

UCC 5G AMF CLI Reference, Release 2026.03

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About this Guide

Note The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. While any existing biased terms are being substituted, exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on RFP documentation, or language that is used by a referenced third-party product.

This preface describes the *Ultra Cloud Core 5G Access and Mobility Management Function - CLI Command Reference*, the document conventions, and the customer support details.

- Conventions Used, on page xix
- Contacting Customer Support, on page xx

Conventions Used

The following tables describe the conventions used throughout this documentation.

Notice Type	Description
Information Note	Provides information about important features or instructions.
Caution	Alerts you of potential damage to a program, device, or system.
Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.

Typeface Conventions	Description
Text represented as a `screen display`	This typeface represents displays that appear on your terminal screen, for example: `Login:`

Typeface Conventions	Description
Text represented as **commands**	This typeface represents commands that you enter, for example: **show ip access-list** This document always gives the full form of a command in lowercase letters. Commands are not case sensitive.
Text represented as a **command** *variable*	This typeface represents a variable that is part of a command, for example: **show card** *slot_number* *slot_number* is a variable representing the applicable chassis slot number.
Text represented as menu or sub-menu names	This typeface represents menus and sub-menus that you access within a software application, for example: Click the **File** menu, then click **New**

Contacting Customer Support

Use the information in this section to contact customer support.

Refer to the support area of http://www.cisco.com for up-to-date product documentation or to submit a service request. A valid username and password are required to access this site. Please contact your Cisco sales or service representative for additional information.



AMF Command Reference

Important AMF does not support CLI command or command options that are not mentioned in this document; even though they are available in the command line. These unsupported CLI commands must not used.

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- amf-global, on page 13
- amf-global call-control-policy, on page 14
- amf-global call-control-policy default-nssai, on page 24
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aaa

Configures the AAA-based user management parameters.

Command Modes

Exec

Syntax Description

aaa authentication users user admin change-password { old-password *old_password* **| new-password** *new_password* **| confirm-password** *new_password* **}**

old-password *old_password*

Specify the current password.

Must be a string.

new-password *new_password*

Specify the new password.

Must be a string.

confirm-password *new_password*

Specify the new password once again to change the password.

Must be a string.

Usage Guidelines

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

amf-global

Configures global AMF parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`amf-global amf-name` *`amf_name`*

amf-name *amf_name*

Specify name of the AMF.

Must be a string.

Usage Guidelines

Use this command to configure global AMF parameters. The CLI prompt changes to the AMF Global Configuration mode (config-amf-global).

amf-global call-control-policy

Configures call control policy.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

call-control-policy *cc_policy_name* **{ am-policy skip { false | true} | asynch-type-comm { *false | true* } | authenticate { all-events { frequency** *frequency_count* **| periodicity** *duration* **} | registration-request { inter-rat { frequency** *frequency_count* **| periodicity** *duration* **} | intra-rat { frequency** *frequency_count* **| periodicity** *duration* **} | normal { frequency** *frequency_count* **| periodicity** *duration* **} | periodic { frequency** *frequency_count* **| periodicity** *duration* **} } | service-request { data { frequency** *frequency_count* **| periodicity** *duration* **} | signaling { frequency** *frequency_count* **periodicity** *duration* **} } } | core-network-type-restriction { 5GC | override-udm-restrictions } | default-dnn** *dnn_name* **| default-nssai [sst { sdt }] | disable-init-csr-reg { *false | true* } | disable-rfsp-pcf { false | true } | eir-check enabled | enable-init-csr-reg-for { *false | true* } | feature-support-ie { emergency-fallback supported target-cn { *EPC | 5GC* } | ims-vops-service-3gpp supported { *false { reject-voice-centric-ue } | true { ue-capability-match-required }* } | iwk-without-n26-supported | rinmr-supported | pcscf-restoration-supported { *false | true* } | redirection-eps-fallback { *not-supported | supported* } } | guti-reallocation { periodic-registration { *disabled* | frequency** *frequency_count* **| periodicity** *duration* **} | service-request { frequency** *frequency_count* **| periodicity** *duration* **} } | local-cause-code-map | paging-priority [map {** *arp | range* **}] | policy { amf-redirection { horizontal-key-derivation { *false | true* } | use-source-key { *false | true* } } | context-release force-smf-update { *false | true* } | nssf-interaction { *disabled | enabled* } | slicing [inclusion-mode {** *A | B | C | D | None* **}] | sms-over-nas { *false | true* } | ue-cfg-update { on-nssf-slice-change { *false | true* } | on-sms-change { *false | true* } | on-tai-change { *false | true* } } | ue-context-transfer { allow-interplmn-supi-transfer { *false | true* } | horizontal-key-derivation { *false | true* } | use-source-key { *false | true* } | use-source-pcf { false | true } } } | rat-type-restriction { *EUTRA | NR | VIRTUAL | WLAN* } | registration [restrict [access-type all]] | report-uli { *false | true* } | security-algo range | supi mnc | tai-group | timers { context-transfer-guard { n14-interface** *guard_time_value* **| n26-interface** *guard_time_value* **} | ho-supervisory** *timer_value* **| t3346** *timer_value* **| t3502** *timer_value* **| t3512** *timer_value* **| t3513 { attempts** *paging_attemps_count* **| value** *timeout_value* **} | t3522 { value** *timer_value* **| retry** *max_rtries* **} | t3550 { value** *timer_value* **| retry** *max_retries* **} | t3555 { value** *timer_value* **| retry** *max_retries* **} | t3560 { value** *timer_value* **| retry** *max_retries* **} | t3570 { value** *timer_value* **| retry** *max_retries* **} | tidle** *timer_value* **| tidt** *timer_value* **| tn2** *timer_value* **| tpurge** *timer_value* **} }**

call-control-policy *cc_policy_name*

Specify the name of the Call Control Policy.

Must be a string.

am-policy skip { false | true }

Specify whether to skip fetching the AM Policy. Default valuse is false.

asynch-type-comm { false | true }

Specify whether to enable or disable asynchronous communication.

Must be one of the following:

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

Default Value: false.

authenticate { all-events { frequency *frequency_count* | periodicity *periodicity_duration* } | registration-request { inter-rat { frequency *frequency_count* | periodicity *periodicity_duration* } | intra-rat { frequency *frequency_count* | periodicity *periodicity_duration* } | normal { frequency *frequency_count* | periodicity *periodicity_duration* } | periodic { frequency *frequency_count* | periodicity *periodicity_duration* } } | service-request { data { frequency *frequency_count* | periodicity *periodicity_duration* } | signaling { frequency *frequency_count* | periodicity *periodicity_duration*} } }

- **authenticate all-events** —Specify the option to authenticate all events. It is also the default or the fallback authentication option, when the configuration does not present for any type.
- **authenticate registration-request** *normal* | *periodic* | *inter-rat* | *intra-rat* —Specify the required option to authenticate the registration process.
- **authenticate service-request** { data | signaling }—Specify the option to authenticate the service type for the service request.
- **frequency** *frequency_count* —Specify the required frequency duration or count for authenticating each option. The frequency range is 0–256. The disabled value is 0.
- **periodicity** *periodicity_duration* —Specify the time, period, or duration for authenticating the selected option. The periodicity duration range is 0–10800 (minutes). The disabled value is 0.

core-network-type-restriction *restriction*

Specify the core network type restriction.

Must be one of the following:

- **5GC**
- **override-udm-restrictions**

default-dnn *dnn_name*

Specify the default DNN.

Must be a string.

default-nssai

Specify the default NSSAI that is assigned to a user equipment (UE) or a subscriber by the network.

disable-init-csr-reg { false | true }

Specify whether to enable or disable initial CSR registration.

Must be one of the following:

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

Default Value: true.

disable-rfsp-pcf { false | true }

Specify whether to enable or disable RFSP PCF.

Must be one of the following:

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

Default Value: false.

eir-check enabled

Enables the EIR check for initial and mobility registration. For more details, see amf-global call-control-policy eir-check, on page 25.

enable-init-csr-reg-for { false | true }

Specify whether to enable or disable initial CSR registration.

Must be one of the following:

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

Default Value: **false**

feature-support-ie

Configure and specify about supported or unsupported AMF or 5GC features.

rinmr-supported

Configure and specify the **rinmr** flag support at AMF in security mode command. The flag support is disabled by default.

emergency-fallback supported target-cn { EPC | 5GC }

Specify the option to enable UE to direct the emergency fallback to the 5GC or EPC network.

Must be one of the following:

- **EPC**
- **5GC**

iwk-without-n26-supported

Specify the "Interworking without N26" indicator supported within the 5GS network functionality support. It gets applied only when the "Interworking without N26" indicator in the 5GS network functionality is in a supported state. When not supported, the "unsupported status" does not have a reference to the status.

pcscf-restoration-supported { true | false }

Specify an option for the IMS network to maintain service continuity and recover from disruptions affecting the PCSCF.

Must be one of the following:

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

Default Value: false.

redirection-eps-fallback { not-supported | supported }

Specify an option for the UE support and redirection for the EPS Fallback for voice, as a part of ICSR.

Must be one of the following:

- **not-supported**
- **supported**

reject-voice-centric-ue { false | true }

Specify if VoPS is not supported whether to reject voice-centric UE registration.

Must be one of the following:

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

Default Value: false.

ue-capability-match-required { false | true }

Specify whether if VoPS is supported UE capability check is required or not required.

This option appears when the **supported** is selected as **true**.

Must be one of the following:

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

Default Value: false.

guti-reallocation { periodic-registration { frequency *frequency_count* | periodicity *duration* } | service-request { frequency *frequency_count* | periodicity *duration* } }

Specify the options to configure the GUTI reallocation for periodic registration or service request based on the number of occurrences (frequency) or based on a time interval (periodicity).

local-cause-code-map

Specify a group of cause code maps in AMF.

paging-priority [map { arp | range }

Specify the ARP value from SMF.

Must be an integer in the range of 1-15.

policy

Specify policy-related settings.

amf-redirection

Specify amf-redirection settings.

horizontal-key-derivation { false | true }

Specify whether source AMF will generate new key every time.

Must be one of the following:

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

Default Value: false.

use-source-key { false | true }

Specify whether target AMF will use key received from source AMF.

Must be one of the following:

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

Default Value: true.

context-release force-smf-update { false | true }

Enables or disables the SMF force update on context release.

Must be one of the following:

- **false**

- **true**

Default Value: false.

nssf-interaction { disabled | enabled }

Enables or disables the NSSF interaction.

slicing

Speify the network slicing settings.

inclusion-mode { A | B | C | D | None }

Speify the the inclusion mode for slicing.

sms-over-nas { false | true }

Configures support for SMS over NAS (Non-Access Stratum).

ue-cfg-update

Specify user equipment configuration update settings.

on-nssf-slice-change { false | true }

Configures updates on NSSF slice changes.

on-sms-change { false | true }

Configures updates on SMS changes.

on-tai-change { false | true }

Configures updates on TAI changes.

ue-context-transfer

Configures user equipment context transfer settings.

allow-interplmn-supi-transfer { false | true }

Allows SUPI transfer across PLMNs.

horizontal-key-derivation { false | true }

Enables or disables horizontal key derivation during context transfer.

use-source-key { false | true }

Configures usage of source key during context transfer.

use-source-pcf { false | true }

Configures usage of source PCF during context transfer.

rat-type-restriction { EUTRA | NR | VIRTUAL | WLAN }

Configures restrictions on radio access technology types.

registration [restrict [access-type all]]

Configures registration restrictions with optional access type specification.

report-uli { false | true }

Specify whether to enable or disable ULI report.

Must be one of the following:

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

Default Value: false.

security-algo range

Configures the range for security algorithms.

supi [mnc *mnc_length*]

Specify the length of Mobile Network Code (MNC) supported. Supported values are 2 and 3.

tai-group *tai_group_name*

Specify name of the TAI group. TAI group name refers to the one of the configured name in tai-group, on page 460.

timers

Configures various timers for different operations.

{ context-transfer-guard { n14-interface *guard_time_value* | n26-interface *guard_time_value* }

- **n14-interface** *guard_time_value*

  Specify the timer value in seconds in the range of 0 to 10.

  The default value is 5. The value 0 is used to disable the timer in the procedure.

- **n26-interface** *guard_time_value*

  Specify the timer value in seconds in the range of 0 to 10.

  The default value is 5. The value 0 is used to disable the timer in the procedure.

ho-supervisory *timer_value*

Specify the timer value in milliseconds.

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

Default Value: 500.

t3346 ***timeout_duration***

Specify the timeout period in seconds.

Must be an integer in the range of 0-11160. The default value is 900 seconds.

t3502 ***timeout_duration***

Specify the timeout period in seconds.

Must be an integer in the range of 0-35712000. The default value is 720 seconds.

t3512 ***timeout_duration***

Specify the timeout period in seconds.

Must be an integer in the range of 0-35712000. The default value is 3240 seconds.

t3513 { attempts ***paging_attempts_count*** **| value** ***timeout_value*** **}**

- **attempts** *paging_attempts_count*

  Specify the number of paging attempts.

  Must be an integer in the range of 1-5.

  Default Value: 2.

- **value** *timeout_value*

  Specify the t3513 timeout value.

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

  Default Value: 5.

t3522 { value ***timeout_duration*** **| retry** ***max_retries*** **}**

- **value** *timeout_duration*

  Specify the timeout period in seconds.

  Must be an integer in the range of 0-30.

  Default Value: 6.

- **retry** *max_retries*

  Specify the maximum number of retries.

  Must be an integer in the range of 0-5.

  Default Value: 4.

t3550 { value ***timeout_duration*** **| retry** ***max_retries*** **}**

- **value** *timeout_duration*

  Specify the timeout period in seconds.

  Must be an integer in the range of 0-30.

Default Value: 6.

- **retry** *max_retries*

  Specify the maximum number of retries.

  Must be an integer in the range of 0-5.

  Default Value: 4.

t3555 { value ***timeout_duration*** **| retry** ***max_retries*** **}**

- **value** *timeout_duration*

  Specify the timeout period in seconds.

  Must be an integer in the range of 0-30.

  Default Value: 6.

- **retry** *max_retries*

  Specify the maximum number of retries.

  Must be an integer in the range of 0-5.

  Default Value: 4.

t3560 { value ***timeout_duration*** **| retry** ***max_retries*** **}**

- **value** *timeout_duration*

  Specify the timeout period in seconds.

  Must be an integer in the range of 0-30.

  Default Value: 6.

- **retry** *max_retries*

  Specify the maximum number of retries.

  Must be an integer in the range of 0-5.

  Default Value: 4.

t3570 { value ***timeout_duration*** **| retry** ***max_retries*** **}**

- **value** *timeout_duration*

  Specify the timeout period in seconds.

  Must be an integer in the range of 0-30.

  Default Value: 6.

- **retry** *max_retries*

  Specify the maximum number of retries.

  Must be an integer in the range of 0-5.

  Default Value: 4.

tidle *timeout_duration*

Specify the timer value in seconds.

Must be an integer in the range of 30-25200.

tidt *timeout_duration*

Specify the timeout period in seconds.

Must be an integer in the range of 0-35712000.

Default value is 3480.

tn2 *timeout_duration*

Specify the timeout period in seconds.

Must be an integer in the range of 0-35712000.

Default value is 6.

tpurge *timeout_duration*

Specify the timeout period in seconds.

Must be an integer in the range of 0-35712000.

Default value is 86400.

Usage Guidelines

Use this command to configure call control policy parameters.

amf-global call-control-policy default-nssai

Configures default slice for the subscriber.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > AMF Call Control Policy (config-call-control-policy-*policy_name*)

Syntax Description

`default-nssai name` *`nssai_name`* **`[ sst`** *`slice_service_type`* **`{ sdt`** *`slice_differentiator_type`* **`} ]`**

default-nssai name

Specify name of the slice.

Must be a string.

sdt *slice_differentiator_type*

Specify the Slice Differentiator Type (SDT).

Must be a string in the octet-string24 pattern. For information on the octet-string24 pattern, see the Input Pattern Types section.

sst *slice_service_type*

Specify the Slice Service Type (SST).

Must be an integer in the range of 0-255.

