



## cnBNG CP Commands

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This guide describes the CLI commands that are used to configure a control plane in cnBNG.

Some keywords and commands are common across multiple commands and configuration modes respectively. Use the information in the Command Modes section only as a reference to navigate to the command in the applicable configuration modes.

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## aaa

Configures AAA-based user management parameters.

---

### Command Modes

Exec

---

### Syntax Description

```
aaa { authentication { users list_of_local_users admin change-password
old-password user_password new-password user_password confirm-password
user_password } }
```

#### **users *list\_of\_local\_users***

Specify the user name.

Must be a string.

#### **old-password *user\_password***

Specify the user's current password.

Must be a string.

#### **new-password *user\_password***

Specify the user's new password.

Must be a string.

#### **confirm-password *user\_password***

Reenter the user's new password.

Must be a string.



**Usage Guidelines**

Use this command to configure the AAA based user management parameters.

# cd

Configures the change directory command.

**Command Modes**

Exec

**Syntax Description**

**cd** *directory*.ssh

**directory**

Specify the directory path.

Must be an alphanumeric string.

**Usage Guidelines**

Use this command to configure the change directory command.

# cdl clear

Configures the Cisco Common Data Layer (CDL) parameters to delete the database sessions.

**Command Modes**

Exec

**Syntax Description**

**cdl clear sessions** [ **db-name** *db\_name* | **filter** { **condition** { **ends-with** | **match** | **starts-with** } **key** *key\_value* } | **map-id** *map\_id* ]

**db-name db\_name**

Specifies the database name to be queried for deleting the data.

Must be a string of 1 to 16 characters.

**key key\_value**

Specifies the query value.

Must be a string of 0 to 512 characters.

**map-id map\_id**

Specifies the map ID to delete the data for a map.

Must be an integer in the range of 0-1024.

**filter condition { ends-with | match | starts-with }**

Specify the query expression to filter the results of query.

**Usage Guidelines**

Use this command to delete the CDL database sessions.

# cdl show sessions

Configures the CDL parameters to display the session details.

---

## Command Modes

Exec

---

## Syntax Description

```
cdl show sessions count { detailed { db-name db_name | filter { condition
{ ends-with | match | starts-with } | key key_value } | limit limit | map-id
map_id } | summary { db-name db_name | filter { condition { ends-with |
match | starts-with } | key key_value } | limit limit | map-id map_id }
```

### count

Display the session count information.

### detailed

Display the session details with data.

### summary

Display the session details without data.

### db-name *db\_name*

Specifies the database name to be queried for displaying the session details.

Must be a string of 1 to 16 characters.

### key *key\_value*

Specifies the query value.

Must be a string of 0 to 512 characters.

### map-id *map\_id*

Specifies the map ID to display the data for a map.

Must be an integer in the range of 0-1024.

### limit *limit*

Specifies the maximum number of records to display.

Must be an integer in the range of 1 to 500 characters.

### filter condition { ends-with | match | starts-with }

Specify the query expression to filter the results of query.

---

## Usage Guidelines

Use this command to display the session details.

## cdl show status

Configures the CDL parameters to display the status of the database.

**Command Modes** Exec

**Syntax Description** `cdl status db-name db_name`

**db-name db\_name**

Specifies the database name for displaying the corresponding status.

Must be a string of 1 to 16 characters.

**Usage Guidelines** Use this command to display the status of the queried database.

## clear ipam

Clears IPAM operational data.

**Command Modes** Exec

**Syntax Description** `clear ipam type upf upf_name`

**upf upf\_name**

Specify the name of the user plane.

Must be a string of 1-64 characters.

**type**

Specify the information to clear.

Must be one of the following:

- **quarantined-routes**: Specify to clear quarantined routes on IPAM that failed during route-delete to UPF.

**Usage Guidelines** Use this command to clear IPAM operational data.

## clear l2tp-tunnel

Clears l2tp tunnel.

**Command Modes** Exec

**Syntax Description** `clear l2tp tunnel { upf upf_name } [ tunnel-type tunnel_type | tunnel-id tunnel_id | force ]`

**force**

Specify to force tunnel deletion, even if UP is down.

**tunnel-id *tunnel\_id***

Specify the tunnel ID.

Must be an integer in the range of 1-65535.

**tunnel-type *tunnel\_type***

Specify the tunnel type.

Must be one of the following:

- lac
- lns

**upf *upf\_name***

Specify name of the User Plane Function.

Must be a string of 1-64 characters.

**Usage Guidelines**

Use this command to clear l2tp tunnel.

## clear subscriber

Clears BNG subscriber data.

**Command Modes**

Exec

**Syntax Description**

```
clear subscriber type [ upf upf_name | port-id upf_port_id | mac mac_address |
sublabel subscriber_label | up-subs-id up_subscriber_id | ipv4-pool ipv4_pool_name |
| ipv6-addr-pool ipv6_address_pool_name | ipv6-pfx-pool ipv6_prefix_pool_name |
ipv4-range ipv4_address_range | ipv6-addr-range ipv6_address_range | ipv6-pfx-range
ipv6_prefix_range | ppp-type ppp_session_type | session-id session_id | tunnel-id
tunnel_id ]
```

**force**

Specify to force session deletion, even if UP is down.

**ipv4-pool *ipv4\_pool\_name***

Specify the IPv4 address pool name.

Must be a string of 1-64 characters.

**ipv4-range *ipv4\_address\_range***

Specify the IPv4 address range in the format "*poolName/start-ip*".

Must be a string of 1-64 characters.

**ipv6-addr-pool *ipv6\_address\_pool\_name***

Specify the IPv6 address pool name.

Must be a string of 1-64 characters.

**ipv6-addr-range *ipv6\_address\_range***

Specify the IPv6 address range in the format "*poolName/start-ip*".

Must be a string of 1-64 characters.

**ipv6-pfx-pool *ipv6\_prefix\_pool\_name***

Specify the IPv6 prefix pool name.

Must be a string of 1-64 characters.

**ipv6-pfx-range *ipv6\_prefix\_range***

Specify the IPv6 prefix range in the format "*poolName/start-pfx*".

Must be a string of 1-64 characters.

**mac *mac\_address***

Specify the MAC address in the format "*aabb.ccdd.eeff*".

Must be a string of 1-64 characters.

**port-id *upf\_port\_id***

Specify the user plane function port ID in the "*upf/port-id*" format.

Must be a string of 1-64 characters.

**ppp-type *ppp\_session\_type***

Specify the PPP session type.

Must be one of the following:

- **lac**
- **pta**

**session-id *session\_id***

Specify the session ID information.

Must be a string of 1-64 characters.

**sublabel *subscriber\_label***

Specify the subscriber label.

Must be a string of 1-64 characters.

**tunnel-id *tunnel\_id***

Specify the tunnel ID information.

Must be a string of 1-64 characters.

**upf *upf\_name***

Specify the user plane function name.

Must be a string of 1-64 characters.

***type***

Specify the type.

Must be one of the following:

- **dhcp**
- **lns**
- **pppoe**
- **sessmgr**

---

**Usage Guidelines** Use this command to clear BNG subscriber data.

## clear subscriber

Clears subscriber data.

---

**Command Modes** Exec

---

**Syntax Description** `clear subscriber { all | gr-instance gr_instance | imei imei_id | namespace namespace | nf-service nf_service | supi supi_id | config_specific_options }`

**all**

Specify to remove all subscriber data.

**gr-instance *gr\_instance***

Specify the subscribers from the GR instance.

**imei *imei\_id***

Specify the International Mobile Equipment Identity.

Must be a string of 15-16 characters.

**namespace *namespace***

NOTE: This keyword is deprecated, use nf-service instead. Specifies the product namespace under which to search.

Default Value: cisco-mobile-infra:none.

**nf-service *nf\_service***

Specify the network function service under which to search.

Default Value: cisco-mobile-infra:none.

**supi *supi\_id***

Specify to remove subscriber data associated with the SUPI ID.

Must be a string of 1-63 characters.

---

**Usage Guidelines** Use this command to clear subscriber data.

## client http header

Configures HTTP header parameters.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** `client http header user-agent user_agent_header`

**user-agent *user\_agent\_header***

Specify the user agent header.

Must be one of the following:

- **app-name**
- **cluster-name**
- **disable**

Default Value: app-name.

---

**Usage Guidelines** Use this command to configure HTTP header parameters.

## client http ping

Configures HTTP ping parameters.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** `client http ping { [ interval ping_interval ] [ timeout ping_timeout ] }`

**interval *ping\_interval***

Specify, in milliseconds, the time interval between two HTTP pings.

Must be an integer in the range of 0-30000.

Default Value: 10000.

**timeout *ping\_timeout***

Specify, in milliseconds, the ping timeout duration to detect if remote host is down.

Must be an integer in the range of 0-15000.

Default Value: 5000.

---

**Usage Guidelines** Use this command to configure HTTP ping parameters.

## client inbound interface

Configures inbound client interface parameters.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** **client inbound interface** *interface\_name*

---

**Usage Guidelines** Use this command to configure inbound client interface parameters. The CLI prompt changes to the Interface Configuration mode (config-interface-<interface\_name>).

## client inbound interface limit overload

Configures overload reject code parameter.

---

**Command Modes** Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface\_name*)

---

**Syntax Description** **limit overload reject-code** *reject\_code*

**reject-code *reject\_code***

Specify the response code to be used when pending limit exceeds.

Must be an integer.

---

**Usage Guidelines** Use this command to configure the overload reject code parameter.

## client inbound interface limit pending

Configures pending request limit parameter.

---

**Command Modes** Exec > Global Configuration (config)



<b>Syntax Description</b>	<code>client inbound limit pending request <i>pending_request_limit</i></code>
<b>Command Modes</b>	Exec > Global Configuration (config) > Interface Configuration (config-interface- <i>interface_name</i> )
<b>Syntax Description</b>	<p><code>limit pending request <i>pending_request_limit</i></code></p> <p><b>request <i>pending_request_limit</i></b></p> <p>Specify the maximum pending request limit to allow.</p> <p>Must be an integer.</p> <p>Default Value: 10240.</p>
<b>Usage Guidelines</b>	Use this command to configure the pending request limit parameter.

## client inbound limit overload

Configures overload reject code parameter.

<b>Command Modes</b>	Exec > Global Configuration (config) > Interface Configuration (config-interface- <i>interface_name</i> )
<b>Syntax Description</b>	<p><code>limit overload reject-code <i>reject_code</i></code></p> <p><b>reject-code <i>reject_code</i></b></p> <p>Specify the response code to be used when pending limit exceeds.</p> <p>Must be an integer.</p>
<b>Usage Guidelines</b>	Use this command to configure the overload reject code parameter.

## client inbound limit pending

Configures pending request limit parameter.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<code>client inbound limit pending request <i>pending_request_limit</i></code>
<b>Command Modes</b>	Exec > Global Configuration (config) > Interface Configuration (config-interface- <i>interface_name</i> )
<b>Syntax Description</b>	<p><code>limit pending request <i>pending_request_limit</i></code></p> <p><b>request <i>pending_request_limit</i></b></p> <p>Specify the maximum pending request limit to allow.</p> <p>Must be an integer.</p> <p>Default Value: 10240.</p>

**Usage Guidelines** Use this command to configure the pending request limit parameter.

## client outbound host ping

Configures host ping parameters.

**Command Modes** Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** `client outbound host ping backoff backoff_interval timeout ping_timeout interval ping_interval`

### **backoff** *backoff\_interval*

Specify, in milliseconds, the backoff time interval to wait when remote host is detected down before pinging again.

Must be an integer in the range of 0-3600000.

Default Value: 0.

### **interval** *ping\_interval*

Specify the time interval, in milliseconds, between two pings.

Must be an integer in the range of 0-30000.

Default Value: 0.

### **timeout** *ping\_timeout*

Specify the ping timeout duration, in milliseconds, to detect remote host down.

Must be an integer in the range of 0-15000.

Default Value: 0.

**Usage Guidelines** Use this command to configure host ping parameters.

## client outbound interface

Configures outbound client interface parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `client outbound interface interface_name`

### **interface** *interface\_name*

Specify the interface.

**Usage Guidelines** Use this command to configure outbound client interface parameters. The CLI prompt changes to the Interface Configuration mode (config-interface-<interface\_name>).

# client outbound interface host ping

Configures host ping parameters.

**Command Modes** Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** **client outbound host ping backoff** *backoff\_interval* **timeout** *ping\_timeout* **interval** *ping\_interval*

**backoff** *backoff\_interval*

Specify, in milliseconds, the backoff time interval to wait when remote host is detected down before pinging again.

Must be an integer in the range of 0-3600000.

Default Value: 0.

**interval** *ping\_interval*

Specify the time interval, in milliseconds, between two pings.

Must be an integer in the range of 0-30000.

Default Value: 0.

**timeout** *ping\_timeout*

Specify the ping timeout duration, in milliseconds, to detect remote host down.

Must be an integer in the range of 0-15000.

Default Value: 0.

**Usage Guidelines** Use this command to configure host ping parameters.

# client outbound interface limit consecutive failure

Configures consecutive failure parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **client outbound limit consecutive failure codes** *failure\_codes* **count** *consecutive\_failure\_count*

**codes** *failure\_codes*

Specify the list of failure codes to be considered, such as timeout, 503, etc.

Must be a string.

You can configure a maximum of 10 elements with this keyword.

**count *consecutive\_failure\_count***

Specify the consecutive failure count limit to detect remote host as down.

Must be an integer.

Default Value: 0.

**Usage Guidelines**

Use this command to configure the consecutive failure parameters.

## client outbound interface limit pending

Configures pending response message limit parameter.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**client outbound limit pending response** *response\_message\_limit*

**Command Modes**

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**limit pending response** *response\_message\_limit*

**response *response\_message\_limit***

Specify the pending response message limit to detect remote host as down.

Must be an integer.

Default Value: 1024.

**Usage Guidelines**

Use this command to configure the pending response message limit parameter.

## client outbound limit consecutive failure

Configures consecutive failure parameters.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**client outbound limit consecutive failure codes** *failure\_codes* **count**  
*consecutive\_failure\_count*

**codes *failure\_codes***

Specify the list of failure codes to be considered, such as timeout, 503, etc.

Must be a string.

You can configure a maximum of 10 elements with this keyword.

**count *consecutive\_failure\_count***

Specify the consecutive failure count limit to detect remote host as down.

Must be an integer.

Default Value: 0.

---

**Usage Guidelines**

Use this command to configure the consecutive failure parameters.

## client outbound limit pending

Configures pending response message limit parameter.

---

**Command Modes**

Exec > Global Configuration (config)

---

**Syntax Description**

**client outbound limit pending response** *response\_message\_limit*

---

**Command Modes**

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface\_name*)

---

**Syntax Description**

**limit pending response** *response\_message\_limit*

**response** *response\_message\_limit*

Specify the pending response message limit to detect remote host as down.

Must be an integer.

Default Value: 1024.

---

**Usage Guidelines**

Use this command to configure the pending response message limit parameter.

## commit

Configures the commit parameters.

---

**Command Modes**

Exec

---

**Syntax Description**

**commit** [ **abort** { **persist-id** *persist\_id* } | **confirm** { **persist-id** *persist\_id* } | **persist-id** *persist\_id* ]

**abort** **persist-id** *persist\_id*

Specify to abort commit. Specify the persistence ID for the commit operation.

Must be an integer.

**confirm** **persist-id** *persist\_id*

Specify to confirm commit. Specify the persistence ID for the commit operation.

Must be an integer.

**persist-id** *persist\_id*

Specify the persistence ID for the commit operation.

Must be an integer.

**Usage Guidelines** Use this command to configure the commit parameters.

## compare

Compares the running configuration to another configuration or a file.

**Command Modes** Exec

**Syntax Description** `compare file { filename [.kube | .ssh/] | configuration }`

***filename* [.kube | .ssh/]**

Specify the file name or the directory path of the file to be compared.

Must be a string.

***configuration***

Specify the desired configuration to be compared against.

Must be a string.

**Usage Guidelines** Use this command to compare the files.

## config

Manipulates the software configuration information.

**Command Modes** Exec

**Syntax Description** `config [ exclusive | no-confirm | shared | terminal ]`

***exclusive***

Specify to enter the exclusive configuration mode.

***no-confirm***

Specify to apply the command without asking for confirmation.

***shared***

Specify to enter the shared configuration mode.

***terminal***

Specify to enter the terminal configuration mode.

**Usage Guidelines** Use this command to manipulate the software configuration information.

## config-error info

Displays configuration error information.

**Command Modes** Exec

**Syntax Description** `show config-error [ info ]`

**Usage Guidelines** Use this command to view configuration error information.

## datastore dbs

Configures DBS parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `datastore dbs db_name`

***db\_name***

Specify name of the DBS.

Must be a string.

**Usage Guidelines** Use this command to configure the DBS parameters. The CLI prompt changes to the DBS Configuration mode (config-dbs-<db\_name>).

## datastore dbs endpoints

Configures endpoint parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `datastore session-db endpoints host_name port port_number`

**Command Modes** Exec > Global Configuration (config) > DBS Configuration (config-dbs-*db\_name*)

**Syntax Description** `endpoints host_name port port_number`

***endpoints host\_name***

Specify name of the host.

Must be a string.

***port port\_number***

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure endpoint parameters.

## datastore notification-ep

Configures notification endpoint parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `datastore notification-ep { [ host host_name ] [ port port_number ] }`

**host *host\_name***

Specify name of the host.

Must be a string.

**port *port\_number***

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure notification endpoint parameters.

## datastore session-db

Configures Session DB parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `datastore session-db slice-name slice_name`

**Usage Guidelines** Use this command to configure Session DB parameters.

## datastore session-db endpoints

Configures endpoint parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `datastore session-db endpoints host_name port port_number`

**Command Modes** Exec > Global Configuration (config) > DBS Configuration (config-dbs-*db\_name*)

**Syntax Description** `endpoints host_name port port_number`



**endpoints *host\_name***

Specify name of the host.

Must be a string.

**port *port\_number***

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure endpoint parameters.

## deployment

Configures product configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **deployment** { **app-name** *application\_name* | **cluster-name** *cluster\_name* | **dc-name** *datacenter\_name* | **logical-nf-instance-id** *logical\_nf\_instance\_id* | **model** *deployment\_model* }

**app-name *application\_name***

Specify the application name.

Must be a string.

**cluster-name *cluster\_name***

Specify the cluster name.

Must be a string.

**dc-name *datacenter\_name***

Specify the datacenter name.

Must be a string.

**logical-nf-instance-id *logical\_nf\_instance\_id***

Specify the logical NF instance ID.

Must be an integer.

Default Value: 0.

**model *deployment\_model***

Specify the deployment model. Default: Large.

Must be one of the following:

- **small**

**Usage Guidelines** Use this command to configure product configuration.

## deployment resource

Configures CPU resources.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `deployment resource cpu cpu_resources`

**cpu *cpu\_resources***

Specify the CPU resources available in millicores.

Must be an integer in the range of 2000-1000000.

Default Value: 18000.

**Usage Guidelines** Use this command to configure CPU resources.

## describe

Displays the command information.

**Command Modes** Exec

**Syntax Description** `describe command`

***command***

Specify the command name to display detailed information about the command.

The command must be one of the following:

- **aaa**
- **cd**
- **cdl**
- **commit**
- **compare**
- **config**
- **describe**
- **dump**
- **exit**

- **help**
- **history**
- **id**
- **idle-timeout**
- **ignore-leading-space**
- **job**
- **leaf-prompting**
- **license**
- **logout**
- **monitor**
- **no**
- **paginate**
- **quit**
- **rcm**
- **screen-length**
- **screen-width**
- **send**
- **show**
- **show-defaults**
- **smiuser**
- **system**
- **terminal**
- **timestamp**
- **who**

---

**Usage Guidelines**

Use this command to display the command specific information.

## diagnostics

Displays diagnostics information.

---

**Command Modes**

Exec

---

**Syntax Description**

**show diagnostics**

**Usage Guidelines** Use this command to view diagnostics information.

## diagnostics info

Displays diagnostics information.

**Command Modes** Exec

**Syntax Description** `show diagnostics info`

**Usage Guidelines** Use this command to view diagnostics information.

## dump transactionhistory

Creates dump of transaction history.

**Command Modes** Exec

**Syntax Description** `dump transactionhistory`

**Usage Guidelines** Use this command to create dump of transaction history.

## edr

Configures EDR reporting parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `edr reporting reporting_status`

**reporting reporting\_status**

Specify to enable or disable EDR reporting.

Must be one of the following:

- **disable**
- **enable**

Default Value: disable.

**Usage Guidelines** Use this command to configure EDR parameters.

## edr edrsubscribers

Configures subscriber EDR reporting.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<b>edr subscribers</b> <i>subscribers_for_edr_reporting</i>
<b>Syntax Description</b>	<b>edr reporting { enable   disable } subscribers</b> <i>subscribers_for_edr_reporting</i>  <b>subscribers</b> <i>subscribers_for_edr_reporting</i> Specify the subscribers to enable EDR reporting. For example, imsi-123456789012345. Must be a string. You can configure a maximum of 10 elements with this keyword.
<b>Usage Guidelines</b>	Use this command to configure subscriber EDR reporting.

