Call Control (ICC) components.
radius	Logs from the RADIUS components.
routing	Logs from the routing components.
sip	Logs from the Session Initiation Protocol (SIP) components.
mgm	Logs from the Media Gateway Manager (MGM) component.

Command Default

Debugging is off.

Command Modes 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.

Usage Guidelines You can specify any number of optional keywords, but each keyword can only be specified once. At least one keyword must be specified for the **debug sbc filter** command. You can issue multiple **debug sbc filter** commands.

Note The debug logs are only output if the appropriate filter keywords have been specified.

The keywords are composed of the following types of filters:

- String filters—Allow the user to turn on logs about common SBC objects such as adjacencies. An object matches the string filter if the object exactly matches the string or the prefix matches the string.

  String filters include the following keywords:

  - **adjacency** {***adj-name***}
  - **bill** {***billing-id***}
  - **ipv4** {***ipv4-address***}
  - **ipv6** {***ipv6-address***}
  - **number** {***number***}

- Component filters—Turn on logs from individual components (or groups of components) within the SBC service. Only one component filter may be specified per **debug sbc filter** command.

  Component filters include the following keywords:

  bm, cac, control, h323, icc, radius, routing, sip, mgm

- Cross-SBC filters—Turn on logs across all components of the SBC service.

  Cross-SBC filters include the following keywords:

  billing, call, media, overview, protocol

Caution Because debugging output is assigned high priority in the CPU process, it can render the system unusable. For this reason, use **debug** commands only to troubleshoot specific problems or during troubleshooting sessions with Cisco technical support personnel. Moreover, it is best to use **debug** commands during periods of lower network traffic and fewer users. Debugging during these periods decreases the likelihood that increased **debug** command processing overhead will affect system use.

Examples

The following example shows all debug logs for the H.248 control channel to the SBE on an SBC called "mySbc":

```
Router# debug sbc mySbc filter control
```

The following example shows all debug logs relating to media flows on an SBC called "mySbc":

```
Router# debug sbc mySbc filter media
```

The following example shows all debug logs relating to media flows with a source or destination address of 10.0.1.1 on an SBC called "mySbc" including output logs for the specified IPv4 IP address:

```
Router# debug sbc mySbc filter media ipv4 10.0.1.1
```

The following example shows that if you want to show all debug logs that relate to media flowing to and from 10.0.1.1 *or* 10.0.1.2, you must issue the following two commands:

```
Router# debug sbc mySbc filter media ipv4 10.0.1.1
Router# debug sbc mySbc filter media ipv4 10.0.1.2
```

The following command prints log entries to the console and file based on an adjacency context:

```
Router# debug sbc test-sbc filter adjacency sip-1
Router# 2008 May 20 15:08:50.114277 sbc: (ctx:0) SBC: New log filter enabled.


The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
Adjacency : sip-1

Filter output:
SBC/SIP:   **** Overview    0x5001 - 108  (0000) **** 00001100000000000000000100
000000
SBC/SIP:   (vpsuafsm.c 914) at 18:26:11, 20 May 2008 (82249142 ms)
SBC/SIP:   << INVITE
SBC/SIP:   Adj=sip-1,DN=service,CN=sipp
```

The following command prints log entries to the console and file from the billing product group:

```
Router# debug sbc test-sbc filter billing
Router# 2008 May 20 17:14:51.758095 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
        Billing Logging Group
```

The following command prints log entries to the console and file from the bandwidth manager component group:

```
Router# debug sbc test-sbc filter bm
Router# 2008 May 20 17:36:10.924908 sbc: (ctx:0) SBC: New log filter enabled.
The following command shows debugging information:
Router# show debug
```

```
SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    BM components
```

The following command prints log entries to the console and file from the ICC component group:

```
Router# debug sbc test-sbc filter icc
Router# 2008 May 20 17:52:15.801682 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    ICC components

Log:
SBC/ICC:   **** UNEXPECTED  0x1504 - 15   (0001) **** 00000000000000000000000000
000000
SBC/ICC:   (dblblack.c 253) at 18:25: 3, 20 May 2008 (82180687 ms)
SBC/ICC:   The Dynamic Blacklisting component is blacklisting a source.
SBC/ICC:   Subfamily = 0X0000000C
SBC/ICC:   Cause = 1
SBC/ICC:   Time period = 600000 ms
SBC/ICC:
SBC/ICC:   Event=["Routing failure" VPN=0X00000000 10.10.1.1]
```

The following command prints log entries to the console and file from the h323 component group:

```
Router# debug sbc test-sbc filter h323
Accessing H323
Completed TNRPC : H323
2008 May 20 17:45:22.058599 sbc: (ctx:0) SBC: New log filter enabled.

BC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    H323 components
```

The following command prints log entries to the console and file from the ICC component group:

```
Router# debug sbc test-sbc filter icc
Router# 2008 May 20 17:52:15.801682 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    ICC components

Log:
SBC/ICC:   **** UNEXPECTED  0x1504 - 15   (0001) **** 00000000000000000000000000
000000
SBC/ICC:   (dblblack.c 253) at 18:25: 3, 20 May 2008 (82180687 ms)
SBC/ICC:   The Dynamic Blacklisting component is blacklisting a source.
```

```
SBC/ICC:   Subfamily = 0X0000000C
SBC/ICC:   Cause = 1
SBC/ICC:   Time period = 600000 ms
SBC/ICC:
SBC/ICC:   Event=["Routing failure" VPN=0X00000000 10.10.1.1]
```

The following command prints log entries to the console and file based on an ipv4 address context:

```
Router# debug sbc test-sbc filter ipv4 10.10.10.1
Router# 2008 May 20 17:12:16.128077 sbc: (ctx:0)Len IPV4: 10
2008 May 20 17:12:16.128159 sbc: (ctx:0)IPV4: 10.10.10.1
2008 May 20 17:12:16.128239 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
IPv4: 10.10.10.1
2008 May 20 17:12:18.371175 sbc: (ctx:0)Filter IPv4 Len: 10
2008 May 20 17:12:18.371256 sbc: (ctx:0)Filter IPv4 string: 10.10.10.1
```

The following command prints log entries to the console and file from the media product group:

```
Router# debug sbc test-sbc filter media
Router# 2008 May 20 17:57:59.071693 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Media Logging Group
```

The following command prints log entries to the console and file from the media product group:

```
Router# debug sbc test-sbc filter media
Router# 2008 May 20 17:57:59.071693 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Media Logging Group
```

The following command prints log entries to the console and file from the media product group:

```
Router# debug sbc test-sbc filter media
Router# 2008 May 20 17:57:59.071693 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:
```

```
 SBC inter-process logging is off
 SBC log filter 0:
    Media Logging Group
```

The following command prints log entries to the console and file from the media product group:

```
Router# debug sbc test-sbc filter media
Router# 2008 May 20 17:57:59.071693 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Media Logging Group
```

The following command prints log entries to the console and file from the MGM component group:

```
Router# debug sbc test-sbc filter mgm
Router# 2008 May 20 18:24:17.552046 sbc: (ctx:0) SBC: New log filter enabled.


The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    MGM components

Log:
SBC/MGM:   << Gate allocate req BillingID (sideA) 48331709 20202020 20202030 000
00000 00000000 00001064  BillingID (sideB) 48331709 20202020 20202030 00000000 0
0000000 00001063
```

The following command prints log entries to the console and file based on a number context:

```
Router# debug sbc test-sbc filter number 1234
Router# 2008 May 20 17:13:26.138304 sbc: (ctx:0) SBC: New log filter enabled.
.
The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
Number : 1234
```

The following command prints log entries to the console and file based on a number context:

```
Router# debug sbc test-sbc filter number 1234
Router# 2008 May 20 17:13:26.138304 sbc: (ctx:0) SBC: New log filter enabled.
.
The following command shows debugging information:
Router# show debug

SBC Daemon:
```

```
 SBC inter-process logging is off
 SBC log filter 0:
Number: 1234
```

The following command prints log entries to the console and file from the overview product group:

```
Router# debug sbc test-sbc filter overview
Router# 2008 May 20 18:25:54.811973 sbc: (ctx:0) SBC: New log filter enabled.

.
The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Overview Logging Group

Log:
SBC/SIP:   **** Operational 0x3801 - 43   (0001) **** 00001110000000000000000000
000000
SBC/SIP:   (siphsrcv.c 45) at 18:26:37, 20 May 2008 (82274720 ms)
SBC/SIP:   SIP message received:
SBC/SIP:   INVITE sip:service@10.10.1.110:5060 SIP/2.0^M
SBC/SIP:   Via: SIP/2.0/UDP 10.10.1.3:5060;branch=z9hG4bK-28511-243-0^M
SBC/SIP:   From: sipp <sip:sipp@10.10.1.3:5060>;tag=28511SIPpTag00243^M
SBC/SIP:   To: sut <sip:service@10.10.1.110:5060>^M
SBC/SIP:   Call-ID: 243-28511@10.10.1.3^M
SBC/SIP:   CSeq: 1 INVITE^M
SBC/SIP:   Contact: sip:sipp@10.10.1.3:5060^M
SBC/SIP:   Max-Forwards: 70^M
SBC/SIP:   Subject: Performance Test^M
SBC/SIP:   Content-Type: application/sdp^M
SBC/SIP:   Content-Length:   129^M
SBC/SIP:   ^M
SBC/SIP:   v=0^M
SBC/SIP:   o=user1 53655765 2353687637 IN IP4 10.10.1.3^M
SBC/SIP:   s=-^M
SBC/SIP:   c=IN IP4 10.10.1.3^M
SBC/SIP:   t=0 0^M
SBC/SIP:   m=audio 6000 RTP/AVP 0^M
SBC/SIP:   a=rtpmap:0 PCMU/8000^M
```

The following command prints log entries to the console and file from the overview product group:

```
Router# debug sbc test-sbc filter overview
Router# 2008 May 20 18:25:54.811973 sbc: (ctx:0) SBC: New log filter enabled.

.
The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Overview Logging Group

Log:
SBC/SIP:   **** Operational 0x3801 - 43   (0001) **** 00001110000000000000000000
000000
SBC/SIP:   (siphsrcv.c 45) at 18:26:37, 20 May 2008 (82274720 ms)
```

```
SBC/SIP:   SIP message received:
SBC/SIP:   INVITE sip:service@10.10.1.110:5060 SIP/2.0^M
SBC/SIP:   Via: SIP/2.0/UDP 10.10.1.3:5060;branch=z9hG4bK-28511-243-0^M
SBC/SIP:   From: sipp <sip:sipp@10.10.1.3:5060>;tag=28511SIPpTag00243^M
SBC/SIP:   To: sut <sip:service@10.10.1.110:5060>^M
SBC/SIP:   Call-ID: 243-28511@10.10.1.3^M
SBC/SIP:   CSeq: 1 INVITE^M
SBC/SIP:   Contact: sip:sipp@10.10.1.3:5060^M
SBC/SIP:   Max-Forwards: 70^M
SBC/SIP:   Subject: Performance Test^M
SBC/SIP:   Content-Type: application/sdp^M
SBC/SIP:   Content-Length:   129^M
SBC/SIP:   ^M
SBC/SIP:   v=0^M
SBC/SIP:   o=user1 53655765 2353687637 IN IP4 10.10.1.3^M
SBC/SIP:   s=-^M
SBC/SIP:   c=IN IP4 10.10.1.3^M
SBC/SIP:   t=0 0^M
SBC/SIP:   m=audio 6000 RTP/AVP 0^M
SBC/SIP:   a=rtpmap:0 PCMU/8000^M
```