Usage Guidelines

Use this command to configure the default Network Slice Selection Assistance Information (NSSAI) that is assigned to a UE or a subscriber by the network.

amf-global call-control-policy eir-check

Configures the EIR check parameters for the UE.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > AMF Call Control Policy Configuration (config-call-control-policy-*policy_name*)

Syntax Description

```
eir-check enabled { emergency-registration | deny-greylisted |
initial-registration }
```

enabled

Enables the EIR check for initial and mobility registration.

emergency-registration

Enables the EIR check specifically for emergency registered UE's and emergency registration scenarios. By default, EIR check is not done for emergency registration.

deny-greylisted

This option configures the AMF to deny registration requests from devices that are greylisted.

initial-registration

This option selects only initial registrations for EIR checks. Without this configuration, the system selects both initial registrations and mobility registrations involving an MME/AMF change for EIR checks.

Usage Guidelines

Use this command to configure the EIR check for the UE.

amf-global call-control-policy odbPacketServices

Configures Operator Determined Barring (ODB) parameters.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > AMF Call Control Policy Configuration (config-call-control-policy-policy_name)

Syntax Description

```
{ odbPacketServices { all-packet-services  | none }
```

{ odbPacketServices { all-packet-services | none }

Specifies whether Operator Determined Barring (ODB) applies to all packet services or none; this setting affects only new subscribers and new PDU establishment requests.

Usage Guidelines

Use this command to configure call control policy parameters related to initial CSR registration and packet service barring for new subscribers and PDU requests.

amf-global call-control-policy ue-ambr

Configures UE-AMBR uplink and downlink values.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > AMF Call Control Policy Configuration (config-call-control-policy-*policy_name*)

Syntax Description

`ue-ambr uplink` *`uplink_value`* **`| downlink`** *`downlink_value`* **`| override-udm-ue-ambr`**

ue-ambr uplink *uplink_value* | downlink *downlink_value* | override-udm-ue-ambr

Configures the User Equipment Aggregate Maximum Bit Rate (UE-AMBR) for uplink and downlink; when `override-udm-ue-ambr` is set, the UE-AMBR value received from UDM is ignored and the CLI-configured value is applied. Changes take effect when the UE transitions from idle to connected state. If no value is configured, a default of 256000 is used for both uplink and downlink.

Usage Guidelines

Use this command to configure UE-AMBR uplink and downlink values.

amf-global dnn-policy

Configures the DNN policy parameter.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

dnn-policy *dnn_name* **[[ims-enabled { false | true }] [lbo-roaming-allowed { false | true }] [nf-profile-name** *nf_profile_name* **]]**

dnn-policy *dnn_name*

Specify name of the DNN.

Must be a string.

ims-enabled { false | true }

Specify whether IMS is enabled for DNN.

Must be one of the following:

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

Default Value: false.

lbo-roaming-allowed { false | true }

Specify whether Local Breakout Roaming is supported.

Must be one of the following:

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

Default Value: false.

nf-profile-name *nf_profile_name*

Specify name of the NF profile.

Must be a string.

Usage Guidelines

Use this command to configure DNN policy parameter.

amf-global dnn-policy network-element-profile-list

Configures the network element profile list.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > DNN Policy Configuration (config-dnn-policy-*policy_name*)

Syntax Description

network-element-profile-list smf *smf_profile_name*

smf *smf_profile_name*

Specify name of the SMF network element profile.

Must be a string.

Usage Guidelines

Use this command to configure the network element profile list.

amf-global load-profile

Configures the load profile to be used in the AMF global configuration.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

`load-profile` *`load_profile_name`*

load-profile *load_profile_name*

Specify the name of the load profile to be used in the AMF global configuration.

Usage Guidelines

Use this command to associate a load profile to be used in the AMF global configuration.

amf-global location lmf-positioning

Configures location services.

Command Modes Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

```
amf-global location { ngran-reporting enabled  | lmf-positioning { mt-lr
 | ni-lr } | positioning }
```

amf-global location { ngran-reporting enabled | lmf-positioning { mt-lr | ni-lr } | positioning }

- **ngran-reporting enabled**—Enables the UE location reporting.
- **lmf-positioning { mt-lr | ni-lr }**—Enables MT-LR or NI-LR depending on the selected configuration.
- **positioning**—Enables or configures the general positioning service capabilities within the AMF.

Usage Guidelines Use this command to configure location services.

amf-global nf-profile

Configures NF profile parameters.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

nf-profile *nf_profile_name*

nf_profile_name

Specify name of the NF profile.

Must be a string.

Usage Guidelines

Use this command to configure NF profile parameters. The CLI prompt changes to the NF Profile Configuration mode (config-nf-profile-<profile_name>).

amf-global nf-profile nf-type-profile

Configures the NF profile type parameter.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > NF Profile Configuration (config-nf-profile-*profile_name*)

Syntax Description

`nf-type-profile type` *`nf_profile_type`*

type *nf_profile_type*

Specify the NF profile type.

Must be one of the following:

- **ausf**
- **lmf**
- **nrf**
- **nssf**
- **pcf**
- **smf**
- **smsf**
- **udm**
- **scp**
- **gmlc**

Usage Guidelines

Use this command to configure the NF profile type parameter. The CLI prompt changes to the NF Type Profile Configuration mode (config-nf-type-profile-<type>).

amf-global nf-profile nf-type-profile grpc-endpoint

Configures GRPC endpoint parameters.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > NF Profile Name Configuration (config-nf-profile-*nf_profile_name*) > NF Profile Type Configuration (config-nf-type-profile-*profile_name*)

Syntax Description

grpc-endpoint host *host_name* **port** *port_number*

host *host_name*

Specify the host name.

Must be a string.

port *port_number*

Specify the port number.

Must be an integer.

Usage Guidelines

Use this command to configure GRPC endpoint parameters.

amf-global nf-profile nf-type-profile http-endpoint

Configures HTTP endpoint parameters.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > NF Profile Name Configuration (config-nf-profile-*nf_profile_name*) > NF Profile Type Configuration (config-nf-type-profile-*profile_name*)

Syntax Description

`http-endpoint base-url` *`base_url`*

base-url *base_url*

Specify the base URL.

Must be a string.

Usage Guidelines

Use this command to configure HTTP endpoint parameters.

amf-global operator-policy

Configures the operator policy.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

operator-policy *policy_name* **[[ccp-name** *ccp_name* **] [nf-profile-name** *nf_profile_name* **] [paging-map-name** *paging_map_name* **]]**

ccp-name *ccp_name*

Specify name of the CCP.

Must be a string.

emergency-profile-name *emergency_profile_name*

Specify name of the emergency profile.

nf-profile-name *nf_profile_name*

Specify name of the NF profile.

Must be a string.

operator-policy *policy_name*

Specify name of the operator policy.

Must be a string.

paging-map-name *paging_map_name*

Specify name of the 5G paging map.

Must be a string of 1-64 characters.

Usage Guidelines

Use this command to configure the operator policy.

amf-global operator-policy network-element-profile-list

Configures network element profiles.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > Operator Policy Configuration (config-operator-policy-*policy_name*)

Syntax Description

network-element-profile-list { amf *amf_ne_profile_name* **| ausf** *ausf_ne_profile_name* **| eir** *eir_ne_profile_list_name* **| gmlc** *gmlc_ne_profile_name* **| lmf** *lmf_ne_profile_name* **| nssf** *nssf_ne_profile_name* **| pcf** *pcf_ne_profile_name* **| smf** *smf_ne_profile_name* **| smsf** *smsf_ne_profile_name* **| udm** *udm_ne_profile_name* **}**

amf *amf_ne_profile_name*

Specify name of the AMF network element profile.

Must be a string.

ausf *ausf_ne_profile_name*

Specify name of the AUSF network element profile.

Must be a string.

eir *eir_ne_profile_name*

Specify the new EIR element to be added in the network element profile list.

Must be a string.

gmlc *gmlc_ne_profile_name*

Specify name of the GMLC network element profile.

Must be a string.

lmf *lmf_ne_profile_name*

Specify name of the LMF network element profile.

Must be a string.

nssf *nssf_ne_profile_name*

Specify name of the NSSF network element profile.

Must be a string.

pcf *pcf_ne_profile_name*

Specify name of the PCF network element profile.

Must be a string.

smf *smf_ne_profile_name*

Specify name of the SMF network element profile.

Must be a string.

smsf *smsf_ne_profile_name*

Specify the name of SMSF with the network element profile.

.

Must be a string.

udm *udm_ne_profile_name*

Specify name of the UDM network element profile.

Must be a string.

Usage Guidelines

Use this command to configure network element profiles.

amf-global paging-algo

Configures the paging algorithm.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

paging-algo *algorithm_name* **[[action** *action* **] [max-n-gnb** *max_gnbs_to_page* **] [t3513-timeout** *paging_timeout* **] [max-paging-attempts** *max_paging_attempts* **]]**

action *action*

Specify the action.

Must be one of the following:

- **all_gnb_all_tai**
- **all_gnb_last_tai**
- **all_gnb_remaining_tai_all**
- **all_gnb_remaining_tai_seq**
- **last_gnb_last_tai**
- **last_n_gnb_last_tai**

max-n-gnb *max_gnbs_to_page*

Specify the max number of gNBs to page.

Must be an integer in the range of 1-5.

max-paging-attempts *max_paging_attempts*

Specify the maximum number of paging attempts.

Must be an integer in the range of 1-5.

paging-algo *paging_algorithm_name*

Specify name of the paging algorigthm.

Must be a string of 1-64 characters.

t3513-timeout *paging_timeout*

Specify the paging timeout value in seconds.

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

Usage Guidelines

Use this command to configure the paging algorigthm.

amf-global paging-map

Configures the paging map parameters.

Command Modes Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description **paging-map** *paging_map_name*

paging_map_name

Specify name of the 5G paging map.

Must be a string of 1-64 characters.

Usage Guidelines Use this command to configure the paging map parameters.

amf-global paging-map precedence

Configures the paging map precedence parameter.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

paging-map *map_name* **[precedence** *map_precedence_level* **[[paging-profile-name** *paging_profile_name* **] [trigger-type** *trigger_type* **]]]**

arp-value *arp_value*

Specify the Allocation and Retention Priority (ARP) value.

Must be an integer in the range of 1-15.

dereg-value *deregistration_trigger_value*

Specify the deregistration trigger value.

Must be one of the following:

- **amf_init**
- **udm_init**

dnn-value *dnn_value*

Specify the Data Network Name (DNN) value.

Must be a string of 1-64 characters.

fiveqi-value *5qi_value*

Specify the 5G QoS Indicator value.

Must be an integer in the range of 1-85.

paging-profile-name *paging_profile_name*

Specify name of the 5G paging profile.

Must be a string of 1-64 characters.

ppi-value *ppi_value*

Specify the Paging Policy Indicator (PPI) value.

Must be an integer in the range of 1-7.

precedence *map_precedence_level*

Specify the map precedence level.

Must be an integer in the range of 1-255.

trigger-type *trigger_type*

Specify the paging trigger type.

Must be one of the following:

- **5qi**
- **arp**
- **dereg**
- **dnn**
- **location**
- **ppi**
- **sms**
- **sor**
- **uecfg**
- **uecfg**

Usage Guidelines

Use this command to configure the paging map precedence parameter.

amf-global paging-profile

Configures paging profile parameters.

Command Modes Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description **`paging-profile`** *`paging_profile_name`*

paging_profile_name

Specify name of the 5G paging profile.

Must be a string of 1-64 characters.

Usage Guidelines Use this command to configure paging profile parameters. The CLI prompt changes to the Paging Profile Configuration mode (config-paging-profile-<profile_name>).

amf-global paging-profile paging-stage

Configures paging stage information.

Command Modes Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global) > Paging Profile Configuration (config-paging-profile-*profile_name*)

Syntax Description **`paging-stage`** *`paging_stage_precedence`* **`[ paging-algo`** *`paging_algorigthm_name`* **`]`**

paging-algo *paging_algorigthm_name*

Specify name of the paging algorigthm.

Must be a string of 1-64 characters.

paging_stage_precedence

Specify the stage.

Must be an integer in the range of 1-5.

Usage Guidelines Use this command to configure paging stage.

amf-global plmn-policy

Configures the operator policy.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

plmn-policy *plmn_name* **operator-policy-name** *operator_policy_name*

operator-policy-name *operator_policy_name*

Specify name of the operator policy.

Must be a string.

plmn-policy *plmn_name*

Specify name of the PLMN.

Must be a string of 5-6 characters in the plmn-string pattern. For information on the plmn-string pattern, see the Input Pattern Types section.

Usage Guidelines

Use this command to configure the operator policy.

amf-global supi-policy

Configures SUPI policy information.

Command Modes

Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description

supi-policy *supi_prefix* **operator-policy-name** *operator_policy_name*

operator-policy-name *operator_policy_name*

Specify name of the operator policy.

Must be a string.

supi-policy *supi_prefix*

Specify the SUPI prefix.

Must be a string of 1-15 characters in the supi-string pattern. For information on the supi-string pattern, see the Input Pattern Types section.

Usage Guidelines

Use this command to configure SUPI policy parameters.

amf-global timers proc-timeout ue-registration

Configures timeout value for registration.

Command Modes Exec > Global Configuration (config) > AMF Global Configuration (config-amf-global)

Syntax Description **`timers proc-timeout ue-registration value`** *`timer_value`*

value *timer_value*

Specify the timer value in seconds.

Must be an integer in the range of 10-120.

Usage Guidelines Use this command to configure timeout value for registration.

amf-global uid-optimize

Configures optimized unique ID allocation for the AMF. This feature is enabled by default.

Command Modes

Exec > Global Configuration

Syntax Description

```
uid-optimize [ disabled ]
```

uid-optimize

Enables optimized unique ID allocation (default behavior).

uid-optimize [disabled]

Disables optimized unique ID allocation.

Usage Guidelines

Use this command to enable or disable the optimized unique ID allocation feature for the AMF. By default, optimized unique ID allocation is enabled. Use the `disabled` keyword to turn off this feature if required.



Note Any change in this configuration requires opscenter shut and start.

amf-services

Configures AMF service configuration parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

amf-services *amf_service_name* **[compliance-profile** *compliance_profile* **| access-token-jws-algo { HS256 | ES256 | RS256 } | access-token-jws-key | guamis [mcc | mnc | region-id | set-id | pointer { amf-name** *amf_name* **| backup-amf-name** *backup_amf_name* **| offline-mode }] | backup-guami-served-by-amf [guamis] | local-cause-code-map** *cause_code_map_name* **] [emergency-profile-name** *emergency_profile_name* **] [locality** *locality_name* **] [operator-policy-name** *operator_policy_name* **] [relative-amf-capacity** *relative_amf_capacity* **] [validate-Tais { false | true }]] | nssai name** *slice_name* **| oauth2-enabled | pws-enabled interface [SBi][SBc] | pws-enabled interface SBc custom-enabled | peer-mme [gummei [mcc | mnc | group-id | mme-code | address | mme-name | mme-realm] | tai-match [priority | mcc | mnc | tac | address]] | pgw fqdn** *fqdn* **| poi-id** *poi_id* **| supported-features [app-rx-retx-cache | app-tx-retx | rolling-upgrade-all | rolling-upgrade-enhancement-infra] | relative-amf-capacity** *capacity_number* **| tai-groups** *tai_group-name* **| validate-Tais [false | true]]**

compliance-profile *compliance_profile*

Specify name of the compliance-profile.

Must be a string.

emergency-profile-name *emergency_profile_name*

Specify name of the emergency profile.

oauth2-enabled

Enable oauth2 based authentication support.

pws-enabled interface [SBi][SBc]

Enables PWS functionality for the specified SBi or SBc interfaces.

pws-enabled interface SBc custom-enabled

Configures the custom-enabled option for PWS and is only valid for the SBc interface.

access-token-jws-algo { HS256 | ES256 | RS256 }

JWS Algorithm used for access token and is mandatory to configure when oauth2 is enabled.

access-token-jws-key

Specify the type of the access token for the JWS Key authorization.