## edr file files

Configures EDR file parameters.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<b>edr file { transaction   transaction-collision } [ reporting</b> <i>reporting_status</i> ] [ <b>verbose</b> <i>verbosity_status</i> ]  <b>file { transaction   transaction-collision }</b> Specify the EDR file.  <b>reporting</b> <i>reporting_status</i> Specify to enable or disable reporting of this file. Must be one of the following: <ul style="list-style-type: none"> <li>• <b>disable</b></li> <li>• <b>enable</b></li> </ul> Default Value: disable.  <b>verbose</b> <i>verbosity_status</i> Specify to enable or disable field description or long names in the file. Must be one of the following: <ul style="list-style-type: none"> <li>• <b>disable</b></li> <li>• <b>enable</b></li> </ul> Default Value: disable.
<b>Usage Guidelines</b>	Use this command to configure EDR file parameters.

## edr file files disable

Disables procedure IDs.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*)

**Syntax Description** **disable procedure-id** *procedure\_ids*

**procedure-id** *procedure\_ids*

Specify the procedure ID value(s)/name(s).

Must be a string.

**Usage Guidelines** Use this command to disable specific procedure IDs.

## edr file files flush

Configures EDR file flush parameters.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*)

**Syntax Description** **flush interval** *file\_flush\_interval*

**interval** *file\_flush\_interval*

Specify, in milliseconds, the file flush interval.

Must be an integer.

Default Value: 1000.

**Usage Guidelines** Use this command to configure the EDR file flush parameters.

## edr file files limit

Configures EDR file limit parameters.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*)

**Syntax Description** **limit** { [ **count** *max\_files\_to\_preserve* ] [ **size** *max\_single\_file\_size* ] }

**count** *max\_files\_to\_preserve*

Specify the maximum number of files to be preserved.

Must be an integer.

Default Value: 10.

**size *max\_single\_file\_size***

Specify the maximum single file size limit in MB.

Must be an integer.

Default Value: 100.

**Usage Guidelines** Use this command to configure the EDR file limit parameters.

## edr file files procedure-id disable-event-id

Disables transaction-level procedure ID configuration.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*)

**Syntax Description** **procedure-id** *procedure\_id*

**procedure** *procedure\_id*

Specify the procedure ID value/name.

Must be a string.

**Usage Guidelines** Use this command to disable transaction-level procedure ID configuration.

## edr file files procedure-id disable-event-id disable-inner disable

Disables event IDs.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*) > Procedure ID Configuration (config-procedure-id-*procedure\_id*)

**Syntax Description** **disable event-id** *event\_ids*

**event-id** *event\_ids*

Specify the event ID value(s)/name(s).

Must be a string.

**Usage Guidelines** Use this command to disable event IDs.

## edr file files procedure-id disable-event-id disable-inner event-id disable-field-id

Disables procedure-level event ID configuration.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*) > Procedure ID Configuration (config-procedure-id-*procedure\_id*)

**Syntax Description** **event-id** *event\_id*

**event** *event\_id*

Specify the event ID value/name.

Must be a string.

**Usage Guidelines** Use this command to disable procedure-level event ID configuration.

## edr file files procedure-id disable-event-id disable-inner event-id disable-field-id disable

Disables field IDs.

**Command Modes** Exec > Global Configuration (config) > EDR File Configuration (config-file-*edr\_file*) > Procedure ID Configuration (config-procedure-id-*procedure\_id*)

**Syntax Description** **disable field-id** *field\_ids*

**field-id** *field\_ids*

Specify the field ID value(s)/name(s).

Must be a string.

**Usage Guidelines** Use this command to disable field IDs.

## endpoint all

Displays endpoint status.

**Command Modes** Exec

**Syntax Description** **show endpoint all**

**Usage Guidelines** Use this command to view endpoint status for all endpoints.

## endpoint info

Displays endpoint information.

**Command Modes** Exec



---

**Syntax Description** `show endpoint info`

---

**Usage Guidelines** Use this command to view endpoint information.

## exit

Exits the current configuration mode and returns to the previous configuration mode.

---

**Command Modes** Exec

---

**Syntax Description** `exit`

---

**Usage Guidelines** Use this command to exit the current configuration mode and return to the previous configuration mode. When used in the Exec mode, exits the management session.

## geo maintenance

Configures Geo Admin Controller to enable or disable maintenance mode.

---

**Command Modes** Exec

---

**Syntax Description** `geo maintenance mode { false | true }`

`mode { false | true }`

Specify to enable or disable maintenance mode. To enable, set to true.

Must be one of the following:

- `false`
- `true`

Default Value: false.

---

**Usage Guidelines** Use this command to configure Geo Admin Controller to enable or disable maintenance mode.

## geo reset-role

Configures Geo Admin Controller for reset role.

---

**Command Modes** Exec

---

**Syntax Description** `geo reset-role { [ instance-id instance_id ] [ role new_role ] }`

**instance-id** *instance\_id*

Specify the instance ID for geo command.

**role *new\_role***

Specify the new role for the specified site.

**Usage Guidelines**

Use this command to configure Geo Admin Controller for reset role.

## geo switch-role

Configures Geo Admin Controller for trigger failover.

**Command Modes**

Exec

**Syntax Description**

```
geo switch-role { [ failback-interval failback_interval ] [ instance-id
instance_id ] [ role new_role ] }
```

**failback-interval *failback\_interval***

Specify, in seconds, the interval between notify failover and actual failover.

Must be a string.

**instance-id *instance\_id***

Specify the instance ID for geo command.

**role *new\_role***

Specify the new role for the specified site.

**Usage Guidelines**

Performs instance role manipulation. Use this command to configure Geo Admin Controller for trigger failover.

## geomonitor podmonitor pods

Configures configuration of pods to be monitored.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

```
geomonitor podmonitor pods pod_name [ [ failedReplicaPercent
failed_replica_precentage ] [ retryCount retry_count ] [ retryFailOverInterval
retry_interval ] [ retryInterval retry_interval ] ]
```

**failedReplicaPercent *failed\_replica\_precentage***

Specify the percentage of failed replica after which GR failover will get triggered.

Must be an integer in the range of 10-100.

**pods *pod\_name***

Specify the name of the pod to be monitored.

Must be a string.

**retryCount *retry\_count***

Specify the counter value to retry if pod failed to ping after which pod is marked as down.

Must be an integer in the range of 1-10.

**retryFailOverInterval *retry\_interval***

Specify, in milliseconds, the retry interval if pod ping fails.

Must be an integer in the range of 200-10000.

**retryInterval *retry\_interval***

Specify, in milliseconds, the retry interval if pod ping is successful.

Must be an integer in the range of 200-10000.

**Usage Guidelines**

Use this command to configure configuration of pods to be monitored.

## geomonitor remotecclustermonitor

Configures remote cluster monitoring configuration.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**geomonitor remotecclustermonitor retryCount *retry\_count* retryInterval *retry\_interval***

**retryCount *retry\_count***

Specify the retry count if remote cluster is not reachable. To disable, set to 0.

Must be an integer in the range of 0-10.

Default Value: 3.

**retryInterval *retry\_interval***

Specify, in milliseconds, the retry interval after which status of the remote site will be fetched.

Must be an integer in the range of 200-50000.

Default Value: 3000.

**Usage Guidelines**

Use this command to configure remote cluster monitoring configuration.

## geomonitor trafficMonitor

Configures traffic monitoring configuration.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description** `geomonitor trafficMonitor thresholdCount threshold_count thresholdInterval threshold_interval`

**thresholdCount *threshold\_count***

Specify the number of calls received for standby instance. To disable, set to 0.

Must be an integer in the range of 0-10000.

Default Value: 0.

**thresholdInterval *threshold\_interval***

Specify, in milliseconds, the maximum duration window to hit the threshold count value.

Must be an integer in the range of 100-10000.

Default Value: 3000.

**Usage Guidelines** Use this command to configure traffic monitoring configuration.

## geomonitor vipmonitor

Configures VIP monitoring configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `geomonitor vipmonitor instance-id instance_id`

**Usage Guidelines** Use this command to configure VIP monitoring configuration.

## geomonitor vipmonitor instance vips

Configures VIP monitoring configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `geomonitor vipmonitor instance instance_id vips vip_interface_name [ retryCount retry_count | retryFailOverInterval retry_interval | retryInterval retry_interval | vipIp vip_ip | vipPort vip_port_number ]`

**retryCount *retry\_count***

Specify the counter value to retry if VIP failed to ping after which the VIP is marked as down.

Must be an integer in the range of 1-10.

**retryFailOverInterval *retry\_interval***

Specify, in milliseconds, the retry interval if VIP failed to ping.

Must be an integer in the range of 200-10000.

**retryInterval** *retry\_interval*

Specify, in milliseconds, the retry interval if VIP pinged successfully.

Must be an integer in the range of 200-10000.

**viplp** *vip\_ip*

Specify the IPv4 detail.

Must be a string.

**vipPort** *vip\_port\_number*

Specify the diagnostic port number.

Must be an integer.

**vip\_interface\_name**

Specify the name of the interface to monitor.

Must be a string.

**Usage Guidelines**

Use this command to configure VIP monitoring configuration.

## helm

Configures Helm configuration parameters.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**helm default-repository** *default\_repository\_name*

**default-repository** *default\_repository\_name*

Specify the name of the default Helm repository.

**Usage Guidelines**

Use this command to configure Helm configuration parameters.

## helm charts

Displays Helm release details.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**charts**

**Usage Guidelines**

Use this command to view Helm release details.

# helm repository

Configures Helm repository parameters.

---

## Command Modes

Exec > Global Configuration (config)

---

## Syntax Description

**helm repository** *helm\_repo\_name* [ [ **access-token** *access\_token* ] [ **password** *helm\_repo\_password* ] [ **url** *helm\_repo\_url* ] [ **username** *helm\_repo\_username* ] ]

### **access-token** *helm\_repo\_access\_token*

Specify the access token for the Helm repository.

Must be a string.

### **helm repository** *helm\_repo\_name*

Specify the name of the Helm repository.

Must be a string.

### **password** *helm\_repo\_password*

Specify the password for the Helm repository.

### **url** *helm\_repo\_url*

Specify the URL for the Helm repository.

Must be a string.

### **username** *helm\_repo\_username*

Specify the username for the Helm repository.

Must be a string.

---

## Usage Guidelines

Use this command to configure the Helm repository parameters.

# help

Displays help information for a specified command.

---

## Command Modes

Exec

---

## Syntax Description

**help** *command*

### **command**

Specify the command name to display the corresponding help information.

The command must be one of the following:

- **aaa**
- **cd**
- **cdl**
- **commit**
- **compare**
- **config**
- **describe**
- **dump**
- **exit**
- **help**
- **history**
- **id**
- **idle-timeout**
- **ignore-leading-space**
- **job**
- **leaf-prompting**
- **license**
- **logout**
- **monitor**
- **no**
- **paginate**
- **quit**
- **rcm**
- **screen-length**
- **screen-width**
- **send**
- **show**
- **show-defaults**
- **smiuser**
- **system**
- **terminal**
- **timestamp**

- **who**

**Usage Guidelines** Use this command to view help information for a specified command.

## history

Configures the command history cache size.

**Command Modes** Exec

**Syntax Description** **history** *history\_size*

### *history\_size*

Specify the command history cache size.

Must be an integer in the range of 0-1000.

**Usage Guidelines** Use this command to configure the command history cache size.

## id

Displays user ID information.

**Command Modes** Exec

**Syntax Description** **id**

**Usage Guidelines** Use this command to view the user ID information.

## idle-timeout

Configures the maximum duration a command can remain idle in seconds after which the system automatically terminates the connection.

**Command Modes** Exec

**Syntax Description** **idle-timeout** *duration*

### *duration*

Specify the idle timeout duration in seconds.

Must be an integer in the range of 1-8192.

**Usage Guidelines** Use this command to configure the maximum duration a command can remain idle.



## ignore-leading-space

Configures whether to ignore or consider the leading whitespace at the beginning of a command.

### Command Modes

Exec

### Syntax Description

**ignore-leading-space** { **false** | **true** }

**{ false | true }**

Specify false to ignore the leading whitespace, and true to consider it.

Must be either "false" or "true".

### Usage Guidelines

Use this command to configure whether to ignore or consider leading whitespace at the beginning of a command.

## infra metrics experimental

Configures the experimental metrics version to be enabled.

### Command Modes

Exec > Global Configuration (config)

### Syntax Description

**infra metrics experimental version** *experimental\_metrics\_version*

**version** *experimental\_metrics\_version*

Specify the experimental metrics version to be enabled.

Must be an integer in the range of 0-4.

Default Value: 0.

### Usage Guidelines

Use this command to configure the experimental metrics version to be enabled.

## infra metrics verbose verboseLevels

Configures verbose configuration parameters.

### Command Modes

Exec > Global Configuration (config)

### Syntax Description

**infra metrics verbose podType** *pod\_type* **level** *verbose\_level*

**level** *verbose\_level*

Specify the verbosity level.

Must be one of the following:

- debug

- **production**
- **trace**

Default Value: trace.

#### **podType** *pod\_type*

Specify the pod type.

Must be one of the following:

- **load-balancer**
- **protocol**
- **service**

---

**Usage Guidelines** Use this command to configure verbose configuration parameters.

## infra transaction limit

Configures the maximum stage limit per transaction.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** **infra transaction limit stage** *max\_stage\_limit*

#### **stage** *max\_stage\_limit*

Specify the maximum stage limit per transaction.

Must be an integer.

Default Value: 100.

---

**Usage Guidelines** Use this command to configure the maximum stage limit per transaction.

## infra transaction limit consecutive same

Configures the maximum consecutive stage limit per transaction.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** **infra transaction limit consecutive same stage** *max\_consecutive\_stage\_limit*

#### **stage** *max\_consecutive\_stage\_limit*

Specify the maximum consecutive stage limit per transaction.

Must be an integer.

Default Value: 10.

**Usage Guidelines** Use this command to configure the maximum consecutive stage limit per transaction.

## infra transaction loop

Configures the transaction loop detection parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `infra transaction loop detection detection_status`

**detection *detection\_status***

Specify to enable or disable loop detection.

Must be one of the following:

- **disable**
- **enable**

Default Value: disable.

**Usage Guidelines** Use this command to configure the transaction loop detection parameter.

## infra transaction loop category

Configures the loop category.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `infra transaction loop category loop_category`

**category *loop\_category***

Specify the category.

**Usage Guidelines** Use this command to configure the loop category. The CLI prompt changes to the Loop Category Configuration mode(`config-category-<category>`).

## infra transaction loop category threshold

Configures the loop detection interval parameter.

**Command Modes** Exec > Global Configuration (config) > Loop Category Configuration (`config-category-category`)

**Syntax Description** `threshold interval loop_detect_interval`

**interval *loop\_detect\_interval***

Specify, in seconds, the loop detection interval.

Must be an integer.

Default Value: 5.

**Usage Guidelines**

Use this command to configure the loop detection interval parameter.

## infra transaction loop category threshold thresholds

Configures threshold parameters.

**Command Modes**

Exec > Global Configuration (config) > Loop Category Configuration (config-category-*category*)

**Syntax Description**

```
threshold threshold_level [ [ action threshold_action ] [ count max_transactions ] ]
```

**action *threshold\_action***

Specify the action to take on threshold breach.

Must be one of the following:

- **kill-session**
- **log-event**
- **noop**

Default Value: noop.

**count *max\_transactions***

Specify the maximum number of transactions for the threshold interval.

Must be an integer.

Default Value: 100.

**thresholds *threshold\_level***

Specify the threshold level.

Must be one of the following:

- **high**
- **low**

**Usage Guidelines**

Use this command to configure threshold parameters.

## instance instance-id

Configures instance ID of GR instance.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **instance instance-id** *instance\_id*

**id** *instance\_id*

Specify the instance ID.

**Usage Guidelines** GR instance-specific parameters. Use this command to configure the instance ID of GR instance. The CLI prompt changes to the Instance ID Configuration mode (config-instance-id-<instance\_id>).

## instance instance-id endpoint ep

Configures endpoint parameters.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*)

**Syntax Description** **endpoint** *endpoint\_type* [ [ **instancetype** *ep\_local\_interface\_type* ] [ **loopbackEth** *loopbackEth* ] [ **loopbackPort** *loopbackPort* ] [ **nodes** *node\_replicas\_for\_resiliency* ] [ **replicas** *replicas\_per\_node* ] [ **uri-scheme** *uri\_scheme* ] ]

**certificate-name** *certificate\_alias\_name*

Specify the alias name for the certificate.

**endpoint** *endpoint\_type*

Specify the endpoint type.

Must be one of the following:

- **bgpspeaker**
- **dhcp**
- **geo**
- **l2tp-tunnel**
- **n4-protocol**
- **nodemgr**
- **pppoe**
- **radius**
- **sbi**

- **sm**
- **udp-proxy**

**instancetype ep\_local\_interface\_type**

Specify the endpoint local interface type.

Must be one of the following:

- **Dual**
- **IPv4**
- **IPv6**

Default Value: IPv4.

**loopbackEth loopbackEth**

Specify the endpoint local interface name or host IP.

Must be a string.

**loopbackPort loopbackPort**

Specify the endpoint local port.

Must be an integer.

**nodes node\_replicas\_for\_resiliency**

Specify the number of node replicas for resiliency.

Must be an integer.

Default Value: 1.

**replicas replicas\_per\_node**

Specify the number of replicas per node.

Must be an integer.

Default Value: 1.

**uri-scheme uri\_scheme**

Specify the URI scheme.

Must be one of the following:

- **http**
- **https**

Default Value: http.

---

**Usage Guidelines**

Use this command to configure endpoint parameters.

# instance instance-id endpoint ep interface

Configures the interface type.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*)

**Syntax Description** **interface** *interface\_type*

**certificate-name** *certificate\_alias\_name*

Specify the alias name for certificate.

**instancetype** *ep\_local\_interface\_type*

Specify the endpoint local interface type.

Must be one of the following:

- **Dual**
- **IPv4**
- **IPv6**

Default Value: IPv4.

**loopbackEth** *loopback\_eth*

Specify the loopback Eth.

Must be a string.

**loopbackPort** *loopback\_port*

Specify the loopback port.

Must be an integer.

**uri-scheme** *uri\_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**
- **https**

Default Value: http.

**interface\_type**

Specify the interface type.

**Usage Guidelines** Use this command to configure the interface type.

## instance instance-id endpoint ep interface dispatcher

Displays the dispatcher queue support details for the interface.

**Command Modes** Exec > Global Configuration (config) > Instance ID Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*) > Interface Configuration (config-interface-*interface\_type*)

**Syntax Description** **dispatcher** { **cache** { **false** | **true** } | **capacity** *queue\_capacity* | **count** *dispatcher\_queues\_count* | **expiry** *cache\_entry\_expiry\_duration* | **nonresponsive** *cache\_entry\_expiry\_duration* | **outbound** { **false** | **true** } | **rate-limit** *queue\_rate\_limit* | **threshold** *outstanding\_requests\_per\_queue\_cache* }

### **cache { false | true }**

Specify to enable or disable retransmission cache support. To disable, set to true.

Must be one of the following:

- **false**
- **true**

Default Value: false.

### **capacity *queue\_capacity***

Specify the capacity of each queue.

Must be an integer.

Default Value: 5000.

### **count *dispatcher\_queues\_count***

Specify the count of dispatcher queues.

Must be an integer.

Default Value: 0.

### **expiry *cache\_entry\_expiry\_duration***

Specify, in milliseconds, the responded cache entry expiry duration.

Must be an integer.

Default Value: 60000.

### **nonresponsive *cache\_entry\_expiry\_duration***

Specify, in milliseconds, the non-responsive cache entry expiry duration.

Must be an integer.



Default Value: 30000.

**outbound { false | true }**

Specify to enable or disable queue support for outbound messages. To disable, set to true.

Must be one of the following:

- **false**
- **true**

Default Value: true.

**rate-limit *queue\_rate\_limit***

Specify the rate limit for each queue.

Must be an integer.

Default Value: 0.

**threshold *outstanding\_requests\_per\_queue\_cache***

Specify the outstanding requests per queue cache.

Must be an integer.

Default Value: 30000.

**Usage Guidelines**

Use this command to view dispatcher queue support details for the interface.

## instance instance-id endpoint ep interface internal base-port

Configures the internal base-port to start endpoint parameter.

**Command Modes**

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

**Syntax Description**

**internal base-port start** *base\_port\_to\_start\_ep*

**start** *base\_port\_to\_start\_ep*

Specify the base port to start endpoint.

Must be an integer in the range of 1024-65535.

**Usage Guidelines**

Use this command to configure the internal base-port to start endpoint parameter.

## instance instance-id endpoint ep interface overload-control client threshold critical

Configures the Overload Control protection's critical threshold parameter.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** **overload-control threshold critical** *critical\_threshold\_limit* **action**  
*critical\_threshold\_action*

**Syntax Description** **overload-control client threshold critical** *critical\_threshold\_limit* **action**  
*critical\_threshold\_action*

**action** *critical\_threshold\_action*

Specify the action to be taken if the critical threshold is hit.