The following command prints log entries to the console and file from the protocol product group:

```
Router# debug sbc test-sbc filter protocol
Router# 2008 May 20 18:28:13.622095 sbc: (ctx:0) SBC: New log filter enabled.
.
The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
    Protocol Logging Group
Router#

Log:
SBC/SIP:   **** Operational 0x3801 - 43   (0001) **** 00001110000000000000000000
000000
SBC/SIP:   (siphsrcv.c 45) at 18:29: 1, 20 May 2008 (82418949 ms)
SBC/SIP:   SIP message received:
SBC/SIP:   INVITE sip:service@10.10.1.110:5060 SIP/2.0^M
SBC/SIP:   Via: SIP/2.0/UDP 10.10.1.3:5060;branch=z9hG4bK-28511-259-0^M
SBC/SIP:   From: sipp <sip:sipp@10.10.1.3:5060>;tag=28511SIPpTag00259^M
SBC/SIP:   To: sut <sip:service@10.10.1.110:5060>^M
SBC/SIP:   Call-ID: 259-28511@10.10.1.3^M
SBC/SIP:   CSeq: 1 INVITE^M
SBC/SIP:   Contact: sip:sipp@10.10.1.3:5060^M
SBC/SIP:   Max-Forwards: 70^M
SBC/SIP:   Subject: Performance Test^M
SBC/SIP:   Content-Type: application/sdp^M
SBC/SIP:   Content-Length:   129^M
SBC/SIP:   ^M
SBC/SIP:   v=0^M
SBC/SIP:   o=user1 53655765 2353687637 IN IP4 10.10.1.3^M
SBC/SIP:   s=-^M
SBC/SIP:   c=IN IP4 10.10.1.3^M
SBC/SIP:   t=0 0^M
SBC/SIP:   m=audio 6000 RTP/AVP 0^M
SBC/SIP:   a=rtpmap:0 PCMU/8000^M
```

The following command prints log entries to the console and file from the RADIUS component group:

```
Router# debug sbc test-sbc filter radius
Router# 2008 May 20 18:33:02.845280 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    Radius components
```

The following command prints log entries to the console and file from the routing component group:

```
Router# debug sbc test-sbc filter routing
Router# 2008 May 20 18:36:38.995736 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    Routing components

Log:
SBC/ROUTING:Number validation begins.
SBC/ROUTING:SBC Index = 0X00000001
SBC/ROUTING:Config set Index = 0X00000003
SBC/ROUTING:Input Called Address Type = 0X00030003
SBC/ROUTING:Input Called Address = CE
SBC/ROUTING:mwCallIccIndex=2909
```

The following command prints log entries to the console and file from the SIP component group:

```
Router# debug sbc test-sbc filter sip
Router# 2008 May 20 18:38:43.795675 sbc: (ctx:0) SBC: New log filter enabled.

The following command shows debugging information:
Router# show debug

SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 1:
    SIP components

Log:
SBC/SIP:   **** Operational 0x3801 - 43   (0001) **** 00001110000000000000000000
000000
SBC/SIP:   (siphsrcv.c 45) at 18:39:19, 20 May 2008 (83037087 ms)
SBC/SIP:   SIP message received:
SBC/SIP:   INVITE sip:service@10.10.1.110:5060 SIP/2.0^M
SBC/SIP:   Via: SIP/2.0/UDP 10.10.1.3:5060;branch=z9hG4bK-28511-1002-0^M
SBC/SIP:   From: sipp <sip:sipp@10.10.1.3:5060>;tag=28511SIPpTag001002^M
SBC/SIP:   To: sut <sip:service@10.10.1.110:5060>^M
SBC/SIP:   Call-ID: 1002-28511@10.10.1.3^M
SBC/SIP:   CSeq: 1 INVITE^M
SBC/SIP:   Contact: sip:sipp@10.10.1.3:5060^M
SBC/SIP:   Max-Forwards: 70^M
SBC/SIP:   Subject: Performance Test^M
```

```
SBC/SIP:   Content-Type: application/sdp^M
SBC/SIP:   Content-Length:   129^M
SBC/SIP:   ^M
SBC/SIP:   v=0^M
SBC/SIP:   o=user1 53655765 2353687637 IN IP4 10.10.1.3^M
SBC/SIP:   s=-^M
SBC/SIP:   c=IN IP4 10.10.1.3^M
SBC/SIP:   t=0 0^M
SBC/SIP:   m=audio 6000 RTP/AVP 0^M
SBC/SIP:   a=rtpmap:0 PCMU/8000^M
```

Related Commands

Command	Description
debug sbc log-level	Sets the debug logging level for logging to the cyclic buffer or to the system logger.
logging buffered	Logs messages to an internal buffer.
logging console	Logs messages to console connections.
logging host	Logs messages to a syslog server host.
logging monitor	Limits messages logged to the terminal lines (monitors) based on severity.
logging on	Enables logging of system messages.
logging synchronous	Synchronizes unsolicited messages and debug output with solicited Cisco IOS software output and prompts for a specific console port line, auxiliary port line, or vty.

debug sbc ha

To turn on debugging for Session Border Controller high availability, use the ***debug sbc ha*** command in privileged EXEC mode. To disable this form of debugging, use the **no** form of this command.

debug sbc ha

no *debug sbc ha*

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

privileged EXEC (#)

Command History

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

Usage Guidelines

Use the **show debug** command to see debug information.

Examples

The following command turns on debugging for sbc high availability:

```
Router# debug sbc ha
Router#
2007 May 13 06:04:51.504671 sbc: (ctx:0)hmstub_send_hb: test_send_hb OK 1150000
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level console	Sets the console logging level.
debug sbc log-level file	Sets the file logging level.
debug sbc errors	Enables debugging of sbc service errors.
debug sbc events	Enables debugging of sbc service events.
debug sbc info	Enables debugging of sbc services information.
debug sbc nbase	Enables debugging of sbc services nbase.

debug sbc info

To debug sbc services information, use the ***debug sbc info*** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc info

no *debug sbc info*

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following command turns on debugging for sbc information:

```
Router# debug sbc info
2007 May 13 06:07:42.071738 sbc: (ctx:0)Received debug msg
2007 May 13 06:07:42.071961 sbc: (ctx:0)Exit mts or debug msg recv
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level console	Sets the console logging level.
debug sbc log-level file	Sets the file logging level.
debug sbc errors	Enables debugging of sbc service errors.
debug sbc events	Enables debugging of sbc service events.
debug sbc ha	Enables debugging of sbc high availability.
debug sbc nbase	Enables debugging of sbc services nbase.

debug sbc ips (session border controller)

To turn on IPS tracing (giving details of inter-component signals flowing between the internal components of the Session Border Controller (SBC) process), use the **debug sbc ips** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***ips {file | in-memory}***

no *debug sbc* *sbc-name* ***ips {file | in-memory}***

Syntax Description

sbc-name	This is the name of the SBC service.
file	Configures file IPS tracing.
in-memory	Configures in-memory IPS tracing.

Command Default

No default behavior or values are available.

Command Modes

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

This command provides details of inter-component signals flowing between the internal components of the SBC process. Events should be logged on IPS trace file for further debugging.

Use the **show debug** command to see debug information.

Examples

The following command turns on IPS tracing:

```
Router# debug sbc mySbc ips
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC

Command	Description
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc log-level console

To set the console logging level, use the **debug sbc log-level console** command in Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *name* **log-level console** *level*

no debug sbc *name* **log-level console** *level*

Syntax Description

name	This is the name of the Session Border Controller (SBC) service.
level	The level to set. 0 gives all pd logging and 100 gives none. The log levels are defined as follows: 90+ Fatal errors 80+ Errors 70+ Unexpected conditions 60+ Operational events 50+ Auditable events 40+ Statistics 30+ Verbose operational events 20+ Verbose statistics 10+ Internal diagnostic logs The following values are used for specific types of logs. 55 Call logs 63 Configuration errors

Command Default

No default behavior or values are available.

Command Modes

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

This command configures the display of the most serious logs directly to the console. Note that when you run the **debug sbc** *name* **log-level console 0** command, a large number of log messages are generated. This could cause an increase in the response time of the system. To limit the rate of messages logged per second, use the **logging rate-limit console** command in global configuration mode.

Use the **show debug** command to see debug information.

Examples

The following command sets the log level for fatal errors to the console at 90:

```
Router# # debug sbc mySbc log-level console 90
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level file	Sets the file logging level.
debug sbc errors	Enables debugging of sbc service errors.
debug sbc events	Enables debugging of sbc service events.
debug sbc ha	Enables debugging of sbc high availability.
debug sbc info	Enables debugging of sbc services information.
debug sbc nbase	Enables debugging of sbc services nbase.
logging rate-limit	Limits the rate of messages logged per second.

debug sbc log-level file

To set the file logging level, use the **debug sbc log-level file** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *name* **log-level file** *level*

no debug sbc *name* **log-level file** *level*

Syntax Description

name	This is the name of the Session Border Controller (SBC) service.
level	The level to set. 0 gives all pd logging and 100 gives none. The log levels are defined as follows: 90+ Fatal errors 80+ Errors 70+ Unexpected conditions 60+ Operational events 50+ Auditable events 40+ Statistics 30+ Verbose operational events 20+ Verbose statistics 10+ Internal diagnostic logs The following values are used for specific types of logs. 55 Call logs 63 Configuration errors

Command Default

No default behavior or values are available.

Command Modes

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

This command logs the most serious logs directly to file.

Use the **show debug** command to see debug information.

Examples

The following command sets the log level to send to file to 60:

```
Router# debug sbc mySbc log-level file 60
```

Related Commands

Command	Description
debug sbc filter control	Enables console logging based on a number of filters.
debug sbc ips	Enables IPS tracing.
debug sbc log-level console	Sets the console logging level.
debug sbc errors	Enables debugging of sbc service errors.
debug sbc events	Enables debugging of sbc service events.
debug sbc ha	Enables debugging of sbc high availability.
debug sbc info	Enables debugging of sbc services information.
debug sbc nbase	Enables debugging of sbc services nbase.

debug sbc logging

To debug SBC logging information, use the ***debug sbc logging*** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc logging

no *debug sbc logging*

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following command turns on debugging for sbc information:

```
Router# debug sbc logging
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.

Command	Description
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc mem-trace dump

To dump current memory usage statistics to file, use the ***debug sbc mem-trace dump*** command in the Exec mode. To disable printing to the terminal, use the **no** form of this command.

debug sbc sbc-name mem-trace dump

no *debug sbc* *sbc-name* ***mem-trace dump***

Syntax Description

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

Command Default

No default behavior or values are available.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following example dumps current memory usage statistics to file:

```
Router# debug sbc mysbc mem-trace dump.
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.

Command	Description
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc nbase

To enable printing to the terminal for the **debug sbc log-level console** command, use the ***debug sbc nbase*** command in the Exec mode. To disable printing to the terminal, use the **no** form of this command.

debug sbc nbase

no debug sbc nbase

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following command enables printing to the terminal for the **debug sbc log-level console** command:

```
Router# debug sbc nbase
Router# 2007 May 13 07:58:45.133136 sbc: (ctx:0)SBC/MG-CTRL:**** Audit       0x2e01 - 35
(0000) **** 00000000000000000000000000000010 SBC/MG-CTRL:(gctpassn.c 1157) at 7:58:45, 13
May 2007 (0x0X00060464 ms) SBC/MG-CTRL: Megaco has created an association with a peer.
SBC/MG-CTRL: Remote address = 22.22.22.100 SBC/MG-CTRL: Remote port = 2940
2007 May 13 07:58:45.232974 sbc: (ctx:0)SBC/MGM:   **** Operational 0x4d02 - 10   (0000)
**** 00010000000000000000000001000000 SBC/MGM:   (zmxsipcp.c 490) at 7:58:45, 13 May 2007
(0x0X000604C8 ms) SBC/MGM:   MPF stub sent MCI req #0X000061D8 (0X00000401) to agent.
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC

Command	Description
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc off

To turn off all sbc filters and set the log-level back to default (63), use the **debug sbc off** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* **off**

no debug sbc *sbc-name* **off**

Syntax Description

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

Command Default

Log-levels set to 63.

Command Modes

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

Use the **show debug** command to see debug information.

Examples

The following command turns on debugging for sbc information:

```
Router# debug sbc test-sbc off
Router# 2008 May 20 14:55:51.410879 sbc: (ctx:0)This option will disable all SBC debugs
2008 May 20 14:55:51.410978 sbc: (ctx:0) SBC: Log filter removed.
2008 May 20 14:55:51.411014 sbc: (ctx:0) SBC: Log filter removed.