Configures JWS Key corresponding to JWS Algo for Access Token. **access-token-jws-key** is enabled only when "access-token-jws-algo" is being configured.

guamis [mcc | mnc | region-id | set-id | pointer { amf-name *amf_name* | backup-amf-name *backup_amf_name* | offline-mode } | backup-guami-served-by-amf [guamis]]

Globally Unique AMF Identifier (GUAMI) uniquely identifies AMF within a 5G network. GUAMI is composed of the following components:

- **mcc**—Specify the three-digit code that uniquely identifies the country of the mobile network.
- **mnc**—Specify the two or three digit mnc code, which in combination with the MCC, uniquely identifies the mobile network operator within a country.
- **region-id**—Specify the fixed-length identifier that specifies a particular region within the geographical area of a network operator.
- **set-id**—Specify the specific set of AMFs within the same region for distinguishing between different AMF sets that might be deployed for load balancing or redundancy purposes.
- **pointer**—Specify the particular AMF instance within a set.
- **amf-name** *amf_name*—Specify the AMF name for the configured GUAMI.
- **backup-amf-name** *backup_amf_name*—Specify the backup AMF name for the configured GUAMI.
- **offline-mode** —Enables offline mode for the GUAMI. Use this command only in AMF maintenance mode.
- **backup-guami-served-by-amf [guamis]** —Specify the list of GUAMIs where current AMF will act as backup.

local-cause-code-map*cause_code_map_name*

Specify the local cause code condition type.

Must be a string in the range of 1–64.

nssai name *slice_name*

Specify the slice name.

peer-mme [gummei [mcc *mcc_value* | mnc *mnc_value* | group-id *group_id* | mme-code *mme_code* | address *address_value*] | tai-match [priority | *priority_value* | mcc *mcc_value* | mnc *mnc_value*| tac *tac_value* [to *end_tac_value* | address *address*| mme-name *mme_name* | mme-realm *mme_realm*]]

peer-mme refers to a Mobility Management Entity (MME) that is considered a peer to current AMF within the network.

- **gummei**—Specify the Globally Unique MME Identifier (GUMMEI), which uniquely identifies an MME in a network, of the peer.
- **tai-match priority** *priority_value*—Specify the priority value of the peer.
- **mcc** *mcc_value*—Specify the three-digit Mobile Country Code. Must be an integer with three digits.

- **mnc** *mnc_value*—Specify the two or three-digit Mobile Country Network. Must be an integer with three digits.
- **tac** *tac_value*—Specify the Tracking Area Code value. Must be an integer in the range of 1-65535.
- **to** *end_tac_value*—Specify the Tracking Area Code range for peer MME.
- **address** *mme_ip-address_list*—Specify theMMEIP address list. It can be IPv4, IPv6. AMF allows you to configure a peer MME address list containing a minimum of one and a maximum of 15 IP addresses.
- **mme-name** *mme_name*—Specify mme-name for the peer MME.
- **mme-realm** *mme_realm*—Specify mme-realm for the peer MME.
- **group-id** *group_id*—Specify the MME Group Identifier value.
- **mme-code** *mme_code*—Specify the MME code value.

locality *locality_name*

Specify the locality for geo support.

pgw fqdn *fqdn*

Specify the SMF+PGW-C parameters.

poi-id *poi_id*

Specify the interception point ID for LI events.If not configured, amf-name is used for poi-Id.

supported-features [app-rx-retx-cache | app-tx-retx | rolling-upgrade-all | rolling-upgrade-enhancement-infra]

Specify one of the following options to enable the supported features for the rolling upgrade.

- **app-rx-retx-cache**: Enable retransmission cache for inbound messages at application.
- **app-tx-retx**: Enable retransmission for outbound messages at application.
- **rolling-upgrade-all**: Enable all the rolling upgrade features that are available through **rolling-upgrade-enhancement-infra**, **app-rx-retx-cache**, and **app-tx-retx** keyword options. By default, the rolling upgrade features are disabled.
- **rolling-upgrade-enhancement-infra**: Enable infra-level features.

tai-groups*tai_group-name*

Specify the TAI group name.

operator-policy-name *operator_policy_name*

Specify name of the operator policy.

relative-amf-capacity *relative_amf_capacity*

Specify the relative AMF capacity.

Must be an integer in the range of 0-255.

Default Value: 127.

validate-Tais { false | true }

Specify whether to enable or disable TAI validation.

Must be one of the following:

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

Default Value: false.

Usage Guidelines

Use this command to configure AMF service configuration parameters. The CLI prompt changes to the AMF Services Configuration mode (config-amf-services-<service_name>).

amf-services api-root

Configures the API root for the AMF services.

Command Modes Exec > Global Configuration (config) > AMF Service Configuration (config-amf-service-*service_name*)

Syntax Description **`api-root`** *`deployment_prefix`*

api-root *deployment_prefix*

Specify the API root with the given deployment prefix.

Usage Guidelines Use this command to configure API root with deployment prefix.

amf-services capacity

Configures the capacity parameter for the AMF service.

Command Modes Exec > Global Configuration (config) > AMF Service Configuration (config-amf-service-*service_name*)

Syntax Description **capacity** *capacity_value*

capacity ***capacity_value***

Specify the capacity value for the AMF service or profile and must be an integer between 0 and 65535. The default value is 10.

Usage Guidelines Use this command to configure capacity parameter for the AMF service.

amf-services priority

Configures the priority parameter for the AMF service.

Command Modes Exec > Global Configuration (config) > AMF Service Configuration (config-amf-service-*service_name*)

Syntax Description **`priority`** *`priority_value`*

priority *priority_value*

Specify the priority value for the AMF service or profile and must be an integer between 0 and 65535. The default value is 1.

Usage Guidelines Use this command to configure priority parameter for the AMF service.

amf-services peer-mme dns-discovery

Configures the DNS-based dynamic discovery of peer MMEs for the specified AMF service.

Command Modes

Exec > Global Configuration (config) > AMF Service Configuration (config-amf-service-*service_name*)

Syntax Description

```
peer-mme dns-discovery enabled
```

peer-mme dns-discovery enabled

Enables DNS-based dynamic discovery of peer MMEs.

Usage Guidelines

Use this command to configure and allow the AMF to automatically resolve and select peer MMEs using DNS queries.

amf-services relative-amf-capacity

Configures the AMF Services ID (**relative-amf-capacity**) to enable the Relative Capacity Configuration Update feature in AMF.

Command Modes

Exec > Global Configuration (`config`) > AMF Services Configuration (`amf-services` *amf_services_name*)

Syntax Description

```
config
   amf-services service_name
      relative-amf-capacity capacity_number
```

relative-amf-capacity *capacity_number*

relative-amf-capacity *capacity_number*—Specifies the AMF capacity, within the range of 0–255. The default value is 127.

Usage Guidelines

Use this **relative-amf-capacity** command, when you want the relative capacity configuration update feature in AMF feature to be configured.

amf-services stateless-proto-ep

Enables the stateless protocol EP deployment for the specified AMF service.

Command Modes

Exec > Global Configuration (config) > AMF Service Configuration (config-amf-service-*service_name*)

stateless-proto-ep enabled

Syntax Description

stateless-proto-ep enabled	Enables the stateless protocol EP deployment.

Command Default

Disabled

Usage Guidelines

Use this command to enables the stateless protocol EP deployment. Enabling/disabling this feature requires ops-center shut/start.

apn-groups

Configures APN groups.

Command Modes Exec > Global Configuration (config)

Syntax Description **apn-groups name** *apn_group_name*

name *apn_group_name*

Specify name of the APN group.

Must be a string.

Usage Guidelines Use this command to configure APN groups. The CLI prompt changes to the APN Groups Configuration mode (config-apn-groups-<group_name>).

apn-groups apns

Configures APN group parameters.

Command Modes Exec > Global Configuration (config) > APN Groups Configuration (config-apn-groups-*group_name*)

Syntax Description **apns** *apn_name*

apns *apn_name*

Specify name of the APN.

Must be a string.

Usage Guidelines Use this command to configure APN group parameters.

apn-profiles

Configures APN profile parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **apn-profiles** *apn_profile_name*

apn_profile_name

Specify name of the APN profile.

Must be a string.

Usage Guidelines Use this command to configure APN profile parameters.

cdl clear sessions

Clears the data from the Cisco Data Layer (CDL) datastore.

Command Modes

Exec

Syntax Description

cdl clear sessions [db-name *database* **| filter** *filter* **| map-id** *map_id* **| slice-name** *slice_name* **]**

db-name *database*

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

Must be a string of 1 to 16 characters.

filter *filter*

Specify the filter.

map-id *map_id*

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

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

slice-name *slice_name*

Specify the slice name to be queried.

Must be a string of 1 to 16 characters.

Usage Guidelines

Use this command to clear the data from the Cisco Data Layer (CDL) datastore.

cdl kafka

Displays the Kafka parameters for Geo Replication.

Command Modes

Exec

Syntax Description

cdl kafka [describe [consumer-groups *name* **| topics [name** *kafka_topic_name* **| include-internal-topics] | list [consumer-groups | topics include-internal-topics]**

describe

Describe the kafka topics or consumer groups.

consumer-groups *name*

Displays the kafka consumer groups. By default, all the consumer groups are described

topics name *kafka_topic_name*

Displays the specified kafka topics. By default, all the internal topics are described

include-internal-topics

Indicates to include the internal topics.

list

Lists the kafka topics or the consumer groups.

consumer-groups

Lists the kafka topics or the consumer groups.

topics include-internal-topics

List all the kafka topics that include the internal topics.

Usage Guidelines

Use this command to display Kafka parameters for Geo Replication.

cdl show sessions

Displays the session data from the datastore.

Command Modes

Exec

Syntax Description

cdl show sessions count [detailed [db-name *db_name* **| filter { condition [ends-with | match | starts-with] | key** *key_value* **} | map-id** *map_id* **| slice-name** *slice_name* **] | summary] | summary [db-name** *db_name* **| filter { condition [ends-with | match | starts-with] | key** *key_value* **} | limit limit | map-id** *map_id* **| max-data-size-kb** *maximum_data_size* **| next-eval-end-time | next-eval-start-time | purge-on-eval | slice-name** *slice_name* **] | detailed [db-name** *db_name* **| filter { condition [ends-with | match | starts-with] | key** *key_value* **} | limit** *limit* **| map-id** *map_id* **| max-data-size-kb** *maximum_data_size* **| next-eval-end-time | next-eval-start-time | purge-on-eval | slice-name** *slice_name* **]**

count

Display the session count information.

detailed

Display the session details with data.

db-name *db_name*

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

Must be a string of 1 to 16 characters.

key *key_value*

Specify the query value.

Must be a string of 0 to 512 characters.

map-id *map_id*

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

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

limit *limit*

Specify the maximum number of records to display.

Must be an integer in the range of 1-500.

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

Specify the query expression to filter the results of query.

purge-on-eval

Displays the list of sessions that have purge-on-eval flag set to true or false.

next-eval-end-time

Displays the sessions that have the next-eval-time less than this time.

next-eval-start-time

Displays the sessions that have the next-eval-time greater than this time.

Usage Guidelines

Use this command to display the session details.

cdl show status

Displays the status of the database from the datastore.

Command Modes

Exec

Syntax Description

cdl show status db-name *database_name*

db-name *database_name*

Specify the database name to display the status.

Must be a string of 1 to 16 characters.

Usage Guidelines

Use this command to display the status of the queried database from the datastore.

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* **{ tpurge 0 | local-purge true } |** *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* { tpurge 0 | local-purge true }

Specify to remove subscriber data associated with the SUPI ID.

Must be a string of 1-63 characters.

- **tpurge 0** : Purges the subscriber immediately.
- **local-purge true** : Purges the subscriber locally without informing peer nodes.

Usage Guidelines

Use this command to clear subscriber data.

clear subscriber clear-opt ran-opt

Displays and clears subscriber data based on specified criteria.

Command Modes

Exec

Syntax Description

{ clear | show } subscriber gnode-id *gnodeb_id* **mnc** *mobile_network_code* **mcc** *mobile_country_code*

gnodeb-id *gnodeb_id*

Specify the gnodeb-id.

Must be an integer in the range of 0-4294967295.

mcc *mobile_country_code*

Specify the mobile country code.

Must be a string in a two digit pattern.

mnc *mobile_network_code*

Specify the mobile network code.

Must be a string in the two-or-three-digit pattern. For information on the two-or-three-digit pattern, see the Input Pattern Types section.

Usage Guidelines

Use this command to view and to clear subscriber data based on specified criteria.

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`*

interface *interface_name*

Specify name of the interface.

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 configuration parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **`client inbound limit overload reject-code`** *`response_code`*

reject-code *response_code*

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

Must be an integer.

Usage Guidelines Use this command to configure Overload configuration parameters.

client inbound interface limit pending

Configures pending limit parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

client inbound limit pending request *max_pending_request_limit*

request *max_pending_request_limit*

Specify the maximum pending request limit to allow.

Must be an integer.

Default Value: 10240.

Usage Guidelines

Use this command to configure the pending request limit parameter.

client inbound limit overload

Configures Overload configuration parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **`client inbound limit overload reject-code`** *`response_code`*

reject-code *response_code*

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

Must be an integer.

Usage Guidelines Use this command to configure Overload configuration parameters.

client inbound limit pending

Configures pending limit parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

client inbound limit pending request *max_pending_request_limit*

request *max_pending_request_limit*

Specify the maximum pending request limit to allow.

Must be an integer.

Default Value: 10240.

Usage Guidelines

Use this command to configure the pending request limit parameter.

client outbound host ping

Configures outbound host ping parameter.

Command Modes

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface_name*)

Syntax Description

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, in milliseconds, the time interval 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 outbound host ping parameter.

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 outbound host ping parameter.

Command Modes

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface_name*)

Syntax Description

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, in milliseconds, the time interval 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 outbound host ping parameter.

client outbound interface limit consecutive failure

Configures consecutive failure configuration parameters.

Command Modes

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface_name*)

Syntax Description

limit consecutive failure count *consecutive_failure_count* **codes** *failure_codes*

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 limit count to detect remote host as down.

Must be an integer.

Default Value: 0.

Usage Guidelines

Use this command to configure consecutive failure configuration parameters.

client outbound interface limit pending

Configures pending limit configuration.

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 pending limit configuration.

client outbound limit consecutive failure

Configures consecutive failure configuration parameters.

Command Modes

Exec > Global Configuration (config) > Interface Configuration (config-interface-*interface_name*)

Syntax Description

limit consecutive failure count *consecutive_failure_count* **codes** *failure_codes*

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 limit count to detect remote host as down.

Must be an integer.

Default Value: 0.

Usage Guidelines

Use this command to configure consecutive failure configuration parameters.

client outbound limit pending

Configures pending limit configuration.

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 pending limit configuration.

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 another_configuration* }

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

Specify the file name ending with .kube/.ssh or the directory path of the file to be compared.

Must be a string.

another_configuration

Specify the configuration to be compared against.

Must be a string.

Usage Guidelines

Use this command to configure the file that must be compared.

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.

coverage

Configures code coverage utilities.

Command Modes Exec > Global Configuration (config)

Syntax Description **`coverage container-stop`** *`container_stop`*

container-stop *container_stop*

Specify the container stop.

Must be a string.

Default Value: false.

Usage Guidelines Use this command to configure code coverage utilities.

datastore dbs

Configures DBS parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **datastore dbs** *dbs_name*

dbs *dbs_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-<dbs_name>).

datastore dbs endpoints

Configures endpoint parameters.

Command Modes

Exec > Global Configuration (config) > DBS Configuration (config-dbs-*dbs_name*)

Syntax Description

endpoints *endpoint_name* **[port** *port_number* **]**

endpoints *endpoint_name*

Specify the endpoint host name.

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 the host name.

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 endpoints`** *`endpoint_name`* **`[ [ port`** *`port_number`* **`] [ slice-name`** *`slice_name`* **`] ]`**

slice-name *slice_name*

Specify name of the slice.

Must be a string.

Usage Guidelines Use this command to configure Session DB parameters.

datastore session-db endpoints

Configures endpoint parameters.

Command Modes Exec > Global Configuration (config) > DBS Configuration (config-dbs-*dbs_name*)

Syntax Description **endpoints** *endpoint_name* **[port** *port_number* **]**

endpoints *endpoint_name*

Specify the endpoint host name.

Must be a string.

port *port_number*

Specify the port number.

Must be an integer.