**critical** *critical\_threshold\_limit*

Specify the critical threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines** Use this command to configure the Overload Control protection's critical threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control client threshold high

Configures the Overload Control protection's high threshold parameter.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** **overload-control threshold high** *high\_threshold\_limit* **action** *high\_threshold\_action*

**Syntax Description** **overload-control client threshold high** *high\_threshold\_limit* **action**  
*high\_threshold\_action*

**action** *high\_threshold\_action*

Specify the action to be taken if the high threshold is hit.

**high** *high\_threshold\_limit*

Specify the high threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines**

Use this command to configure the Overload Control protection's high threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control client threshold low

Configures the Overload Control protection's low threshold parameter.

**Command Modes**

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**overload-control threshold low** *low\_threshold\_limit* **action** *low\_threshold\_action*

**Syntax Description**

**overload-control client threshold low** *low\_threshold\_limit* **action**  
*low\_threshold\_action*

**action** *low\_threshold\_action*

Specify the action to be taken if the low threshold is hit.

**low** *low\_threshold\_limit*

Specify the low threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines**

Use this command to configure the Overload Control protection's low threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control endpoint threshold critical

Configures the Overload Control protection's critical threshold parameter.

**Command Modes**

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**overload-control threshold critical** *critical\_threshold\_limit* **action**  
*critical\_threshold\_action*

**Syntax Description**

**overload-control client threshold critical** *critical\_threshold\_limit* **action**  
*critical\_threshold\_action*

**action** *critical\_threshold\_action*

Specify the action to be taken if the critical threshold is hit.

**critical *critical\_threshold\_limit***

Specify the critical threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines**

Use this command to configure the Overload Control protection's critical threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control endpoint threshold high

Configures the Overload Control protection's high threshold parameter.

**Command Modes**

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**overload-control threshold high** *high\_threshold\_limit* **action** *high\_threshold\_action*

**Syntax Description**

**overload-control client threshold high** *high\_threshold\_limit* **action**  
*high\_threshold\_action*

**action *high\_threshold\_action***

Specify the action to be taken if the high threshold is hit.

**high *high\_threshold\_limit***

Specify the high threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines**

Use this command to configure the Overload Control protection's high threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control endpoint threshold low

Configures Overload Control protection's low threshold parameter.

**Command Modes**

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**overload-control threshold low** *low\_threshold\_limit* **action** *low\_threshold\_action*

**Syntax Description**

**overload-control client threshold low** *low\_threshold\_limit* **action**  
*low\_threshold\_action*

**action *low\_threshold\_action***

Specify the action to be taken if the low threshold is hit.

**low *low\_threshold\_limit***

Specify the low threshold limit for outstanding requests.

Must be an integer in the range of 10-100000.

**Usage Guidelines**

Use this command to configure the Overload Control protection's low threshold parameter. To configure threshold configuration per client, use the "overload-control client threshold ..." command.

## instance instance-id endpoint ep interface overload-control msg-type messageConfigs

Configures the message configuration parameters.

**Command Modes**

Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description**

**overload-control** **msg-type** *message\_type* **msg-priority** *message\_priority*  
**pending-request** *pending\_requests* **priority** *message\_priority* **queue-size** *queue\_size*  
**rate-limit** *rate\_limit* **reject-threshold** *reject\_threshold*

**msg-type *message\_type***

Specify the message type.

**pending-request *pending\_requests***

Specify the pending requests count in virtual queue.

Must be an integer.

**queue-size *queue\_size***

Specify the packet count or capacity of each virtual queue.

Must be an integer.

**rate-limit *rate\_limit***

Specify the rate limit for virtual queue.

Must be an integer.

**reject-threshold *reject\_threshold***

Specify the limit to reject incoming messages if this threshold percentage of pending requests are present.

Must be an integer.

**Usage Guidelines** Use this command to configure the message configuration parameters.

## instance instance-id endpoint ep interface sla

Configures SLA parameters.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** `sla { [ response response_time ] [ procedure procedure_time ] }`

**procedure** *procedure\_time*

Specify the procedure time in milliseconds.

Must be an integer in the range of 1000-120000.

**response** *response\_time*

Specify the response time in milliseconds.

Must be an integer in the range of 1000-180000.

**Usage Guidelines** Use this command to configure SLA parameters.

## instance instance-id endpoint ep interface vip

Configures VIP IP parameters.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** `vip-ip vip_ip [ [ offline ] [ vip-interface interface_name ] [ vip-port vip_port ] ]`

**offline**

Specify to mark the vip-ip as offline.

**vip-interface** *interface\_name*

Specify the interface name to advertise BGP router.

Must be a string.

**vip-ip** *vip\_ip*

Specify the host IP address.

Must be a string.

**vip-port *vip\_port***

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure VIP IP parameters.

## instance instance-id endpoint ep interface vip6

Configures VIP IP6 parameters.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_name*) > Interface Configuration (config-interface-*interface\_name*)

**Syntax Description** **vip-ip6** *vip\_ip6* [ [ **offline** ] [ **vip-ipv6-port** *port\_number* ] ]

**offline**

Specify the VIP IP as offline.

**vip-ip6 *vip\_ip6***

Specify the host detail.

Must be a string.

**vip-ipv6-port *port\_number***

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure VIP IP6 parameters.

## instance instance-id endpoint ep internal base-port

Configures the internal base-port to start endpoint parameter.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

**Syntax Description** **internal base-port start** *base\_port\_to\_start\_ep*

**start *base\_port\_to\_start\_ep***

Specify the base port to start endpoint.

Must be an integer in the range of 1024-65535.

**Usage Guidelines** Use this command to configure the internal base-port to start endpoint parameter.

## instance instance-id endpoint ep system-health-level crash

Configures system health crash parameters.

### Command Modes

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

### Syntax Description

```
system-health-level crash { [ cpu-percent cpu_percent ] [ memory-in-mbs memory ] [ num-of-goroutine number_of_goroutine ] }
```

#### **cpu-percent** *cpu\_percent*

Specify the CPU percentage.

Must be an integer.

Default Value: 80.

#### **memory-in-mbs** *memory*

Specify the memory in MB.

Must be an integer.

Default Value: 2048.

#### **num-of-goroutine** *number\_of\_goroutine*

Specify the number of goroutine per core.

Must be an integer.

Default Value: 45000.

### Usage Guidelines

Use this command to configure system health crash parameters.

## instance instance-id endpoint ep system-health-level critical

Configures system health critical parameters.

### Command Modes

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

### Syntax Description

```
system-health-level critical { [ cpu-percent cpu_percent ] [ memory-in-mbs memory ] [ num-of-goroutine number_of_goroutine ] }
```

#### **cpu-percent** *cpu\_percent*

Specify the CPU percentage.

Must be an integer.

Default Value: 60.



**memory-in-mbs *memory***

Specify the memory in MB.

Must be an integer.

Default Value: 1024.

**num-of-goroutine *number\_of\_goroutine***

Specify the number of goroutine per core.

Must be an integer.

Default Value: 35000.

---

**Usage Guidelines** Use this command to configure system health critical parameters.

## instance instance-id endpoint ep system-health-level warn

Configures system health warn parameters.

---

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

---

**Syntax Description** **system-health-level warn** { [ **cpu-percent** *cpu\_percent* ] [ **memory-in-mbs** *memory* ] [ **num-of-goroutine** *number\_of\_goroutine* ] }

**cpu-percent *cpu\_percent***

Specify the CPU percentage.

Must be an integer.

Default Value: 50.

**memory-in-mbs *memory***

Specify the memory in MB.

Must be an integer.

Default Value: 512.

**num-of-goroutine *number\_of\_goroutine***

Specify the number of goroutine per core.

Must be an integer.

Default Value: 25000.

---

**Usage Guidelines** Use this command to configure system health warn parameters.

## instance instance-id endpoint ep vip

Configures VIP parameters.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

**Syntax Description** **vip-ip** *vip\_ipv4\_address* [ [ **offline** ] [ **vip-interface** *vip\_interface\_name* ] [ **vip-port** *port\_number* ] ]

### **offline**

Specify the VIP-IP as offline.

### **vip-interface** *vip\_interface\_name*

Specify the interface name to advertise BGP router.

Must be a string.

### **vip-ip** *vip\_ipv4\_address*

Specify the VIP IPv4 address.

Must be a string.

### **vip-port** *port\_number*

Specify the port number.

Must be an integer.

**Usage Guidelines** Use this command to configure VIP parameters.

## instance instance-id endpoint ep vip6

Configures VIP IPv6 parameters.

**Command Modes** Exec > Global Configuration (config) > Instance ID Configuration (config-instance-id-*instance\_id*) > Endpoint Configuration (config-endpoint-*endpoint\_type*)

**Syntax Description** **vip-ipv6** *vip\_ipv6\_detail* [ [ **offline** ] [ **vip-ipv6-port** *vip\_ipv6\_port\_number* ] ]

### **offline**

Specify the VIP-IP as offline.

### **vip-ipv6-port** *vip\_ipv6\_port\_number*

Specify the port number.

Must be an integer.

**vip-ipv6 *vip\_ipv6\_detail***

Specify the IPv6 detail.

Must be a string.

**Usage Guidelines** Use this command to configure VIP IPv6 parameters.

## instances instance

Configures instance configuration parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **instances instance** *instance\_id* [ [ **cluster-id** *cluster\_id* ] [ **system-id** *system\_id* ] [ **slice-name** *slice\_name* ] ]

**cluster-id *cluster\_id***

Specify the instance cluster ID.

Must be a string.

**instance-id *instance\_id***

Specify the instance ID.

Must be an integer in the range of 1-8.

**slice-name *slice\_name***

Specify the CDL slice name associated with instance ID.

Must be a string.

**system-id *system\_id***

Specify the instance system ID.

Must be a string.

**Usage Guidelines** Use this command to configure instance configuration parameters.

## ipam dp

Displays IPAM data-plane allocations.

**Command Modes** Exec

**Syntax Description** **show ipam dp**

**Usage Guidelines** Use this command to view IPAM data-plane allocations.

## ipam dp-tag

Displays data-plane tag-related allocations.

**Command Modes** Exec

**Syntax Description** `show ipam dp-tag`

**Usage Guidelines** Use this command to view data-plane tag-related allocations. Tag represents DNN or PoolName based on NF.

## ipam instance

Configures IPAM instance parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `ipam instance instance_id`

**instance instance\_id**

Specify the instance ID.

Must be an integer in the range of 1-8.

**Usage Guidelines** Use this command to configure IPAM instance parameters. The CLI prompt changes to the Instance Configuration mode (config-instance-<instance\_id>).

## ipam instance address-pool

Configures IPAM address pools.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-*instance\_id*)

**Syntax Description** `address-pool pool_name [ address-quarantine-qsize address_quarantine_queue_size | address-quarantine-timer address_quarantine_timer_interval | offline | static | vrf-name vrf_name ]`

**address-pool pool\_name**

Specify the address pool's name.

Must be a string of 1-128 characters in the ipam-str pattern. For information on the ipam-str pattern, see the Input Pattern Types section.

**address-quarantine-qsize** *address\_quarantine\_queue\_size*

Specify the maximum number of IPs to be held in quarantine queue per-dp, per-af, per-instance. By default, it is set to 0 (no limit).

Must be an integer.

**address-quarantine-timer** *address\_quarantine\_timer\_interval*

Specify the address quarantine timer interval in seconds.

Must be an integer in the range of 4-3600.

Default Value: 4.

**offline**

Specify the pool as an offline pool.

**vrf-name** *vrf\_name*

Specify the VRF name.

Must be a string of 1-128 characters in the ipam-str pattern. For information on the ipam-str pattern, see the Input Pattern Types section.

**Usage Guidelines**

Use this command to configure IPAM address pools. The CLI prompt changes to the Address Pool Configuration mode (config-address-pool-<address\_pool\_name>).

## ipam instance address-pool ipv4 address-range

Configures IPv4 address ranges.

**Command Modes**

Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv4 Configuration (config-ipv4)

**Syntax Description**

**address-range** *start\_ipv4\_address end\_ipv4\_address* [ **offline** ]

**default-gateway** *ip\_address*

Specify the default gateway IP address for static pool.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**offline**

Specify the IPv4 address range as offline.

**end\_ipv4\_address**

Specify the end address of the IPv4 address range.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

***start\_ipv4\_address***

Specify the start address of the IPv4 address range.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv4 address ranges.

## ipam instance address-pool ipv4 prefix-range

Configures IPv4 prefix range.

**Command Modes** Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance\_id*) > Address Pool Configuration (config-address-pool-address\_pool\_name)

**Syntax Description** **ipv4 prefix-range range** *prefix\_value prefix\_length* [ **offline** ]

***default-gateway ip\_address***

Specify the default gateway IP address for static pool.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

***length prefix\_length***

Specify the IPv4 prefix length.

Must be an integer in the range of 1-31.

***offline***

Specify the IPv4 prefix range as offline.

***prefix\_value***

Specify the IPv4 prefix.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv4 prefix range.

## ipam instance address-pool ipv4 split-size

Configures chunk split size parameters.

<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv4 Configuration (config-ipv4)
<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)
<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)
<b>Syntax Description</b>	<p><b>split-size</b> [ [ <b>no-split</b> ] [ <b>per-cache</b> <i>number_of_addresses</i> ] [ <b>per-dp</b> <i>number_of_addresses</i> ] ]</p> <p><b>no-split</b></p> <p>Specify not to split the address range into smaller chunks.</p> <p><b>per-cache <i>number_of_addresses</i></b></p> <p>Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2. Must be an integer in the range of 2-262144.</p> <p><b>per-dp <i>number_of_addresses</i></b></p> <p>Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2. Must be an integer in the range of 2-262144.</p>
<b>Usage Guidelines</b>	Use this command to configure chunk split size parameters. The CLI prompt changes to the Split Size Configuration mode (config-split-size).

## ipam instance address-pool ipv4 threshold

Configures pool thresholds.

<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv4 Configuration (config-ipv4)
<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)
<b>Command Modes</b>	Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance- <i>instance_id</i> ) > Address Pool Configuration (config-address-pool- <i>address_pool_name</i> ) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)
<b>Syntax Description</b>	<b>threshold upper-threshold</b> <i>upper_threshold</i>

**upper-threshold** *upper\_threshold*

Specify the upper threshold value in percentage.

Must be an integer in the range of 1-100.

**Usage Guidelines** Use this command to configure pool thresholds.

## ipam instance address-pool ipv6 address-ranges address-range

Configures IPv6 address ranges.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Syntax Description** **address-range** *start\_ipv6\_address end\_ipv6\_address* [ **offline** ]

**offline**

Specify the IPv6 address range as offline.

**end\_ipv6\_address**

Specify the end address of the IPv6 address range.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**start\_ipv6\_address**

Specify the start address of the IPv6 address range.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv6 address ranges.

## ipam instance address-pool ipv6 address-ranges prefix-range

Configures IPv6 prefix range.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Syntax Description** **prefix-range** **range** *prefix\_value prefix\_length* [ **offline** ]

**length** *prefix\_length*

Specify the IPv6 prefix length.



Must be an integer in the range of 96-127.

***prefix\_value***

Specify the IPv6 prefix.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv6 prefix range.

## ipam instance address-pool ipv6 address-ranges split-size

Configures chunk split size parameters.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)

**Syntax Description** **split-size** [ [ **no-split** ] [ **per-cache** *number\_of\_addresses* ] [ **per-dp** *number\_of\_addresses* ] ]

**no-split**

Specify not to split the address range into smaller chunks.

**per-cache *number\_of\_addresses***

Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

**per-dp *number\_of\_addresses***

Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

**Usage Guidelines** Use this command to configure chunk split size parameters. The CLI prompt changes to the Split Size Configuration mode (config-split-size).

## ipam instance address-pool ipv6 address-ranges threshold

Configures pool thresholds.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)

**Syntax Description** **threshold** **upper-threshold** *upper\_threshold*

**upper-threshold** *upper\_threshold*

Specify the upper threshold value in percentage.

Must be an integer in the range of 1-100.

**Usage Guidelines** Use this command to configure pool thresholds.

## ipam instance address-pool ipv6 prefix-ranges prefix-range

Configures IPv6 prefix ranges.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)

**Syntax Description** **prefix-range** *prefix\_value* **prefix-length** *prefix\_length* [ **offline** ]

**offline**

Specify the IPv6 prefix range as offline.

**prefix-length** *prefix\_length*

Specify the prefix length.

Must be an integer in the range of 1-63.

**prefix-range** *prefix\_value*

Specify the IPv6 prefix range.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv6 prefix ranges.

## ipam instance address-pool ipv6 prefix-ranges split-size

Configures chunk split size parameters.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)

**Syntax Description** **split-size** [ [ **no-split** ] [ **per-cache** *number\_of\_addresses* ] [ **per-dp** *number\_of\_addresses* ] ]

### **no-split**

Specify not to split the address range into smaller chunks.

### **per-cache number\_of\_addresses**

Specify the number of addresses per chunk for IPAM cache allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

### **per-dp number\_of\_addresses**

Specify the number of addresses per chunk for data-plane allocation. Specify in power of 2.

Must be an integer in the range of 2-262144.

**Usage Guidelines** Use this command to configure chunk split size parameters. The CLI prompt changes to the Split Size Configuration mode (config-split-size).

## ipam instance address-pool ipv6 prefix-ranges threshold

Configures pool thresholds.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Address Ranges Configuration (config-address-ranges)

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*) > IPv6 Configuration (config-ipv6) > Prefix Ranges Configuration (config-prefix-ranges)

**Syntax Description** **threshold upper-threshold** *upper\_threshold*

**upper-threshold** *upper\_threshold*

Specify the upper threshold value in percentage.

Must be an integer in the range of 1-100.

**Usage Guidelines** Use this command to configure pool thresholds.

## ipam instance address-pool static

Configures IPAM static pool parameters.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*) > Address Pool Configuration (config-address-pool-*address\_pool\_name*)

**Syntax Description** **static enable user-plane** *user\_plane*

**enable**

Specify to set pool as static.

**user-plane** *user\_plane*

Specify to associate user plane for this static pool.

Must be a string of 1-128 characters in the ipam-str pattern. For information on the ipam-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPAM static pool parameters.

## ipam instance min-dp-addr-size

Configures the minimum number of addresses to reserve per UPF, per NM, per pool/tag.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*)

**Syntax Description** **min-dp-addr-size** [ [ **ipv4-addr** *reserve\_min\_ipv4\_address* ] | [ **ipv6-addr** *reserve\_min\_ipv6\_address* ] ] | [ **ipv6-prefix** *reserve\_min\_ipv6\_prefix* ] ]

**ipv4-addr reserve\_min\_ipv4\_address**

Specify the minimum number of IPv4 addresses to reserve.

Must be an integer in the range of 16-262144.

**ipv6-addr reserve\_min\_ipv6\_address**

Specify the minimum number of IPv6 addresses to reserve.

Must be an integer in the range of 32-262144.

**ipv6-prefix reserve\_min\_ipv6\_prefix**

Specify the minimum number of IPv6 prefix to reserve.

Must be an integer in the range of 32-262144.

**Usage Guidelines**

Use this command to configure the minimum number of addresses to reserve per UPF, per NM, per pool/tag.

## ipam instance source

Configures pool-datastore source selection.

**Command Modes**

Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*)

**Syntax Description**

**source local**

**local**

Specify to use local address pool datastore.

**Usage Guidelines**

Use this command to configure pool-datastore source selection.";

## ipam instance source external ipam

Configures external IPAM server for pool information.

**Command Modes**

Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*)

**Syntax Description**

**source external ipam [ host *ip\_address* | port *port\_number* | vendor *vendor\_id* ]**

**host *ip\_address***

Specify the IPAM server's IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**port *port\_number***

Specify the IPAM server's port number.

Must be an integer in the range of 1-65535.

**vendor *vendor\_id***

Specify the IPAM server's vendor ID. Default: cisco.

Must be one of the following:

- cisco

**Usage Guidelines** Use this command to configure external IPAM server for pool information.

## ipam instance threshold

Configures global upper thresholds.

**Command Modes** Exec > Global Configuration (config) > IPAM Configuration (config-ipam) > Instance Configuration (config-instance-*instance\_id*)

**Syntax Description** **threshold** [ [ **ipv4-addr** *ipv4\_address\_threshold* ] | [ **ipv6-addr** *ipv6\_address\_threshold* ] | [ **ipv6-prefix** *ipv6\_prefix\_threshold* ] ]

**ipv4-addr *ipv4\_address\_threshold***

Specify the IPv4 address threshold in percentage.

Must be an integer in the range of 1-100.

**ipv6-addr *ipv6\_address\_threshold***

Specify the IPv6 address threshold in percentage.

Must be an integer in the range of 1-100.

**ipv6-prefix *ipv6\_prefix\_threshold***

Specify the IPv6 prefix threshold in percentage.

Must be an integer in the range of 1-100.

**Usage Guidelines** Use this command to configure global upper thresholds.

## ipam pool

Displays pool allocation information.

<b>Command Modes</b>	Exec
<b>Syntax Description</b>	<b>show ipam pool</b>
<b>Usage Guidelines</b>	Use this command to view pool allocation information.

## job

Suspends the jobs that are running in the background.

<b>Command Modes</b>	Exec
<b>Syntax Description</b>	<b>job stop</b> <i>job_id</i>  <i>job_id</i> Specify the job ID for suspending the corresponding job. Must be an integer.
<b>Usage Guidelines</b>	Use this command to suspend the jobs that are running in the background.