The following command shows debugging information:
Router# show debug
SBC Daemon:

 SBC inter-process logging is off
 SBC log filter 0:
```

Related Commands

Command	Description
debug sbc log-level console	
debug sbc log-level file	
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc pd filter component

To turn on problem determination (PD) filter components, use the **debug sbc pd** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***pd filter component [bm | cac | control | h323 | hm | icc | mgm | radius | routing | sip]***

no ***debug sbc*** *sbc-namee* ***pd filter component [bm | cac | control | h323 | hm | icc | mgm | radius | routing | sip]***

Syntax Description

sbc-name	This is the name of the SBC service.
bm	Logs from the bm components.
cac	Logs from the cac components.
control	Logs from the H.248 controller components.
h323	Logs from the H.323 components.
hm	Logs from the bm components.
icc	Logs from the icc components.
mgm	Logs from the mgm components.
radius	Logs from the radius components.
routing	Logs from the routing components.
sip	Logs from the sip components.

Command Default

No default behavior or values are available.

Command Modes

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

This command provides details of inter-component signals flowing between the internal components of the SBC process. Events should be logged on IPS trace file for further debugging.

Use the **show debug** command to see debug information.

Examples

The following command turns on IPS tracing:

```
Router# debug sbc mySbc ips
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc pd filter context

To turn on different logs from the problem determination (PD) filters, use the **debug sbc pd filter context** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***pd filter context [adjacency name*** *name*| ***billing_id*** *name* | ***ipv4*** *name* | ***number*** *name]*

no ***debug sbc*** *sbc-name* ***pd filter context [adjacency name*** *name*| ***billing_id*** *name* | ***ipv4*** *name* | ***number*** *name]*

Syntax Description

sbc-name	This is the name of the SBC service.
adjacency	Logs from the adjacency filter.
billing_id	Logs from the billing_id filter.
ipv4	Logs from the ipv4 filter.
number	Logs from the number filter.
name	Name for the specific filter context.

Command Default

No default behavior or values are available.

Command Modes

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

This command provides details of inter-component signals flowing between the internal components of the SBC process. Events should be logged on IPS trace file for further debugging.

Use the **show debug** command to see debug information.

Examples

The following command turns on the adjacency log filter:

```
Router# debug sbc pd filter context adjacency test
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.

Command	Description
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc pd filter product

To turn on problem determination (PD) filter product group logs, use the **debug sbc pd filter product** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* ***pd filter context [billing | call | media | overview | protocol]***

no ***debug sbc*** *sbc-name* ***pd filter context [adjacency | billing_id | ipv4 | number]***

Syntax Description

sbc-name	This is the name of the SBC service.
billing	Logs from the billing product group.
call	Logs from the call product group.
media	Logs from the media product group.
overview	Logs from the overview product group.
protocol	Logs from the protocol product group.

Command Default

No default behavior or values are available.

Command Modes

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

This command provides details of inter-component signals flowing between the internal components of the SBC process. Events should be logged on IPS trace file for further debugging.

Use the **show debug** command to see debug information.

Examples

The following command turns on the logs from the protocol product group:

Router# **debug sbc pd filter product protocol**

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.

Command	Description
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug sbc pd log-level

To set the file logging level, use the **debug sbc pd log-level** command in the Exec mode. To disable this form of debugging, use the **no** form of this command.

debug sbc *sbc-name* **pd log-level** {**console** *level* | **file** *level* | **filter** *level*}

no debug sbc *sbc-name* **pd log-level** {**console** *level* | **file** *level* | **filter** *level*}

Syntax Description

sbc-name	This is the name of the Session Border Controller (SBC) service.
level	The level to set. 0 gives all problem determination (pd) logging and 100 gives none. The log levels are defined as follows: 90+ Fatal errors 80+ Errors 70+ Unexpected conditions 60+ Operational events 50+ Auditable events 40+ Statistics 30+ Verbose operational events 20+ Verbose statistics 10+ Internal diagnostic logs The following values are used for specific types of logs. 55 Call logs 63 Configuration errors

Command Default

No default behavior or values are available.

Command Modes

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

This command logs the most serious logs directly to file.

Use the **show debug** command to see debug information.

Examples

The following command sets the log level to send to file to 60:

```
Router# debug sbc mySbc pd log-level file 60
```

Related Commands

Command	Description
debug sbc errors	Debugs SBC service errors.
debug sbc events	Debugs SBC service events.
debug sbc ha	Debugs SBC high availability (HA) services.
debug sbc info	Debugs SBC services information.
debug sbc ips	Turns on IPS tracing.
debug sbc logging	Debugs SBC logging information.
debug sbc mem-trace dump	Dumps current memory usage statistics to file.
debug sbc nbase	Debugs SBC
debug sbc pd filter component	Turns on problem determination (PD) filter components.
debug sbc pd filter context	Turns on different logs from the problem determination (PD) filters.
debug sbc pd filter product	Turns on problem determination (PD) filter product group logs.
debug sbc pd log-level	Sets the file logging level.

debug vrf

To get debugging information on virtual routing and forwarding (VRF) instances, use the **debug vrf** command in privileged EXEC mode. To turn off the debug output, use the **undebug** version of the command.

debug vrf {**create** | **delete** | **error** | **ha** | **initialization** | **interface** | **ipv4** | **ipv6** | **issu** | **lock** | **lookup** | **mpls** | **selection**}

undebug vrf {**create** | **delete** | **error** | **ha** | **initialization** | **interface** | **ipv4** | **ipv6** | **issu** | **lock** | **lookup** | **mpls** | **selection**}

Syntax Description

create	Specifies VRF creation debugging.
delete	Specifies VRF deletion debugging.
error	Specifies VRF error debugging.
ha	Specifies VRF high-availability debugging.
initialization	Specifies VRF subsystem initialization debugging.
interface	Specifies VRF interface assignment debugging.
ipv4	Specifies VRF IPv4 address family debugging.
ipv6	Specifies VRF IPv6 address family debugging.
issu	Specifies VRF in-service software upgrade debugging.
lock	Specifies VRF lock debugging.
lookup	Specifies VRF database lookup debugging.
mpls	Specifies VRF multiprotocol label switching debugging.
selection	Specifies VRF selection debugging.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced.

Usage Guidelines

Use this command to get debugging information on VRFs.

Examples

The following example shows how to turn on debugging of VRF interface assignment:

```
Router# debug vrf interface
```

Related Commands

Command	Description
vrf definition	Defines a virtual routing and forwarding instance.

default-port-limit

To enter the mode for configuring the default event limits for the ports of a given address, use the **default-port-limit** command in the SBE blacklist IPv4 configuration mode. To remove the event limits set, use the **no** form of this command.

default-port-limit

no default-port-limit

Syntax Description

This command has no arguments or keywords.

Command Default

No event limits are defined for ports.

Command Modes

SBE blacklist IPv4 configuration (config-sbc-sbe-blacklist-ipv4)

Command History

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

Usage Guidelines

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

Examples

The following example shows how the **blacklist default-port-limit** command is used to enter the mode for configuring the default event limits for the ports of the source address 123.123.2.2:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# ipv4 123.123.2.2
Router(config-sbc-sbe-blacklist-ipv4)# default-port-limit
Router(config-sbc-sbe-blacklist-ipv4-port-lmt)#
```

Related Commands

Command	Description
blacklist	Enters the mode for configuring the default event limits for the source addresses in a given VPN.
ipv4 (blacklist)	Enters the mode for applying blacklisting options to a single IP address.
reason	Enters a mode for configuring a limit to a specific event type on the source.
timeout	Defines the length of time that packets from the source are blocked, should the limit be exceeded.

Command	Description
trigger-period	Defines the period over which events are considered.
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.

delegate-profile

To configure a delegate client registration profile that can be applied to a delegate subscriber, use the **delegate-profile** command in SBE configuration mode. To remove a delegate client registration profile, use the **no delegate-profile** command.

delegate-profile *{profile name}*

no delegate-profile *{profile name}*

Syntax Description

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

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

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

Usage Guidelines

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

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

Before configuring provisioned delegate registration, you need to configure a delegate registration profile and a SIP contact for a subscriber for whom a subscriber detail table exists, and then you can configure delegate registration for the subscriber. See the Examples section.

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

Examples

The following example configures a delegate registration profile that can be applied to a delegate registration subscriber:

```
sbc mySbc sbe
  delegate-profile my-profile
    dur 1000
    retry-cnt 5
    retry-interval 60
    refresh-timeout 200
```

The following example configures a SIP contact for a subscriber, for whom a subscriber detail table exists, and for whom, after the SIP contact is configured, Provisioned Delegate Registration can be configured:

```
sbc mySbc
 sbe
  subscriber sip:bob@isp.example
   sip-contact sip:steve@10.1.1.2
    adjacency CallMgrB
    exit
```

The following example configures a delegate registration aor= sip:bob@isp.example

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

Related Commands

Command	Description
sip-contact	Configures the SIP contact information for a specified Uniform Resource Identifier (URI) for a delegate subscriber.
subscriber	Configures a delegate registration for a specified subscriber associated with a client device.
delegate-registration	Configures provisioned delegate registration for a specific delegate client.
adjacency	Configures the adjacency facing the registrar.
profile	Applies a delegate registration profile to a delegate registration subscriber.
show sbc sbe sip subscribers	Displays subscribers for whom Provisioned Delegate Registration has been provisioned.
show sbc sbe sip delegate-profile	Displays subscriber profiles for whom Provisioned Delegate Registration has been configured.

delegate-registration

To configure provisioned delegate registration for a specific delegate client, use the **delegate-registration** command in subscriber-entry configuration mode. To remove provisioned delegate registration for a specific delegate client, use the **no delegate-registration** command.

delegate-registration *{hostname}*

no delegate-registration *{hostname}*

Syntax Description

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

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

This command allows you to configure a provisioned delegate registration for a specific delegate client. While in the subscriber-delegate configuration mode, you typically configure adjacency and profile, as shown in the examples section.

Before configuring provisioned delegate registration, you need to configure a delegate registration profile, a SIP contact for a subscriber for whom a subscriber detail table exists, and then you can configure delegate registration for the subscriber. See the Examples section.

Examples

The following example configures a delegate registration aor= sip:bob@isp.example:

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

The following example configures a delegate registration profile that can be applied to a delegate registration subscriber.

```
sbc mySbc sbe
  delegate-profile my-profile
    duration 1000
    retry-count 5
    retry-interval 60
    refresh-buffer 200
```

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

```
sbc mySbc
 sbe
  subscriber sip:bob@isp.example
   sip-contact sip:steve@10.1.1.2
    adjacency CallMgrB
    exit
```

The following example configures a delegate registration for a specified client device address location, after the SIP contact information has been configured:

```
sbc mySbc
  sbe
   subscriber sip:bob@isp.example
    sip-contact sip:steve@10.1.1.2
     adjacency CallMgrB          ==================> client adjacency
     exit
   delegate-registration sip:registrar@1.1.1.1
    adjacency CallMgrA                 ============> registrar adjacency
    profile my-profile
    activate
```

Related Commands

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

description (route server context)

To specify a description for a BGP route server context, use the **description** command in route server context configuration mode. To remove the description, use the **no** form of this command.

description *string*

no description

Syntax Description

string	Description of the route server context. The string can be up to 80 characters long.

Command Default

No description for a route server context exists.

Command Modes

Route server context configuration (config-router-rsctx)

Command History

Release	Modification
Cisco IOS XE 3.3S	This command was introduced.

Usage Guidelines

Create a route server context if you want your BGP route server to support customized, flexible policies. The routes needing flexible policy handling are selected for import into a route server context by an import map that you configure. The import map references a route map, where the actual policy is defined.

The **description** command allows an optional description of a route server context to remind you of the purpose of the context or policy, for example. This is more user-friendly and scannable than trying to interpret the route map commands when looking at a configuration file or **show** output.

Examples

In the following example, the description is a user-friendly way to see the purpose of the context, without having to interpret the import map and route map:

```
Router(config)# router bgp 65000
Router(config-router)# route-server-context only_AS27_context
Router(config-router-rsctx)# description Context references route map permitting only
routes with AS 27 in AS path.
```

Related Commands

Command	Description
import-map	Configures flexible policy handling by a BGP route server.
route-server-context	Creates a route-server context in order to provide flexible policy handling for a BGP route server.

description (session border controller)

To configure descriptive text for a policy set, an adjacency, a source and its event limits, a number analysis table, a stream list, or an administrative domain, use the **description** command in the appropriate configuration mode. To remove this configuration, use the **no** form of this command.

description *description*

no description *description*

Syntax Description

description	Object you are describing.

Command Default

No default behavior or values are available.