Usage Guidelines Use this command to configure endpoint parameters.

debug-settings amf-ngap-ep

Configures debug settings for AMF NGAP endpoint.

Command Modes Exec > Global Configuration (config)

Syntax Description `debug-settings amf-ngap-ep go-debug`

go-debug

Specifiy to debug.

Must be a string.

Usage Guidelines Use this command to configure debug settings for the AMF NGAP endpoint.

debug-settings amf-rest-ep

Configures debug settings for AMF REST endpoint.

Command Modes

Exec > Global Configuration (config)

Syntax Description

```
debug-settings amf-rest-ep go-debug
```

go-debug

Specifiy to debug.

Must be a string.

Usage Guidelines

Use this command to configure debug settings for the AMF REST endpoint.

debug-settings amf-sctp-lb

Configures debug settings for amf-sctp-lb.

Command Modes Exec > Global Configuration (config)

Syntax Description `debug-settings amf-sctp-lb go-debug`

go-debug

Specifiy to debug.

Must be a string.

Usage Guidelines Use this command to configure debug settings for amf-sctp-lb.

debug-settings amf-service

Configures debug settings for AMF service.

Command Modes Exec > Global Configuration (config)

Syntax Description `debug-settings amf-service go-debug`

go-debug

Specifiy to debug.

Must be a string.

Usage Guidelines Use this command to configure debug settings for the AMF service.

deployment

Configures the product deployment parameters.

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 name of the application.

Must be a string.

cluster-name *cluster_name*

Specify name of the cluster.

Must be a string.

dc-name *datacenter_name*

Specify name of the datacenter.

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 deployment parameters.

deployment resource

Configures the deployment CPU resource parameter.

Command Modes

Exec > Global Configuration (config) > Deployment Configuration (config-deployment)

Syntax Description

`resource cpu` *`cpu_size`*

cpu *cpu_size*

Specify the CPU size in millicores.

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

Default Value: 18000.

Usage Guidelines

Use this command to configure the deployment CPU resource parameter.

describe

Displays the command information.

Command Modes

Exec

Syntax Description

describe *command*

command

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

Must be a string.

The command must be one of the following:

- **aaa**
- **cd**
- **cdl**
- **clear**
- **commit**
- **compare**
- **config**
- **describe**
- **dump**
- **exit**
- **geo**
- **help**
- **history**
- **id**
- **idle-timeout**
- **ignore-leading-space**
- **job**
- **leaf-prompting**
- **license**
- **logout**
- **monitor**
- **no**

- **paginate**
- **quit**
- **reconcile**
- **screen-length**
- **screen-width**
- **search**
- **send**
- **show**
- **show-defaults**
- **smiuser**
- **system**
- **terminal**
- **timestamp**
- **transaction**
- **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

Removes the transaction history.

Command Modes

Exec

Syntax Description

```
dump transactionhistory
```

transactionhistory

Dump the transaction history.

Usage Guidelines

Use this command to remove the transaction history.

edr reporting

Disables/Enables the EDR reporting.

Command Modes

Exec > Global Configuration (config)

Syntax Description

```
edr reporting { disable | enable }
```

edr reporting { disable | enable }

- **disable**

  : Disables the EDR reporting.
- **enable**

  : Enables the EDR reporting.

Usage Guidelines

Use this command to configure EDR enable parameters.

edr all subscribers

Configures EDR reporting for all subscribers.

Command Modes Exec > Global Configuration (config)

Syntax Description `edr reporting all subscribers`

edr reporting all subscribers

- **all subscribers**

  : Enables edr reporting for all.

Usage Guidelines Use this command to configure EDR reporting for all subscribers.

edr file transaction reporting

Configures EDR file transaction reporting.

Command Modes Exec > Global Configuration (config)

Syntax Description `edr file transaction reporting { disable | enable }`

edr file transaction reporting { disable | enable }

Use this command to disable/enable transaction level EDR.

Usage Guidelines Use this command to disable or enable the EDR file transaction reporting.

edr file transaction flush interval

Configures EDR file transaction flush interval.

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction flush *flush_interval*

edr file transaction flush *flush_interval*

Specify the interval time interval in milliseconds to flush file.

The flush interval value is in integer ranging from 500 to 10000 ms. The default value is 1000 ms.

Usage Guidelines

Use this command to configure EDR file flush parameters.

edr file transaction limit

Configures EDR file transaction limit parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction limit { count *file_count* **| size** *file_max_limit* **| storage** *storage_size* **}**

edr file transaction limit { count *file_count* | size *file_max_limit* | storage *storage_size* }

- **count** *file_count*: Specify the maximum number of files to be preserved in service-pod (s), (default: 10).
- **size** *file_max_limit*: Specify the maximum single file size (in MiB) limit in service-pod (s), (default: 100MiB).
- **storage** *storage_size*: Specify the EDR Storage size (in GiB) of persistent volume in edr-monitor pod (s), (disable PV: 0, default: 24GiB).

Usage Guidelines

Use this command to configure EDR file transaction limit parameters.

edr file transaction procedure

Configures the procedure-id, event-id, and field-id parameters.



Note Once you configure this CLI, the system generates EDR only for the configured parameters, and it disables all other procedures, fields, and events.

Command Modes Exec > Global Configuration (config) > EDR File Transaction (config-edr-file-transaction)

Syntax Description **`procedure`** *`procedure_id`* **`[ event`** *`event_id`* **`| field`** *`field_id`* **`]`**

procedure *procedure_id* { event *event_id* | field *field_id* }

Specify the name of procedure-id, event-id, and field-id to enable the EDR reporting.

Must be a string.

Usage Guidelines Use this command to enable transaction-level procedure-id, event-id, and field-id parameters.

edr file transaction rate

Configures EDR file transaction rate.

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction rate *edr_generation_rate*

edr file transaction rate *edr_generation_rate*

Specify the allowed rate per second to generate EDR records. The default value is 4096.

Usage Guidelines

Use this command to configure EDR file transaction rate.

edr file transaction threshold

Configures EDR file transaction threshold parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction threshold { cpu *cpu_threshold* **| session** *session_threshold* **}**

edr file transaction threshold { cpu *cpu_threshold* | session *session_threshold* }

Specify the CPU and Session threshold value (s) to limit EDR generation. After reaching any of the CPU or session threshold values, the system stops generating the EDR files.

The default value for CPU threshold is 80%.

The default value for session threshold is 100,000 per gr-instance.

Usage Guidelines

Use this command to configure EDR file transaction threshold parameters.

edr file transaction collision reporting

Configures EDR file transaction-collision reporting.



Note For more details on transaction-collision scenarios, see UCC AMF Configuration and Administration Guide > Chapter: Event Data Records > EDR Transaction Collision

Command Modes Exec > Global Configuration (config)

Syntax Description

```
edr file transaction-collision reporting { disable | enable }
```

edr file transaction-collision reporting { disable | enable }

Disables or enables the EDR reporting.

Usage Guidelines Use this command to disable or enable the EDR file transaction-collision reporting.

edr file transaction-collision flush interval

Configures EDR file transaction-collision flush interval.

Note For more details on transaction-collision scenarios, see UCC AMF Configuration and Administration Guide > Chapter: Event Data Records > EDR Transaction Collision

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction-collision flush *flush_interval*

edr file transaction-collision flush *flush_interval*

Specify the interval time interval in milliseconds to flush file.

The flush interval value is in integer ranging from 500 to 10000 ms. The default value is 1000 ms.

Usage Guidelines

Use this command to configure EDR file flush parameters.

edr file transaction-collision limit

Configures EDR file transaction-collision limit parameters.



Note For more details on transaction-collision scenarios, see UCC AMF Configuration and Administration Guide > Chapter: Event Data Records > EDR Transaction Collision

Command Modes

Exec > Global Configuration (config)

Syntax Description

edr file transaction-collision limit { count *file_count* **| size** *file_max_limit* **| storage** *storage_size* **}**

edr file transaction-collision limit { count *file_count* | size *file_max_limit* | storage *storage_size* }

- **count** *file_count*: Specify the maximum number of files to be preserved in service-pod (s), (default: 10).
- **size** *file_max_limit*: Specify the maximum single file size (in MiB) limit in service-pod (s), (default: 100MiB).
- **storage** *storage_size*: Specify the EDR Storage size (in GiB) of persistent volume in edr-monitor pod (s), (disable PV: 0, default: 24GiB).

Usage Guidelines

Use this command to configure EDR file transaction-collision limit parameters.

show endpoint

Displays endpoint status.

Command Modes

Exec

Syntax Description

```
show endpoint { all | info | ipv4 | ipv6 }
```

all

Displays the status of all endpoints across all pods in the cluster.

info

Displays the detailed information about endpoints.

ipv4

Displays the status of endpoints with IPv4 addresses.

ipv6

Displays the status of endpoints with IPv6 addresses.

Usage Guidelines

Use this command to view the status of endpoints.

exit

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

Command Modes

Exec

Syntax Description

```
exit
```

Usage Guidelines

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

group nf-mgmt

Configures NF management group name.

Command Modes

Exec > Global Configuration (config)

Syntax Description

group nf-mgmt *mgmt_group_name* **{ nrf-mgmt-group** *nrf_mgmt_group_name* **| failure-handling-profile** *fh_profile_name* **| locality** *locality_name*| **heartbeat-interval** *heartbeat_interval* **| message-handling-profile** *message_handling_profile_name*

group nf-mgmt *mgmt_group_name*

Specify name of the NRF management group.

Must be a string.

nrf-mgmt-group *nrf_mgmt_group_name*

Specify name of the NRF management group.

Must be a string.

failure-handling-profile *fh_profile_name*

Specify name of the Failure Handling profile for the NRF Management functionality.

Must be a string.

locality *locality_name*

Specify the locality information.

Must be a string.

heartbeat-interval *heartbeat_interval*

Specify the heartbeat interval in seconds.

Must be an integer.

message-handling-profile *message_handling_profile_name*

Specify the message handling profile name.

Must be an integer.

Usage Guidelines

Use this command to configure NF management group name.

group nrf discovery

Configures NRF discovery group parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`group nrf discovery` *`group_name`* **`[ nrf-type`** *`nrf_type`* **`]`**

discovery *group_name*

Specify name of the NRF discovery group.

Must be a string.

nrf-type *nrf_type*

Specify the NRF type.

Must be one of the following:

- **PLMN**: PLMN.
- **SHARED**: SHARED.
- **SLICE-LOCAL**: SLICE-LOCAL.

Usage Guidelines

Use this command to configure the NRF discovery group configuration.

group nrf discovery service type nrf

Configures the NRF discovery service name.

Command Modes

Exec > Global Configuration (config)

Syntax Description

nrf *nrf_service_name* **[responsetimeout** *response_timeout* **]**

nrf *nrf_service_name*

Specify name of the NRF discovery service.

Must be one of the following:

- **nnrf-disc**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

Usage Guidelines

Use this command to configure the NRF discovery service name.

group nrf discovery service type nrf endpoint-profile

Configures endpoint profile parameters.

Command Modes

Exec > Global Configuration

Syntax Description

endpoint-profile *endpoint_profile_name* **{ api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **| uri-version** *uri_version* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

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

uri-version *uri_version*

Specify the URI version.

Must be a string.

Usage Guidelines

Use this command to configure endpoint profile parameters.

group nrf discovery service type nrf endpoint-profile endpoint-name

Configures endpoint parameters.

Command Modes Exec > Global Configuration

Syntax Description **endpoint-name** *endpoint_name* **[priority** *priority* **| capacity** *endpoint_capacity* **]**

capacity *endpoint_capacity*

Specify the endpoint capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

priority *priority*

Specify the node priority for endpoint.

Must be an integer in the range of 0-65535.

endpoint_name

Specify name of the endpoint.

Must be a string.

Usage Guidelines Use this command to configure endpoint parameters.

group nrf discovery service type nrf endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf discovery service type nrf endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 ***ipv6_address***

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf discovery service type nrf endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf discovery service type nrf endpoint-profile version uri-version

Configures URI version information.

Command Modes

Exec > Global Configuration

Syntax Description

`uri-version` *`uri_version`* **`[ full-version`** *`full_version`* **`]`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure URI version information.

group nrf mgmt

Configures the NRF self-management group parameters.

Command Modes

Exec > Global Configuration

Syntax Description

mgmt *group_name* **[nrf-type** *nrf_type* **]**

mgmt *group_name*

Specify name of the NRF self-management group.

Must be a string.

nrf-type *nrf_type*

Specify the NRF type.

Must be one of the following:

- **PLMN**: PLMN.
- **SHARED**: SHARED.
- **SLICE-LOCAL**: SLICE-LOCAL.

Usage Guidelines

Use this command to configure the NRF self-management group parameters.

group nrf mgmt service type nrf

Configures the NRF self-management service information.

Command Modes

Exec > Global Configuration

Syntax Description

`nrf nrf-service-name` *`nrf_service_name`* **`[ responsetimeout`** *`response_timeout`* **`]`**

nrf-service-name *nrf_service_name*

Specify name of the NRF service.

Must be one of the following:

- **nnrf-nfm**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

Usage Guidelines

Use this command to configure the NRF self-management service information.

group nrf mgmt service type nrf endpoint-profile

Configures endpoint profile parameters1.

Command Modes

Exec > Global Configuration

Syntax Description

endpoint-profile *endpoint_profile_name* **{ api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

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

Usage Guidelines

Use this command to configure endpoint profile parameters.

group nrf mgmt service type nrf endpoint-profile endpoint-name

Configures endpoint parameters.

Command Modes

Exec > Global Configuration

Syntax Description

endpoint-name *endpoint_name* **[max-retry-count** *max_retry_count* **] [priority** *endpoint_priority* **]**

max-retry-count *max_retry_count*

Specify the maximum retry count.

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

Default Value: 3.

priority *endpoint_priority*

Specify the node priority for endpoint.

Must be an integer in the range of 0-65535.

endpoint_name

Specify name of the endpoint.

Must be a string.

Usage Guidelines

Use this command to configure endpoint parameters.

group nrf mgmt service type nrf endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf mgmt service type nrf endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf mgmt service type nrf endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NRF NF-Client Configuration (config-nrf) > NRF Profile Configuration (config-nrf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

group nrf mgmt service type nrf endpoint-profile version uri-version

Configures version information.

Command Modes

Exec > Global Configuration

Syntax Description

`uri-version` *`uri_version`* **`[ full-version`** *`full_version`* **`]`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the version information.

help

Displays help information for specified command.

Command Modes

Exec

Syntax Description

help *command*

command

Specify the command name to display the corresponding help information.

Must be a string.

The command must be one of the following:

- **aaa**
- **cd**
- **cdl**
- **clear**
- **commit**
- **compare**
- **config**
- **describe**
- **dump**
- **exec-imap**
- **exit**
- **geo**
- **help**
- **history**
- **id**
- **idle-timeout**
- **ignore-leading-space**
- **job**
- **leaf-prompting**
- **license**
- **logout**
- **mode**

- **monitor**
- **no**
- **paginate**
- **quit**
- **reconcile**
- **screen-length**
- **screen-width**
- **search**
- **send**
- **show**
- **show-defaults**
- **smiuser**
- **smi-ldap**
- **system**
- **terminal**
- **timestamp**
- **transaction**
- **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 the 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 for which a command can remain idle in seconds after which the system automatically terminates the connection.

Command Modes

Exec

Syntax Description

idle-timeout *timeout_in_seconds*

timeout_in_seconds

Specify the idle timeout duration in seconds.

Usage Guidelines

Use this command to configure the maximum duration for which 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 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** *pod_type* **level** *verbose_level*

level *verbose_level*

Specify the verbosity level.

Must be one of the following:

- **debug**
- **off**
- **production**
- **trace**

Default Value: trace.

pod_type

Specify the pod type.

Must be one of the following:

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



Note You can enable the ASN encoding/decoding and NAS algorithm metrics by setting:

pod-type: to application, **verbose-level:** as trace.

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 thresholds.

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 thresholds.

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 ID 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.

instancetype *ep_local_interface_type*

Specify the endpoint local interface type.

Must be one of the following:

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

Default Value: IPv4.

internal-vip *internal_vip*

Specify the internal VIP.

Must be a string.