## k8 label pod-group-config

Configures K8 node affinity label pod group configuration.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<b>k8 label</b> <i>pod_group</i> <b>key</b> <i>label_key</i> <b>value</b> <i>label_value</i>  <b>key</b> <i>label_key</i> Specify the key for the label. Must be a string.  <b>value</b> <i>label_value</i> Specify the value for the label. Must be a string.  <b>pod_group</b> Specify the pod group for the VMs. Must be one of the following: <ul style="list-style-type: none"> <li>• <b>cdl-layer</b></li> <li>• <b>oam-layer</b></li> <li>• <b>protocol-layer</b></li> </ul>

- **service-layer**

---

**Usage Guidelines**

Use this command to configure K8 node affinity label pod group configuration.

## kubernetes

Configures Kubernetes parameters.

---

**Command Modes**

Exec > Global Configuration (config)

---

**Syntax Description**

```
k8s name k8s_cluster_name [ [ image-pull-secrets image_pull_secrets ] [
ingress-host-name ingress_host_name ] [ namespace k8s_namespace ] [ nf-name nf_name
] [ registry image_registry ] [ single-node { false | true } ] [
use-volume-claims { false | true } ] ]
```

**image-pull-secrets** *image\_pull\_secrets*

Specify the image pull secrets stored within K8s.

Must be a string.

**ingress-host-name** *ingress\_host\_name*

Specify the generic ingress host name.

Must be a string.

**name** *k8s\_cluster\_name*

Specify the K8s cluster name.

Must be a string.

**namespace** *k8s\_namespace*

Specify the K8s namespace for the network function.

Must be a string.

**nf-name** *nf\_name*

Specify the NF deployed in this k8s namespace.

Must be a string.

**registry** *image\_registry*

This keyword is deprecated.

Must be a string.

**single-node** { **false** | **true** }

Specify to enable or disable single node deployment.



Must be one of the following:

- **false**
- **true**

Default Value: false.

**use-volume-claims { false | true }**

Specify to enable or disable using volume claims when deploying.

Must be one of the following:

- **false**
- **true**

Default Value: false.

---

#### Usage Guidelines

Use this command to configure Kubernetes parameters.

## kubernetes nodes

Configures list of k8s nodes.

---

#### Command Modes

Exec > Global Configuration (config)

---

#### Syntax Description

**k8s nodes** *k8s\_node\_name* [ [ **node-type** *node\_type* ] [ **worker-type** *worker\_type* ] ]

**node-type** *node\_type*

Specify the K8s node type.

Must be a string.

**worker-type** *worker\_type*

Specify the k8s worker type.

Must be a string.

**k8s\_node\_name**

Specify the K8s node name.

Must be a string.

---

#### Usage Guidelines

Use this command to configure the list of k8s nodes.

## leaf-prompting

Enables or disables automatic querying for leaf values.

<b>Command Modes</b>	Exec
<b>Syntax Description</b>	<pre>leaf-prompting { false   true } { false   true }</pre> <p>Specify false to disable leaf prompting, and true to enable. Must be either "false" or "true".</p>
<b>Usage Guidelines</b>	Use this command to automatically query for leaf values.

## license smart deregister

Configures the license parameters for the VNF deregistration.

<b>Command Modes</b>	Exec
<b>Syntax Description</b>	<pre>license smart deregister deregister</pre> <p>Specify to deregister the VNF for smart licensing.</p>
<b>Usage Guidelines</b>	Use this command to configure the license parameters for the VNF deregistration.

## license smart register

Configures the license parameters for the VNF registration.

<b>Command Modes</b>	Exec
<b>Syntax Description</b>	<pre>license smart register force idtoken token_id register force idtoken token_id</pre> <p>Specify to register the VNF for Smart Licensing.</p> <p>Specify to enable the force registration of the agent.</p> <p>Specify the ID token to register the agent with. Must be an integer.</p>
<b>Usage Guidelines</b>	Use this command to configure the license parameters for the VNF registration.

## license smart renew

Configures the license parameters for the VNF renewal.

**Command Modes** Exec

**Syntax Description** `license smart renew { ID | auth }`

### **renew**

Renew the smart agent IDs and authentication.

### **ID**

Specify to renew the smart agent license registration information.

### **auth**

Initiate the manual update of the license usage information with Cisco.

**Usage Guidelines** Use this command to configure the license parameters for the VNF renewal.

## local-instance

Configures GR instance for current instance.

**Command Modes** Exec > Global Configuration

**Syntax Description** `local-instance instance gr_instance_id`

### **instance *gr\_instance\_id***

Specify the GR instance ID of current instance.

**Usage Guidelines** Use this command to configure GR instance for current instance.

## logging async application enable

Enables async logging.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `logging async application enable buffer-size buffer_size`

**Syntax Description** `logging async monitor-subscriber enable buffer-size buffer_size`

**Syntax Description** `logging async tracing enable buffer-size buffer_size`

---

**Syntax Description**    `logging async transaction enable buffer-size buffer_size`

**buffer-size** *buffer\_size*

Specify the buffer size for async logging.

Must be an integer.

---

**Usage Guidelines**    Use this command to enable async logging.

## logging async monitor-subscriber enable

Enables async logging.

---

**Command Modes**    Exec > Global Configuration (config)

---

**Syntax Description**    `logging async application enable buffer-size buffer_size`

---

**Syntax Description**    `logging async monitor-subscriber enable buffer-size buffer_size`

---

**Syntax Description**    `logging async tracing enable buffer-size buffer_size`

---

**Syntax Description**    `logging async transaction enable buffer-size buffer_size`

**buffer-size** *buffer\_size*

Specify the buffer size for async logging.

Must be an integer.

---

**Usage Guidelines**    Use this command to enable async logging.

## logging async tracing enable

Enables async logging.

---

**Command Modes**    Exec > Global Configuration (config)

---

**Syntax Description**    `logging async application enable buffer-size buffer_size`

---

**Syntax Description**    `logging async monitor-subscriber enable buffer-size buffer_size`

---

**Syntax Description**    `logging async tracing enable buffer-size buffer_size`

---

**Syntax Description**    `logging async transaction enable buffer-size buffer_size`

**buffer-size** *buffer\_size*

Specify the buffer size for async logging.

Must be an integer.

**Usage Guidelines** Use this command to enable async logging.

## logging async transaction enable

Enables async logging.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `logging async application enable buffer-size buffer_size`

**Syntax Description** `logging async monitor-subscriber enable buffer-size buffer_size`

**Syntax Description** `logging async tracing enable buffer-size buffer_size`

**Syntax Description** `logging async transaction enable buffer-size buffer_size`

**buffer-size *buffer\_size***

Specify the buffer size for async logging.

Must be an integer.

**Usage Guidelines** Use this command to enable async logging.

## logging error

Configures error logging parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `logging error stack status`

**stack *status***

Specify to enable or disable error stack.

Must be one of the following:

- **disable**
- **enable**

Default Value: enable.

**Usage Guidelines** Use this command to configure error logging parameters.

## logging level

Configures the logging level.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** `logging level log_level`

**application *application\_log\_level***

Specify the application logging level.

Must be one of the following:

- debug
- error
- info
- off
- trace
- warn

**monitor-subscriber *monitor\_subscriber\_log\_level***

Specify the monitor subscriber logging level.

Must be one of the following:

- debug
- error
- info
- off
- trace
- warn

**tracing *tracing\_log\_level***

Specify the tracing logging level.

Must be one of the following:

- debug
- error
- info
- off
- trace
- warn

**transaction *transaction\_log\_level***

Specify the transaction logging level.

Must be one of the following:

- **debug**
- **error**
- **info**
- **off**
- **trace**
- **warn**

---

**Usage Guidelines** Use this command to configure the logging level.

## logging logger

Configures the log name.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** **name** *log\_name*

**name** *log\_name*

Specify the log name in "module.component.interface" format.

Must be a string.

---

**Usage Guidelines** Use this command to configure the log name.

## logging logger level

Configures the logging level.

---

**Command Modes** Exec > Global Configuration (config)

---

**Syntax Description** **logging level** *log\_type\_options*

**application** *application\_log\_level*

Specify the application logging level.

Must be one of the following:

- **debug**
- **error**

- **info**
- **off**
- **trace**
- **warn**

**monitor-subscriber *monitor\_subscriber\_log\_level***

Specify the monitor subscriber logging level.

Must be one of the following:

- **debug**
- **error**
- **info**
- **off**
- **trace**
- **warn**

**tracing *tracing\_log\_level***

Specify the tracing logging level.

Must be one of the following:

- **debug**
- **error**
- **info**
- **off**
- **trace**
- **warn**

**transaction *transaction\_log\_level***

Specify the transaction logging level.

Must be one of the following:

- **debug**
- **error**
- **info**
- **off**
- **trace**



- warn

**Usage Guidelines** Use this command to configure the logging level.

## logging transaction

Configures the transaction logging parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `logging transaction { duplicate | message | persist } { disable | enable }`

### duplicate

Specify to enable duplicate in transaction logging.

Must be one of the following:

- disable
- enable

Default Value: disable.

### max-file-size *max\_file\_size*

Specify the transaction file size in MB.

Must be an integer in the range of 1-10000.

Default Value: 50.

### max-rotation *max\_rotation*

Specify the maximum number of file rotations.

Must be an integer in the range of 2-1000.

Default Value: 10.

### message

Specify to enable messages in transaction logging.

Must be one of the following:

- disable
- enable

Default Value: disable.

**persist**

Specify to enable or disable file-based transaction logging.

Must be one of the following:

- **disable**
- **enable**

Default Value: disable.

**Usage Guidelines**

Use this command to configure the transaction logging parameters.

# logout

Logout a specific session or a specific user from all sessions.

**Command Modes**

Exec

**Syntax Description**

**logout** [ **session** *session\_id* | **user** *user\_name* ]

**session** *session\_id*

Specify the session ID from the possible completion options.

Must be a string.

**user** *user\_name*

Specify the user name or the user process from the possible completion options.

Must be a string.

**Usage Guidelines**

Use this command to log out a specific session or a specific user from all sessions.

# monitor protocol

Configures the SMF to monitor the protocol.

**Command Modes**

Exec

**Syntax Description**

**monitor protocol interface** *interface\_name* [ **capture-duration** *duration* ]

**interface** *interface\_name*

Specify the name of interface on which PCAP is captured.

Must be a string.

**capture-duration** *duration*

Specify the duration, in seconds, during which PCAP is captured. The default value is 300 seconds.

Must be an integer.

**Usage Guidelines** Use this command to monitor the protocol.

## monitor subscriber

Configures the SMF to monitor the subscribers.

**Command Modes** Exec

**Syntax Description** `monitor subscriber supi supi [ capture-duration duration ] | subscriber-dump filename file_name | subscriber-list`

### **supi** *supi*

Specify the subscriber identifier.

Must be a string.

### **capture-duration** *duration*

Specify the duration, in seconds, during which PCAP is captured. The default value is 300 seconds.

Must be an integer.

### **filename** *file\_name*

Specify the path of the file name to be dumped.

Must be a string.

**Usage Guidelines** Use this command to monitor the subscribers.

## nf-tls ca-certificates

Configure CA certificate parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `nf-tls ca-certificates cert_alias_name cert-data cert_data`

### **cert-data** *cert\_data*

Specify the certificate data in PEM format.

Must be a string.

### **cert\_alias\_name**

Specify the alias name of the certificate.

Must be a string.

**Usage Guidelines** Configures TLS keystore configuration for interfaces. Use this command to configure CA certificate parameters.

## nf-tls certificate-status

Displays certificate status information.

**Command Modes** Exec

**Syntax Description** `show nf-tls certificate-status`

**Usage Guidelines** Use this command to view certificate status information.

## nf-tls certificates

Configures certificate parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `nf-tls certificates cert_alias_name cert-data cert_data private-key private_key`

**cert-data cert\_data**

Specify the certificate data in PEM format.

Must be a string.

**private-key private\_key**

Specify the certificate private key in PEM format.

Must be a string.

**cert\_alias\_name**

Specify the alias name of the certificate.

Must be a string.

**Usage Guidelines** Configures TLS keystore configuration for interfaces. Use this command to configure certificate parameters.

## no

Restores the command history cache size to its default setting. See the [history](#) command.

**Command Modes** Exec

**Syntax Description** `no history`

---

**Usage Guidelines**

Use this command to configure the command history cache size to its default setting. For more details, see the [history](#) command.

## paginate

Configures whether or not to paginate CLI command output.

---

**Command Modes**

Exec

---

**Syntax Description**

**paginate** { **false** | **true** }

**{ false | true }**

Specify false to disable paginating CLI command output, and true to enable.

Must be either "false" or "true".

---

**Usage Guidelines**

Use this command to paginate the command output.

## peers

Displays peer information.

---

**Command Modes**

Exec

---

**Syntax Description**

**show peers**

---

**Usage Guidelines**

Use this command to view peer information.

## peers all

Displays information for all peers.

---

**Command Modes**

Exec

---

**Syntax Description**

**show peers all**

---

**Usage Guidelines**

Use this command to view information for all peers.

## profile aaa

Configures AAA profiles.

---

**Command Modes**

Exec > Global Configuration (config)

---

**Syntax Description**

**profile aaa** *aaa\_profile\_name*

***aaa\_profile\_name***

Specify the AAA profile name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure AAA profiles.

## profile aaa accounting

Configures accounting configuration parameters.

**Command Modes** Exec > Global Configuration (config) > AAA Profile Configuration (config-aaa-*aaa\_profile\_name*)

**Syntax Description** **accounting method-order** *method\_list\_order*

***method-order method\_list\_order***

Specify the method list order.

Must be one of the following:

- **radius**

-Or-

Must be a string of 1-128 characters.

You can configure a maximum of three elements with this keyword.

**Usage Guidelines** Use this command to configure accounting configuration parameters.

## profile aaa authentication

Configures authentication parameters.

**Command Modes** Exec > Global Configuration (config) > AAA Profile Configuration (config-aaa-*aaa\_profile\_name*)

**Syntax Description** **authentication method-order** *method\_list\_order*

***method-order method\_list\_order***

Specify the method list order.

Must be one of the following:

- **radius**

-Or-

Must be a string of 1-128 characters.

You can configure a maximum of three elements with this keyword.

**Usage Guidelines** Use this command to configure authentication parameters.

## profile aaa authorization

Configures authorization parameters.

**Command Modes** Exec > Global Configuration (config) > AAA Profile Configuration (config-aaa-aaa\_profile\_name)

**Syntax Description** **authorization**

**password default\_password**

Specify the default password.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure authorization parameters. The CLI prompt changes to the Authorization Configuration mode.

## profile aaa authorization type subscriber

Configures authorization type subscriber.

**Command Modes** Exec > Global Configuration (config) > AAA Profile Configuration (config-aaa-aaa\_profile\_name) > Authorization Configuration (config-authorization)

**Syntax Description** **type subscriber method-order** *method\_list\_order*

**method-order method\_list\_order**

Specify the method list order.

Must be one of the following:

- radius

-Or-

Must be a string of 1-128 characters.

You can configure a maximum of three elements with this keyword.

**Usage Guidelines** Use this command to configure authorization type subscriber.

## profile aaa authorization username

Configures the default user name.

**Command Modes** Exec > Global Configuration (config) > AAA Profile Configuration (config-aaa-aaa\_profile\_name) > Authorization Configuration (config-authorization)

**Syntax Description** `username { format attribute_format | identifier identifier_type | value user_name }`

**format attribute\_format**

Specify the attribute format.

**identifier identifier\_type**

Specify the identifier type.

Must be one of the following:

- **addr**
- **circuit-id-tag**
- **client-mac-address-custom1**
- **client-mac-address-custom2**
- **client-mac-address-ietf**
- **client-mac-address-raw**
- **client-mac-address**
- **dhcp-client-id-spl**
- **dhcp-client-id**
- **dhcp-user-class**
- **dhcp-vendor-class**
- **dhcpv4-client-id-spl**
- **dhcpv4-vendor-class**
- **dhcpv6-client-id-ent-ident**
- **dhcpv6-interface-id**
- **dhcpv6-vendor-class-string**
- **inner-vlan-id**
- **outer-vlan-id**
- **physical-adapter**
- **physical-chassis**
- **physical-port**
- **physical-slot**
- **physical-subslot**



- **port-type**
- **pppoe-session-id**
- **remote-id-tag**
- **service-name**
- **user-plane**
- **username**

**value *user\_name***

Specify the user name.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines**

Use this command to configure the default user name.

## profile attribute-format

Configures AAA attribute templates.

**Command Modes**

Exec > Global Configuration (config)

**Syntax Description**

**attribute-format** *profile\_name* **format-order** *attributes* **format-string** *format\_string*

**format-order *attributes***

Specify the ordered list of attributes.

Must be one of the following:

- **addr**
- **circuit-id-tag**
- **client-mac-address-custom1**
- **client-mac-address-custom2**
- **client-mac-address-ietf**
- **client-mac-address-raw**
- **client-mac-address**
- **dhcp-client-id-spl**
- **dhcp-client-id**
- **dhcp-user-class**
- **dhcp-vendor-class**

- **dhcpv4-client-id-spl**
- **dhcpv4-vendor-class**
- **dhcpv6-client-id-ent-ident**
- **dhcpv6-interface-id**
- **dhcpv6-vendor-class-string**
- **inner-vlan-id**
- **outer-vlan-id**
- **physical-adapter**
- **physical-chassis**
- **physical-port**
- **physical-slot**
- **physical-subslot**
- **port-type**
- **pppoe-session-id**
- **remote-id-tag**
- **service-name**
- **user-plane**
- **username**

-Or-

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

You can configure a maximum of 32 elements with this keyword.

**format-string** *format\_string*

Specify the format pattern. For example, %sdelimiter%sdelimiter%s.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**profile\_name**

Specify the profile name.

Must be a string of 1-128 characters.

---

**Usage Guidelines**

Use this command to configure AAA attribute templates.

## profile coa

Configures RADIUS Dynamic-author/COA parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **profile coa** [ **server-key** *server\_shared\_secret\_key* ]

**server-key** *server\_shared\_secret\_key*

Specify the COA server shared secret key.

Must be a string.

**Usage Guidelines** Use this command to configure RADIUS Dynamic-author/COA parameters.

## profile coa client

Configures RADIUS COA client parameters.

**Command Modes** Exec > Global Configuration (config) > COA Profile Configuration (config-coa)

**Syntax Description** **client** *client\_ip\_address* **server-key** *client\_shared\_secret\_key*

**server-key** *client\_shared\_secret\_key*

Specify the client shared secret key.

Must be a string.

**client\_ip\_address**

Specify the client IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure RADIUS COA client parameters.

## profile dhcp

Configures DHCP profile.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `profile dhcp dhcp_profile_name`

***dhcp\_profile\_name***

Specify the name of the DHCP profile.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure DHCP profiles. Enters the DHCP Profile Configuration mode (config-dhcp-<profile\_name>).

## profile dhcp ipv4

Configures DHCP IPv4 parameters.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name)

**Syntax Description** `ipv4 [ mode dhcp_mode ]`

***mode dhcp\_mode***

Specify the DHCP server or proxy mode.

Must be one of the following:

- **proxy**
- **server**

Default Value: server.

**Usage Guidelines** Use this command to configure DHCP IPv4 parameters. Enters the DHCP IPv4 Configuration mode (config-ipv4).

## profile dhcp ipv4 class

Configures DHCP IPv4 class configuration parameters.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4)

**Syntax Description** `class dhcp_class_name`

***dhcp\_class\_name***

Specify the DHCP class name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure DHCP IPv4 class configuration parameters. Enters the DHCP Class Configuration mode.

## profile dhcp ipv4 class matches

Configures the list of match values.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name)

**Syntax Description** **matches** [ **match-type** *match\_type* ]

**match-type** *match\_type*

Specify to match any or match all.

Must be one of the following:

- **all**
- **any**

**Usage Guidelines** Use this command to configure the list of match values. Enters the Matches Configuration mode.

## profile dhcp ipv4 class matches match

Configures match key and value.

**Command Modes** Exec > Global Configuration (config) > DHCP Configuration (config-dhcp-profile\_name) > Class Configuration (config-class-class\_name) > Matches Configuration (config-matches)

**Syntax Description** **match** *match\_key* { **ascii** *ascii\_string* | **hex** *hex\_string* }

**ascii** *ascii\_string*

Specify the ASCII strings.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**hex** *hex\_string*

Specify the hexadecimal string.

Must be a string of 1-128 characters.

You can configure a maximum of eight elements with this keyword.

**match\_key**

Specify the match key.

Must be one of the following:

- **dhcpv4-circuit-id**
- **dhcpv4-remote-id**
- **dhcpv4-user-class**
- **dhcpv4-vendor-class**

**Usage Guidelines** Use this command to configure match key and value.

## profile dhcp ipv4 class server

Configures DHCP server mode.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name)

**Syntax Description** **server** [ **boot-filename** *boot\_file\_name* | **dns-servers** *ip\_address* | **domain-name** *domain\_name* | **netbios-name-server** *ip\_address* | **next-server** *ip\_address* | **ntp-servers** *ntp\_servers* | **pool-name** *pool\_name* ]

### **boot-filename** *boot\_file\_name*

Specify the boot file name.

Must be a string of 1-128 characters.