Command Modes

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

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

Routing policy table (config-sbc-sbe-rtgpolicy)

CAC policy-set configuration (config-sbc-sbe-cacpolicy)

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

NA routing table configuration (config-sbc-sbe-rtgpolicy-natable)

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

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

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

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

Administrative domain configuration (config-sbc-sbe-ad)

Stream list configuration (config-sbc-sbe-stream-list)

SIP Body Editor configuration (config-sbc-sbe-mep-bdy)

SIP Method Editor configuration (config-sbc-sbe-mep-mth)

SIP Option Editor configuration (config-sbc-sbe-mep-opt)

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

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

Command History

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

Release	Modification
Cisco IOS XE Release 3.2S	This command was added in the Administrative domain mode.
Cisco IOS XE Release 3.3S	This command was added in the Stream list, SIP Body Editor, SIP Method Editor, SIP Option Editor, SIP Header Editor, and SIP Parameter Editor configuration modes.

Usage Guidelines

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

The use of special characters, such as backslash (\), and a three or larger digit for character settings such as **description**, results in incorrect translation.

Examples

The following example shows how to configure the h323ToIsp42 H.323 adjacency to use the description test adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 h323ToIsp42
Router(config-sbc-sbe-adj-h323)# description test adjacency
```

The following example shows how to set the SipToIsp42 SIP adjacency to use the description test adjacency:

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

The following example shows how to create a description for the MyNaTable number analysis table with entries that match the entire dialed number:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-number-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# description "My first number analysis table"
```

The following example shows how to create an empty policy set, identified by the number 1, on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# description "empty set"
```

The following example shows how to set the description of the MyCacTable admission control table:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy-cactable)# description "My first CAC table"
```

The following example shows how to create a description for the MyNaTable number analysis table with entries that match the start of the dialed number:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-prefix-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# description "My first number analysis table"
```

The following example shows how to add a description for a specific source IP address:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# blacklist
Router(config-sbc-sbe-blacklist)# ipv4
Router(config-sbc-sbe-blacklist)# ipv4 125.12.12.15
Router(config-sbc-sbe-blacklist-ipv4)# description "test"
```

The following example shows how to create an empty policy set, identified by the number 1, on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# description "empty set"
```

The following example shows how to add a description for an administrative domain:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# admin-domain ADMIN1
Router(config-sbc-sbe-ad)# description "My first administrative domain"
```

The following example shows how to add a description for a stream list:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)# description "This is my first stream list"
```

The following examples shows how to add a description to the header, body, option, parameter, and method editors.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip parameter-editor paramedit1
Router(config-sbc-sbe-mep-prm)# description "The Parameter Editor"
```

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip header-editor header1
Router(config-sbc-sbe-mep-hdr)# description "The Header Editor"
```

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip option-editor option1
Router(config-sbc-sbe-mep-opt)# description “The Option Editor”
```

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip body-editor Body1
Router(config-sbc-sbe-mep-bdy)# description “The Body Editor”
```

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip method-editor Method1
Router(config-sbc-sbe-mep-mth)# description “The Method Editor”
```

description (sip-opt)

To set the description for the profile, use the **description** command in SIP option mode. Use the **no** form of this command to remove description from this profile.

description *line*

no description *line*

Syntax Description

line	The description of the profile. The maximum number of characters is 80.

Command Default

The global default is used.

Command Modes

SIP option (sip-opt)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to set the description for the profile.

```
Router# configure terminal
Router(config)# sbc sanity
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip option-profile optpr1
Router(config-sbc-sbe-sip-opt)# description test
```

dial-plan-suffix

To configure the dial plan suffix used for the ENUM query, use the **dial-plan-suffix** command in ENUM entry configuration mode. To return the dial plan suffix to the default value, use the no form of this command.

dial-plan-suffix *suffix*

no dial-plan-suffix *suffix*

Syntax Description

suffix	ENUM dialing plan suffix. The maximum length is 255.

Command Default

The default suffix is e164.arpa.

Command Modes

ENUM entry configuration (config-sbc-sbe-enum-entry)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the dial plan suffix used for the ENUM query:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc-sbe)# enum 1
Router(config-sbc-sbe-enum)# entry ENUM_1
Router(config-sbc-sbe-enum-entry)# server ipv4 10.10.10.10 vrf VRF1
Router(config-sbc-sbe-enum-entry)# dial-plan-suffix Example.Suffix
Router(config-sbc-sbe-enum-entry)#
```

Related Commands

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

Command	Description
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.

diameter

To enable the Diameter protocol on a node and enter the Diameter configuration mode, use the **diameter** command in SBE configuration mode. To disable the Diameter protocol on a node, use the no form of this command.

diameter

no diameter

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

Release	Modification
Cisco IOS XE Release 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.

Diameter is an Authentication Authorization Accounting (AAA) protocol and is an enhanced version of the RADIUS (Remote Authentication Dial-In User Service) protocol. Diameter is the protocol of choice for the next generation network IP Multimedia Subsystem (IMS) developed by 3rd Generation Partnership Project (3GPP).

Examples

The following example shows how to enable the Diameter protocol on a node and enter the diameter configuration mode:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# diameter
Router(config-sbc-sbe-diameter)#
```

Related Commands

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

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.

div-address

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

div-address

no div-address

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

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

Note The header list is for inbound calls only.

Examples

The following example shows how to enter the diverted-by address mode:

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

Related Commands

Command	Description
activate (enum)	Activates ENUM client.
dial-plan-suffix	Configures the dial plan suffix used for the ENUM query.

Command	Description
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.

div-address (header)

To enter the Diverted-by address mode and set the priority of the header or headers from which to derive a diverted-by address (inbound only), use the **div-address** command in the Session Initiation Protocol (SIP) Header Editor configuration mode. To remove the priority list of headers, use the **no** form of this command.

div-address

no div-address

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

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

Examples

The following example shows how to enter the Diverted-by address mode:

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

Related Commands

Command	Description
sip header-editor	Configures a header editor.

domain-name

To specify the domain name of a Border Access Controller (BAC) adjacency that replaces the domain name of the Access Gateway Control Function (AGCF) and the Media Gateway Control Function (MGCF), use the **domain-name** command in the H248 BAC adjacency configuration mode. To remove the specification of the domain name for a BAC adjacency, use the **no** form of this command.

domain-name *domain-name*

no domain-name *domain-name*

Syntax Description

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

Command Default

None

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how the **domain-name** command is used to specify the domain name of a BAC adjacency:

```
Router# configure terminal
Router(config)# sbc h248 bac
Router(config-h248-bac)# adjacency h248 access iad_80_123
Router(config-h248-bac-adj)# domain-name cisco
```

Related Commands

Command	Description
adjacency h248	Configures an H.248 access adjacency and core adjacency.

dscp

To configure a DSCP with which to mark IP packets belonging to a given QoS profile, use the **dscp** command in the appropriate configuration mode. To return to the default, use the **no** form of this command.

dscp *value*

no dscp

Syntax Description

value	Specifies the DSCP value with which to mark packets. Range is 0 to 63.

Command Default

The default DSCP value is 0.

Command Modes

QoS sig configuration (config-sbc-sbe-qos-sig)

QoS video configuration (config-sbc-sbe-qos-video)

QoS voice configuration (config-sbc-sbe-qos-voice)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the QoS profile for sig to mark IP packets with a DSCP of 10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos sig residential
Router(config-sbc-sbe-qos-fax)# dscp 10
```

The following example shows how to configure the QoS profile for video to mark IP packets with a DSCP of 10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos video residential
Router(config-sbc-sbe-qos-video)# dscp 10
```

The following example shows how to configure the QoS profile for voice to mark IP packets with a DSCP of 10:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# qos voice residential
Router(config-sbc-sbe-qos-voice)# dscp 10
```

dst-address

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

dst-address

no dst-address

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

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

Note The header list is for inbound calls only.

Examples

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

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

Related Commands

Command	Description
activate (enum)	Activates ENUM client.
dial-plan-suffix	Configures the dial plan suffix used for the ENUM query.

Command	Description
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.

dst-address (editor)

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

dst-address

no dst-address

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

This command enables you to enter the Destination address mode from where you can use the **header-prio header-name** command to set the priority of the header or headers from which a called party address is derived.

Note The header list is for inbound calls only.

Examples

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

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

Related Commands

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

dst-adjacency

To configure the destination adjacency of an entry in a routing table, use the **dst-adjacency** command in RTG routing table configuration mode. To delete the destination adjacency, use the **no** form of this command.

dst-adjacency *target-adjacency*

no dst-adjacency *target-adjacency*

Syntax Description

target-adjacency	Specifies the string that identifies the destination adjacency to use.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

The *target-adjacency* argument is mandatory for routing tables entries with table-type **round-robin**.

Examples

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-address-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency softswitch1
```

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-address-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency softswitch1
```

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-adjacency-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency softswitch1
```

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-src-account-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency softswitch1
```

The following example shows how to configure the destination adjacency of an entry in the new routing table MyRtgTable to softswitch1:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-round-robin-table MyRtgTable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# dst-adjacency softswitch1
```

dtmf-duration (session border controller)

To configure the default duration of a dual tone multifrequency (DTMF) event in milliseconds, use the **dtmf-duration** command in VDBE configuration mode. To reconfigure the default duration of a DTMF event in milliseconds, use the **no** form of this command.

dtmf-duration ***duration***

no dtmf-duration *duration*

Syntax Description

duration	This is the default duration of a DTMF event in milliseconds. The range is 0-1000. The default is 200.

Command Default

The default is 200 ms if this command is not configured, or the **no dtmf-duration** command is issued.

Command Modes

VDBE configuration (config-sbc-dbe-vdbe) for distributed SBC

VDBE configuration (config-sbc-vdbe) for unified SBC

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 was modified for unified SBC.

Usage Guidelines

This command can be used on both unified and distributed SBC, but in slightly different configuration modes. Note the correct mode to use for either unified or distributed SBC.

Examples

The following example configures the duration of a DTMF event to be 250 milliseconds for a unified SBC:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc)# vdbe
Router(config-sbc-vdbe)# dtmf-duration 250
Router(config-sbc-vdbe)# end
```

The following example configures the duration of a DTMF event to be 250 milliseconds for a distributed SBC:

```
Router# configure terminal
Router(config)# sbc mySbc dbe
Router(config-sbc-dbe)# vdbe
Router(config-sbc-dbe-vdbe)# dtmf-duration 250
Router(config-sbc-dbe-vdbe)# end
```

Related Commands

Command	Description
vdbe	Enter into VDBE configuration mode.

dtmf disable sip

To turn off automatic detection of dual tone multifrequency-specific options, use the **dtmf disable sip** command in adjacency SIP configuration mode. To turn on the automatic detection of dual tone multifrequency (DTMF) relay, use the **no** form of this command.

dtmf disable sip {info | notify}

no dtmf disable sip {**info** | **notify**}

Syntax Description

info	Specifies INFO-based DTMF relay.
notify	Specifies NOTIFY-based DTMF relay.

Command Default

The default is automatic detection of DTMF relay.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to turn off automatic detection of DTMF relay using the INFO method as the preferred DTMF transport method for the endpoints on an adjacency:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp4
Router(config-sbe-adj-sip)# dtmf disable sip info
```

dtmf sip

To configure DTMF SIP, use the **dtmf sip** command in adjacency SIP configuration mode. To unconfigure DTMF SIP, use the **no** form of this command.

dtmf sip {default duration *millisec* **| info always-supported | notify interval** *millisec***}**

no dtmf sip {default duration *millisec* **| info always-supported | notify interval** *millisec***}**

Syntax Description

default	Specifies default values.
duration	Specifies the duration for which the SBC advertises on outbound DTMF transport.
info	Specifies INFO-based DTMF relay.
always-supported	Overrides automatic detection of DTMF support, assuming the INFO method as the preferred DTMF transport method for endpoints on an adjacency.
notify	Specifies NOTIFY-based DTMF relay.
interval	Specifies the maximum time for which the SBC waits between the NOTIFY messages for a single DTMF event.
millisec	The time in milliseconds, ranging from 1 to 65535.