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.

max-fragment-size *max_fragment_size*

Specify the Maximum SCTP fragment size for data packet.

Must be an integer.

Default Value: 0.

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 gtp dscp

Configures the Differentiated Service Code Point (DSCP) while sending packets over the N26/GTPC interface.

Command Modes

Exec > Global Configuration (config) > Instance ID Configuration (config-instance instance-id-*instance_id*) > Endpoint Configuration (config-endpoint-*gtp*)

dscp *dscp_value*

Syntax Description

dscp *dscp_value*	Specify the DSCP value. DSCP value is either in hexadecimal string starting with '0x' eg:0x3F or decimal value (range 0-63) eg:12. **Note** If DSCP value is not specified in the configuration then the default DSCP value is set to 0.

Usage Guidelines

Use this command to configure the DSCP value for the N26/GTPC interface.

instance instance-id endpoint sctp dscp

Configures the Differentiated Service Code Point (DSCP) while sending packets over the N2/SCTP interface.

Command Modes

Exec > Global Configuration (config) > Instance ID Configuration (config-instance instance-id-*instance_id*) > Endpoint Configuration (config-endpoint-*sctp*)

dscp *dscp_value*

Syntax Description

dscp *dscp_value*	Specify the DSCP value. DSCP value is either in hexadecimal string starting with '0x' eg:0x3F or decimal value (range 0-63) eg:12. **Note** If DSCP value is not specified in the configuration then the default DSCP value is set to 0.

Usage Guidelines

Use this command to configure the DSCP value for the N2/SCTP interface.

instance instance-id endpoint sctp replicas parameters

Configures operational parameters for an SCTP endpoint within a defined service instance.

Command Modes

Exec > Global Configuration (config) > Instance ID Configuration (config-instance-id-*instance_id*)

Syntax Description

instance instance-id *instance_id* **{ endpoint sctp { replicas** *no_of_replicas* **{ parameters { association { heartbeat-interval** *heartbeat_interval_value* **| max-assoc-retry-count** *max_assoc_retry_count* **| path-max-rtery-count** *path_max_rtery_count* **| valid-cookie-life** *valid_cookie_life* **} | client-idle-timeout** *client_idle_timeout_value* **| mtu-size** *mtu_size* **| rto { initial | max | min } | sack { sack-frequency | sack-period } } } } }**

- **instance-id**: Assigns a unique identifier to the specific instance being configured.
- **endpoint sctp**: Configures the network communication endpoint settings.
- **replicas**: Specifies the number of instances or service copies to be deployed.
- **parameters**: Groups specific configuration settings for the SCTP protocol.
- **association**: Manages settings related to the SCTP association establishment and maintenance.
- **heartbeat-interval**: Sets the time interval between sending heartbeat chunks to monitor path availability.
- **max-assoc-retry-count**: Defines the maximum number of attempts to establish an SCTP association.
- **path-max-rtery-count**: Sets the maximum number of retransmission attempts for a specific network path.
- **valid-cookie-life**: Configures the duration for which an initialization cookie remains valid during the handshake.
- **client-idle-timeout**: Specifies the duration of inactivity before a client connection is terminated.
- **mtu-size**: Sets the Maximum Transmission Unit size for SCTP packets.
- **rto**: Configures Retransmission Timeout (RTO) parameters for the association.
- **initial**: Sets the starting RTO value used for retransmission calculations.
- **max**: Defines the maximum allowable RTO value.
- **min**: Defines the minimum allowable RTO value.
- **sack**: Configures Selective Acknowledgment (SACK) settings for the connection.
- **sack-frequency**: Determines how often SACK chunks are generated and sent.
- **sack-period**: Sets the time interval for reporting SACK information.

Usage Guidelines

Use this command to configure operational parameters for an SCTP endpoint within a defined service instance.

instance instance-id endpoint sbi dscp

Configures the Differentiated Service Code Point (DSCP) while sending packets over the SBI interface.

Command Modes

Exec > Global Configuration (config) > Instance ID Configuration (config-instance instance-id-*instance_id*) > Endpoint Configuration (config-endpoint-*sbi*)

dscp *dscp_value*

Syntax Description

dscp *dscp_value*	Specify the DSCP value. DSCP value is either in hexadecimal string starting with '0x' eg:0x3F or decimal value (range 0-63) eg:12. **Note** If DSCP value is not specified in the configuration then the default DSCP value is set to 0.

Usage Guidelines

Use this command to configure the DSCP value for the SBI interface.

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 pod interface.

Must be a string.

loopbackPort ***loopback_port_number***

Specify the loopback port number.

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_name*)

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 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 ID Configuration (config-instance-id-*instance_id*) > Endpoint Configuration (config-endpoint-*endpoint_type*) > Interface Configuration (config-interface-*interface_name*)

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 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, in milliseconds, the procedure time.

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

response *response_time*

Specify, in milliseconds, the response time.

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 Virtual 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_address* **[[offline] [vip-interface** *interface_name* **] [vip-port** *vip_port_number* **]]**

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_address*

Specify the host IP address.

Must be a string.

vip-port *vip_port_number*

Specify the port number.

Must be an integer.

Usage Guidelines

Use this command to configure Virtual IP parameters.

instance instance-id endpoint ep interface vip6

Configures VIP IPv6 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 IPv6 parameters.

instance instance-id endpoint ep nodes nodes-count internal vip ip interface interface-name vip ip

Configures GTPC-EP merge mode.

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_address*

vip-ip *vip_ip_address*

Specifies the virtual IP address associated with the specified interface.

Must be a string.

Note vip-ipv6 is not supported for GTP endpoint.

Usage Guidelines

Use this command to configure Virtual IP 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 internal-port

Configures internal port parameters.

Command Modes

Exec > Global Configuration (config) > Instance Configuration (config-instance-id-*instance_id*) > Endpoint Configuration (config-endpoint-*endpoint_type*)

Syntax Description

internal-port metrics *metrics_port* **admin** *admin_port* **ipc** *ipc_port* **pprof** *pprof_port* **keepalived** *keepalived_port*

admin *admin_port*

Specify the admin port number for SCTP.

Must be an integer.

Default Value: 7879.

ipc *ipc_port*

Specify the IPC port number for SCTP.

Must be an integer.

Default Value: 9005.

keepalived *keepalived_port*

Specify the keepalived port number for SCTP.

Must be an integer.

Default Value: 29000.

metrics *metrics_port*

Specify the metrics port number for SCTP.

Must be an integer.

Default Value: 7083.

pprof *pprof_port*

Specify the PPROF port number for SCTP.

Must be an integer.

Default Value: 7850.

Usage Guidelines

Use this command to configure internal port parameters.

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_percentage* **] [memory-in-mbs** *memory* **] [num-of-goroutine** *goroutine_per_core* **] }**

cpu-percent *cpu_percentage*

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 *goroutine_per_core*

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_percentage*

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_percentage`* **`] [ memory-in-mbs`** *`memory`* **`] [ num-of-goroutine`** *`number_of_goroutine`* **`] }`**

cpu-percent *cpu_percentage*

Specify the CPU percentage.

Must be an integer.

Default Value: 50.

memory-in-mbs *memory*

Specify the memory in MBs.

Must be an integer.

Default Value: 512.

num-of-goroutine *goroutine_per_core*

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 *endpoint_type* 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.

instance instance-id vip-ip vip-port fqdn

Configures the fqdn for AMF instance.

Command Modes

Exec > Global Configuration (config) > Instance Configuration (config-instance-instance-id-*instance_id*)

Syntax Description

endpoint *endpoint_name* **{ uri-scheme** *uri_scheme_name* **| vip-ip** *ip_address* **| vip-port** *port_number* **| fqdn** *fqdn_address* **}**

endpoint *endpoint_name* { uri-scheme *uri_scheme_name* | vip-ip *ip_address* | vip-port *port_number* | fqdn *fqdn_address* }

- **endpoint** *endpoint_name* —Specify the endpoint for the instance.
- **uri-scheme** *uri_scheme_name* —Specify the URI scheme name.
- **vip-ip** *ip_address* —Specify the VIP IP address for the endpoint.
- **vip-port** *port_number* —Specify the VIP IP port for the endpoint.
- **fqdn** *fqdn_address* —Specify the fqdn name for the endpoint.

Usage Guidelines

Use this command to configure the fqdn for the AMF instance.

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 *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.

instance instance-id endpoint service

Configures K8 pod resource parameters (CPU, memory, etc.) for the specified service endpoint.

Command Modes

Exec > Global Configuration

Syntax Description

```
endpoint service { cpu | memory }
```

cpu

Configures K8 pod CPU resources for this service endpoint.

memory

Configures K8 pod memory resources for this service endpoint.

Usage Guidelines

Use this command to configure CPU and memory resources for a specific service endpoint instance in the K8 pod.



Note This option is applicable for endpoints: `ngap`, `gtp`, `sbi`, `li`, `nodemgr`, `protocol`, `protocol`, `service`, and `sctp`.

Any change in this configuration requires opscenter shut and start.

instance instance-id endpoint service cpu

Configures CPU resource parameters for the specified service endpoint instance.

Command Modes

Exec > Global Configuration

Syntax Description

endpoint service cpu { max-process *max_processes* **| request** *cpu_resource_request* **}**

max-process *max_processes*

Specify the maximum number of parallel OS threads to use.

Must be an integer in the range of 1-32.

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 the CPU resource parameters for a specific service endpoint instance in the K8 pod.

instance instance-id endpoint service service-name

Configures the SCTP endpoint parameteters with ULB inetgration.

Command Modes Exec > Global Configuration

Syntax Description **instance instance-id** *instance_id* **{ endpoint** *endpoint_name* **{ service** *service_name* **{ cpu request** *cpu_resource_request* **| cpu max-process** *cpu_max_process* **| memory request** *memory_request* **| memory limit** *memory_limit* **| replicas** *replicas_value* **| nodes** *nodes_value* **| nad-policy nad_policy_name } } }**

instance instance-id *instance_id* { endpoint *endpoint_name* { service *service_name* { cpu request *cpu_resource_request* | cpu max-process *cpu_max_process* | memory request *memory_request* | memory limit *memory_limit* | replicas *replicas_value* | nodes *nodes_value* | nad-policy nad_policy_name } } }

- **instance instance-id** : Enters configuration mode for instance with ID 1.
- **endpoint** : Configures the endpoint type for the instance, for example `SCTP`.
- **service**: Defines a service under the endpoint.
- **cpu request**: Specify the millicores of CPU resources for the service, default value is 1000.
- **cpu max-process**: Specify the maximum number of CPU processes (threads) for the service, default value is 12.
- **memory request**:Specify the memory resources for the service, default value is 4096 MB.
- **memory limit**: Sets the maximum memory limit, default value is 8192 MB for the service.
- **replicas** : Specifies replicas of the service per node.
- **nodes**: Specifies node replica for resiliency.
- **nad-policy sctp-policy**: Applies the SCTP Network Attachment Definition (NAD) policy, example "sctp-policy" to the endpoint.



Note Enabling / disabling non-host mode deployment configuration requires ops center shut and start.

instance instance-id endpoint service memory

Configures memory resource parameters for the specified service endpoint instance.

Command Modes

Exec > Global Configuration

Syntax Description

endpoint service memory { limit *memory_limit* **| request** *memory_resource_request* **}**

limit *memory_limit*

Specify the maximum memory resource limit in megabytes (MiB).

Must be an integer in the range appropriate for your deployment.

request *memory_resource_request*

Specify the memory resource request in megabytes (MiB).

Must be an integer in the range appropriate for your deployment.

Usage Guidelines

Use this command to configure the memory resource parameters for a specific service endpoint instance in the K8 pod.

Note This option is applicable for endpoints: `ngap`, `gtp`, `sbi`, `li`, `nodemgr`, `protocol`, `protocol`, `service`, and `sctp`.

Any change in this configuration requires opscenter shut and start.

job

Suspends the jobs that are running in the background.

Command Modes

Exec

Syntax Description

job stop *job_id*

job_id

Specify the job ID.

Must be an integer.

Usage Guidelines

Use this command to suspend the jobs that are running in the background.

k8 amf local etcd endpoint

Configures AMF local Etcd endpoint parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

amf local etcd endpoint host *host_name* **port** *port_number*

host *host_name*

Specify the host name.

Must be a string.

Default Value: etcd.

port *port_number*

Specify the port number.

Must be an integer.

Default Value: 2379.

Usage Guidelines

Use this command to configure AMF local Etcd endpoint parameters.

k8 label pod-group-config

Configures K8 node affinity label pod group configuration.

Command Modes

Exec > Global Configuration (config)

Syntax Description

k8 label *pod_group* **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.

pod_group

Specify the pod group for the VMs.

Must be one of the following:

- **cdl-layer**
- **oam-layer**
- **protocol-layer**
- **service-layer**

Usage Guidelines

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

k8 label sctp-layer

Configures AMF sctp-layer parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`sctp-layer 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 sctp-layer parameters.

k8s single-node

Enables AMF to be deployed in single node.

Command Modes

Exec > Global Configuration (config)

Syntax Description

```
k8s single-node { false | true }
```

single-node { false | true }

Specify whether to enable or disable single-node deployment of AMF.

Must be one of the following:

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

Default Value: false.

If **k8s single-node true** is configured, AMF pods can be deployed in a single node.

Single node deployment involves some additional configurations. For more information, contact your Cisco account representative.



Note AMF does not support dynamic changes to this command.

Usage Guidelines

Use this command to enable AMF to be deployed in single node.

leaf-prompting

Enables or disables automatically querying for leaf values.

Command Modes Exec

Syntax Description `leaf-prompting { false | true }`

{ false | true }

Specify false to disable leaf prompting, true to enable.

Must be either "false" or "true".

Usage Guidelines Use this command to automatically query for leaf values.

license smart register

Registers the VNF for Smart Licensing.

Command Modes Exec

Syntax Description `license smart register [ force | idtoken idtoken ]`

register

Register the VNF for Smart Licensing.

force

Force registration of the agent.

idtoken

Specify the ID token to register the agent with.

Must be an integer.

Usage Guidelines Use this command to register the VNF for Smart Licensing.

license smart deregister

Deregisters the VNF for Smart Licensing.

Command Modes

Exec

Syntax Description

```
license smart deregister
```

deregister

Deregisters the VNF for Smart Licensing.

Usage Guidelines

Use this command to deregister the VNF for Smart Licensing.

license smart renew

Renews smart agent IDs and authentication.

Command Modes

Exec

Syntax Description

```
license smart renew { ID | auth }
```

renew

Renews the smart agent IDs and authentication.

ID

Specify the ID to renew smart agent license registration information.

auth

Specify to initiate a manual update of the license usage information with Cisco.

Usage Guidelines

Use this command to renew the smart agent IDs and authentication.

license smart status

Displays the smart licensing status information.

Command Modes

Exec

Syntax Description

```
license smart status status-only { true | false }
```

status

Displays the smart licensing information.

status-only

Displays only the status information.

Must be one of the following:

- false
- true

Usage Guidelines

Use this command to view the smart licensing status information.

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.

local-cause-code-map auth-failure

Configures the UE authentication failure condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map auth-failure cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **illegal-ms**
- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: illegal-ms.

Usage Guidelines

Use this command to configure the UE authentication failure condition type parameter.

local-cause-code-map clear-subscriber

Configures the UE subscriber clear condition type.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map clear-subscriber cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **5GS-services-not-allowed**
- **implicitly-de-registered**
- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: plmn-not-allowed.

Usage Guidelines

Use this command to configure the UE subscriber clear condition type.

local-cause-code-map core-network-type-restriction

Configures a mapping of local cause codes to specific actions or responses. It allows the system to handle different scenarios or errors based on predefined cause codes, ensuring appropriate processing or signaling.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`local-cause-code-map core-network-type-restriction cause-code-5gmm` *`cause_code_5gmm`*

core-network-type-restriction cause-code-5gmm *cause_code_5gmm*

Restricts the core network type to 5GC. It ensures that the policies and configurations apply specifically to the 5G Core network, potentially affecting how certain services are managed or restricted within this network type.

Usage Guidelines

Use this command to configure a mapping of local cause codes to specific actions or responses.

local-cause-code-map ctxt-xfer-fail

Configures the AMF context transfer failure condition type parameter.