### **dns-servers** *ip\_address*

Specify the DNS server IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

### **domain-name** *domain\_name*

Specify the domain name.

Must be a string of 1-128 characters.

### **netbios-name-server** *ip\_address*

Specify the NetBIOS name server IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**next-server *ip\_address***

Specify the TFTP server IP address to be used by the client.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**ntp-servers *ntp\_servers***

Specify the NTP servers.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**pool-name *pool\_name***

Specify the pool name.

Must be a string of 1-128 characters.

**Usage Guidelines**

Use this command to configure the DHCP server mode. Enters the DHCP Server Configuration mode.

## profile dhcp ipv4 class server lease

Configures DHCP Server Lease parameters.

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)

**Syntax Description**

**lease** { [ **days** *days* ] [ **hours** *hours* ] [ **minutes** *minutes* ] }

**days *days***

Specify the number of days.

Must be an integer in the range of 0-365.

**hours *hours***

Specify the hours.

Must be an integer in the range of 0-23.

**minutes *minutes***

Specify the minutes.

Must be an integer in the range of 0-59.

**Usage Guidelines** Use this command to configure the DHCP Server Lease parameters.

## profile dhcp ipv4 class server netbios-node-type

Configures NetBIOS node type.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)

**Syntax Description** `netbios-name-server { broadcast-node | hexadecimal hex_number | hybrid-node | mixed-node | peer-to-peer-node }`

### **broadcast-node**

Specify broadcast node.

### **hexadecimal hex\_number**

Specify the hexadecimal number.

Must be a string of 2 characters.

### **hybrid-node**

Specify hybrid node.

### **mixed-node**

Specify mixed node.

### **peer-to-peer-node**

Specify peer-to-peer node.

**Usage Guidelines** Use this command to configure the NetBIOS node type.

## profile dhcp ipv4 class server option-codes

Configures the OptionCode table.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)



---

**Syntax Description**    **option-codes**

---

**Usage Guidelines**    Use this command to configure the OptionCode table. Enters the Option Codes Configuration mode (config-option-codes).

## profile dhcp ipv4 class server option-codes option-code

Configures a DHCP option code.

---

**Command Modes**    Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server) > Option Codes Configuration (config-option-codes)

---

**Command Modes**    Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server) > Option Codes Configuration (config-option-codes)

---

**Syntax Description**    **option-code** *dhcp\_option\_code* [ **ascii-string** *ascii\_string* | **force-insert** { **false** | **true** } | **hex-string** *hex\_string* | **ip-address** *ip\_address* ]

### **ascii-string** *ascii\_string*

Specify the ASCII string.

Must be a string of 1-128 characters.

### **force-insert** { **false** | **true** }

Specify whether to force insert this option.

Must be one of the following:

- **false**
- **true**

### **hex-string** *hex\_string*

Specify the hexadecimal string.

Must be a string of 1-128 characters in the pattern `([0-9a-fA-F]{2}([0-9a-fA-F]{2})*)?`.

### **ip-address** *ip\_address*

Specify the server's IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

### **option-code** *dhcp\_option\_code*

Specify the DHCP option code.

Must be an integer in the range of 0-255.

**Usage Guidelines** Use this command to configure a DHCP option code. Enters the Option Code Configuration mode.

## profile dhcp ipv4 server

Configures DHCP server mode.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name)

**Syntax Description** `server [ boot-filename boot_file_name | dns-servers ip_address | domain-name domain_name | netbios-name-server ip_address | next-server ip_address | ntp-servers ntp_servers | pool-name pool_name ]`

### **boot-filename** *boot\_file\_name*

Specify the boot file name.

Must be a string of 1-128 characters.

### **dns-servers** *ip\_address*

Specify the DNS server IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

### **domain-name** *domain\_name*

Specify the domain name.

Must be a string of 1-128 characters.

### **netbios-name-server** *ip\_address*

Specify the NetBIOS name server IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

### **next-server** *ip\_address*

Specify the TFTP server IP address to be used by the client.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**ntp-servers *ntp\_servers***

Specify the NTP servers.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**pool-name *pool\_name***

Specify the pool name.

Must be a string of 1-128 characters.

---

**Usage Guidelines** Use this command to configure the DHCP server mode. Enters the DHCP Server Configuration mode.

## profile dhcp ipv4 server lease

Configures DHCP Server Lease parameters.

---

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)

---

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)

---

**Syntax Description** **lease** { [ **days** *days* ] [ **hours** *hours* ] [ **minutes** *minutes* ] }

**days *days***

Specify the number of days.

Must be an integer in the range of 0-365.

**hours *hours***

Specify the hours.

Must be an integer in the range of 0-23.

**minutes *minutes***

Specify the minutes.

Must be an integer in the range of 0-59.

---

**Usage Guidelines** Use this command to configure the DHCP Server Lease parameters.

## profile dhcp ipv4 server netbios-node-type

Configures NetBIOS node type.

<b>Command Modes</b>	Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)
<b>Command Modes</b>	Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class_name) > Server Configuration Mode (config-server)
<b>Syntax Description</b>	<pre>netbios-name-server { broadcast-node   hexadecimal hex_number   hybrid-node                       mixed-node   peer-to-peer-node }</pre> <p><b>broadcast-node</b> Specify broadcast node.</p> <p><b>hexadecimal hex_number</b> Specify the hexadecimal number. Must be a string of 2 characters.</p> <p><b>hybrid-node</b> Specify hybrid node.</p> <p><b>mixed-node</b> Specify mixed node.</p> <p><b>peer-to-peer-node</b> Specify peer-to-peer node.</p>
<b>Usage Guidelines</b>	Use this command to configure the NetBIOS node type.

## profile dhcp ipv4 server option-codes

Configures the OptionCode table.

<b>Command Modes</b>	Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server)
<b>Command Modes</b>	Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class_name) > Server Configuration Mode (config-server)
<b>Syntax Description</b>	<b>option-codes</b>
<b>Usage Guidelines</b>	Use this command to configure the OptionCode table. Enters the Option Codes Configuration mode (config-option-codes).

# profile dhcp ipv4 server option-codes option-code

Configures a DHCP option code.

---

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Server Configuration Mode (config-server) > Option Codes Configuration (config-option-codes)

---

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > IPv4 Configuration (config-ipv4) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server) > Option Codes Configuration (config-option-codes)

---

**Syntax Description**

**option-code** *dhcp\_option\_code* [ **ascii-string** *ascii\_string* | **force-insert** { **false** | **true** } | **hex-string** *hex\_string* | **ip-address** *ip\_address* ]

**ascii-string** *ascii\_string*

Specify the ASCII string.

Must be a string of 1-128 characters.

**force-insert** { **false** | **true** }

Specify whether to force insert this option.

Must be one of the following:

- **false**
- **true**

**hex-string** *hex\_string*

Specify the hexadecimal string.

Must be a string of 1-128 characters in the pattern ([0-9a-fA-F]{2}([0-9a-fA-F]{2})\*)?.

**ip-address** *ip\_address*

Specify the server's IP addresses.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**option-code** *dhcp\_option\_code*

Specify the DHCP option code.

Must be an integer in the range of 0-255.

---

**Usage Guidelines**

Use this command to configure a DHCP option code. Enters the Option Code Configuration mode.

## profile dhcp ipv6

Configures DHCP IPv6 parameters.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name)

**Syntax Description** **ipv6** [ **mode** *dhcp\_mode* ]

**mode** *dhcp\_mode*

Specify the DHCP mode server or proxy.

Must be one of the following:

- **proxy**
- **server**

Default Value: server.

**Usage Guidelines** Use this command to configure DHCP IPv6 parameters. Enters the DHCP IPv6 Configuration mode.

## profile dhcp ipv6 class

Configures DHCP IPv6 class configuration parameters.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6)

**Syntax Description** **class** *dhcp\_class\_name*

**dhcp\_class\_name**

Specify the DHCP class name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure DHCP IPv6 class configuration parameters.

## profile dhcp ipv6 class server

Configures DHCP server mode.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Class Configuration (config-class-class\_name)

---

**Syntax Description**

```
server { aftr-name aftr_name | dns-servers ip_address | domain-name domain_name  
| iana-pool-name iana_pool_name | iapd-pool-name iapd_pool_name | preference  
server_preference | rapid-commit }
```

**aftr-name** *aftr\_name*

Specify the Address Family Transition Router (AFTR) name.

Must be a string of 1-128 characters.

**dns-servers** *ip\_address*

Specify the DNS server IP addresses.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**domain-name** *domain\_name*

Specify the domain name.

Must be a string of 1-128 characters.

**iana-pool-name** *iana\_pool\_name*

Specify the IANA pool name.

Must be a string of 1-128 characters.

**iapd-pool-name** *iapd\_pool\_name*

Specify the IAPD pool name.

Must be a string of 1-128 characters.

**preference** *server\_preference*

Specify the DHCP server preference.

Must be an integer in the range of 1-255.

**rapid-commit**

Specify to allow rapid commit.

---

**Usage Guidelines**

Use this command to configure the DHCP server mode.

## profile dhcp ipv6 class server lease

Configures the lease parameters.

---

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Server Configuration Mode (config-server)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)

**Syntax Description** **lease** { [ **days** *days* ] [ **hours** *hours* ] [ **minutes** *minutes* ] }

**days** *days*

Specify the number of days.

Must be an integer in the range of 0-365.

**hours** *hours*

Specify the hours.

Must be an integer in the range of 0-23.

**minutes** *minutes*

Specify the minutes.

Must be an integer in the range of 1-59.

**Usage Guidelines** Use this command to configure lease parameters.

## profile dhcp ipv6 server

Configures DHCP server mode.

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6)

**Command Modes** Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Class Configuration (config-class-class\_name)

**Syntax Description** **server** { **aftr-name** *aftr\_name* | **dns-servers** *ip\_address* | **domain-name** *domain\_name* | **iana-pool-name** *iana\_pool\_name* | **iapd-pool-name** *iapd\_pool\_name* | **preference** *server\_preference* | **rapid-commit** }

**aftr-name** *aftr\_name*

Specify the Address Family Transition Router (AFTR) name.

Must be a string of 1-128 characters.

**dns-servers** *ip\_address*

Specify the DNS server IP addresses.

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.



**domain-name *domain\_name***

Specify the domain name.

Must be a string of 1-128 characters.

**iana-pool-name *iana\_pool\_name***

Specify the IANA pool name.

Must be a string of 1-128 characters.

**iapd-pool-name *iapd\_pool\_name***

Specify the IAPD pool name.

Must be a string of 1-128 characters.

**preference *server\_preference***

Specify the DHCP server preference.

Must be an integer in the range of 1-255.

**rapid-commit**

Specify to allow rapid commit.

**Usage Guidelines**

Use this command to configure the DHCP server mode.

## profile dhcp ipv6 server lease

Configures the lease parameters.

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Server Configuration Mode (config-server)

**Command Modes**

Exec > Global Configuration (config) > DHCP Profile Configuration (config-dhcp-profile\_name) > DHCP IPv6 Configuration (config-ipv6) > Class Configuration (config-class-class\_name) > Server Configuration Mode (config-server)

**Syntax Description**

```
lease { [ days days ] [ hours hours ] [ minutes minutes ] }
```

**days *days***

Specify the number of days.

Must be an integer in the range of 0-365.

**hours *hours***

Specify the hours.

Must be an integer in the range of 0-23.

**minutes** *minutes*

Specify the minutes.

Must be an integer in the range of 1-59.

**Usage Guidelines** Use this command to configure lease parameters.

## profile feature-template

Configures feature template profile.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **feature-template** *feature\_template\_name* [ [ **vrf-name** *vrf\_name* ] [ **httpr-policy** *httpr\_policy\_name* ] ]

**feature-template** *feature\_template\_name*

Specify the feature template name.

Must be a string of 1-128 characters.

**httpr-policy** *httpr\_policy\_name*

Specify the PBR HTTPR policy name.

Must be a string of 1-128 characters.

**vrf-name** *vrf\_name*

Specify the VRF name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure feature template profiles. The CLI prompt changes to the Feature Template Configuration mode (config-feature-template-<template\_name>)

## profile feature-template ipv4

Configures IPv4 features.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*)

**Syntax Description** **ipv4** [ **mtu** *maximum\_transmission\_unit* | **ingress-acl** *ingress\_ipv4\_acl\_name* | **egress-acl** *egress\_ipv4\_acl\_name* | **disable-unreachables** ]

**disable-unreachables**

Specify to disable sending ICMP Unreachable messages.

**egress-acl *egress\_ipv4\_acl\_name***

Specify the egress IPv4 ACL name.

Must be a string of 1-128 characters.

**ingress-acl *ingress\_ipv4\_acl\_name***

Specify the ingress IPv4 ACL name.

Must be a string of 1-128 characters.

**mtu *maximum\_transmission\_unit***

Specify the Maximum Transmission Unit in bytes.

Must be an integer in the range of 68-65535.

**Usage Guidelines**

Use this command to configure IPv4 features. The CLI prompt changes to the IPv4 Configuration mode (config-ipv4).

## profile feature-template ipv4 verify-unicast-source

Enables per-packet validation for unicast.

**Command Modes**

Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > IPv4 Configuration (config-ipv4)

**Syntax Description**

**verify-unicast-source reachable-via-rx**

**reachable-via-rx**

Specify the source is reachable via interface on which packet was received.

**Usage Guidelines**

Use this command to enable per-packet validation for unicast.

## profile feature-template ipv6

Configures IPv6 features.

**Command Modes**

Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*)

**Syntax Description**

**ipv6** [ [ **egress-acl** *egress\_ipv6\_acl\_name* ] [ **ingress-acl** *ingress\_ipv6\_acl\_name* ] [ **mtu** *maximum\_transmission\_unit* ] ]

**disable-unreachables**

Specify to disable sending ICMP Unreachable messages.

**egress-acl *egress\_ipv6\_acl\_name***

Specify the egress IPV6 ACL name.  
Must be a string of 1-128 characters.

**ingress-acl *ingress\_ipv6\_acl\_name***

Specify the ingress IPV6 ACL name.  
Must be a string of 1-128 characters.

**mtu *maximum\_transmission\_unit***

Specify the Maximum Transmission Unit in bytes.  
Must be an integer in the range of 1280-65535.

**Usage Guidelines**

Use this command to configure IPv6 features. The CLI prompt changes to the IPv6 Configuration mode (config-ipv6).

## profile feature-template ipv6 verify-unicast-source

Configures per packet validation for unicast.

**Command Modes**

Exec > Global Configuration (config) > Feature Template Configuration  
(config-feature-template-*template\_name*) > IPv6 Configuration (config-ipv6)

**Syntax Description**

**verify-unicast-source** [ **reachable-via-rx** ]

**reachable-via-rx**

Specify source is reachable via interface on which packet was received.

**Usage Guidelines**

Use this command to configure per packet validation for unicast.

## profile feature-template ppp

Configures the PPP feature.

**Command Modes**

Exec > Global Configuration (config) > Feature Template Configuration  
(config-feature-template-*template\_name*)

**Syntax Description**

**ppp authentication** *authentication\_method*

**authentication *authentication\_method***

Specify the authentication method.

Must be one of the following:

- **chap**

- **pap**

You can configure a maximum of two elements with this keyword.

**max-bad-auth *max\_auth\_failures***

Specify the maximum authentication failures to allow.

Must be an integer in the range of 0-10.

**max-configure *max\_configure***

Specify the maximum conf-reqs to send without response.

Must be an integer in the range of 1-10.

**max-failure *max\_conf\_naks***

Specify the maximum conf-naks to receive.

Must be an integer in the range of 1-5.

**service-type *service\_type***

Specify the service type.

Must be one of the following:

- **outbound**

---

**Usage Guidelines**

Use this command to configure the PPP feature. The CLI prompt changes to the PPP Configuration mode (config-ppp).

## profile feature-template ppp chap

Configures CHAP parameters.

---

**Command Modes**

Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

---

**Syntax Description**

**chap** **hostname** *chap\_host\_name* **password** *chap\_password*

**hostname** *chap\_host\_name*

Specify the CHAP host name.

Must be a string of 1-128 characters of 1-128 characters.

**password** *chap\_password*

Specify the CHAP password.

Must be a string.

**Usage Guidelines** Use this command to configure CHAP parameters.

## profile feature-template ppp ipcp

Configures PPP IPCP negotiation parameters.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **ipcp** [ **peer-address-pool** *peer\_address\_pool\_name* ]

**peer-address-pool** *peer\_address\_pool\_name*

Specify the peer-address pool name.

Must be a string of 1-128 characters of 1-128 characters.

**Usage Guidelines** Use this command to configure PPP IPCP negotiation parameters. The CLI

## profile feature-template ppp ipcp dns

Configures DNS address to be used for peer.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **ipcp dns primary-address** *primary\_address* **secondary-address** *secondary\_address*

**primary-address** *primary\_address*

Specify the primary address. The first address is considered as Primary and second address as Secondary.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**secondary-address** *secondary\_address*

Specify the secondary address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure DNS address to be used for peer.

## profile feature-template ppp ipcp renegotiation

Configures renegotiation parameters.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **ipcp renegotiation ignore**

**ignore**

Specify to ignore attempts by the peer to renegotiate LCP.

**Usage Guidelines** Use this command to configure renegotiation parameters.

## profile feature-template ppp ipcp wins

Configures WINS address to be used for peer.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **ipcp wins primary-address** *primary\_ip\_address* **secondary-address** *secondary\_ip\_address*

**primary-address** *primary\_ip\_address*

Specify the primary address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**secondary-address** *secondary\_ip\_address*

Specify the secondary address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure WINS address to be used for peer.

## profile feature-template ppp ipv6cp renegotiation

Configures renegotiation parameters.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **ipv6cp renegotiation ignore**

**ignore**

Specify to ignore attempts by the peer to renegotiate LCP.

**Usage Guidelines** Use this command to configure renegotiation parameters.

## profile feature-template ppp keepalive

Configures PPP Keepalive parameters.

### Command Modes

Exec > Global Configuration

### Syntax Description

**keepalive** { **disable** | **interval** *keepalive\_interval* | **retry** *keepalive\_retries* }

#### **disable**

Specify to disable PPP keepalive.

#### **interval** *keepalive\_interval*

Specify the keepalive interval in minutes.

Must be an integer in the range of 10-120.

#### **retry** *keepalive\_retries*

Specify the number of keepalive retries.

Must be an integer in the range of 1-255.

### Usage Guidelines

Use this command to configure PPP Keepalive parameters.

## profile feature-template ppp lcp delay

Configures the time to delay before starting active LCP negotiations.

### Command Modes

Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

### Syntax Description

**delay** **seconds** *delay\_value* **milliseconds** *delay\_value*

#### **milliseconds** *delay\_value*

Specify the delay value in milliseconds.

Must be an integer in the range of 0-70000000.

#### **seconds** *delay\_value*

Specify the delay value in seconds.

Must be an integer in the range of 0-255.

### Usage Guidelines

Configures LCP global configuration parameters. Use this command to configure the time to delay before starting active LCP negotiations.



## profile feature-template ppp lcp renegotiation

Configures LCP renegotiation.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** `lcp renegotiation ignore`

**ignore**

Specify to ignore attempts by the peer to renegotiate LCP.

**Usage Guidelines** Use this command to configure LCP renegotiation.

## profile feature-template ppp pap

Configures PAP parameters.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** `pap accept-null-password`

**accept-null-password**

Specify to accept null-password.

**Usage Guidelines** Use this command to configure PAP parameters.

## profile feature-template ppp timeout

Configures PPP timeout parameters.

**Command Modes** Exec > Global Configuration (config) > Endpoint N4 Protocol Configuration (config-endpoint-n4-protocol)

**Syntax Description** `retransmission timeout total_auth_complete_time [ retry max_response_time ]`

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** `timeout { [ authentication total_auth_complete_time ] [ retry max_response_time ] }`

**authentication total\_auth\_complete\_time**

Specify the total time to allow for authentication to complete.

Must be an integer in the range of 3-30.

**retry *max\_response\_time***

Specify the maximum time to wait for a response to a Conf-Req in seconds.

Must be an integer in the range of 1-10.

**Usage Guidelines** Use this command to configure PPP timeout parameters.

## profile feature-template ppp timeout absolute

Configures the absolute timeout period for a PPP session.

**Command Modes** Exec > Global Configuration (config) > Feature Template Configuration (config-feature-template-*template\_name*) > PPP Configuration (config-ppp)

**Syntax Description** **timeout absolute minutes** *timeout\_minutes*

**minutes** *timeout\_minutes*

Specify the timeout period in minutes.

Must be an integer in the range of 0-70000000.

**Usage Guidelines** Use this command to configure the absolute timeout period for a PPP session.

## profile feature-template qos

Configures QoS input policy parameters.

**Command Modes** Exec > Global Configuration (config) > Feature Template QoS Profile Configuration (config-feature-template-qos)

**Syntax Description** **qos** { [ **in-policy** *in\_policy\_name* ] [ **out-policy** *out\_policy\_name* ] [ **merge-level** *merge\_level* ] }

**in-policy** *in\_policy\_name*

Specify the QoS input policy name.

Must be a string of 1-128 characters.

**merge-level** *merge\_level*

Specify the merge level. 0 = merge disabled,

0 = merge enabled + level. Must be an integer.

**out-policy** *out\_policy\_name*

Specify the QoS output policy name.