Command Default

The default is automatic detection of DTMF relay.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure DTMF SIP:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp4
Router(config-sbe-adj-sip)# dtmf sip notify interval 1000
Router(config-sbe-adj-sip)# dtmf sip info always-supported
```

duration

To configure the expiration time during which the Cisco Unified Border Element (SP Edition) tries to perform provisioned delegate registration before stopping, use the **duration** command in subscriber delegate profile configuration mode. To reset the expiration time to the default duration time, use the **no duration command.**

duration *{dur time in secs}*

no duration *{dur time in secs}*

Syntax Description

dur time in secs	This is the duration time in seconds. The range is 1 to 2,147,483 seconds. The default duration time is 1800 seconds.

Command Default

The default duration time is 1800 seconds.

Command Modes

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

Command History

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

Usage Guidelines

This command configures the expiration time when the delegate client is due to expire, that is, the length of time in seconds during which the SBC tries to perform delegate registration before stopping. This is one of the delegate profile parameters you can configure.

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

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

Examples

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

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

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

Related Commands

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

early-media-deny

To configure whether to disallow early-media for an entry in an admission control table, use the **early-media-deny** command in CAC table configuration mode. To return to the default value, use the **no** form of this command.

early-media-deny

no early-media-deny

Syntax Description

This command has no arguments or keywords.

Command Default

By default, early-media is allowed.

Command Modes

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

Command History

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

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 disallow early-media for an existing entry in the admission control table MyCacTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# early-media-deny
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
Router(config-sbc-sbe-cacpolicy-cactable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

Related Commands

Command	Description
early-media-timeout	Configures the time to allow early-media before a call is established.

early-media-timeout

To configure the amount of time for which to allow early-media before a call is established, use the **early-media-timeout** command in CAC table configuration mode. To return to the default value, use the **no** form of this command.

early-media-timeout *value*

no early-media-timeout

Syntax Description

value	Specifies the timeout period (in seconds). A value of 0 means that calls are not timed out.

Command Default

value: 0

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the early-media-timeout for an existing entry in the admission control table MyCacTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable table-type limit dst-prefix
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# early-media-timeout 90
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
Router(config-sbc-sbe-cacpolicy-cactable)# exit
```

early-media-type

To configure the direction of early media to allow for an entry in a call admission control table, use the **early-media-type** command in CAC table configuration mode. To return to the default value, use the **no** form of this command.

early-media-type {backward-half-duplex | forward-half-duplex | full-duplex}

no early-media-type

Syntax Description

backward-half-duplex	Allows early media in the backwards direction only.
forward-half-duplex	Allows early media in the forwards direction only.
full-duplex	Allows early media in both directions.

Command Default

The default direction is full-duplex.

Command Modes

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

Command History

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

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 disallow early-media for an existing entry in the admission control table MyCacTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# early-media-type full-duplex
Router(config-sbc-sbe-cacpolicy-cactable-entry)# exit
Router(config-sbc-sbe-cacpolicy-cactable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

Command	Description
early-media-timeout	Configures the time to allow early-media before a call is established.

edit-cic

To manipulate a carrier identification code in number analysis and routing tables, use the **edit-cic** command call policy set table mode. The **no** form of the command removes the configured string.

edit-cic [**del-prefix** *pd*] **|** [**del-suffix** *sd*] **|** [**add-prefix** *pa*] **|** [**replace** *ds*]

Syntax Description

del-prefix	Specifies digits to delete from the front of the carrier ID string.
del-suffix	Specifies digits to delete from the end of the carrier ID string.
add-prefix	Specifies digits to add to the front of the carrier ID string.
replace	Replaces the carrier ID string with the configured string of digits.
pd	A positive integer specifying the number of digits to delete from the front of the carrier ID string.
sd	A positive integer specifying the number of digits to delete from the end of the carrier ID string.
pa	A string of digits to add to the front of the carrier ID string.
ds	A string of digits with which to replace the carrier ID string.

Command Default

No default behavior or values are available.

Command Modes

NA-DST-address-table configuration (config-sbc-sbe-rtgpolicy-natable-entry)

Command History

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

Usage Guidelines

This command is used to manipulate the carrier identification code (cic) address in number analysis and routing tables. You can configure more than one edit action (del-prefix, del-suffix, and add-prefix) and configure combinations of edit actions, as long as you follow the rules. The rules are as follows:

- The edit-cic action keywords **del-prefix**, **del-suffix**, and **add-prefix** can be combined in any order, with at least one keyword required.
- Combinations of edit-cic actions are implemented from left to right. For example, the combination **edit-cic del-prefix 3 add-prefix 919 del-suffix 4** command changes the dialed digit string, 2025551212, into 919555.
- The **edit-cic replace** action cannot be combined with other edit actions.

If you want to remove the carrier ID entirely from outgoing messages, specify a replacement string of 0000 or a prefix deletion length of 4. For example:

edit-cic del-prefix *4*

or

edit-cic replace *0000*

Re-entering the **edit-cic** command with a new combination of edit actions replaces the existing combination.

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 entry 1 to delete four digits from the end of the dialed string, delete three digits from the beginning of the dialed string, and then add 202 to the beginning of the dialed string in the new number analysis table MyNaTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# edit-cic del-suffix 4 del-prefix 3
add-prefix 202
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

The following example replaces the entire carrier code identification address of dialed digits with the digits 2025551212:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# edit-cic replace 2025551212
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

The following command sets entry 1 to delete the first digit of the carrier ID in NA table *MyNaTable*:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-src-account-table mytable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-natable-entry)# edit-cic del-prefix 1
Router(config-sbc-sbe-rtgpolicy-natable-entry)#
```

Related Commands

Command	Description
call-policy-set	Enters the mode of a routing policy configuration within an SBE entity.
entry	Enters the mode for configuring an entry in a number analysis table, creating the table, if necessary.
na-src-account-table	Enters the mode for configuring a number analysis table within an SBE policy set, with entries that match the source account.

Command	Description
edit	Configures a dial-string manipulation action in number analysis and routing tables with entries of the table matching the whole dialed number.
edit-src	Configures a source number manipulation action in number analysis and routing tables.

edit-src

To configure a source address manipulation action in the number analysis table and the routing table, use the **edit-src** command in the appropriate configuration mode. To remove a configured string, use the **no** form of this command.

edit-src [**del-prefix** *pd*] | [**del-suffix** *sd*] | [**add-prefix** *pa*] | [**replace** *ds*]

Syntax Description

del-prefix	Specifies the digits to be deleted from the beginning of the dialed string.
del-suffix	Specifies the digits to be deleted from the end of the dialed string.
add-prefix	Specifies the digits to be added to the beginning of the dialed string.
replace	Replaces the dialed string with the configured digits.
pa	A string of digits to be added to the beginning of the source number string.
pd	A positive integer specifying the number of digits to be deleted from the beginning of the source number string.
sd	A positive integer specifying the number of digits to be deleted from the end of the source number string.
ds	A string of digits with which to replace the source number string.

Command Default

No default behavior or values are available.

Command Modes

Number Analysis table entry (config-sbc-sbe-rtgpolicy-natable-entry)

rtg-carrier-id-table entry

rtg-dst-address-table entry

rtg-dst-domain-table entry

rtg-round-robin-table entry

rtg-src-account-table entry

rtg-src-address-table entry

rtg-src-adjacency-table entry

rtg-src-domain-table entry

rtg-category-table entry

rtg-least-cost-table entry

rtg-time-table entry

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 command was modified. The source address can now be edited in the number analysis table.

Usage Guidelines

You cannot use this command *if the table is a part of the active policy set.*

This command is used to manipulate the source address in the number analysis table and the routing table. You can configure more than one edit action (**del-prefix**, **del-suffix**, and **add-prefix**) or combinations of edit actions, as long as you follow these rules:

- The **del-prefix**, **del-suffix**, and **add-prefix** edit-src action keywords can be combined in any order, with at least one keyword being mandatory.
- Combinations of edit-src actions are implemented from left to right. For example, the **edit-src del-prefix 3 add-prefix 919 del-suffix 4** combination command changes the dialed digit string 2025551212 into 919555.
- The **edit-src replace** action command cannot be combined with other edit actions.

Re-entering the **edit-src** command with a new combination of edit actions replaces the existing combination.

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

Examples

The following example shows how to configure entry 1 to delete four digits from the end of the dialed string, delete three digits from the beginning of the dialed string, and then add 202 to the beginning of the dialed string in the new number analysis table, MyNaTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-natable-entry)# edit-src del-suffix 4 del-prefix 3
add-prefix 202
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

The following example shows how to replace the entire source address of the dialed digits with the digit 2025551212:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-natable-entry)# edit-src replace 2025551212
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

The following command shows how to set entry 1 to delete the first digit of the source address in the *MyTable* routing table:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# rtg-dst-address-table mytable
Router(config-sbc-sbe-rtgpolicy-rtgtable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# edit-src del-prefix 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)#
```

Related Commands

Command	Description
entry	Enters the mode for configuring an entry in a number analysis table, creating the table, if necessary.
edit	Configures a dial-string manipulation action in the number analysis table and the routing table, with the entries in the table matching the complete dialed number.
edit-cic	Manipulates a carrier identification code in the number analysis table and the routing table.

edit

To configure a string manipulation action in number analysis and routing tables with entries of the table matching the whole dialed number or the source number, use the **edit** command in NA routing table entry configuration mode. To return to the default value, use the **no** form of this command.

edit [**del-prefix** *pd*] | [**del-suffix** *sd*] | [**add-prefix** *pa*] | [**replace** *ds*]

no edit

Syntax Description

del-prefix	Positive integer specifying a number of digits to delete from the front of the dialed digit string.
del-suffix	Positive integer specifying a number of digits to delete from the end of the dialed digit string.
add-prefix	String of digits to add to the front of the dialed string.
replace	String of digits with which to replace the dialed string.
pd	A positive integer specifying the number of digits to delete from the front of the carrier ID string.
sd	A positive integer specifying the number of digits to delete from the end of the carrier ID string.
pa	A string of digits to add to the front of the carrier ID string.
ds	A string of digits with which to replace the carrier ID string.

Command Default

No default behavior or values are available.

Command Modes

NA routing table entry configuration (config-sbc-sbe-rtgpolicy-natable-ent)

Command History

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

Usage Guidelines

This command is used to manipulate the source address or a destination address in number analysis and routing tables. You can configure more than one edit action (del-prefix, del-suffix, and add-prefix) and configure combinations of edit actions, as long as you follow the rules. The rules are as follows:

- The edit action keywords **del-prefix**, **del-suffix**, and **add-prefix** can be combined in any order, with at least one keyword required.
- Combinations of edit actions are implemented from left to right. For example, the combination **edit del-prefix 3 add-prefix 919 del-suffix 4** command changes the dialed digit string, 2025551212, into 919555.
- The **edit replace** action cannot be combined with other edit actions.

Re-entering the **edit** command with a new combination of edit actions replaces the existing combination.

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 entry 1 to delete four digits from the end of the dialed string, delete three digits from the beginning of the dialed string, and then add 202 to the beginning of the dialed string in the new number analysis table MyNaTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# edit del-suffix 4 del-prefix 3 add-prefix
202
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

The following example replaces the entire address of dialed digits with the digits 2025551212:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# na-dst-address-table MyNaTable
Router(config-sbc-sbe-rtgpolicy-natable)# entry 1
Router(config-sbc-sbe-rtgpolicy-rtgtable-entry)# edit replace 2025551212
Router(config-sbc-sbe-cacpolicy-natable-ent)# exit
Router(config-sbc-sbe-cacpolicy-natable)# exit
Router(config-sbc-sbe-cacpolicy)# exit
```

Related Commands

Command	Description
edit-cic	Manipulates a carrier identification code in number analysis and routing tables.
edit-src	Configures a source number manipulation action in number analysis and routing tables.

editor-list

To specify the stage at which you want the editors to be applied, use the **editor-list** command in the adjacency SIP editor configuration mode. To remove the configuration of the editor list, use the **no** form of this command.

editor-list {after-send | before-receive}

no editor-list {after-send | before-receive}

Syntax Description

after-send	Specifies that the outgoing message must be edited after the message is processed by the adjacency and just before it is forwarded from the adjacency.
before-receive	Specifies that the incoming message must be edited just after it is received on the adjacency and before the adjacency begins processing it.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Note that the editors must be configured before you run this command.

Examples

In the following example, the **editor-list** command is used to specify that the editors must be applied to the messages after the messages are received:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip my_adjacency
Router(config-sbc-sbe-adj-sip)# editor-type editor
Router(config-sbc-sbe-adj-sip)# editor-list after-send
```

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 type	Configures an editor type to be applied on a SIP adjacency.
filename	Specifies the path and name of the script file written using the Lua programming language.
load-order	Specifies the load order of a script in a script set.
script	Configures a script written using the Lua programming language.
show sbc sbe editors	Displays a list of all the editors registered on the SBC.
show sbc sbe script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
script-set lua	Configures a script set composed of scripts written using the Lua programming language.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

editor-type

To configure an editor type for a SIP adjacency to apply, use the **editor-type** command in the SIP adjacency configuration mode. To unconfigure an editor type, use the **no** form of this command.