Command Modes Exec > Global Configuration (config) > AMF Services Configuration (config-amf-services-*service_name*)

Syntax Description **`local-cause-code-map ctxt-xfer-fail cause-code-5gmm`** *`cause_code_5gmm`*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **ue-identity-not-derived**

Default Value: ue-identity-not-derived.

Usage Guidelines Use this command to configure the AMF context transfer failure condition type parameter.

local-cause-code-map ctxt-xfer-fail-mme

Configures the MME context transfer failure condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map ctxt-xfer-fail-mme cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **ue-identity-not-derived**

Default Value: ue-identity-not-derived.

Usage Guidelines

Use this command to configure the MME context transfer failure condition type parameter.

local-cause-code-map dnn-mismatch

Configures the DNN mismatch condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`local-cause-code-map dnn-mismatch cause-code-5gmm` *`cause_code_5gmm`*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: plmn-not-allowed.

Usage Guidelines

Use this command to configure the DNN mismatch condition type parameter.

local-cause-code-map dnn-not-subscribed

Configures the DNN not subscribed condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map dnn-not-subscribed cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **dnn-not-subscribed**

Default Value: dnn-not-subscribed.

Usage Guidelines

Use this command to configure the DNN not subscribed condition type parameter.

local-cause-code-map gw-unreachable

Configures the gw unreachable condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map gw-unreachable cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: no-suitable-cells-in-tracking-area.

Usage Guidelines

Use this command to configure the gw unreachable condition type parameter.

local-cause-code-map ims-vops-failure

Configures a mapping between the local cause code and ims-vops-failure.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`local-cause-code-map ims-vops-failure cause-code-5gmm` *`cause_code_5gmm`*

ims-vops-failure cause-code-5gmm *cause_code_5gmm*

Configures a mapping between a local cause code for IMS Voice over PS service failures and a specific 5GMM cause code. This mapping allows the system to translate or associate IMS VoPS failures with a relevant cause code recognized within the 5G Mobility Management framework. By doing so, it facilitates coherent handling and signaling of these failures across the network, enabling more effective management and troubleshooting of IMS-related issues.

Usage Guidelines

Use this command to configure a mapping of local cause codes to ims-vops-failure.

local-cause-code-map inter-plmn-roaming

Configures the inter-PLMN roaming condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map inter-plmn-roaming cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **5GS-services-not-allowed**
- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: plmn-not-allowed.

Usage Guidelines

Use this command to configure the inter-PLMN roaming condition type parameter.

local-cause-code-map odb-packet-services

Configures the barring condition type parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **`local-cause-code-map odb-packet-services cause-code-5gmm`** *`cause_code_5gmm`*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **5GS-services-not-allowed**
- **n1-mode-not-allowed**
- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **tracking-area-not-allowed**

Usage Guidelines Use this command to configure the barring condition type parameter.

local-cause-code-map peer-node-unknown

Configures the peer node no response condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map peer-node-unknown cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **ue-identity-not-derived**

Default Value: ue-identity-not-derived.

Usage Guidelines

Use this command to configure the peer node no response condition type parameter.

local-cause-code-map rat-type-restriction

Configures a mapping between the local cause code and rat-type-restriction.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map rat-type-restriction cause-code-5gmm *cause_code_5gmm*

rat-type-restriction cause-code-5gmm *cause_code_5gmm*

Configures a mapping between local cause codes for RAT type restrictions and specific 5GMM cause codes. This configuration allows the system to handle scenarios where certain RAT types are restricted by associating them with a standardized 5GMM cause code. This ensures consistent communication and management of RAT type restrictions within the 5G network, helping to streamline operations and facilitate troubleshooting.

Must be one of the following:

- **plmn-not-allowed**
- **no-suitable-cells-in-tracking-area**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **5GS-services-not-allowed**
- **n1-mode-not-allowed**
- **redirection-to-epc-required**

Usage Guidelines

Use this command to configure a mapping of local cause codes to rat-type-restriction.

local-cause-code-map registration-restriction

Configures a mapping of local cause codes to registration-restriction.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map registration-restriction cause-code-5gmm *cause_code_5gmm*

registration-restriction cause-code-5gmm *cause_code_5gmm*

Configures the maping of local cause codes related to registration restrictions to specific 5GMM (5G Mobility Management) cause codes. This configuration helps the system to handle cases where registration attempts are restricted by associating them with a corresponding 5GMM cause code. This mapping ensures that the restrictions are communicated consistently and efficiently within the 5G network, aiding in proper signaling and management of registration-related issues.

Must be one of the following:

- **plmn-not-allowed**
- **5GS-service-not-allowed**
- **no-suitable-cells-in-tracking-area**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **n1-mode-not-allowed**
- **redirection-to-epc-required**

Default value: plmn-not-allowed

Usage Guidelines

Use this command to configure a mapping of local cause codes to specific registration-restrictions.

local-cause-code-map restricted-zone-code

Configures the restricted zone code condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`local-cause-code-map restricted-zone-code cause-code-5gmm` *`cause_code_5gmm`*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **5GS-services-not-allowed**
- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: no-suitable-cells-in-tracking-area.

Usage Guidelines

Use this command to configure the restricted zone code condition type parameter.

local-cause-code-map smf-selection-failure

Configures the SMF selection failure condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map smf-selection-failure cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**

Default Value: no-suitable-cells-in-tracking-area.

Usage Guidelines

Use this command to configure the SMF selection failure condition type parameter.

local-cause-code-map udm-unavailable

Configures the UDM not available condition type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

local-cause-code-map udm-unavailable cause-code-5gmm *cause_code_5gmm*

cause-code-5gmm *cause_code_5gmm*

Specify the condition type.

Must be one of the following:

- **no-suitable-cells-in-tracking-area**
- **plmn-not-allowed**
- **restricted-service-area**
- **roaming-not-allowed-in-this-tracking-area**
- **tracking-area-not-allowed**
- **5GS-services-not-allowed**
- **n1-mode-not-allowed**
- **redirection-to-epc-required**

Default Value: no-suitable-cells-in-tracking-area.

Usage Guidelines

Use this command to configure the UDM not available condition type parameter.

logging async application enable

Enables and configures async application logging.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`logging async application { disable | 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 and configure async application logging.

logging async monitor-subscriber enable

Enables and configures async mon-sub logging.

Command Modes

Exec > Global Configuration (config)

Syntax Description

logging async monitor-subscriber { disable | 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 and configure async mon-sub logging.

logging async tracing enable

Enables and configures async tracing logging.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`logging async tracing { disable | 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 and configure async tracing logging.

logging async transaction enable

Enables and configures async transaction logging.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`logging async transaction { disable | 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 and configure async transaction 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 json logging

Configures the JSON logging for different types of logs in the AMF.

Command Modes

Exec

Syntax Description

```
logging json-logging [ application | monitor-subscriber | transaction ]
```

application

Enables or disables JSON logging for application logs.

monitor-subscriber

Enables or disables JSON logging for subscriber monitoring logs.

transaction

Enables or disables JSON logging for transaction logs.

Usage Guidelines

Use this command to configure JSON logging for different types of logs in the AMF.

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 name

Configures the log name.

Command Modes Exec > Global Configuration (config)

Syntax Description `logging name { infra.config.core | infra.message_log.core }`

logging name logging name { infra.config.core | infra.message_log.core }

Specify the module name for logs generation.

Must be a string.

infra.config.core

Specify the log identifier used to capture events related to the core configuration of the infrastructure.

infra.message_log.core

Specify the log identifier used to capture core infrastructure messaging.

Usage Guidelines Use this command to configure the log names.

logging transaction

Configures the logging transaction parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

logging transaction { [duplicate { disable | enable }] [message { disable | enable }] [persist { disable | enable [max-file-size *max_file_size* **] [max-rotation** *max_rotations* **] } }**

duplicate { enable | disable }

Specify whether to enable or disable duplicate logs in transaction logging.

Must be one of the following:

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

Default Value: disable.

max-file-size *max_file_size*

Specify the maximum transaction file size in MB.

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

Default Value: 50.

max-rotation *max_rotations*

Specify the maximum number of file rotations.

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

Default Value: 10.

message { enable | disable }

Specify whether to enable or disable messages in transaction logging.

Must be one of the following:

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

Default Value: disable.

persist { enable | disable }

Specify whether 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 logging transaction parameters.

logging range name

Configures specific logging targets (such as `infra.config.core` or `infra.message_log.core`) rather than applying settings globally.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`logging range name { infra.config.core | infra.message_log.core }`

logging range name { infra.config.core | infra.message_log.core }

Specify the module range name for logs generation.

Must be a string.

infra.config.core

Specify the log identifier used to capture events related to the core configuration of the infrastructure.

infra.message_log.core

Specify the log identifier used to capture core infrastructure messaging.

Usage Guidelines

Use this command to configure specific logging targets with the logging range name [prefix].

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 AMF to monitor the protocol.

Command Modes

Exec

Syntax Description

monitor protocol [interface *interface_name* **[capture-duration** *duration* **| gr-instance** *gr_instance* **| pcap]]**

interface *interface_name*

Specify the name of interface on which PCAP is captured.

Must be a string.

Must be one of the following:

- sbi
- pfcp
- gtpu
- gtpc
- gtp
- radius
- diameter

capture-duration *duration*

Specify the duration, in seconds, during which monitor subscriber is enabled.

Must be an integer.

Default Value: 300 seconds

gr-instance *gr_instance*

Specify the GR instance ID.

pcap

Enable PCAP file generation.

Must be "yes or "no".

Default Value: no

Usage Guidelines

Use this command to monitor the protocol.

monitor subscriber

Configures the AMF to monitor the subscribers.

Command Modes

Exec

Syntax Description

monitor subscriber [capture-duration *duration* **| dump filename** *file_name* **| supi** *supi* **| gr-instance** *gr_instance* **| imei** *subscriber_imei* **| imsi** *subscriber_imsi* **| internal-messages [yes] | list | namespace [sgw | smf] | nf-service [sgw | smf] | transaction-logs [yes]]**

capture-duration *duration*

Specify the duration, in seconds, during which monitor subscriber is enabled.

Must be an integer.

Default Value: 300 seconds

dump filename *file_name*

Specify the path of the file name to be dumped.

Must be a string.

supi *supi*

Specify the subscriber identifier.

Must be a string.

gr-instance *gr_instance*

Specifies the network function service instance (GR instance) under which to search or monitor subscribers.

Must be a string.

imei *subscriber_imei*

Specifies the International Mobile Equipment Identity (IMEI) of the subscriber; must be a string of 15-16 characters.

imsi *subscriber_imsi*

Specifies the International Mobile Subscriber Identity (IMSI) of the subscriber; must be a string.

internal-messages

Set to yes to enable internal messages.

Default Value: disabled

list

List the monitored subscriber files.

namespace [sgw | smf]

Specifies the product namespace under which to search; this keyword is deprecated and replaced by nf-service.

nf-service [sgw | smf]

Specifies the network function service under which to search or monitor subscribers, such as SGW or SMF.

transaction-logs

Set to yes to enable transaction logging.

Default Value: disabled

Usage Guidelines

Use this command to monitor the subscribers.

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.

nf-tls ca certificates

Configures client certificates.

Command Modes Exec > Global Configuration (config)

Syntax Description **`nf-tls ca-certificates`** *`certificate_name`* **`cert-data`** *`certificate_data`*

nf-tls ca-certificates *certificate_name*

Specify the certificate name and data.

Must be a string.

cert-data *certificate_data*

Specify the certificate data in PEM format.

Must be a string.

Usage Guidelines Use this command to configure client certificates.

nf-tls certificates

Configures server certificates.

Command Modes Exec > Global Configuration (config)

Syntax Description **nf-tls certificates** *certificate_name* **cert-data** *certificate_data* **private-enc-key** *private_enc_key_data*

nf-tls certificates ***certificate_name***

Specify the certificate name and data.

Must be a string.

cert-data ***certificate_data***

Specify the certificate data in PEM format.

Must be a string.

private-enc-key ***private_enc_key_data***

Specify the certificate private enc key in PEM format.

Must be a string.

Note **private-key** option is deprecated and it is recommended to use **private-enc-key** instead.

Usage Guidelines Use this command to configure server certificates.

show nrf

Displays various operational and configuration details related to the Network Repository Function (NRF), such as access token information, discovery filters, and registration or subscription status.

Command Modes

Exec

Syntax Description

```
show nrf { access-token-info | discovery-info | displaylevel }
```

access-token-info

Displays detailed information regarding the Network Function (NF) access tokens.

discovery-info

Displays information related to the discovery filter configurations used by the NRF.

displaylevel

Specifies the depth or level of detail to be shown in the output for NRF-related information.

Usage Guidelines

Use this command to view operational and configuration details related to the Network Repository Function (NRF), such as access token information, discovery filters, and registration or subscription status.

nrf registration-info

Displays NRF registration information.

Command Modes

Exec

Syntax Description

```
show nrf { registration-info { displaylevel | gr-instance } }
```

displaylevel

Displays the depth to show.

Must be a string.

gr-instance

Specify the `gr-instance` parameter for the unique identifier of the group instance for which you want to display NF subscription information.

Usage Guidelines

Use this command to view registration information.

nrf subscription-info

Displays NF subscription information.

Command Modes Exec > Global Configuration

Syntax Description `show nrf subscription-info { displaylevel | gr-instance }`

displaylevel

Displays the depth to show.

Must be a string.

gr-instance

Specify the `gr-instance` parameter for the unique identifier of the group instance for which you want to display NF subscription information.

Usage Guidelines Use this command to view NF subscription information.

operator-policy network-element-profile-list scp

Configures the network element profiles with specific policies in a given environment.

Command Modes

Exec > Global Configuration (config) > Operator Policy Configuration (config-operator-policy-*operator_policy_name*)

Syntax Description

`network-element-profile-list scp` *`profile_name`*

network-element-profile-list scp *profile_name*

Specify the profile name for the network element list.

Usage Guidelines

Use this command to configure a policy with a network element profile.

paginate

Configures whether or not to paginate CLI command output.

Command Modes Exec

Syntax Description `paginate { true | false }`

{ true | false }

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.

patch amf-ngap-ep

Configures patch amf-ngap-ep parameter.

Command Modes Exec > Global Configuration (config)

Syntax Description **`patch amf-ngap-ep patch-url`** *`patch_url`*

patch-url *patch_url*

Specify the patch URL.

Must be a string.

Usage Guidelines Use this command to configure patch amf-ngap-ep parameter.

patch amf-rest-ep

Configures patch AMF REST endpoint.

Command Modes Exec > Global Configuration (config)

Syntax Description **`patch amf-rest-ep patch-url`** *`patch_url`*

patch-url *patch_url*

Specify the patch URL.

Must be a string.

Usage Guidelines Use this command to configure patch AMF REST endpoint.

patch amf-sctp-lb

Configures patch amf-sctp-lb parameter.

Command Modes Exec > Global Configuration (config)

Syntax Description **`patch amf-sctp-lb patch-url`** *`patch_url`*

patch-url *patch_url*

Specify the patch URL.

Must be a string.

Usage Guidelines Use this command to configure patch amf-sctp-lb parameter.

patch amf-service

Configures patch AMF service.

Command Modes Exec > Global Configuration (config)

Syntax Description **`patch amf-service patch-url`** *`patch_url`*

patch-url *patch_url*

Specify the patch URL.

Must be a string.

Usage Guidelines Use this command to configure patch AMF service.

peers

Displays peer information.

Command Modes Exec

Syntax Description

```
show peers { all { additionalDetails | connectedTime | direction |
interfaceName | podInstance | rpc | type | vrf } | ipv4 { additionalDetails
 | connectedTime | direction | interfaceName | podInstance | rpc | type
| vrf } | ipv6 { additionalDetails | connectedTime | direction |
interfaceName | podInstance | rpc | type | vrf } }
```

Syntax Description Displays the additional information about each peer. This information includes metrics, such as error rates and configuration specific details.

Syntax Description Displays the duration for which the peer has been connected.

Syntax Description Displays the direction of the peer connection. For example, inbound or outbound.

Syntax Description Displays the name of the network interface through which the peer is connected.

Syntax Description Displays the specific pod instance that the peer is connected to.