Must be a string of 1-128 characters.

---

**Usage Guidelines**

Use this command to configure QoS input policy parameters. The CLI prompt changes to the QoS Configuration mode (config-qos).

## profile feature-template service-accounting

Configures service accounting parameters.

---

**Command Modes**

Exec > Global Configuration (config) > Feature Template QoS Profile Configuration (config-feature-template-qos)

---

**Syntax Description**

```
service-accounting enable [ [ aaa-profile aaa_profile_name ] [ periodic-interval interim_interval ] ]
```

**aaa-profile** *aaa\_profile\_name*

Specify the AAA profile to use for service accounting.

**enable**

Specify to enable service accounting.

**periodic-interval** *interim\_interval*

Specify the interim interval in seconds.

Must be an integer in the range of 60-4320000.

---

**Usage Guidelines**

Use this command to configure service accounting parameters. The CLI prompt changes to the Service Accounting Configuration mode (config-service-accounting).

## profile feature-template session-accounting

Configures session accounting parameters.

---

**Command Modes**

Exec > Global Configuration (config) > Feature Template QoS Profile Configuration (config-feature-template-qos)

---

**Syntax Description**

```
session-accounting enable [ [ aaa-profile aaa_profile_name ] [ periodic-interval interim_interval ] [ dual-stack-delay dual_stack_delay_wait ] ]
```

**aaa-profile** *aaa\_profile\_name*

Specify the AAA profile to use for session accounting.

**dual-stack-delay** *dual\_stack\_delay\_wait*

Specify the dual stack set delay wait in seconds.

Must be an integer in the range of 1-30.

#### **enable**

Specify to enable session accounting.

#### **periodic-interval *interim\_interval***

Specify the interim interval in seconds.

Must be an integer in the range of 60-4320000.

#### **Usage Guidelines**

Use this command to configure session accounting parameters. The CLI prompt changes to the Session Accounting Configuration mode (config-session-accounting).

## profile l2tp

Configures L2TP subscriber profiles.

#### **Command Modes**

Exec > Global Configuration (config)

#### **Syntax Description**

```
profile l2tp l2tp_profile_name [ [ authentication ] [ force-lcp-renegotiation
] [ congestion-control ] [ dsl-info-forwarding ] [ encrypt-avp ] [
hello-interval hello_message_interval ] [ hostname host_name ] [ mode config_mode
] [ mtu mtu_for_lcp_negotiation ] [ password tunnel_auth_password ] [ receive-window
receive_window_size ] [ rx-connect-speed rx_connect_speed ] [
tunnel-load-balancing method ] [ tx-connect-speed tx_connect_speed ] [ vrf
vrf_name ] ]
```

#### **authentication**

Specify to authenticate the L2TP tunnel.

#### **congestion-control**

Specify to enable L2TP Congestion Control.

#### **dsl-info-forwarding**

Specify to forward DSL Line Info attributes.

#### **encrypt-avp**

Specify to hide AVPs in outgoing control messages.

#### **force-lcp-renegotiation**

Specify to force LCP and Auth renegotiation.

#### **hello-interval *hello\_message\_interval***

Specify the hello message interval in seconds.

Must be an integer in the range of 10-1000.

**hostname *host\_name***

Specify the local host name of the tunnel.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**mode *config\_mode***

Specify the LAC/LNS config mode.

Must be one of the following:

- **lac**: Configures an LAC to request the establishment of an L2TP tunnel to an LNS.
- **lns**: Configures an LNS to accept requests from LAC to establish L2TP tunnel.

**mtu *mtu\_for\_lcp\_negotiation***

Specify the MTU for LCP negotiation.

Must be an integer in the range of 500-2000.

Default Value: 1492.

**password *tunnel\_auth\_password***

Specify the password for tunnel authentication.

Must be a string.

**receive-window *receive\_window\_size***

Specify the receive window size for the tunnel.

Must be an integer in the range of 1-5000.

Default Value: 256.

**rx-connect-speed *rx\_connect\_speed***

Specify the Rx connect speed in kbps.

Must be an integer in the range of 9-100000000.

**tunnel-load-balancing *method***

Specify the Tunnel Load Balancing method.

Must be one of the following:

- **equal**: Equal load sharing.
- **weighted**: Weighted load sharing.

**tx-connect-speed *tx\_connect\_speed***

Specify the Tx connect speed in kbps.

Must be an integer in the range of 9-100000000.

}

**vrf *vrf\_name***

Specify the VRF of the tunnel.

Must be a string of 1-128 characters.

**l2tp\_profile\_name**

Specify the name of the L2TP profile.

Must be a string of 1-128 characters.

**Usage Guidelines**

Use this command to configure L2TP subscriber profiles. This command enters the L2TP Profile Configuration mode (config-l2tp-<profile\_name>).

## profile l2tp domain

Configures domain matching.

**Command Modes**

Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-*profile\_name*)

**Syntax Description**

**domain** *domain\_name* **tun-assign-id** *tunnel\_id*

**tun-assign-id *tunnel\_id***

Specify the domain name with tunnel ID.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**domain\_name**

Specify the domain name.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines**

Use this command to configure domain matching.

You can configure a maximum of 16 elements with this command.

## profile l2tp ip-tos

Configures IP ToS value for tunneled traffic.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **ip-tos value** { *service\_type* | **reflect** }

**reflect**

Specify to reflect IP payload ToS on tunnel.

**value service\_type**

Specify the type of service value.

Must be an integer in the range of 1-255.

**Usage Guidelines** Use this command to configure IP ToS value for tunneled traffic.

## profile l2tp ipv4

Configures IPv4 settings for tunnel.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **ipv4** { [ **df-bit** *df\_bit\_state* ] [ **source** *source\_ip\_address* ] }

**df-bit df\_bit\_state**

Specify the DF Bit parameter.

Must be one of the following:

- **reflect**: Reflects df bit from inner IP header.
- **set**: Configures df bit.

**source source\_ip\_address**

Specify the source IP address of the tunnel.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure IPv4 settings for tunnel.

## profile l2tp ipv4 destination

Configures destination address of tunnel.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **destination dest-ip** *dest\_ip\_address* **weight** *weight*

**dest-ip *dest\_ip\_address***

Specify the destination IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

**weight *weight***

Specify the weight for Weighted Load Balancing method.

Must be an integer in the range of 1-65535.

Default Value: 1.

**Usage Guidelines**

Use this command to configure destination address of tunnel.

You can configure a maximum of 64 elements with this command.

## profile l2tp retransmit initial

Configures SCCRQ retransmission timeout settings.

**Command Modes**

Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-*profile\_name*)

**Syntax Description**

**retransmit *retries* *max\_retries***

***retries* *max\_retries***

Specify the maximum number of retries for SCCRQ packets.

Must be an integer in the range of 1-1000.

Default Value: 2.

**Usage Guidelines**

Configures Control message retransmission parameters. Use this command to configure SCCRQ retransmission timeout settings.

## profile l2tp retransmit initial timeout

Configures retransmission timeout parameters.

**Command Modes**

Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-*profile\_name*)

**Syntax Description**

**retransmit *timeout* *max* *max\_timeout* *min* *min\_timeout***

***max* *max\_timeout***

Specify the max timeout duration in seconds.

Must be an integer in the range of 1-8.

Default Value: 8.



**min *min\_timeout***

Specify the min timeout duration in seconds.

Must be an integer in the range of 1-8.

Default Value: 1.

**Usage Guidelines**

Use this command to configure retransmission timeout parameters.

## profile l2tp retransmit timeout

Configures Control packet retransmission timeout parameters.

**Command Modes**

Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-*profile\_name*)

**Syntax Description**

**timeout max** *max\_timeout* **min** *min\_timeout*

**max *max\_timeout***

Specify the maximum timeout duration in seconds.

Must be an integer in the range of 1-32.

Default Value: 8.

**min *min\_timeout***

Specify the minimum timeout duration in seconds.

Must be an integer in the range of 1-8.

Default Value: 1.

**Usage Guidelines**

Use this command to configure Control packet retransmission timeout parameters.

## profile l2tp tcp

Configures TCP settings.

**Command Modes**

Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-*profile\_name*)

**Syntax Description**

**tcp adjust-mss** *mss\_value*

**adjust-mss *mss\_value***

Specify to adjust the MSS value of TCP SYN packets. Specify th MSS value in bytes.

Must be an integer in the range of 500-1500.

**Usage Guidelines**

Use this command to configure TCP settings.

## profile l2tp terminate-from

Configures the host name of the remote peer to accept tunnels.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **profile terminate-from hostname** *remote\_host\_name*

**hostname** *remote\_host\_name*

Specify the remote host name.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the host name of the remote peer to accept tunnels.  
You can configure a maximum of 16 elements with this command.

## profile l2tp tunnel

Configures tunnel parameters.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **tunnel session-limit** *session\_limit*

**session-limit** *session\_limit*

Specify the maximum number of L2TP sessions per tunnel.

Must be an integer in the range of 1-64000.

**Usage Guidelines** Use this command to configure tunnel parameters.

## profile l2tp tunnel timeout

Configures tunnel deletion after timeout.

**Command Modes** Exec > Global Configuration (config) > L2TP Profile Configuration (config-l2tp-profile\_name)

**Syntax Description** **tunnel timeout no-session** *no\_session\_timeout*

**no-session** *no\_session\_timeout*

Specify the no-session timeout value in seconds.

Must be an integer in the range of 1-86400.

**Usage Guidelines** Use this command to configure tunnel deletion after timeout.

## profile pppoe

Configures PPPOE Subscriber profile.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `profile pppoe pppoe_profile_name [ [ ac-cookie ac_cookie ] [ ac-name ac_name ] [ ctrl-pkt-priority priority ] [ mtu pado_delay ] [ mtu pppoe_mtu ] [ service-name pppoe_service_names ] [ service-selection-disable { false | true } ] [ timeout-completion session_completion_timeout ] ]`

### **ac-cookie ac\_cookie**

Specify the AC-Cookie to use in PADO packets.

Must be a string of 1-128 characters.

### **ac-name ac\_name**

Specify the the AC-Name to use in PADO packets.

Must be a string of 1-128 characters.

### **ctrl-pkt-priority priority**

Specify the CoS bits to use in PADx packets.

Must be an integer in the range of 0-7.

Default Value: 0.

### **mtu pppoe\_mtu**

Specify the PPPoE MTU for LCP negotiation.

Must be an integer in the range of 500-2000.

Default Value: 1492.

### **pppoe pppoe\_profile\_name**

Specify the name of the PPPOE profile.

Must be a string of 1-128 characters.

### **service-name pppoe\_service\_names**

Specify the supported PPPoE service names. You can simultaneously configure multiple service names.

Must be a string of 1-128 characters.

### **service-selection-disable { false | true }**

Specify to disable or enable the advertising of extra service names in PADO packets.

Must be one of the following:

- **false**
- **true**

Default Value: false.

**timeout-completion *session\_completion\_timeout***

Specify the maximum wait time for session to be completed.

Must be an integer in the range of 3-600.

Default Value: 180.

**Usage Guidelines**

Use this command to configure PPPOE Subscriber profiles. The CLI prompt changes to the PPPOE Profile Configuration mode (config-pppoe-<profile\_name>).

## profile pppoe max-payload

Configures a range for the ppp-max payload tag value.

**Command Modes**

Exec > Global Configuration (config) > PPPOE Profile Configuration mode (config-pppoe-*profile\_name*)

**Syntax Description**

**max-payload** { [ **deny** ] | [ **maximum** *maximum\_payload\_value* ] [ **minimum** *minimum\_payload\_value* ] }

**deny**

Specify to deny the PPP-max payload value.

**maximum *maximum\_payload\_value***

Specify the maximum payload value.

Must be an integer in the range of 1-40000.

Default Value: 1500.

**minimum *minimum\_payload\_value***

Specify the minimum value for the payload.

Must be an integer in the range of 1-40000.

Default Value: 1492.

**Usage Guidelines**

Use this command to configure a range for the ppp-max payload tag value.

## profile pppoe session-limit circuit-id

Configures the maximum number of sessions allowed per Circuit-ID.

**Command Modes** Exec > Global Configuration (config) > PPOE Profile Configuration mode (config-pppoe-*profile\_name*)

**Syntax Description** `session-limit circuit-id value [ threshold threshold_count ]`

**threshold threshold\_count**

Specify the threshold count.

Must be an integer in the range of 1-65535.

**value**

Specify the value.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure the maximum number of sessions allowed per Circuit-ID.

## profile pppoe session-limit mac

Configures the maximum number of sessions allowed per peer MAC address.

**Command Modes** Exec > Global Configuration (config) > PPOE Profile Configuration mode (config-pppoe-*profile\_name*)

**Syntax Description** `session-limit mac value [ threshold threshold_count ]`

**threshold threshold\_count**

Specify the threshold count.

Must be an integer in the range of 1-65535.

**value**

Specify the value.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure the maximum number of sessions allowed per peer MAC address.

## profile pppoe session-limit max

Configures the maximum number of sessions allowed under the PPPoE profile.

**Command Modes** Exec > Global Configuration (config) > PPOE Profile Configuration mode (config-pppoe-*profile\_name*)

**Syntax Description** `session-limit max value [ threshold threshold_count ]`

**threshold threshold\_count**

Specify the threshold count.

Must be an integer in the range of 1-65535.

**value**

Specify the value.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure the maximum number of sessions allowed under the PPPoE profile.

## profile pppoe session-limit outer-vlan

Configures the maximum number of sessions allowed per outer-vlan, per access interface.

**Command Modes** Exec > Global Configuration (config) > PPPOE Profile Configuration mode (config-pppoe-profile\_name)

**Syntax Description** `session-limit outer-vlan value [ threshold threshold_count ]`

**threshold threshold\_count**

Specify the threshold count.

Must be an integer in the range of 1-65535.

**value**

Specify the value.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure the maximum number of sessions allowed per outer-vlan, per access interface.

## profile radius

Configures RADIUS client parameters.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `profile radius [ [ algorithm radius_server_selection_algorithm ] [ deadtime dead_time ] [ max-retry max_retry ] [ timeout retransmit_timeout_duration ] ]`

**algorithm radius\_server\_selection\_algorithm**

Specify the algorithm for selecting RADIUS server.

Must be one of the following:

- **first-server**: Highest priority first.
- **round-robin**: Round-robin.

**deadtime** *dead\_time*

Specify the time to elapse, in minutes, between RADIUS server marked unreachable and when connection can be re-attempted.

Must be an integer in the range of 0-65535.

**max-retry** *max\_retry*

Specify the maximum number of times the system must attempt retry with the RADIUS server.

Must be an integer in the range of 0-65535.

**timeout** *retransmit\_timeout\_duration*

Specify the time duration to wait for response from the RADIUS server before retransmitting.

Must be an integer in the range of 1-65535.

**Usage Guidelines**

Use this command to configure RADIUS client parameters. The CLI prompt changes to the RADIUS Configuration mode (config-radius).

## profile radius accounting

Configures RADIUS accounting parameters.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius)

**Syntax Description**

```
accounting [ [ algorithm radius_server_selection_algorithm ] [ deadtime dead_time ] [ max-retry max_retry ] [ timeout retransmit_timeout_duration ] ]
```

**algorithm** *radius\_server\_selection\_algorithm*

Specify the algorithm for selecting RADIUS server.

Must be one of the following:

- **first-server**: Highest priority first.
- **round-robin**: Round-robin.

**deadtime** *dead\_time*

Specify the time to elapse, in minutes, between RADIUS server marked unreachable and when connection can be re-attempted.

Must be an integer in the range of 0-65535.

**max-retry** *max\_retry*

Specify the maximum number of times the system must attempt retry with the RADIUS server.

Must be an integer in the range of 0-65535.

**timeout *retransmit\_timeout\_duration***

Specify the time duration to wait for response from the RADIUS server before retransmitting.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure RADIUS accounting parameters. The CLI prompt changes to the Accounting Configuration mode (config-accounting).

## profile radius accounting attribute

Configures the AAA attributes.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting)

**Syntax Description** **attribute**

**nas-identifier *nas\_identifier***

Specify the attribute name by which the system will be identified in Access-Request messages.

Must be a string of 1-128 characters of 1-32 characters.

**nas-ip *nas\_ip\_address***

Specify the AAA NAS IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA attributes. The CLI prompt changes to the Attribute Configuration mode (config-attribute).

## profile radius accounting attribute called-station-id

Configures the AAA called-station-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **called-station-id { format-name *format\_name* | value }**

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.



**value**

Specify the value of the AAA called-station-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines**

Use this command to configure the AAA called-station-id attribute.

## profile radius accounting attribute called-station-id format

Configures node parameters.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description**

**called-station-id format-name** *format\_name* [ **nas-port-type** *nas\_port\_type* ]

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines**

Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius accounting attribute calling-station-id

Configures the AAA calling-station-id attribute.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description**

**calling-station-id** *value*

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**value**

Specify the value of the AAA calling-station-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA calling-station-id attribute.

## profile radius accounting attribute calling-station-id format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `called-station-id format-name format_name [ nas-port-type nas_port_type ]`

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type *nas\_port\_type***

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius accounting attribute nas-identifier-format

Configures the AAA nas-identifier-format attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `nas-identifier-format value`

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure the AAA nas-identifier-format attribute.

## profile radius accounting attribute nas-identifier-format format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `called-station-id format-name format_name [ nas-port-type nas_port_type ]`

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type *nas\_port\_type***

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius accounting attribute nas-port

Configures the AAA nas-port attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `nas-port value`

**format-e *format\_e\_value***

Specify the attribute format-e value.

Must be a string of 32 characters in the pattern ([01FSAPRiLUVQ]\*).

***value***

Specify value of the nas-port attribute.

Must be an integer in the range of 1-maximum.

**Usage Guidelines** Use this command to configure the AAA nas-port attribute.

## profile radius accounting attribute nas-port format-e-list

Configures the AAA nas-port-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `format-e-list nas-port-type nas_port_type_value format-e format_e_value`

**format-e *format\_e\_value***

Specify the attribute format-e value.

Must be a string of 32 characters in the pattern ([01FSAPRiLVQ]\*).

**nas-port-type *nas\_port\_type\_value***

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines**

Use this command to configure the AAA nas-port-id attribute.

## profile radius accounting attribute nas-port-id

Configures the AAA nas-port-id attribute.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description**

**nas-port-id** *value*

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

***value***

Specify value of the AAA nas-port-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines**

Use this command to configure the AAA nas-port-id attribute.

## profile radius accounting attribute nas-port-id format

Configures node parameters.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description**

**called-station-id format-name** *format\_name* [ **nas-port-type** *nas\_port\_type* ]

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines**

Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius accounting detect-dead-server

Configures parameters to detect a dead RADIUS server.

**Command Modes**

Exec > Global Configuration

**Syntax Description**

**detect-dead-server** **response-timeout** *response\_timeout\_duration*

**response-timeout** *response\_timeout\_duration*

Specify the time duration, in seconds, for a response from the RADIUS server to mark it as unreachable.

Must be an integer in the range of 1-65535.

**Usage Guidelines**

Use this command to configure parameters to detect a dead RADIUS server.

## profile radius attribute

Configures the AAA attributes.

**Command Modes**

Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting)

**Syntax Description**

**attribute**

**nas-identifier** *nas\_identifier*

Specify the attribute name by which the system will be identified in Access-Request messages.

Must be a string of 1-128 characters of 1-32 characters.

**nas-ip** *nas\_ip\_address*

Specify the AAA NAS IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA attributes. The CLI prompt changes to the Attribute Configuration mode (config-attribute).

## profile radius attribute called-station-id

Configures the AAA called-station-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `called-station-id { format-name format_name | value }`

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**value**

Specify the value of the AAA called-station-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA called-station-id attribute.

## profile radius attribute called-station-id format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** `called-station-id format-name format_name [ nas-port-type nas_port_type ]`

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius attribute calling-station-id

Configures the AAA calling-station-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **calling-station-id** *value*

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**value**

Specify the value of the AAA calling-station-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA calling-station-id attribute.

## profile radius attribute calling-station-id format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **called-station-id format-name** *format\_name* [ **nas-port-type** *nas\_port\_type* ]

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius attribute nas-identifier-format

Configures the AAA nas-identifier-format attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **nas-identifier-format** *value*

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to configure the AAA nas-identifier-format attribute.

## profile radius attribute nas-identifier-format format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **called-station-id format-name** *format\_name* [ **nas-port-type** *nas\_port\_type* ]

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius attribute nas-port

Configures the AAA nas-port attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **nas-port** *value*



**format-e *format\_e\_value***

Specify the attribute format-e value.

Must be a string of 32 characters in the pattern ([01FSAPRiLUVQ]\*).

**value**

Specify value of the nas-port attribute.

Must be an integer in the range of 1-maximum.

**Usage Guidelines** Use this command to configure the AAA nas-port attribute.

## profile radius attribute nas-port format-e-list

Configures the AAA nas-port-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **format-e-list nas-port-type** *nas\_port\_type\_value* **format-e** *format\_e\_value*

**format-e *format\_e\_value***

Specify the attribute format-e value.

Must be a string of 32 characters in the pattern ([01FSAPRiLVQ]\*).

**nas-port-type *nas\_port\_type\_value***

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure the AAA nas-port-id attribute.