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

no editor-type

Syntax Description

editor	Uses the method, header, option, parameter, or body editor.
profile	Uses the method, header, option, parameter, or body profile.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure an editor type for a SIP adjacency to apply:

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

Related Commands

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

editor

If multiple editors have been configured in an editor list, to specify the order in which a particular editor must be applied in the sequence defined by the list, use the **editor** command in the adjacency SIP editor configuration mode. To remove the configuration of the editor, use the **no** form of this command.

editor *order-number editor-name* **[condition [body contains sdp]]**

no editor *order-number editor-name* **[condition [body contains sdp]]**

Syntax Description

order-number	Order in which the editor must be applied.
editor-name	Name of the editor that you want to apply to messages that are processed by the adjacency.
condition	Specifies that there are one or more conditions for the editor to be applied.
body contains sdp	Specifies that the message body must contain SDP-based content. The editor is applied only if this condition is met. Include **body contains sdp** in the command for script-based editors.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

In the following example, the **editor** command is used to set the load order for the my_editor editor to 4. A header editor is configured in this example.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# sip editor-type editor
Router(config-sbc-sbe)# sip parameter-editor my_parameter_editor
Router(config-sbc-sbe-mep-prm)# exit
Router(config-sbc-sbe)# sip header-editor my_header_editor
Router(config-sbc-sbe-mep-hdr)# exit
Router(config-sbc-sbe)# adjacency sip my_adjacency
```

```
Router(config-sbc-sbe-adj-sip)# editor-type editor
Router(config-sbc-sbe-adj-sip)# header-editor inbound my_header_editor
Router(config-sbc-sbe-adj-sip)# editor-list after-send
Router(config-sbc-sbe-adj-sip-ed)# editor 4 my_editor condition body contains sdp
```

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-list	Specifies the stage at which the editors must be applied.
editor type	Configures an editor type to be applied on a SIP adjacency.
filename	Specifies the path and name of the script file written using the Lua programming language.
load-order	Specifies the load order of a script in a script set.
script	Configures a script written using the Lua programming language.
show sbc sbe editors	Displays a list of all the editors registered on the SBC.
show sbc sbe script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
script-set lua	Configures a script set composed of scripts written using the Lua programming language.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

entry

To create or modify an entry in a table or an SDP media profile, use the **entry** command in the appropriate configuration mode. To destroy the given entry, use the **no** form of this command.

entry *entry-id*

no entry *entry-id*

Syntax Description

entry-id	Specifies the table entry.

Command Default

No default behavior or values are available.

Command Modes

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

NA routing table configuration (config-sbc-sbe-rtgpolicy-natable)

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

SIP SDP media profile configuration (config-sbc-sbe-sip-sdp-media)

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	Command usage was expanded to support SDP media profiles for the Customized Option for Late-to-Early Media Interworking.

Usage Guidelines

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

Note You cannot change the configuration of tables in the context of the active policy set. An entry may not be destroyed if the table is a part of the active policy set.

Examples

The following example shows how to create an entry in the new admission control table, MyCacTable:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable table-type limit dst-prefix
Router(config-sbc-sbe-cacpolicy)# cac-table MyCacTable
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)#
```

entry (enum)

To configure the ENUM client entry name and enter the ENUM entry configuration mode, use the **entry** (enum) command in SBE configuration mode. To remove the ENUM client entry name, use the no form of this command.

entry *entry-name*

no entry *entry-name*

Syntax Description

entry-name	ENUM client entry name.

Command Default

No default behavior or values are available.

Command Modes

ENUM configuration (config-sbc-sbe-enum)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the ENUM client entry name:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# enum 1
Router(config-sbc-sbe-enum)# entry ENUM_1
```

Related Commands

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

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

enum

To configure the ENUM client ID number and enter the ENUM configuration mode, use the **enum** command in SBE configuration mode. To remove the ENUM client ID number, use the no form of this command.

enum *enum-id*

no enum *enum-id*

Syntax Description

enum-id	ENUM client ID number. Currently, only the number 1 is allowed.

Command Default

No default behavior or values are available.

Command Modes

SBE configuration (config-sbc-sbe)

Command History

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

Usage Guidelines

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

The ENUM ID number is used by the Routing Policy Service (RPS) to initiate service requests.

At the SBE level, multiple ENUM client entries can be provisioned.

Examples

The following example shows how to configure the ENUM client ID number and enter the ENUM configuration mode:

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

Related Commands

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

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

error-profile

To configure an existing error profile as the outbound SIP error profile, use the **error-profile outbound** command in adjacency SIP configuration mode. To remove an error profile as the SIP error profile, use the no form of this command.

error-profile outbound *profile-name*

no error-profile outbound *profile-name*

Syntax Description

profile-name	Name of the existing error profile to be used as the inbound or outbound SIP error profile.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure an existing error profile as the outbound SIP error profile:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip MySIP
Router(config-sbc-sbe-adj-sip) error-profile outbound OUT_Err_profile_1
Router(config-sbc-sbe-adj-sip)
```

Related Commands

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

exit-if-vnet

To exit virtual network interface mode, use the **exit-if-vnet** command in virtual network interface mode.

exit-if-vnet

Syntax Description

This command has no arguments or keywords.

Command Modes

Virtual network interface mode (config-if-vnet)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced.

Usage Guidelines

This command is not saved in a configuration and therefore does not appear in **show running-config** output.

The **exit-if-vnet** command is one of the commands that will be displayed in system help if you enter a ? at the Router(config-if-vnet)# prompt. However, the **exit** command performs the same function as the **exit-if-vnet** command and is a shorter command to enter.

Examples

The following example shows how to exit virtual network interface mode:

```
Router(config)# vrf definition red
Router(config-vrf)# vnet tag 100
R1(config-vrf)# description guest access
R1(config-vrf)# address-family ipv4
R1(config-vrf-af)# exit-address-family
R1(config-vrf)# vrf definition blue
R1(config-vrf)# vnet tag 200
R1(config-vrf)# description Finance
R1(config-vrf)# address-family ipv4
R1(config-vrf-af)# exit-address-family
R1(config-vrf)# interface fastethernet 1/1/1
R1(config-if)# ip address 10.1.1.1 255.255.255.0
R1(config-if)# vnet trunk
R1(config-if)# vnet name blue
R1(config-if-vnet)# exit-if-vnet
R1(config-if)#
```

Related Commands

Command	Description
exit	Exits any configuration mode to the next highest mode in the CLI mode hierarchy.
vnet	Configures overrides of an interface's attributes on a per-VRF basis and enters virtual network interface mode.

exit-route-server-context

To exit a route server context and return to router configuration mode, use the **exit-route-server-context** command in route server context configuration mode.

exit-route-server-context

Syntax Description

This command has no arguments or keywords.

Command Modes

Route server context configuration (config-router-rsctx)

Command History

Release	Modification
Cisco IOS XE 3.3S	This command was introduced.

Usage Guidelines

When you configure a BGP route server with a flexible policy, you create a route server context with an import map, which is when you might use the **exit-route-server-context** command. The **exit-route-server-context** command is one of the commands that will be displayed in system help if you enter a ? at the Router(config-router-rsctx)# prompt. However, the **exit** command performs the same function as the **exit-route-server-context** command.

Examples

In the following example, a route server context is created and the **exit-route-server-context** command is used to exit route server context configuration mode:

```
router bgp 65000
   route-server-context ONLY_AS27_CONTEXT
      address-family ipv4 unicast
         import-map only_AS27_routemap
      exit-address-family
   exit-route-server-context
   !
Router(config)#
```

Related Commands

Command	Description
route-server-context	Creates a route-server context in order to provide flexible policy handling for a BGP route server.

exit-vrf-list

To exit VRF list submode, use the **exit-vrf-list** command in VRF list submode.

exit-vrf-list

Syntax Description

This command has no arguments or keywords.

Command Modes

VRF list submode (config-vrf-list)

Command History

Release	Modification
Cisco IOS XE Release 3.2S	This command was introduced.

Usage Guidelines

This command is not saved in a configuration and therefore does not appear in **show running-config** output.

The **exit-vrf-list** command is one of the commands that will be displayed in system help if you enter a ? at the Router(config-vrf-list)# prompt. However, the **exit** command performs the same function as the **exit-vrf-list** command and is a shorter command to enter.

Examples

The following example shows how to exit VRF list submode:

```
Router(config)# vrf list external
Router(config-vrf-list)# member blue
Router(config-vrf-list)# exit-vrf-list
Router(config)#
```

Related Commands

Command	Description
exit	Exits any configuration mode to the next highest mode in the CLI mode hierarchy.
vrf list	Defines a list of VRFs.

expires-header

To configure expires parameter in the SIP contact header, use the **expires-header** command in adjacency SIP configuration mode. To remove an expires parameter from the header, use the no form of this command.

expires-header *options*

no expires-header *options*

Syntax Description

options	The options for the expires header parameters are: • *add-not-present*—SBC provides expiry information in the format provided by the endpoint, or as indicated by other configurations. • *add-smallest*—The value of the expires header is set to the value of the smallest expires parameter on any provided contact. • *add-value*—SBC adds an expires header to any REGISTER request sent out on the specified adjacency that does not contain an expiry value.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure an expires header parameter on the SIP contact header:

```
Router# configure terminal
Router(config)# sbc MySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip test
Router(config-sbc-sbe-adj-sip) expires-header add-not-present
Router(config-sbc-sbe-adj-sip)
```

Related Commands

Command	Description
softswitch-shield	Configures softswitch shielding support on SIP adjacency.
show sbc sbe adjacencies	Displays all the detailed field output pertaining to a specified Session Initiation Protocol (SIP) adjacency.

fast-register-interval

To configure the fast-path register interval (in seconds), use the **fast-register-interval** command in adjacency SIP configuration mode. To unconfigure the fast-path register interval, use the **no** form of this command.

fast-register-interval *interval*

no fast-register-interval

Syntax Description

interval	Specifies the interval value in seconds. Range is 1 to 2000000.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

If fast-path register support is enabled on this adjacency, this is the minimum expiry period accepted on a subscriber registration. The interval at which registrations are forwarded on to the softswitch is governed by the registration minimum expiry value.

Note The *interval* must be less than the *minimum expiry* value.

Examples

The following example shows how to enable the fast-register interval on the SIP adjacency SipToIsp42 to 10 seconds:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# fast-register-interval 10
```

Related Commands

Command	Description
fast-register disable	Disables fast-path register support on the SIP adjacency.

fast-register disable

To disable fast-path register support on the SIP adjacency, use the **fast-register disable** command in adjacency SIP configuration mode. To enable fast-path register support, use the **no** form of this command.

fast-register disable

no fast-register disable

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Fast-path register is used to prevent the SBC from forwarding all SIP register messages to the softswitch, thus reducing the load on the softswitch. This is enabled by default and can be disabled using this command. When active, a SIP register message received from the same host and port as an existing registration, and with a nonzero expires interval, is immediately responded to without further parsing or other processing performed.

Examples

The following example shows how to disable fast-path register support on the SIP adjacency SipToIsp42:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip SipToIsp42
Router(config-sbc-sbe-adj-sip)# fast-register disable
```

Related Commands

Command	Description
fast-register-interval	Configures the fast-path register interval.

filename (session border controller)

To specify the path and name of the script file written using the Lua programming language, use the **filename** command in the SBE script-set script configuration mode.

filename {*device-type:file-path-and-name*}

Syntax Description

device-type	One of the following or any other storage device installed on the router: • **bootflash:** • **flash:** • **fpd:** • **nvram:** • **obfl:** The list of file system devices is dynamically generated and displayed. Other devices, such as a hard disk, that are available on the platform can also be used in this command.
file-path-and-name	Full path and name of the script file on the specified storage device.