Syntax Description Displays information related to Remote Procedure Calls (RPC) between peers.

Syntax Description Displays the type of peer. For example, client, server, or router

Syntax Description Displays the vrf details.

Usage Guidelines Use this command to view peer information for all peers, ipv4, and ipv6.

profile compliance

Configures 3GPP compliance profile configuration.

Command Modes Exec > Global Configuration (config)

Syntax Description **`profile compliance`** *`profile_name`*

profile compliance *profile_name*

Specify name of the compliance profile.

Must be a string.

Usage Guidelines Use this command to configure the 3GPP compliance profile configuration.

profile compliance service

Configures the AMF service names.

Command Modes Exec > Global Configuration (config) > Compliance Profile Configuration (config-compliance-*profile_name*)

Syntax Description **service** *service_name*

service_name

Specify the service names.

Usage Guidelines Use this command to configure the AMF service names.

profile compliance service version spec

Configures the 3GPP specification version number.

Command Modes

Exec > Global Configuration (config) > Compliance Profile Configuration (config-compliance-*profile_name*) > Service (*service_name*)

Syntax Description

`version spec` *`3gpp_spec_version`*

version spec *3gpp_spec_version*

Specify the 3GPP specification version number.

Usage Guidelines

Use this command to configure the 3GPP specification version number.

profile emergency-profile emergency

Configures emergency profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile emergency-profile *profile_name* **[[dnn** *dnn_name* **] [ue-validation-level** *ue_validation_level* **]]**

dnn *dnn_name*

Specify name of the DNN.

Must be a string.

emergency-profile *profile_name*

Specify name of the profile.

Must be a string.

ue-validation-level *ue_validation_level*

Specify the UE validation level.

Must be one of the following:

- **auth-only**: Specify to allow only authenticated UEs. Subscription is bypassed.
- **full**: Specify to allow only authenticated UEs with subscription and location validated. Allow only UEs with Normal Registration.
- **none**: Specify to allow any UE. UE without SUPI will attach using IMEI/PEI. Authentication is optional..
- **supi-only**: Specify to allow only UEs with SUPI. UE without SUPI will be rejected. Authentication is optional.

Usage Guidelines

Use this command to configure emergency profile parameters. The CLI prompt changes to the Emergency Profile Configuration mode (config-emergency-profile-<profile_name>).

profile emergency-profile emergency extended-emergency-num

Configures the extended emergency number parameters.

Command Modes

Exec > Global Configuration (config) > Emergency Profile Configuration (config-emergency-profile-*profile_name*)

Syntax Description

`extended-emergency-num` *`extended_emergency_number`* **`sub-service`** *`emergency_number_sub_service_type`*

extended-emergency-num *extended_emergency_number*

Specify the extended emergency number.

Must be a string of 1-10 characters.

sub-service *emergency_number_sub_service_type*

Specify the emergency number sub-service type.

Must be a string.

Usage Guidelines

Use this command to configure extended emergency number parameters.

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

profile emergency-profile emergency local-emergency-num

Configures local emergency number parameters.

Command Modes

Exec > Global Configuration (config) > Emergency Profile Configuration (config-emergency-profile-*profile_name*)

Syntax Description

`local-emergency-num` *`emergency_number emergency_number_service_type`*

emergency_number

Specify the emergency number.

Must be a string of 1-10 characters.

emergency_number_service_type

Specify the emergency number service type.

Must be one of the following:

- **ambulance**
- **fire**
- **marine-guard**
- **mountain-rescue**
- **police**

Usage Guidelines

Use this command to configure local emergency number parameters.

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

profile emergency-profile emergency nssai

Configures slice for susbcriber parameters.

Command Modes

Exec > Global Configuration (config) > Emergency Profile Configuration (config-emergency-profile-*profile_name*)

Syntax Description

nssai *slice_name* **[sst** *slice_service_type* **]**

nssai *slice_name*

Specify name of the slice.

Must be a string.

sst *slice_service_type*

Specify the Slice Service Type (SST).

Must be an integer in the range of 0-255.

Usage Guidelines

Use this command to configure slice for susbcriber parameters.

profile load

Configures the load profile parameter for the AMF service.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`profile load` *`load_profile_name`* **`{ load-calc-frequency`** *`load_calc_frequency_value`* **`| change-factor`** *`change_factor_value`* **`}`**

profile load *load_profile_name*

Specify the load profile name.

load-calc-frequency *load_calc_frequency_value*

Specify the frequency value in seconds ranging from 5 to 3600 seconds. The default value is 120 seconds.

change-factor *change_factor_value*

Specify the change factor value. Range is between 1 to 20. The default value is 5.

Usage Guidelines

Use this command to configure the load profile prameters.

profile network-element amf

Configures the peer AMF network element configuration parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element amf *peer_amf_config_name* **[[nf-client-profile** *nf_client_profile_name* **] [failure-handling-profile** *failure_handling_profile_name* **]]**

failure-handling-profile *failure_handling_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_amf_config_name

Specify name of the AMF peer configuration.

Must be a string.

Usage Guidelines

Use this command to configure the peer AMF network element configuration parameters. The CLI prompt changes to the AMF NE Configuration mode (config-amf-<amf_name>).

profile network-element amf query-params

Configures query parameters for AMF discovery.

Command Modes

Exec > Global Configuration (config) > AMF NE Configuration mode (config-amf-*amf_name*)

Syntax Description

query-params *amf_query_params*

query-params *amf_query_params*

Specify the AMF query parameters.

Must be one of the following:

- **amf-set-id**
- **amf-region-id**
- **guami**
- **requester-plmn**
- **snssais**
- **target-nf-instance-id**
- **tai**
- **target-plmn**

Usage Guidelines

Use this command to configure query parameters for AMF discovery.

profile network-element ausf

Configures peer AUSF parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element ausf *peer_ausf_config_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_ausf_config_name

Specify name of the peer AUSF configuration.

Must be a string.

Usage Guidelines

Use this command to configure peer AUSF parameters.

profile network-element ausf query-params

Configures query parameter for AUSF discovery.

Command Modes Exec > Global Configuration (config) > AUSF Peer Configuration (config-amf-*peer_ausf_config_name*)

Syntax Description **`query-params`** *`amf_ausf_query_params`*

query-params *amf_ausf_query_params*

Specify the AMF AUSF query parameters.

Must be one of the following:

- **requester-plmn**
- **routing-indicator**
- **supi**
- **target-plmn**

Usage Guidelines Use this command to configure query parameter for AUSF discovery.

profile network-element eir

Configures the EIR network element profile list.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`profile network-element eir` *`eir_name`* **`nf-client-profile`** *`nf_client_profile_name`* **`failure-handling-profile`** *`fh_profile_name`*

profile network-element eir *eir_name*

Specify the name of EIR with the network element profile.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

Usage Guidelines

Use this command to configure the EIR with the network element profile.

profile network element eir query params

Configures query parameter for EIR discovery.

Command Modes

Exec > Global Configuration (config) > Profile Network Element EIR (config-**profile network-element eir** *eir_profile_network_element_name*)

Syntax Description

```
query-params [ target-plmn]
```

query-params [target-plmn]

Specifies the target Public Land Mobile Network (PLMN). This defmes the particular mobile network to which the EIR queries are directed, allowing the EIR to check equipment statuses relevant to that specific network.

Usage Guidelines

Use this command to configure query parameter for EIR discovery.

profile network-element gmlc

Configures the GMLC network element profile list.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element gmlc *gmlc_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

profile network-element gmlc *gmlc_name*

Specify the name of GMLC with the network element profile.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

Usage Guidelines

Use this command to configure the GMLC with the network element profile.

profile network-element gmlc query-params

Configures query parameters for GMLC discovery.

Command Modes Exec > Global Configuration (config) > GMLC NE Configuration mode (config-amf-*gmlc_name*)

Syntax Description **query-params** *gmlc_query_params*

query-params *gmlc_query_params*

Specify the GMLC query parameters.

Must be one of the following:

- **client-type**
- **target-plmn**

Usage Guidelines Use this command to configure query parameters for GMLC discovery.

profile network-element lmf

Configures the LMF network element profile list.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element lmf *lmf_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

profile network-element lmf *lmf_name*

Specify the name of LMF with the network element profile.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

Usage Guidelines

Use this command to configure the LMF with the network element profile.

profile network-element lmf query-params

Configures query parameters for LMF discovery.

Command Modes Exec > Global Configuration (config) > LMF NE Configuration mode (config-amf-*lmf_name*)

Syntax Description **query-params** *lmf_query_params*

query-params *lmf_query_params*

Specify the LMF query parameters.

Must be one of the following:

- **target-plmn**
- **snssais**
- **an-node-type**
- **rat-type**
- **client-type**
- **lmf-id**
- **target-nf-instance-id**

Usage Guidelines Use this command to configure query parameters for LMF discovery.

profile-network-element nf-selection-model-priority

Configures a network element profile with NF selection model and it's priority parameters.

Command Modes

Exec > Global Configuration (config) > Network Element Configuration (config-network-element-*network_element_profile_name*)

Syntax Description

{ nf-client-profile *nf_client_profile_name* **| failure-handling-profile** *failure_handling_profile_name* **| nf-selection-model priority** *nf_model_priority* **[local | nrf-query | scp] | query-params [queryparam1 queryparam2] }**

{ nf-client-profile *nf_client_profile_name* | failure-handling-profile *failure_handling_profile_name* | nf-selection-model priority *nf_model_priority* [local | nrf-query | scp] | query-params [queryparam1 queryparam2] }

- **nf-client-profile** *nf_client_profile_name* —Specify the NF client profile associated with the network element.
- **failure-handling-profile** *failure_handling_profile_name* —Specify the failure handling profile for the network element.
- **nf-selection-model priority** *nf_model_priority* **[local | nrf-query | scp]**—Specify the NF selection model and its priority.

```
nf-selection-model 1 scp
```

- **query-params [queryparam1 queryparam2]**—Specify the query parameters to be used.

Usage Guidelines

Use this command to configure the NF selection model and its priority.

profile network-element nssf

Configures peer NSSF parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element nssf *peer_nssf_config_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_nssf_config_name

Specify name of the NSSF peer configuration.

Must be a string.

Usage Guidelines

Use this command to configure peer NSSF parameters.

profile network-element nssf query-params

Configures query parameters for NSSF discovery.

Command Modes Exec > Global Configuration (config) > NSSF Peer Configuration (config-nssf-*peer_nssf_config_name*)

Syntax Description **`query-params`** *`query_parameters`*

query-params *query_parameters*

Specify NRF query parameters.

Must be one of the following:

- **requester-plmn**
- **tai**
- **target-plmn**

Usage Guidelines Use this command to configure query parameters for NSSF discovery.

profile network-element pcf

Configures peer PCF parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element pcf *peer_pcf_config_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *failure_handling_profile_name*

failure-handling-profile *failure_handling_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_pcf_config_name

Specify name of the PCF peer configuration.

Must be a string.

Usage Guidelines

Use this command to configure the peer PCF parameters.

profile network-element pcf query-params

Configures query parameters for PCF discovery.

Command Modes Exec > Global Configuration (config) > PCF Peer Configuration (config-pcf-*peer_pcf_config_name*)

Syntax Description **`query-params`** *`query_parameters`*

query-params *query_parameters*

Specify NRF query parameters.

Must be one of the following:

- **requester-plmn**
- **snssais**
- **supi**
- **tai**
- **target-plmn**

Usage Guidelines Use this command to configure query parameters for PCF discovery.

profile-network-element scp endpoint-profile endpoint-name primary-ip-address port

Configures the NF client profiles with SCP service and endpoint configurations.

Command Modes Exec > Global Configuration (config) > NF Client Configuration (config-profile nf-client nf-type-scp-*nf_type*)

Syntax Description

profile nf-client nf-type scp [scp-profile *nf_client_profile_name* **[locality** *locality_name* **[priority** *priority_value* **{ service name type** *service_name_type* **[responsetimeout** *responsetimeout_value* **{ endpoint-profile** *endpoint_profile_name* **[capacity** *capacity_value* **| priority** *priority_value* **| api-root** *prefix* **| uri-scheme** *uri_scheme_name* **| endpoint-name** *endpoint_name* **{ priority** *priority_value* **| capacity** *capacity_value* **| primary ip-address ipv4** *ipv4_address* **| primary ip-address port** *port_number* **}] }] }]]]**

profile nf-client nf-type scp [scp-profile ***nf_client_profile_name*** **[locality** ***locality_name*** **[priority** ***priority_value*** **{ service name type** ***service_name_type*** **[responsetimeout** ***responsetimeout_value*** **{ endpoint-profile** ***endpoint_profile_name*** **[capacity** ***capacity_value*** **| priority** ***priority_value*** **| api-root** ***prefix*** **| uri-scheme** ***uri_scheme_name*** **| endpoint-name** ***endpoint_name*** **{ priority** ***priority_value*** **| capacity** ***capacity_value*** **| primary ip-address ipv4** ***ipv4_address*** **| primary ip-address port** ***port_number*** **| fqdn** ***fqdn_address*** **| fqdn-port** ***fqdn_port*** **}] }] }]]]**

- **profile nf-client nf-type scp**—Start the configuration for an NF client profile.
- **scp-profile** *nf_client_profile_name* —Specify the NF client profile name.
- **locality** *locality_name* —Specify the locality attributes.
- **priority** *priority_value* —Specify priority for the locality.
- **service name type** *service_name_type* —Specify the service name type.
- **responsetimeout** *responsetimeout_value* —Specify response timeout for the service.
- **endpoint-profile** *endpoint_profile_name*—Specify the endpoint profile.
- **capacity** *capacity_value* —Specify the capacity of the endpoint.
- **priority** *priority_value* —Specify the priority for the endpoint.
- **api-root** *prefix* —Specify the deployment-specific API prefix for SCP peer.
- **uri-scheme** *uri_scheme_name* —Specify the URI scheme. The URI scheme can be http ot https.
- **endpoint-name** *endpoint_name* —Specify the endpoint name.
- **priority** *priority_value* —Specify the priority for the endpoint name.
- **capacity** *capacity_value* —Specify capacity for the endpoint name.
- **primary ip-address ipv4** *ipv4_address* —Specify the primary IPv4 address.
- **primary ip-address port** *port_number* —Specify the primary IP address port.
- **fqdn** *fqdn_address* —Specify the fqdn address.

- **fqdn-port** *fqdn_port* —Specify the fqdn port. fqdn port is an optional configuration.

Note If SCP peer FQDN is known, you can configure FQDN instead of primary/secondary IP address.

Usage Guidelines Use this command to configure an NF client profile name with specific locality, scp and fqdn service, and endpoint configurations.

profile network-element scp

Configures the network element profiles with specific NF client and failure handling profiles and SCP discovery params.

Command Modes

Exec > Global Configuration (config) > Network Element Profile Configuration (config-profile network-element scp-*scp_profile_name*)

Syntax Description

nf-client-profile *client_profile_name* **failure-handling-profile** *failure_handling_profile_name* **discovery-params** *[service-names]*

nf-client-profile *client_profile_name*

Specify the SCP client profile. *client_profile_name* must be an alphanumeric string representing the corresponding NF client profile name.

failure-handling-profile *failure_handling_profile_name*

Specify the SCP failure handling network profile for the configured SCP. *failure_handling_profile_name* must be an alphanumeric string representing the corresponding SCP failure handling network profile name.

discovery-params [service-names]

Specify the service name for discovery. The "3gpp-Sbi-Discovery-service-names" HTTPheader is sent as a plain string to the SCP, but only when you configure the **discovery-params [service-names]** within the SCP network element profile.

3gpp-sbi-discovery-service-names : nsmf-pdusession

Usage Guidelines

Use this command to configure a network element profile name with an NF client profile and a failure handling profile.

profile network-element smf

Configures SMF peer parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element smf *peer_smf_config_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_smf_config_name

Specify name of the SMF peer configuration.

Must be a string.

Usage Guidelines

Use this command to configure SMF peer parameters.

profile network-element smf query-params

Configures query parameter for SMF discovery.

Command Modes Exec > Global Configuration (config) > SMF Peer Configuration (config-smf-*peer_smf_config_name*)

Syntax Description **`query-params`** *`query_parameters`*

query-params *smf_query_params*

Specify the SMF query parameters.