## profile radius attribute nas-port-id

Configures the AAA nas-port-id attribute.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **nas-port-id** *value*

**format-name *format\_name***

Specify the attribute format name.

Must be a string of 1-128 characters.

**value**

Specify value of the AAA nas-port-id attribute.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

**Usage Guidelines** Use this command to configure the AAA nas-port-id attribute.

## profile radius attribute nas-port-id format

Configures node parameters.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Accounting Configuration (config-accounting) > Attribute Configuration (config-attribute)

**Syntax Description** **called-station-id format-name** *format\_name* [ **nas-port-type** *nas\_port\_type* ]

**format-name** *format\_name*

Specify the attribute format name.

Must be a string of 1-128 characters.

**nas-port-type** *nas\_port\_type*

Specify the Nas-Port-Type value to apply format name on.

Must be an integer in the range of 0-44.

**Usage Guidelines** Use this command to configure node parameters for nas-port-id, calling-station-id, called-station-id, nas-identifier-format.

## profile radius detect-dead-server

Configures parameters to detect a dead RADIUS server.

**Command Modes** Exec > Global Configuration

**Syntax Description** **detect-dead-server response-timeout** *response\_timeout\_duration*

**response-timeout** *response\_timeout\_duration*

Specify the time duration, in seconds, for a response from the RADIUS server to mark it as unreachable.

Must be an integer in the range of 1-65535.

**Usage Guidelines** Use this command to configure parameters to detect a dead RADIUS server.

# profile radius server

Configures RADIUS external server parameters.

## Command Modes

Exec > Global Configuration (config) > RADIUS Configuration (config-radius)

## Syntax Description

**server** *radius\_server\_ip\_address radius\_server\_port\_number* [ [ **priority** *radius\_server\_priority* ] [ **secret** *radius\_server\_secret* ] [ **type** *server\_type* ] ]

### **priority** *radius\_server\_priority*

Specify the priority of the RADIUS server.

Must be an integer in the range of 1-100.

### **secret** *radius\_server\_secret*

Specify the secret of the RADIUS server.

Must be a string.

### **type** *server\_type*

Specify the server type.

Must be one of the following:

- **acct**
- **auth**

Default Value: auth.

### **radius\_server\_ip\_address**

Specify the IP address of the RADIUS server.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

### **radius\_server\_port\_number**

Specify the port number of the RADIUS server.

Must be an integer in the range of 1-65535.

## Usage Guidelines

Use this command to configure RADIUS external server parameters. The CLI prompt changes to the Server Configuration mode (config-server-<ip\_address>/<port\_number>).

## profile radius server-group

Configures association of RADIUS servers to groups.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius)

**Syntax Description** **server-group** *server\_group\_name*

***server\_group\_name***

Specify the name of the RADIUS server group.

Must be a string of 1-128 characters.

**Usage Guidelines** Use this command to associate RADIUS servers to groups. The CLI prompt changes to the Server Group Configuration mode (config-server-group-<group\_name>).

## profile radius server-group server

Configures RADIUS server information.

**Command Modes** Exec > Global Configuration (config) > RADIUS Configuration (config-radius) > Server Group Configuration (config-server-group-*group\_name*)

**Syntax Description** **server** *radius\_server\_type radius\_server\_ip\_address radius\_port\_number*

***radius\_port\_number***

Specify the port number of the RADIUS server.

***radius\_server\_ip\_address***

Specify IP address of the RADIUS server.

***radius\_server\_type***

Specify the server type.

Must be one of the following:

- **acct**: Server used for accounting requests.
- **auth**: Server is used for authentication/authorization requests.

**Usage Guidelines** Use this command to configure RADIUS server information.

## profile server-group

Configures AAA custom server groups.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<pre><b>profile server-group</b> <i>aaa_server_group_name</i> [ <b>radius-group</b> <i>radius_server_group_name</i> ]</pre> <p><b>radius-group</b> <i>radius_server_group_name</i> Specify the RADIUS server group name.</p> <p><b>aaa_server_group_name</b> Specify the AAA server group name. Must be a string of 1-128 characters.</p>
<b>Usage Guidelines</b>	Use this command to configure AAA custom server groups. The CLI prompt changes to the Server Group Configuration mode (config-server-group-<group_name>).

## profile subscriber

Configures subscriber profiles.

<b>Command Modes</b>	Exec > Global Configuration (config)
<b>Syntax Description</b>	<pre><b>profile subscriber</b> <i>subscriber_profile_name</i> [ <b>activate-feature-templates</b> <i>template_names</i>   <b>apply-all-class</b>   <b>dhcp-profile</b> <i>dhcp_profile_name</i>   <b>l2tp-profile</b> <i>l2tp_profile_name</i>   <b>pppoe-profile</b> <i>pppoe_profile_name</i>   <b>session-type</b> <i>session_type</i> ]</pre> <p><b>activate-feature-templates</b> <i>template_names</i> Specify the list of feature templates to activate. You can configure a maximum of eight elements with this keyword.</p> <p><b>apply-all-class</b> Specify to apply all classes if enabled.</p> <p><b>dhcp-profile</b> <i>dhcp_profile_name</i> Specify the DHCP-FSOL profile name.</p> <p><b>l2tp-profile</b> <i>l2tp_profile_name</i> Specify to associate L2TP-FSOL profile.</p> <p><b>pppoe-profile</b> <i>pppoe_profile_name</i> Specify the PPPOE-FSOL profile name.</p> <p><b>session-type</b> <i>session_type</i> Specify the allowed session type.</p>

Must be one of the following:

- **ipv4**
- **ipv4v6**
- **ipv6**

Default Value: ipv4v6.

**subscriber *subscriber\_profile\_name***

Specify the subscriber profile name.

Must be a string of 1-128 characters.

**Usage Guidelines**

Use this command to configure subscriber profiles. The CLI prompt changes to the Subscriber Configuration mode (config-subscriber-*<profile\_name>*).

## profile subscriber aaa

Configures AAA operations.

**Command Modes**

Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*)

**Command Modes**

Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*)

**Command Modes**

Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*)

**Command Modes**

Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class Configuration (config-class-*class\_name*)

**Syntax Description**

**aaa** *aaa\_option* *aaa\_profile\_name*

***aaa\_option***

Specify the AAA option.

Must be one of the following:

- **authenticate**
- **authorize**

***aaa\_profile\_name***

Specify the AAA profile name.

**Usage Guidelines**

Use this command to configure AAA operations.

## profile subscriber class

Configures subscriber classification parameters.

### Command Modes

Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*)

### Command Modes

Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*)

### Syntax Description

**class** *class\_name* [ **activate-feature-templates** *feature\_template\_names* ]

**activate-feature-templates** *feature\_template\_names*

Specify the list of feature template names to activate.

You can configure a maximum of eight elements with this keyword.

**class** *class\_name*

Specify the class name.

Must be a string of 1-128 characters.

### Usage Guidelines

Use this command to configure subscriber classification parameters. The CLI prompt changes to the Class Configuration mode (config-class-<class\_name>).

## profile subscriber class aaa

Configures AAA operations.

### Command Modes

Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*)

### Command Modes

Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class Configuration (config-class-*class\_name*)

### Syntax Description

**aaa** *aaa\_option profile\_name*

**aaa\_option**

Specify the AAA option.

Must be one of the following:

- **authenticate**
- **authorize**

***profile\_name***

Specify the AAA profile name for authentication.

**Usage Guidelines** Use this command to configure AAA operations.

## profile subscriber class matches

Configures the list of match values.

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*)

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class  
Configuration (config-class-*class\_name*)

**Syntax Description** **matches** [ **match-type** *match\_type* ]

***match-type match\_type***

Specify the match type.

Must be one of the following:

- **all**
- **any**

**Usage Guidelines** Use this command to configure the list of match values. Enters the Matches Configuration mode.

## profile subscriber class matches match

Configures Match Key and value.

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*) > Matches  
Configuration (config-matches)

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class  
Configuration (config-class-*class\_name*) > Matches Configuration (config-matches)

**Syntax Description** **match** *match\_key* { **type** *match\_protocol* | **ascii** *ascii\_string* | **regex** *regex\_string* }

***ascii ascii\_string***

Specify the ASCII string.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.



You can configure a maximum of eight elements with this keyword.

**regex *regex\_string***

Specify the regular expression string.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**type *match\_protocol***

Specify the match protocol.

Must be one of the following:

- **dhcp**
- **ppp**

You can configure a maximum of two elements with this keyword.

***match\_key***

Specify the match key.

Must be one of the following:

- **circuit-id**
- **protocol**
- **remote-id**
- **source-mac**
- **username**

**Usage Guidelines** Use this command to configure Match Key and value.

## profile subscriber event

Configures subscriber events.

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration  
(config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*)

**Syntax Description** `event event_name [ activate-feature-templates template_names | apply-all-class  
| deactivate-feature-templates template_names ]`

**activate-feature-templates *template\_names***

Specify the list of feature templates to activate.

You can configure a maximum of eight elements with this keyword.

**apply-all-class**

Specify to apply all classes if enabled.

**deactivate-feature-templates *template\_names***

Specify the list of feature templates to deactivate.

You can configure a maximum of eight elements with this keyword.

**event *event\_name***

Specify the event name.

Must be one of the following:

- **session-activate**

---

**Usage Guidelines** Use this command to configure subscriber events.

## profile subscriber event aaa

Configures AAA operations.

---

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*)

---

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*)

---

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*)

---

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class Configuration (config-class-*class\_name*)

---

**Syntax Description** **aaa** *aaa\_option* *aaa\_profile\_name*

***aaa\_option***

Specify the AAA option.

Must be one of the following:

- **authenticate**
- **authorize**

***aaa\_profile\_name***

Specify the AAA profile name.

**Usage Guidelines** Use this command to configure AAA operations.

## profile subscriber event class

Configures subscriber classification.

**Command Modes** Exec > Global Configuration

**Syntax Description** `class { class-name class_name | deactivate-feature-templates template_names | activate-feature-templates template_names }`

**activate-feature-templates *template\_names***

Specify the list of feature template names to activate.

You can configure a maximum of eight elements with this keyword.

**class-name *class\_name***

Specify the class name.

Must be a string of 1-128 characters.

**deactivate-feature-templates *template\_names***

Specify the list of feature template names to deactivate.

You can configure a maximum of eight elements with this keyword.

**Usage Guidelines** Use this command to configure subscriber classification.

## profile subscriber event class aaa

Configures AAA operations.

**Command Modes** Exec > Global Configuration

**Syntax Description** `aaa { aaa-option aaa_option | profile profile_name }`

**aaa-option *aaa\_option***

Specify the AAA option.

Must be one of the following:

- **authenticate**
- **authorize**

**profile *profile\_name***

Specify the AAA profile name for authentication.

**Usage Guidelines** Use this command to configure AAA operations.

## profile subscriber event class matches

Configures the list of match values.

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*)

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class Configuration (config-class-*class\_name*)

**Syntax Description** **matches** [ **match-type** *match\_type* ]

**match-type** *match\_type*

Specify the match type.

Must be one of the following:

- **all**
- **any**

**Usage Guidelines** Use this command to configure the list of match values. Enters the Matches Configuration mode.

## profile subscriber event class matches match

Configures Match Key and value.

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Class Configuration (config-class-*class\_name*) > Matches Configuration (config-matches)

**Command Modes** Exec > Global Configuration (config) > Subscriber Profile Configuration (config-subscriber-*subscriber\_profile\_name*) > Event Configuration (config-event-*event\_name*) > Class Configuration (config-class-*class\_name*) > Matches Configuration (config-matches)

**Syntax Description** **match** *match\_key* { **type** *match\_protocol* | **ascii** *ascii\_string* | **regex** *regex\_string* }

**ascii** *ascii\_string*

Specify the ASCII string.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**regex *regex\_string***

Specify the regular expression string.

Must be a string in the bng-special-str pattern. For information on the bng-special-str pattern, see the Input Pattern Types section.

You can configure a maximum of eight elements with this keyword.

**type *match\_protocol***

Specify the match protocol.

Must be one of the following:

- **dhcp**
- **ppp**

You can configure a maximum of two elements with this keyword.

***match\_key***

Specify the match key.

Must be one of the following:

- **circuit-id**
- **protocol**
- **remote-id**
- **source-mac**
- **username**

---

**Usage Guidelines** Use this command to configure Match Key and value.

## quit

Exits the management session.

---

**Command Modes** Exec

---

**Syntax Description** `quit`

---

**Usage Guidelines** Use this command to exit the management session.

## radius

Displays RADIUS client data.

---

**Command Modes** Exec

---

**Syntax Description**    `show radius`

---

**Usage Guidelines**    Use this command to view RADIUS client data.

## radius acct-server

Displays RADIUS accounting server data.

---

**Command Modes**    Exec

---

**Syntax Description**    `show radius acct-server`

---

**Usage Guidelines**    Use this command to view RADIUS accounting server data.

## radius auth-server

Displays RADIUS authentication server data.

---

**Command Modes**    Exec

---

**Syntax Description**    `show radius auth-server`

---

**Usage Guidelines**    Use this command to view RADIUS authentication server data.

## radius-dyn-auth

Displays RADIUS dynamic-author data.

---

**Command Modes**    Exec

---

**Syntax Description**    `show radius radius-dyn-auth`

---

**Usage Guidelines**    Use this command to view RADIUS dynamic-author data.

## radius-dyn-auth clients

Displays RADIUS dynamic-author information.

---

**Command Modes**    Exec

---

**Syntax Description**    `show radius clients`

---

**Usage Guidelines**    Use this command to view RADIUS dynamic-author information.

## rcm switchover

Configures Redundancy and Configuration Manager (RCM) switchover operation.

**Command Modes** Exec

**Syntax Description** **rcm switchover source** *ip\_address* **destination** *ip\_address*

**source** *ip\_address*

Specify the source IP address.

Must be an IP address.

**destination** *ip\_address*

Specify the destination IP address.

Must be an IP address.

**Usage Guidelines** Use this command to configure RCM switchover operation.

## reconcile ipam

Reconciles IPAM data with CDL records.

**Command Modes** Exec

**Syntax Description** **reconcile ipam**

**Usage Guidelines** Use this reconcile IPAM data with CDL records.

## resource pod

Configures Pod resource parameter.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **resource** *pod\_type*

**pod\_type**

Specify the pod type.

**Usage Guidelines** Use this command to configure Pod resource parameter. The CLI prompt changes to the Pod Resource Configuration mode (config-resource-<pod\_type>).

## resource pod cpu

Configures CPU resource request parameter.

**Command Modes** Exec > Global Configuration (config) > Pod Resource Configuration (config-resource-*pod\_type*)

**Syntax Description** **cpu request** *cpu\_resource\_request*

**request** *cpu\_resource\_request*

Specify the CPU resource request in millicores.

Must be an integer in the range of 100-1000000.

**Usage Guidelines** Use this command to configure CPU resource request parameter.

## resource pod labels

Configures K8 Node Affinity label configuration.

**Command Modes** Exec > Global Configuration (config) > Pod Resource Configuration (config-resource-*pod\_type*)

**Syntax Description** **labels key** *label\_key* **value** *label\_value*

**key** *label\_key*

Specify the key for the label.

Must be a string.

**value** *label\_value*

Specify the value for the label.

Must be a string.

**Usage Guidelines** Use this command to configure K8 Node affinity label configuration.

## resource pod memory

Configures memory resource request parameter.

**Command Modes** Exec > Global Configuration (config) > Pod Resource Configuration (config-resource-*pod\_type*)

**Syntax Description** **memory request** *memory\_resource\_request*

**request** *memory\_resource\_request*

Specify the memory resource request in megabytes.



Must be an integer in the range of 100-200000.

**Usage Guidelines** Use this command to configure memory resource request parameter.

## resources

Displays resources information.

**Command Modes** Exec

**Syntax Description** `show resources`

**Usage Guidelines** Use this command to view resources information.

## resources info

Displays resources information.

**Command Modes** Exec

**Syntax Description** `show resources info`

**Usage Guidelines** Use this command to view resources information.

## router bfd instance instance-id

Configures Multi-Hop BFD configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `router bfd instance instance-id instance_id`

***instance\_id***

Specify the instance ID.

**Usage Guidelines** Use this command to configure Multi-Hop BFD configuration.

## router bfd instance instance-id interface-list

Configures monitor interface list configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** `router monitor-interface interface-list interface interface_to_monitor`

**gateway-ip gateway\_ip\_address**

Specify IP address of the gateway.

Must be a string.

**interface interface\_to\_monitor**

Specify the interface to monitor.

Must be a string.

**Usage Guidelines** Use this command to configure monitor interface list configuration.

## router bfd instance instance-id interface-list neighbors

Configures monitor interface list configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **router bfd instance** *instance-id* **interface** *interface\_to\_monitor* **neighbor** *neighbor\_ip\_address*

**neighbor neighbor\_ip\_address**

Specify IP address of the neighbor.

Must be a string.

**Usage Guidelines** Use this command to configure monitor interface list configuration.

## router bgplist

Configures BGP speaker configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **router bgp** *bgp* [ **learnDefaultRoute** { **false** | **true** } | **loopbackBFDPort** *bfd\_local\_port\_number* | **loopbackPort** *bgp\_local\_port\_number* ]

**bgp bgp**

Specify the BGP.

Must be an integer.

**learnDefaultRoute { false | true }**

Specify whether to enable or disable learning default route and adding it in kernel space.

Must be one of the following:

- **false**

- true

Default Value: false.

**loopbackBFDPort *bfd\_local\_port\_number***

Specify the BFD local port number.

Must be an integer.

Default Value: 3784.

**loopbackPort *bgp\_local\_port\_number***

Specify the BGP local port number.

Must be an integer.

Default Value: 179.

**Usage Guidelines**

Use this command to configure the BGP speaker configuration.

## router bgplist bfd

Configures BFD configuration.

**Command Modes**

Exec > Global Configuration (config) > Router Configuration (config-router-router)

**Syntax Description**

```
bfd { interval bfd_interval | min_rx bfd_min_rx | multiplier bfd_interval_multiplier }
```

**interval *bfd\_interval***

Specify, in microseconds, the BFD interval.

Must be an integer.

Default Value: 250000.

**min\_rx *bfd\_min\_rx***

Specify, in microseconds, the BFD minimum RX.

Must be an integer.

Default Value: 250000.

**multiplier *bfd\_interval\_multiplier***

Specify the BFD interval multiplier.

Must be an integer.

Default Value: 3.

**Usage Guidelines**

Use this command to configure the BFD configuration.

## router bgplist interfaceList

Configures bonding interface configuration.

**Command Modes** Exec > Global Configuration (config) > Router Configuration (config-router-router)

**Syntax Description** **interface** *bgp\_local\_interface*

**interface** *bgp\_local\_interface*

Specify the BGP local interface.

Must be a string.

**Usage Guidelines** Use this command to configure the bonding interface configuration.

## router bgplist interfaceList bondingInterfaces

Configures bonding interface configuration.

**Command Modes** Exec > Global Configuration (config) > Router Configuration (config-router-router) > Router Interface Configuration (config-router-interface)

**Syntax Description** **bondingInterface** *linked\_bonding\_interface*

**bondingInterface** *linked\_bonding\_interface*

Specify the linked bonding interface.

Must be a string.

**Usage Guidelines** Use this command to configure the bonding interface configuration.

## router bgplist interfaceList neighbors

Configures neighbor parameters.

**Command Modes** Exec > Global Configuration (config) > Router Configuration (config-router-router) > Router Interface Configuration (config-router-interface)

**Syntax Description** **neighbor** *neighbor\_ip\_address* [ **fail-over** *failover\_type* | **remote-as** *remote\_as\_number* ]

**fail-over** *failover\_type*

Specify the failover type.

Must be one of the following:

- **bfd**

**neighbor *neighbor\_ip\_address***

Specify the IP address of the neighbor.

Must be a string.

**remote-as *remote\_as\_number***

Specify the Autonomous System (AS) number of the BGP neighbor.

Must be an integer.

Default Value: 65000.

---

**Usage Guidelines**

Use this command to configure the neighbor parameters.

## router bgplist policies

Configures policy parameters.

---

**Command Modes**

Exec > Global Configuration (config) > Router Configuration (config-router-router)

---

**Syntax Description**

**policy-name** *policy\_name* [ **as-path-set** *as\_path\_set* | **gateWay** *gateway\_address* | **interface** *interface* | **ip-prefix** *ip\_prefix* | **isStaticRoute** { **false** | **true** } | **mask-range** *mask\_range* | **modifySourceIp** { **false** | **true** } ]

**as-path-set *as\_path\_set***

Specify the Autonomous System (AS) path set.

Must be a string.

**gateWay *gateway\_address***

Specify the gateway address.

Must be a string.

**interface *interface***

Specify the interface to set as source ip.

Must be a string.

**ip-prefix *ip\_prefix***

Specify the IP prefix.

Must be a string.

**isStaticRoute { **false** | **true** }**

Specify whether to enable or disable adding static route into kernel space.

Must be one of the following:

- **false**
- **true**

Default Value: false.

**mask-range** *mask\_range*

Specify the mask range.

Must be a string.

**modifySourceIp** { **false** | **true** }

Specify whether to enable or disable modifying source IP of incoming route.

Must be one of the following:

- **false**
- **true**

Default Value: false.