Command Default

No default behavior or values are available.

Command Modes

SBE script-set script configuration (config-sbc-sbe-scrpset-script)

Command History

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

Usage Guidelines

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

Examples

In the following example, the **filename** command specifies that the script file is mySBCScript.lua and is located on the bootflash device:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# script-set 10 lua
Router(config-sbc-sbe-script-set)# script mySBCScript
Router(config-sbc-sbe-scrpset-script)# load-order 2
Router(config-sbc-sbe-scrpset-script)# type wrapped edit-point both
```

```
Router(config-sbc-sbe-scrpset-script)# filename bootflash:mySBCScript.lua
```

Related Commands

Command	Description
active-script-set	Activates a script set,
clear sbc sbe script-set-stats	Clears the stored statistics related to a script set.
complete	Completes a CAC policy set, call policy set, or script set after committing the full set.
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.
load-order	Specifies the load order of a script in a script set.
script	Configures a script written using the Lua programming language.
show sbc sbe editors	Displays a list of all the editors registered on the SBC.
show sbc sbe script-set	Displays a summary of the details pertaining to all the configured script sets or the details of a specified script set.
script-set lua	Configures a script set composed of scripts written using the Lua programming language.
sip header-editor	Configures a header editor.
sip method-editor	Configures a method editor.
sip option-editor	Configures an option editor.
sip parameter-editor	Configures a parameter editor.
test sbc message sip filename script-set editors	Tests the message editing functionality of the SBC.
test script-set	Tests the working of a script set.
type	Specifies the type of a script written using the Lua programming language.

first-cac-scope

To configure the scope at which to begin defining limits when performing the admission control stage of policy, use the **first-cac-scope** command in CAC-policy-set configuration mode. Use the **no** form of this command to delete the routing table.

first-cac-scope *scope-name*

no first-cac-scope

Syntax Description

scope-name	Specifies the scope at which limits should be initially defined when performing the admission control stage of policy. Possible values are: • **adj-group**—Limits for events from members of the same adjacency group. • **call**—Limits are per single call. • **category**—Limits per category. • **dst-account**—Limits for events sent to the same account. • **dst-adj-group**—Limits for events sent to the same adjacency group. • **dst-adjacency**—Limits for events sent to the same adjacency. • **dst-number**—Limits for events that have the same adjacency number. • **global**—Limits are global (May not be combined with any other option). • **src-account**—Limits for events from the same account. • **src-adj-group**—Limits for events from the same adjacency group. • **arc-adjacency**—Limits for events from the same adjacency. • **src-number**—Limits for events that have the same source number. • **sub-category-pfx** *prefix-len*—The limits specified at this scope apply to all events sent to or received from members of the same subscriber category prefix. **Note** The prefix-len is included as part of the **first-cac-scope** command. For example, the command would be: **first-cac-scope sub-category-pfx** *prefix-len*.

Command Default

No default behavior or values are available.

Command Modes

CAC-policy-set configuration (config-sbc-sbe-cacpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 2.5	The **sub-category-pfx** *prefix-len* scope was added.

Usage Guidelines

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

Examples

The following example shows how to set the scope category as the first scope at which to define an admission control policy in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# first-cac-scope src-adjacency
```

first-cac-table

To configure the name of the first policy table to process when performing the admission control stage of policy, use the **first-cac-table** command in CAC-policy-set configuration mode. To remove this configuration, use the **no** form of this command.

first-cac-table *table-name*

no first-cac-table

Syntax Description

table-name	Specifies the admission control table that should be processed first.

Command Default

No default behavior or values are available.

Command Modes

CAC-policy-set configuration (config-sbc-sbe-cacpolicy)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to set the table RootCacTable as the first admission control table in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# cac-policy-set 1
Router(config-sbc-sbe-cacpolicy)# first-cac-table RootCacTable
```

first-call-routing-table

To configure the name of the first policy table to process when performing the routing stage of policy for new-call events, use the **first-call-routing-table** command in routing policy table mode. To unconfigure the name of the first policy table, use the **no** form of this command.

first-call-routing-table *table-name*

no first-call-routing-table

Syntax Description

table-name	Specifies the routing table that should be processed first.

Command Default

No default behavior or values are available.

Command Modes

Routing policy table (config-sbc-sbe-rtgpolicy)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the table RootCallRtgTable as the first routing table for new-call events in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# first-call-routing-table RootCallRtgTable
```

first-inbound-na-table

To configure the name of the first inbound policy table to be processed when performing the number analysis stage of a policy, use the **first-inbound-na-table** command in the Routing policy table configuration mode. To unconfigure the name of the first inbound policy table, use the **no** form of this command.

first-inbound-na-table *table-name*

no first-inbound-na-table

Syntax Description

table-name	The number analysis table that should be processed first.

Command Default

No default behavior or values are available.

Command Modes

Routing policy table (config-sbc-sbe-rtgpolicy)

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.2S	This command was modified. This **first-number-analysis-table** command was renamed as the **first-inbound-na-table** command.

Usage Guidelines

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

Examples

The following example shows how to configure the table RootNaTable as the first inbound number analysis table in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# first-inbound-na-table RootNaTable
```

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-outbound-na-table	Configures the name of the first outbound policy table to be processed when performing the number analysis stage of a policy.

Command	Description
show sbc sbe call-policy-set	Lists the details of the policy sets configured on the SBC.
show sbc sbe call-policy-set default	Lists the summary of the default policy set configured on the SBC.

first-outbound-na-table

To configure the name of the first outbound policy table to be processed when performing the number analysis stage of a policy, use the **first-outbound-na-table** command in the Routing policy table configuration mode. To deconfigure the name of the first outbound policy table, use the **no** form of this command.

first-outbound-na-table *table-name*

no first-outbound-na-table

Syntax Description

table-name	The number analysis table that should be processed first.

Command Default

No default behavior or values are available.

Command Modes

Routing policy table (config-sbc-sbe-rtgpolicy)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the table RootOutTable as the first outbound number analysis table in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# first-outbound-na-table RootOutTable
```

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.

Command	Description
show sbc sbe call-policy-set	Lists the details of the policy sets configured on the SBC.
show sbc sbe call-policy-set default	Lists the summary of the default policy set configured on the SBC.

first-reg-routing-table

To configure the name of the first policy table to process when performing the routing stage of policy for subscriber-registration events, use the **first-reg-routing-table** command in routing policy table configuration mode. To deconfigure the name of the first policy table, use the **no** form of this command.

first-reg-routing-table *table-name*

no first-reg-routing-table

Syntax Description

table-name	Specifies the routing table that should be processed first.

Command Default

No default behavior or values are available.

Command Modes

Routing policy table (config-sbc-sbe-rtgpolicy)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the table RootRegRtgTable as the first routing table for subscriber-registration events in configuration set 1 on mySbc:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# call-policy-set 1
Router(config-sbc-sbe-rtgpolicy)# first-reg-routing-table RootRegRtgTable
```

flipped-interval (XML Billing)

To configure the maximum interval at which to flip a billing XML file, use the **flipped-interval** command in the SBE billing XML configuration mode. To reset the flip interval to its default value of 3 minutes, use the **no** form of this command.

flipped-interval *seconds*

no flipped-interval

Syntax Description

seconds	Time after which the CDRs being stored in the existing XML file is stopped and flipped to a new XML billing file. The interval at which to switch from one XML file to another XML file can be specified in seconds ranging from 60 to 86400. The default interval is 180 seconds.

Command Default

By default, the flip interval is 3 minutes (180 seconds).

Command Modes

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

Command History

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

Usage Guidelines

The XML billing files are stored under the CDR path configured by the administrator. An XML billing file is generated for CDRs at regular intervals and not exceeding the defined flip size. To switch the XML billing file from one XML file to another, use the **flipped-interval** *seconds* command from the SBE billing xml configuration mode. The default interval to flip an XML billing file is 3 minutes.

Examples

The following example shows how to set the flip interval to 5 minutes (300 seconds):

```
Router(config)# sbc sbcbilling
Router(config-sbc)# sce
Router(config-sbc-sce)# billing
Router(config-sbc-sce-billing)# xml method
Router(config-sbc-sce-billing)# xml 1
Router(config-sbc-sce-billing-xml)# flipped-interval 300
```

Related Commands

Command	Description
xml (billing)	Configures the method index for XML billing.
method xml	Configures the billing method as XML for the Billing Manager.
ldr-check	Configures the time at which long duration records are checked.

flipped-size (XML Billing)

To configure the maximum file-size, that if exceeds, leads to the flipping of the billing XML file, use the **flipped-size** command in the SBE billing XML configuration mode. To reset the flip-size to its default value of 10 MB, use the **no** form of this command.

flipped-size *size*

no flipped-size

Syntax Description

size	The file size, which, if exceeds, leads to the CDRs stored in the existing XML file being stopped and flipped to a new XML billing file. The flip size can be specified in Kilo Bytes (KB) ranging from 5120 to 512000. The default file size is 10 MB or 10240 KB.

Command Default

By default, the maximum size of billing file after which the billing file is flipped to a new file, is 10 MB.

Command Modes

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

Command History

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

Usage Guidelines

The XML billing files are stored in the CDR path configured by the administrator. An XML billing file is generated for the CDR at regular intervals not exceeding the defined flip-size. To switch the XML billing file from one XML file to another after the flip size is exceeded, execute the **flipped-size** *size* command from the SBE billing XML configuration mode. The default file size to flip an XML billing file is 10 MB.

Examples

The following example shows how to set the flip size to 512000:

```
Router(config)# sbc sbcbilling
Router(config-sbc)# sce
Router(config-sbc-sce)# billing
Router(config-sbc-sce-billing)# xml method
Router(config-sbc-sce-billing)# xml 1
Router(config-sbc-sce-billing-xml)# flipped-size 512000
```

Related Commands

Command	Description
xml (billing)	Configures the method index for XML billing.
method xml	Configures the billing method as XML for the Billing Manager.
ldr-check	Configures the time at which long duration records are checked.

fmtp (codec variant)

To define the format-specific parameters for a variant, use the **fmtp** command in the Codec variant configuration mode. To remove the defined format-specific parameters, use the **no** form of this command.

fmtp *fmtp-string*

no fmtp

Syntax Description

fmtp-string	The format-specific parameter string in the *name=value* format.

Command Default

No default behavior or values are available.

Command Modes

Codec variant configuration (config-sbc-sbe-codec-var-codec)

Command History

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

Usage Guidelines

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

To view the default format-specific parameters values associated with variants, use the **show sbc sbe codecs variant** command.

Examples

The following example shows how to define the format-specific parameters for a variant in the Codec variant configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec variant codec G723-H-1
Router(config-sbc-sbe-codec-var-codec)# fmtp bitrate=6.3
```

fmtp (session border controller)

To configure the default value of the format-specific parameters for Session Description Protocol (SDP), use the **fmtp** command in the Codec system configuration mode.To remove the default value of the format-specific parameters, use the **no** form of this command.

fmtp *fmtp-string*

no fmtp

Syntax Description

fmtp-string	The format-specific parameter string for SDP, in the *name=value* format.

Command Default

No default behavior or values are available.

Command Modes

Codec system configuration (config-sbc-sbe-codec-def)

Command History

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

Usage Guidelines

When a codec is converted from a standard to a variant representation, the default format-specific parameters, if any, are stripped out of the resulting SDP. However, when the format-specific parameters under codec variant in a codec variant contains parameters that match the default format-specific parameters for the variant's standard codec, those parameters are deemed matched in SDP if either one of the following is true:

- The exact '<*name*>=<*value*>' parameter has been received.
- No parameters that start with '<*name*>=' have been received.

To view the default format-specific parameters values associated with standard codecs, use the **show sbc sbe codecs** command.

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

Examples

The following example shows how to configure the default value of the format-specific parameters for SDP using the **fmtp** command in the Codec system configuration mode:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec system G723 id 4
Router(config-sbc-sbe-codec-def)# fmtp annexa=yes
```

force-signaling-peer

To force the Session Initiation Protocol (SIP) messages for either only out-of-dialog requests (that is, dialog-creating requests) or both in-dialog and out-of-dialog requests to go to a configured signaling peer, use the **force-signaling-peer** command in adjacency SIP configuration mode. To disable this feature, use the **no** form of this command.

force-signaling-peer [**all**]

no force-signaling-peer [**all**]

Syntax Description

all	Forces the hop to a configured signaling peer for both in-dialog requests and out-of-dialog requests.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

Release	Modification
Cisco IOS XE Release 2.4	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.
Cisco IOS XE Release 3.1S	The **all** keyword was added.

Usage Guidelines

While configuring redundant peer addresses, you must include the **all** keyword in the command. This is to force SIP messages for both in-call requests and out-of-call requests to go to the configured signaling peer.

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 force SIP messages to go to a configured signaling peer in the context of both in-dialog and out-of-dialog requests:

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

Related Commands

redundant peer	Configures an alternative signaling peer for an adjacency.

signaling-peer-priority	Configures the priority of a signaling peer on a SIP adjacency.
signaling-peer-switch	Configures a SIP adjacency to switch the signaling peer to an available destination.

g107a-factor

To set the Advantage (A) factor, use the **g107a-factor** command in the adjacency H.323 configuration mode or adjacency SIP configuration mode. The Advantage factor is one of the parameters used in the calculation of the MOS-CQE score. To remove the Advantage factor setting, use the **no** form of this command.

g107a-factor *factor-number*

no g107a-factor

Syntax Description

factor-number	Value of the Advantage factor. The range is from 0 to 20.

Command Default

By default, the value of *factor-number* is 0.

Command Modes

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

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the Advantage factor by using the **g107a-factor** command in the adjacency H.323 configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 adj1
Router(config-sbc-sbe-adj-h323)# g107a-factor 10
```

Related Commands

Command	Description
calc-moscqe	Specifies the percentage of calls that must be used to calculate the MOS-CQE score.
current15minutes	Specifies that QoS statistics must be calculated for 15-minute intervals.
current5minutes	Specifies that QoS statistics must be calculated for 5-minute intervals.
currentday	Specifies that statistics must be calculated for 24-hour intervals.
currenthour	Specifies that QoS statistics must be calculated for 60-minute intervals.

Command	Description
currentindefinite	Specifies that statistics must be calculated indefinitely, starting from the last explicit reset.
g107 bpl	Sets a value for the Packet-Loss Robustness (Bpl) factor.
g107 ie	Sets a value for the Equipment Impairment (Ie) factor.
local-jitter-ratio	Specifies the percentage of calls that must be used to calculate the local jitter ratio.
show sbc sbe adjacencies	Displays details of the adjacencies configured on the SBE.
show sbc sbe call-stats	Displays the statistics pertaining to all the calls on a the SBE.
snmp-server enable traps sbc	Enables SBC notification types.
statistics	Specifies the QoS statistic for which alert levels must be set.

g107 bpl

To set the Packet-Loss Robustness (Bpl) factor, use the **g107 bpl** command in the codec definition mode. The Packet-Loss Robustness factor is one of the parameters used in the calculation of the MOS-CQE score. To remove the Packet-Loss Robustness factor setting, use the **no** form of this command.

g107 bpl *factor-number*

no g107 bpl

Syntax Description

factor-number	Value of the Packet-Loss Robustness factor. The range is from 1 to 40.

Command Default

By default, the value of *factor-number* is 1.

Command Modes

Codec definition mode (config-sbc-sbe-codec-def)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the Packet-Loss Robustness factor by using the **g107 bpl** command in the adjacency H.323 configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec system PCMU id 0
Router(config-sbc-sbe-codec-def)# g107 bpl 30
```

Related Commands

Command	Description
calc-moscqe	Specifies the percentage of calls that must be used to calculate the MOS-CQE score.
current15minutes	Specifies that QoS statistics must be calculated for 15-minute intervals.
current5minutes	Specifies that QoS statistics must be calculated for 5-minute intervals.
currentday	Specifies that statistics must be calculated for 24-hour intervals.
currenthour	Specifies that QoS statistics must be calculated for 60-minute intervals.

Command	Description
currentindefinite	Specifies that statistics must be calculated indefinitely, starting from the last explicit reset.
g107 ie	Sets a value for the Equipment Impairment (Ie) factor.
g107a-factor	Sets a value for the Advantage (A) factor.
local-jitter-ratio	Specifies the percentage of calls that must be used to calculate the local jitter ratio.
show sbc sbe adjacencies	Displays details of the adjacencies configured on the SBE.
show sbc sbe call-stats	Displays the statistics pertaining to all the calls on a the SBE.
snmp-server enable traps sbc	Enables SBC notification types.
statistics	Specifies the QoS statistic for which alert levels must be set.

g107 ie

To set the Equipment Impairment (Ie) factor, use the **g107 ie** command in the codec definition mode. The Equipment Impairment factor is one of the parameters used in the calculation of the MOS-CQE score. To remove the Equipment Impairment factor setting, use the **no** form of this command.

g107 ie *factor-number*

no g107 ie

Syntax Description

factor-number	Value of the Equipment Impairment factor. The range is from 0 to 50.

Command Default

By default, the value of *factor-number* is 0.

Command Modes

Codec definition mode (config-sbc-sbe-codec-def)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the Equipment Impairment factor by using the **g107 ie** command in the adjacency H.323 configuration mode:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# codec system PCMU id 0
Router(config-sbc-sbe-codec-def)# g107 ie 20
```

Related Commands

Command	Description
calc-moscqe	Specifies the percentage of calls that must be used to calculate the MOS-CQE score.
current15minutes	Specifies that QoS statistics must be calculated for 15-minute intervals.
current5minutes	Specifies that QoS statistics must be calculated for 5-minute intervals.
currentday	Specifies that statistics must be calculated for 24-hour intervals.
currenthour	Specifies that QoS statistics must be calculated for 60-minute intervals.

Command	Description
currentindefinite	Specifies that statistics must be calculated indefinitely, starting from the last explicit reset.
g107 bpl	Sets a value for the Packet-Loss Robustness (Bpl) factor.
g107a-factor	Sets a value for the Advantage (A) factor.
local-jitter-ratio	Specifies the percentage of calls that must be used to calculate the local jitter ratio.
show sbc sbe adjacencies	Displays details of the adjacencies configured on the SBE.
show sbc sbe call-stats	Displays the statistics pertaining to all the calls on a the SBE.
snmp-server enable traps sbc	Enables SBC notification types.
statistics	Specifies the QoS statistic for which alert levels must be set.

generic-stream callee

To configure the generic media stream list settings for a callee, use the **generic-stream callee** command in the CAC table entry configuration mode. To deconfigure the generic media stream list settings, use the **no** form of this command.

generic-stream callee *generic-stream-list*

no generic-stream callee

Syntax Description

generic-stream-list	The name of the generic stream list. This generic stream list should be defined during the configuration of the stream list.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the generic media stream list settings for a callee using the **generic-stream callee** command in the CAC table entry mode:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)# exit
Router(config-sbc-sbe)# cac-policy-set 2
Router(config-sbc-sbe-cacpolicy)# cac-table 2
Router(config-sbc-sbe-cacpolicy-cactable)# table-type limit src-adjacency
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# generic-stream callee my-stream
```

generic-stream caller

To configure the generic media stream list settings for a caller, use the **generic-stream caller** command in the CAC table entry configuration mode. To deconfigure the generic media stream list settings, use the **no** form of this command.

generic-stream caller *generic-stream-list*

no generic-stream caller

Syntax Description

generic-stream-list	The name of the generic stream list. This generic stream list should be defined during the configuration of the stream list.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure the generic media stream list settings for a caller using the **generic-stream caller** command in the CAC table entry mode:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)# exit
Router(config-sbc-sbe)# cac-policy-set 2
Router(config-sbc-sbe-cacpolicy)# cac-table 2
Router(config-sbc-sbe-cacpolicy-cactable)# table-type limit src-adjacency
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# generic-stream caller my-stream
```

generic-stream media-type

To configure the media type for a generic stream, use the **generic-stream media-type** command in the Stream list configuration mode. To deconfigure the media type for a generic stream, use the **no** form of this command.

generic-stream media-type {**application** | **message**} **transport udp protocol** *protocol-name*

no generic-stream media-type {**application** | **message**} **transport udp protocol** *protocol-name*

Syntax Description

application	Specifies **application** as media type for the generic stream.
message	Specifies **message** as media type for the generic stream.
transport	Configures the transport protocol for the generic stream.
udp	Specifies the UDP protocol for the generic stream.
protocol	Specifies the protocol name for the generic stream.
protocol-name	The protocol name for the generic stream. The protocol name is case sensitive.

Command Default

No default behavior or values are available.

Command Modes

Stream list configuration (config-sbc-sbe-stream-list)

Command History

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

Usage Guidelines

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

Examples

The following example shows how to configure **application** as the media type for the generic stream using the **generic-stream media-type** command in the Stream list configuration mode:

```
Router# configure terminal
Router(config)# sbc mysbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)# generic-stream media-type application transport udp
protocol BFCP
```

Related Commands

Command	Description
show sbc sbe stream-list	Displays the stream lists that are present on the SBE.
stream-list	Configures a stream list.

generic-stream branch

To configure the generic media stream list settings for a caller or a callee, use the **generic-stream branch** command in the CAC table entry configuration mode. To unconfigure the generic media stream list settings, use the **no** form of this command.

generic-stream branch *generic-stream-list*

no generic-stream branch

Syntax Description

generic-stream-list	Name of the generic stream list. This list must be defined during the configuration of the stream list. The *generic-stream-list* can have a maximum of 30 characters which can include the underscore character (_) and alphanumeric characters. **Note** Except for the underscore character, do not use any special character to specify field names.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

Release	Modification
Cisco IOS XE Release 3.5S	This command was introduced on the Cisco ASR 1000 Series Aggregation Services Routers.

Usage Guidelines

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

Examples

The following example shows how to configure the generic media stream list settings by using the **generic-stream branch** command:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# sbc mySBC
Router(config-sbc)# sbe
Router(config-sbc-sbe)# stream-list my-stream
Router(config-sbc-sbe-stream-list)# exit
Router(config-sbc-sbe)# cac-policy-set 2
Router(config-sbc-sbe-cacpolicy)# cac-table 2
Router(config-sbc-sbe-cacpolicy-cactable)# table-type limit src-adjacency
Router(config-sbc-sbe-cacpolicy-cactable)# entry 1
Router(config-sbc-sbe-cacpolicy-cactable-entry)# generic-stream branch my-stream
```

Related Commands

Command	Description
generic-stream callee	Configures the generic media stream list settings for a callee.
generic-stream caller	Configures the generic media stream list settings for a caller.

global

To enter the mode for configuring blacklisting to apply to all addresses, use the **global** command in the SBE blacklist configuration mode.

global

Syntax Description

This command has no arguments or keywords.

Command Default

No default behavior or values are available.

Command Modes

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how to enter the mode for configuring blacklisting to apply to all addresses:

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

Related Commands

Command	Description
blacklist	Enters the mode for configuring the default event limits for the source addresses in a given VPN.
ipv4 (blacklist)	Enters the mode for applying blacklisting options to a single IP address.
reason	Enters a mode for configuring a limit to a specific event type on the source.
timeout	Defines the length of time that packets from the source are blocked, should the limit be exceeded.
trigger-period	Defines the period over which events are considered.
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.

group (session border controller)

To configure an adjacency to an adjacency group, use the **group** command in the appropriate adjacency mode. To remove the adjacency from the specified group, use the **no** form of this command.

group *word*

no group *word*

Syntax Description

word	Indicates the group name for the adjacency. The maximum size is 32 characters.

Command Default

No default behavior or values are available.

Command Modes

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

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

Command History

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

Usage Guidelines

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

Examples

The following example shows how the **group** command assigns a SIP adjacency named sipGW to adjacency group named InternetEth0:

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency sip sipGW
Router(config-sbc-sbe-adj-sip)# group InternetEth0
```

The following example shows how the **group** command assigns an H.323 adjacency named H323ToIsp42 to an adjacency group named Isp42.

```
Router# configure terminal
Router(config)# sbc mySbc
Router(config-sbc)# sbe
Router(config-sbc-sbe)# adjacency h323 H323ToIsp42
Router(config-sbc-sbe-adj-h323)# group Isp42
```