**policy-name** *policy\_name*

Specify name of the policy.

Must be a string.

**source-prefix** *source\_ip\_prefix*

Specify the source IP prefix.

Must be a string.

**Usage Guidelines** Use this command to configure the policy parameters.

## router monitor-interface interface-list

Configures monitor interface list configuration.

**Command Modes** Exec > Global Configuration (config)

**Syntax Description** **router monitor-interface interface-list interface** *interface\_to\_monitor*  
**linked-interface** *linked\_interface\_to\_monitor*

**interface** *interface\_to\_monitor*

Specify the interface to monitor.

Must be a string.

**linked-interface *linked\_interface\_to\_monitor***

Specify the linked interface to monitor.

Must be a string.

---

**Usage Guidelines** Use this command to configure monitor interface list configuration.

## rpc

Displays RPC information.

---

**Command Modes** Exec

---

**Syntax Description** `show rpc`

---

**Usage Guidelines** Use this command to view RPC information.

## rpc all

Displays information for all RPCs.

---

**Command Modes** Exec

---

**Syntax Description** `show rpc all`

---

**Usage Guidelines** Use this command to view information for all RPCs.

## running-status

Displays system running status information.

---

**Command Modes** Exec

---

**Syntax Description** `show running-status`

---

**Usage Guidelines** Use this command to view system running status information.

## running-status info

Displays system running status information.

---

**Command Modes** Exec

---

**Syntax Description** `show running-status info`

**Usage Guidelines** Use this command to view system running status information.

## screen-length

Configures the number of rows of text that the terminal screen displays.

**Command Modes** Exec

**Syntax Description** **screen-length** *number\_of\_rows*

***number\_of\_rows***

Specify the number of rows that the terminal screen displays.

Must be an integer.

**Usage Guidelines** Use this command to set the number of rows that the terminal screen displays.

## screen-width

Configures the number of columns that the terminal screen displays.

**Command Modes** Exec

**Syntax Description** **screen-width** *number\_of\_columns*

***number\_of\_columns***

Specify the number of columns that the terminal screen displays.

Must be an integer.

**Usage Guidelines** Use this command to set the number of columns that the terminal screen displays.

## send

Sends messages to the terminal of a specific user or all users.

**Command Modes** Exec

**Syntax Description** **send** *user message*

***user***

Specify the user to whom the message must be sent.

Must be a string. Select from the possible completion options.



**message**

Specify the message that must be sent.

Must be a string.

---

**Usage Guidelines** Use this command to send messages to the terminal of a specific user or to all users.

## sessions

Displays pending session commits in the database.

---

**Command Modes** Exec

---

**Syntax Description** `show sessions`

---

**Usage Guidelines** Use this command to view pending session commits in the database.

## sessions affinity

Displays instance-wise affinity count.

---

**Command Modes** Exec

---

**Syntax Description** `show sessions affinity`

---

**Usage Guidelines** Use this command to view the instance-wise affinity count.

## sessions commit-pending

Displays all pending session commits.

---

**Command Modes** Exec

---

**Syntax Description** `show sessions commit-pending`

---

**Usage Guidelines** Use this command to view all pending session commits.

## show

Displays the system information.

---

**Command Modes** Exec

---

**Syntax Description** `show system_component`

***system\_component***

Specify the component to view the information.

Must be a string. Select from the possible completion options.

**Usage Guidelines** Use this command to view the system information.

## show bfd-neighbor

Displays BFD status of neighbors.

**Command Modes** Exec

**Syntax Description** `show bfd-neighbor [ ip ip_address ]`

***ip ip\_address***

Specify the IP address of the neighbor.

Must be a string.

**Usage Guidelines** Use this command to view BFD status of neighbors.

## show bgp-global

Displays BGP global configuration.

**Command Modes** Exec

**Syntax Description** `show bgp-global`

**Usage Guidelines** Use this command to view BGP global configuration.

## show bgp-kernel-route

Displays BGP kernel-configured routes.

**Command Modes** Exec

**Syntax Description** `show bgp-kernel-route [ application { false | true } ]`

***application { false | true }***

Specify whether to display application added routes.

Must be one of the following:

- **false**

- true

Default Value: false.

---

**Usage Guidelines** Use this command to view BGP kernel-configured routes.

## show bgp-neighbors

Displays BGP neighbor's status.

---

**Command Modes** Exec

---

**Syntax Description** **show bgp-neighbors [ ip *ip\_address* ]**

**ip *ip\_address***

Specify the IP address of the neighbor.

Must be a string.

---

**Usage Guidelines** Use this command to view BGP neighbor's status.

## show bgp-route-summary

Displays BGP route summary.

---

**Command Modes** Exec

---

**Syntax Description** **show bgp-route-summary**

---

**Usage Guidelines** Use this command to view BGP route summary.

## show bgp-routes

Displays BGP routes information.

---

**Command Modes** Exec

---

**Syntax Description** **show bgp-routes**

---

**Usage Guidelines** Use this command to view BGP routes information.

## show edr

Displays EDR Transaction Procedure Event fields.

---

**Command Modes** Exec

---

**Syntax Description** **show edr** { [ **event** *transaction\_procedure\_event* ] [ **transaction-procedure** *transaction\_procedure* ] }

**event** *transaction\_procedure\_event*

Specify the transaction procedure's name, ID, or all.

Must be a string.

**transaction-procedure** *transaction\_procedure*

Specify the transaction procedure's name, ID, or all.

Must be a string.

---

**Usage Guidelines** Use this command to view EDR Transaction Procedure Event fields.

## show geo-maintenance-mode

Displays status of maintenance mode.

---

**Command Modes** Exec

---

**Syntax Description** **show geo-maintenance-mode**

---

**Usage Guidelines** Use this command to view if maintenance mode is enabled or disabled.

## show georeplication

Displays ETCD/Cache checksum.

---

**Command Modes** Exec

---

**Syntax Description** **show georeplication checksum instance-id** *instance\_id*

**checksum**

Specify checksum.

**instance-id** *instance\_id*

Specify the instance ID for which checksum will be displayed.

Must be a string.

---

**Usage Guidelines** Use this command to view ETCD/Cache checksum.

## show ipam-debug

Displays IPAM debug information.

**Command Modes** Exec

**Syntax Description** `show ipam-debug [ all ]`

**all**

Specify to display all IPAM debug internal information.

**Usage Guidelines** Use this command to view IPAM debug information.

## show l2tp-tunnel

Show L2TP tunnel information.

**Command Modes** Exec

**Syntax Description** `show l2tp-tunnel [ count tunnels_count | detail ]`

**count tunnels\_count**

Specify the number of tunnels.

**detail**

Specify to display detailed information.

**Usage Guidelines** Use this command to view L2TP tunnel information.

## show l2tp-tunnel filter

Show L2TP tunnel information for additional filters.

**Command Modes** Exec

**Syntax Description** `show l2tp-tunnel filter { destination-addr destination_address | source-addr source_address | state state_info | tunnel-id l2tp_tunnel_id | tunnel-type tunnel_type | tunnelAssignmentID tunnel_assignment_id | upf upf_info }`

**destination-addr destination\_address**

Specify the tunnel destination IP address.

Must be a string.

**source-addr *source\_address***

Specify the tunnel source IP address.

Must be a string.

**state *state\_info***

Specify the state information.

Must be one of the following:

- **complete**
- **incomplete**

**tunnel-id *l2tp\_tunnel\_id***

Specify the L2TP tunnel ID.

Must be an integer in the range of 1-65535.

**tunnel-type *tunnel\_type***

Specify the tunnel type.

Must be one of the following:

- **lac**
- **lns**

**tunnelAssignmentID *tunnel\_assignment\_id***

Specify the tunnel assignment ID.

Must be a string.

**upf *upf\_info***

Specify the UPF.

Must be a string.

---

**Usage Guidelines** Use this command to view L2TP tunnel information for additional filters.

## show local-interface-status

Displays status of local interface.

---

**Command Modes** Exec

---

**Syntax Description** `show local-interface-status interface local_interface_name`

**interface *local\_interface\_name***

Specify name of the local interface.

Must be a string.

---

**Usage Guidelines** Use this command to view status of local interface .

## show role

Displays current role for the specified instance.

---

**Command Modes** Exec

---

**Syntax Description** **show role instance-id** *instance\_id*

**instance-id *instance\_id***

Specify the instance ID for which role must be displayed.

---

**Usage Guidelines** Use this command to view current role for the specified instance.

## show subscriber

Shows BNG subscriber data.

---

**Command Modes** Exec

---

**Syntax Description** **show subscriber** *type* [ **count** | **detail** | **sublabel** *subscriber\_label* ]

**acct-sess-id *accounting\_session\_id***

Specify the accounting session ID.

Must be a string of 1-64 characters.

**count**

Specify to display the number of sessions.

**debug**

Specify debug information.

**detail**

Specify to display detailed information.

**sublabel *subscriber\_label***

Specify the subscriber label.

Must be a string of 1-64 characters.

### **type**

Specify the type.

Must be one of the following:

- **dhcp**: DHCP information.
- **lms**: Lms information.
- **pppoe**: PPPoE information.
- **session**: SessionManager information.

**Usage Guidelines** Use this command to view BNG subscriber data.

## show subscriber

Displays subscriber information.

**Command Modes** Exec

**Syntax Description** `show subscriber { all | supi supi_id }`

### **all**

Specify all SUPIs or IMEIs.

### **gr-instance *gr\_instance***

Specify the network function service under which to search.

### **imei *imei\_id***

Specify the International Mobile Equipment Identity.

Must be a string of 15-16 characters.

### **namespace *namespace***

NOTE: This keyword is deprecated, use `nf-service` instead. Specify the product namespace under which to search.

Default Value: `cisco-mobile-infra:none`.

### **nf-service *nf\_service***

Specify the network function service under which to search.

Default Value: `cisco-mobile-infra:none`.



**supi** *supi\_id*

Specify the subscriber's SUPI ID.

Must be a string.

**Usage Guidelines**

Use this command to view summary and detailed subscriber information for all subscribers or specific subscribers based on SUPI, IMEI, or all.

## show subscriber filter

Configures additional filters.

**Command Modes**

Exec

**Syntax Description**

```
show subscriber type filter [ afi address_family | iana-state-bound
iana_bound_state | iapd-state-bound iapd_bound_state | ipv4-addr ipv4_address |
ipv4-pool ipv4_pool_name | ipv4-range ipv4_address_range | ipv4-state-bound
ipv4_bound_state | ipv6-addr ipv6_address | ipv6-addr-pool ipv6_address_pool_name |
ipv6-addr-range ipv6_address_range | ipv6-pfx ipv6_prefix | ipv6-pfx-pool
ipv6_prefix_pool | ipv6-pfx-range ipv6_prefix_range | mac mac_address | port-id
upf_port_id | state session_state | up-subs-id up_subscriber_id | upf upf_name |
upmgr sm_up_info | username session_user_name | vrf vrf_name ]
```

**afi** *address\_family*

Specify the address family.

Must be one of the following:

- **dual**: Dual-Stack sessions.
- **ipv4**: IPv4-only sessions.
- **ipv6**: IPv6-only sessions.
- **pending**: Inflight sessions (applicable for SessMgr).

**feat-template** *feature\_template\_profile\_name*

Specify the feature-template profile name.

Must be a string.

**iana-state-bound** *iana\_bound\_state*

Specify the IANA bound state.

Must be one of the following:

- **iana-state-bound**

**iapd-state-bound *iapd\_bound\_state***

Specify the IAPD bound state.

Must be one of the following:

- **iapd-state-bound**

**ipv4-addr *ipv4\_address***

Specify the IPv4 address in the format "*pool-name/ipv4-addr*".

Must be a string.

**ipv4-pool *ipv4\_pool\_name***

Specify the IPv4 pool name.

Must be a string.

**ipv4-range *ipv4\_address\_range***

Specify the IPv4 address range in the format "*poolName/start-ip*".

Must be a string.

**ipv4-state-bound *ipv4\_bound\_state***

Specify the IPv4 bound state.

Must be one of the following:

- **ipv4-state-bound**

**ipv6-addr-pool *ipv6\_address\_pool\_name***

Specify the IPv6 address pool name.

Must be a string.

**ipv6-addr-range *ipv6\_address\_range***

Specify the IPv6 address range in the format "*poolName/start-ip*".

Must be a string.

**ipv6-addr *ipv6\_address***

Specify the IPv6 address in the format "*pool-name/ipv6-addr*".

Must be a string.

**ipv6-pfx-pool *ipv6\_prefix\_pool***

Specify the IPv6 prefix pool name.

Must be a string.

**ipv6-pfx-range *ipv6\_prefix\_range***

Specify the IPv6 prefix range in the format "*poolName/start-pfx*".

Must be a string.

**ipv6-pfx *ipv6\_prefix***

Specify the IPv6 prefix in the format "*pool-name/ipv6-pfx*".

Must be a string.

**mac *mac\_address***

Specify the MAC address in the "*aabb.ccdd.eeff*" format.

Must be a string.

**port-id *upf\_port\_id***

Specify the user plane function port ID in the format "*upf/portid*".

Must be a string.

**ppp-type *ppp\_session\_type***

Specify the PPP session type.

Must be one of the following:

- **lac**
- **pta**: PPPoE PTA subscriber.

**session-id *session\_id***

Specify the L2TP session ID.

Must be an integer in the range of 1-65535.

**sesstype *session\_type***

Specify the SM subscriber session type.

Must be one of the following:

- **ipo**: IPOE subscribers.
- **lac**
- **lms**
- **ppp**: PPP subscribers.

**smstate *sm\_session\_state***

Specify the state of the SM session.

Must be one of the following:

- **created**
- **deleted**
- **established**

**smupstate *smup\_session\_state***

Specify the state of the SMUP session.

Must be one of the following:

- **smUpSessionCreated**
- **smUpSessionDeleted**
- **smUpSessionWait4SmCreate**

**state *session\_state***

Specify the session state.

Must be one of the following:

- **complete**: Specify the state is complete.
- **incomplete**: Specify the state is incomplete.

**tunnel-dest-addr *tunnel\_dest\_address***

Specify the L2TP tunnel destination address.

Must be a string.

**tunnel-id *tunnel\_id***

Specify the L2TP tunnel ID.

Must be an integer in the range of 1-65535.

**up-sub-id *up\_subscriber\_id***

Specify the UP subscriber ID.

Must be a string.

**upf *upf\_name***

Specify the user plane function name.

Must be a string.

**username *session\_user\_name***

Specify the user name of the session.

Must be a string.

**Usage Guidelines** Use this command to configure additional filters.

## show subscriber opts

Displays opts information.

**Command Modes** Exec

**Syntax Description** `opts { detail | count }`

### **count**

Displays count of number of sessions.

### **detail**

Displays detailed information.

**Usage Guidelines** Use this command to view opts information.

## show subscriber synchronize

Synchronize info.

**Command Modes** Exec

**Syntax Description** `show subscriber synchronize upf upf_info`

**Syntax Description** `show subscriber synchronize-cp upf upf_info`

### **synchronise-cp**

Specify to synchronise CP information.

Must be one of the following:

- **synchronize-cp**

### **synchronise**

Specify to synchronise UP information.

Must be one of the following:

- **synchronize**

### **upf upf\_info**

Specify UPF information.

Must be a string of 1-64 characters.

**Usage Guidelines** Use this command to synchronise info.

## show-defaults

Displays the default configuration.

**Command Modes** Exec

**Syntax Description** `show-defaults { false | true }`

**{ false | true }**

Specify whether to display or hide the default values. To display, select true. Otherwise, select false.

Must be either "false" or "true".

**Usage Guidelines** Use this command to view the default configuration.

## smiuser

Configures the Subscriber Microservices Infrastructure (SMI) user account parameters.

**Command Modes** Exec

**Syntax Description** `smiuser { add-group groupname group_name | add-user { username username | password password } | change-password { username username | current_password current_password | new_password new_password | confirm_password new_password | password_expire_days expire_days } | change-self-password { current_password current_password | new_password new_password | confirm_password new_password | password_expire_days expire_days } | delete-group groupname group_name | delete-user username username | unassign-user-group { groupname groupname_pam | username username_pam } | update-password-length length password_length }`

**username username**

Specify the username.

Must be a string.

**password password**

Specify the user password.

Must be a string.

**confirm\_password new\_password**

Confirm the new password.

Must be a string.

**current\_password** *current\_password*

Specify the current password.

Must be a string.

**new\_password** *new\_password*

Specify the new password.

Must be a string.

**password\_expire\_days** *expire\_days*

Specify the number of days before the password expires.

Must be an integer.

**groupname** *group\_name*

Specify the group name.

Must be a string.

**groupname** *groupname\_pam*

Specify the group name in PAM.

Must be a string.

**username** *username\_pam*

Specify the user name in PAM.

Must be a string.

**length** *password\_length*

Specify the minimum password length.

Must be an integer.

**Usage Guidelines**

Use this command to configure the smiuser parameters.

## system

Configures the NF's system operations.

**Command Modes**

Exec

**Syntax Description**

```
system { ops-center stop | synch { start | stop } | upgrade | uuid-override
new-uuid uuid_value }
```

**ops-center stop**

Stop the synching of configuration.

**synch { start | stop }**

Starts or stops the synching of configuration,

**upgrade**

Initiates the upgrade of a product.

**uuid-override new-uuid *uuid\_value***

Change the Universally Unique Identifier (UUID) to a new value.

Must be a string.

---

**Usage Guidelines**

Use this command to display the NF's system operations.

## terminal

Configures the type of terminal.

---

**Command Modes**

Exec

---

**Syntax Description**

**terminal** *terminal\_type*

***terminal\_type***

Specify the terminal type.

Must be one of the following:

- ansi
- generic
- linux
- vt100
- xterm

---

**Usage Guidelines**

Use this command to configure the terminal type.

## test-radius accounting

Tests RADIUS accounting server function.

---

**Command Modes**

Exec

---

**Syntax Description**

**test-radius accounting**



**all**

Specify to test all configured servers.

Must be one of the following:

- **all**

**client-nas *nas\_ip\_address***

Specify the client NAS IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**port *server\_port\_number***

Specify the RADIUS server port number.

Must be an integer in the range of 1-65535.

**server-group *server\_group\_name***

Specify the sever group name.

Must be a string of 1-64 characters.

**server *server\_ip\_address***

Specify the RADIUS server IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**username *user\_name***

Specify the user name.

Must be a string of 1-64 characters.

Default Value: test.

**Usage Guidelines**

Use this command to test RADIUS accounting server function.

## test-radius authentication

Tests RADIUS authentication server.

---

**Command Modes** Exec

---

**Syntax Description** `test-radius authentication`**all**

Specify to test all configured servers.

Must be one of the following:

- **all**

**client-nas *nas\_ip\_address***

Specify the client NAS IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**password *user\_password***

Specify the password for user with authentication verified.

Must be a string of 1-64 characters.

Default Value: test.

**port *server\_port\_number***

Specify the RADIUS server port number.

Must be an integer in the range of 1-65535.

**server-group *server\_group\_name***

Specify the sever group name.

Must be a string of 1-64 characters.

**server *server\_ip\_address***

Specify the RADIUS server IP address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

-Or-

Must be a string in the ipv6-address pattern. For information on the ipv6-address pattern, see the Input Pattern Types section.

**username *user\_name***

Specify the user name.

Must be a string of 1-64 characters.

Default Value: test.

---

**Usage Guidelines**

Use this command to test RADIUS authentication server.

## timestamp

Configures the timestamp parameters.

---

**Command Modes**

Exec

---

**Syntax Description**

**timestamp** { **disable** | **enable** }

**{ disable | enable }**

Enable or disable the timestamp display.

---

**Usage Guidelines**

Use this command to configure the timestamp.

## user-plane

Configures the userplane configuration.

---

**Command Modes**

Exec > Global Configuration

---

**Syntax Description**

**user-plane** *userplane\_name*

**offline**

Specify as offline.

**subscriber-profile** *subscriber\_profile*

Specify the Subscriber Profile to associate at current level.

***userplane\_name***

Specify the userplane name.

Must be a string of 1-128 characters.

---

**Usage Guidelines**

Use this command to configure the userplane configuration.

## user-plane peer-address

Configures the userplane IP address.

---

**Command Modes**

Exec > Global Configuration

---

**Syntax Description** `peer-address ipv4 ipv4_address offline`

**ipv4 *ipv4\_address***

Specify the IPv4 address.

Must be a string in the ipv4-address pattern. For information on the ipv4-address pattern, see the Input Pattern Types section.

---

**Usage Guidelines** Use this command to configure the userplane IP address.

## user-plane port-id

Configures Port Identifier parameters.

---

**Command Modes** Exec > Global Configuration

---

**Syntax Description** `port-id id port_id subscriber-profile subscriber_profile`

**id *port\_id***

Specify the port identifier.

Must be a string of 1-128 characters.

**subscriber-profile *subscriber\_profile***

Specify the Subscriber Profile to associate to the Port Identifier level.

---

**Usage Guidelines** Use this command to configure Port Identifier parameters.

## who

Displays information on currently logged on users.

---

**Command Modes** Exec

---

**Syntax Description** `who`

---

**Usage Guidelines** Use this command to view information on currently logged on users. The command output displays the Session, User, Context, From (IP address), Protocol, Date, and Mode information.