Must be one of the following:

- **dnn**
- **pgwfqdn**
- **pgwind**
- **requester-plmn**
- **snssais**
- **tai**
- **target-plmn**

Usage Guidelines Use this command to configure query parameter for SMF discovery.

profile network-element udm

Configures peer UDM parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element udm *peer_udm_config_name* **nf-client-profile** *nf_client_profile_name* **failure-handling-profile** *fh_profile_name*

failure-handling-profile *fh_profile_name*

Specify name of the failure handling profile.

Must be a string.

nf-client-profile *nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

peer_udm_config_name

Specify name of the UDM peer configuration.

Must be a string.

Usage Guidelines

Use this command to configure peer UDM parameters.

profile network-element udm query-params

Configures query parameters for UDM discovery.

Command Modes Exec > Global Configuration (config) > UDM Peer Configuration (config-udm-*peer_udm_config_name*)

Syntax Description **`query-params`** *`query_parameters`*

query-params *amf_udm_query_params*

Specify the AMF UDM query parameters.

Must be one of the following:

- **requester-plmn**
- **routing-indicator**
- **supi**
- **target-plmn**

Usage Guidelines Use this command to configure query parameters for UDM discovery.

profile nf-client nf-type amf amf-profile

Configures AMF profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type amf { amf-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

amf-profile *profile_name*

Specify the AMF profile name

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure AMF profile parameters. The CLI prompt changes to the AMF Profile Configuration mode (config-amf-profile-<profile_name>).

profile nf-client nf-type amf amf-profile locality

Configures the AMF profile locality parameter.

Command Modes

Exec > Global Configuration (config) > AMF Profile Configuration (config-amf-profile-*profile_name*)

Syntax Description

`locality` *`locality_name`* **`[ priority`** *`locality_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_priority*

Specify priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the AMF profile locality parameter.

profile nf-client nf-type amf amf-profile locality service name type

Configures the AMF service name type parameter.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

service name type *amf_service_name_type* **responsetimeout** *response_timeout*

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *amf_service_name_type*

Specify the service name type.

Must be one of the following:

- **namf-comm**
- **namf-evts**
- **namf-loc**
- **namf-mt**

Usage Guidelines

Use this command to configure the AMF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type amf amf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > AMF Profile Configuration (config-amf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type ausf ausf-profile

Configures AUSF profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type ausf { ausf-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

ausf-profile *profile_name*

Specify name of the AUSF profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure AUSF profile parameters. The CLI prompt changes to the AUSF Profile Configuration mode (config-ausf-profile-<profile_name>).

profile nf-client nf-type ausf ausf-profile locality

Configures the AUSF profile locality parameter.

Command Modes

Exec > Global Configuration (config) > AUSF Profile Configuration (config-ausf-profile-*profile_name*)

Syntax Description

`locality` *`locality_name`* **`[ priority`** *`locality_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_priority*

Specify priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the AUSF profile locality parameter.

profile nf-client nf-type ausf ausf-profile locality service name type

Configures the AUSF service name type parameter.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`ausf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *ausf_service_name_type*

Specify the AUSF service name type.

Must be one of the following:

- **nausf-auth**

Usage Guidelines

Use this command to configure the AUSF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type ausf ausf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF-Client Configuration (config-ausf) > AUSF Profile Configuration (config-ausf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type eir eir-profile

Configures EIR profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type eir { eir-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

eir-profile *eir_profile_name*

Specify name of the EIR profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure the EIR profile parameters. The CLI prompt changes to the EIR Profile Configuration mode (config-eir-profile-<profile_name>).

profile nf-client nf-type eir eir-profile locality

Configures the EIR profile locality parameter.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*)

Syntax Description

`locality` *`locality_name`* **`[ priority`** *`priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *priority*

Specify the priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the EIR profile locality parameter.

profile nf-client nf-type eir eir-profile locality service name type

Configures the EIR service name type parameter.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

service name type *service_name_type* **[responsetimeout** *response_timeout_interval* **]**

responsetimeout *response_timeout_interval*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *service_name_type*

Specify the EIR service name type.

Must be one of the following:

- **n5g-eir-eic**

Usage Guidelines

Use this command to configure the EIR service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type eir eir-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > EIR Profile Configuration (config-eir-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type group nrf auth service type nrf oauth2

Configures the AMF ID (**service type nrf oauth2** in the **group nrf auth**) to enable an NRF endpoint, to which the AMF will send the `AccessToken` request to the NRF server, when the `nf-client` is configured.

Command Modes

Exec > Global Configuration (`config`) > AMF Configuration (`config-amf` *amf_name*) > NF Profile Name Configuration (`config-nf-profile-nf` *nf_profile_name*) > NF Profile Type Configuration (`config-nf-type-profile` *profile_type_name*) > `group nrf auth` > `service type nrf oauth2`

Syntax Description

```
group nrf auth nrf_group_name
   service type nrf oauth2
      endpoint-profile endpoint_profile_details
      capacity capacity_number
      uri-scheme http
      endpoint-name endpoint_name
      priority priority_number
      primary ip-address ipv4 ipv4_address
      primary ip-address port port_address
```

group nrf auth *nrf_group_name*

Specify the NRF group name to authenticate. Must be a string.

service type nrf oauth2

Specify the service and the type of NRF, which must be authenticated to enable the OAuth2 profile configuration.

endpoint-profile *endpoint_profile_details*

Specify the endpoint profile details.

capacity *capacity_number*

Specify the capacity requirement in number.

uri-scheme http

Specify the URI scheme.

endpoint-name *endpoint_name*

Specify the endpoint name.

priority *priority_number*

Specify the priority request. Must be in numbers.

primary ip-address ipv4 *ipv4_address*

Specify the primary IPv4 address.

primary ip-address port *port_address*

Specify the primary port address.

Usage Guidelines

Use this command, when the **service type nrf oauth2** in the **group nrf auth** feature is configured, when the AMF sends the `AccessToken` request to the NRF server, when the `nf-client` is configured.

profile nf-client nf-type gmlc gmlc-profile

Configures GMLC profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type gmlc { gmlc-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

gmlc-profile *profile_name*

Specify the GMLC profile name

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure GMLC profile parameters. The CLI prompt changes to the GMLC Profile Configuration mode (config-gmlc-profile-<profile_name>).

profile nf-client nf-type gmlc gmlc-profile locality

Configures the GMLC profile locality parameter.

Command Modes Exec > Global Configuration (config) > GMLC Profile Configuration (config-amf-profile-*gmlc_profile_name*)

Syntax Description **`locality`** *`locality_name`* **`[ priority`** *`locality_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_priority*

Specify priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines Use this command to configure the GMLC profile locality parameter.

profile nf-client nf-type gmlc gmlc-profile locality service name type

Configures the GMLC service name type parameter.

Command Modes

Exec > Global Configuration (config) > GMLC NF-Client Configuration (config-gmlc) > GMLC Profile Configuration (config-GMLC-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`gmlc_service_name_type`* { **`responsetimeout`** *`response_timeout`* }

service name type *gmlc_service_name_type*

Specify the service name type.

Must be one of the following:

- **ngmlc-loc**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

Usage Guidelines

Use this command to configure the GMLC service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type gmlc gmlc-profile locality service name type ngmlc-loc endpoint-profile

Configures endpoint profile parameters.

Command Modes

Exec > Global Configuration (config) > GMLC NF-Client Configuration (config-gmlc) > GMLC Profile Configuration (config-gmlc-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *endpoint_capacity* **| priority** *profile_priority* **| uri-scheme** *uri_scheme* **| server-name** *server_name***}**

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

{ capacity *endpoint_capacity*

Specify the endpoint capacity.

Must be an integer in the range of 0-65535.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.
- **https**: HTTPS.

server-name *server_name*

Specify the server name.

Usage Guidelines

Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type gmlc gmlc-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters.

Command Modes

Exec > Global Configuration (config) > GMLC NF-Client Configuration (config-gmlc) > GMLC Profile Configuration (config-gmlc-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type gmlc gmlc-profile locality service name type endpoint-profile endpoint-name default-notification-subscriptions

Configures the Default Notification Subscription parameters.

Command Modes

Exec > Global Configuration (config) > GMLC NF-Client Configuration (config-gmlc) > GMLC Profile Configuration (config-gmlc-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

`default-notification-subscriptions` *`name`* **`[ callback-uri`** *`callback_uri`* **`| notification-type`** *`notification_type`* **`]`**

callback-uri *callback_uri*

Specify the callback URI.

Must be a string.

notification-type *notification_type*

Specify the notification type.

- **LOCATION_NOTIFICATION**

name

Specify the name of the default notification subscriptions.

Must be a string.

Usage Guidelines

Use this command to configure the Default Notification Subscription parameters. The CLI prompt changes to the Default Notification Subscriptions Configuration mode (config-default-notification-subscriptions-<name>)

profile nf-client nf-type gmlc gmlc-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters.

Command Modes

Exec > Global Configuration (config) > GMLC NF-Client Configuration (config-gmlc) > GMLC Profile Configuration (config-gmlc-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary ip-address { [{ ipv4 *ipv4_address* **| ipv6** *ipv6_address* **}] [port** *port_number* **] }**

ipv4 ***ipv4_address*****| ipv6** ***ipv6_address***

Specify the IPv4/IPv6 address.

Must be a string in the IPv4/IPv6-address pattern. For information on the IPv4/IPv6-address pattern, see the Input Pattern Types section.

port ***port_number***

Specify the port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type lmf lmf-profile

Configures LMF profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type lmf { lmf-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

lmf-profile *profile_name*

Specify the LMF profile name

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure LMF profile parameters. The CLI prompt changes to the LMF Profile Configuration mode (config-lmf-profile-<profile_name>).

profile nf-client nf-type lmf lmf-profile locality

Configures the LMF profile locality parameter.

Command Modes

Exec > Global Configuration (config) > LMF Profile Configuration (config-amf-profile-*profile_name*)

Syntax Description

`locality` *`locality_name`* **`[ priority`** *`locality_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_priority*

Specify priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the LMF profile locality parameter.

profile nf-client nf-type lmf lmf-profile locality service name type

Configures the LMF service name type parameter.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`lmf_service_name_type`* **`responsetimeout`** *`response_timeout`*

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *lmf_service_name_type*

Specify the service name type.

Must be one of the following:

- **nlmf-loc**

Usage Guidelines

Use this command to configure the LMF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type lmf lmf-profile locality service name type endpoint-profile

Configures endpoint profile parameters.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.
- **https**: HTTPS.

Usage Guidelines

Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type lmf lmf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type lmf lmf-profile locality service name type endpoint-profile endpoint-name default-notification-subscriptions

Configures the Default Notification Subscription parameters.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

default-notification-subscriptions *name* **[callback-uri** *callback_uri* **| n1-message-class** *n1_message_class*| **n2-information-class** *n2_information_class* **| notification-type** *notification_type* **]**

callback-uri *callback_uri*

Specify the callback URI.

Must be a string.

n1-message-class *n1_message_class*

Specify the N1 Message Class.

Must be one of the following:

- **LPP**

n2-information-class *n2_information_class*

Specify the N2 Information Class.

Must be one of the following:

- **NRPPA**

notification-type *notification_type*

Specify the notification type.

Must be one of the following:

- **N1_MESSAGES**
- **N2_INFORMATION**

name

Specify the name of the default notification subscriptions.

Must be a string.

Usage Guidelines

Use this command to configure the Default Notification Subscription parameters. The CLI prompt changes to the Default Notification Subscriptions Configuration mode (config-default-notification-subscriptions-<name>)

profile nf-client nf-type lmf lmf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary ip-address { [ipv4 *ipv4_address* **] [port** *port_number* **] }**

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.

port ***port_number***

Specify the port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type lmf lmf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter.

Command Modes

Exec > Global Configuration (config) > LMF NF-Client Configuration (config-lmf) > LMF Profile Configuration (config-lmf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type nssf nssf-profile

Configures NSSF profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type nssf { nssf-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

nssf-profile *nssf_profile_name*

Specify name of the NSSF profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure the NSSF profile parameters. The CLI prompt changes to the NSSF Profile Configuration mode (config-nssf-profile-<profile_name>).

profile nf-client nf-type nssf nssf-profile locality

Configures locality parameter.

Command Modes Exec > Global Configuration (config) > NSSF Profile Configuration (config-nssf-profile-*profile_name*)

Syntax Description **`locality`** *`locality_name`* **`[ priority`** *`locality_config_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_config_priority*

Specify the priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines Use this command to configure the NSSF Profile Locality parameter.

profile nf-client nf-type nssf nssf-profile locality service name type

Configures the NSSF service name type parameter.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`service_name_type`* **`[ responsetimeout`** *`response_timeout_interval`* **`]`**

responsetimeout *response_timeout_interval*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *service_name_type*

Specify the NSSF service name type.

Must be one of the following:

- **nnssf-nsselection**

Usage Guidelines

Use this command to configure the NSSF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type nssf nssf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > NSSF Profile Configuration (config-nssf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type pcf pcf-profile

Configures PCF profile parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-client nf-type pcf { pcf-profile *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

pcf-profile *profile_name*

Specify name of the PCF profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines

Use this command to configure the PCF profile parameters. The CLI prompt changes to the PCF Profile Configuration mode (config-pcf-profile-<profile_name>).

profile nf-client nf-type pcf pcf-profile locality

Configures the PCF profile locality parameter.

Command Modes

Exec > Global Configuration (config) > PCF Profile Configuration (config-psf-profile-*profile_name*)

Syntax Description

`locality` *`locality_name`* **`[ priority`** *`locality_priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *locality_priority*

Specify priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the PCF profile locality parameter.

profile nf-client nf-type pcf pcf-profile locality service name type

Configures the PCF service name type parameter.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *service_name_type*

Specify the PCF service name parameters.

Must be one of the following:

- **npcf-am-policy-control**

Usage Guidelines

Use this command to configure the PCF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type pcf pcf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > PCF Profile Configuration (config-pcf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type smf smf-profile

Configures SMF profile parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **profile nf-client nf-type smf { smf-profile** *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

smf-profile *smf_profile_name*

Specify name of the SMF profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines Use this command to configure the SMF profile parameters. The CLI prompt changes to the SMF Profile Configuration mode (config-smf-profile-<profile_name>).

profile nf-client nf-type smf smf-profile locality

Configures the SMF profile locality parameter.

Command Modes Exec > Global Configuration (config) > SMF Profile Configuration (config-smf-profile-*profile_name*)

Syntax Description **`locality`** *`locality_name`* **`[ priority`** *`priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *priority*

Specify the priority of the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines Use this command to configure the SMF profile locality parameter.

profile nf-client nf-type smf smf-profile locality service name type

Configures the SMF service name type parameter.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

`service name type` *`smf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *smf_service_name_type*

Specify the service name type.

Must be one of the following:

- **nsmf-pdusession**

Usage Guidelines

Use this command to configure the SMF service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type smf smf-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > SMF Profile Configuration (config-smf-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

version uri-version { *uri_version* **| full-version** *full_version* **}**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client nf-type smsf

Configures SMSF parameters.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile network-element smsf *peer_smsf_config_name* **nf-client-profile** *nf_client_profile_name* **{ locality** *locality_name* **| priority** *priority_value* **| service name type nsmsf-sms | endpoint-profile** *endpoint_profile* **| capacity** *capacity_value* **| priority** *priority_value* **| uri-scheme http version | uri-version v2 }**

{ locality locatity_name | priority priority_value | service name type nsmsf-sms | endpoint-profile endpoint_profile | capacity capacity_value | priority priority_value | uri-scheme http version | uri-version v2 }

profile network-element smsf

Specify name of the network element as SMSF.

nf-client-profile*nf_client_profile_name*

Specify name of the NF client profile.

Must be a string.

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *priority_value*

Specify the priority value.

Must be an integer.

service name type nsmsf-sms

Specify name of the service type as nsmsf-sms.

Must be a string.

endpoint-profile *endpoint_profile*

Specify name of the endpoint profile.

Must be a string.

capacity *capacity_value*

Specify the capacity value.

Must be a string.

uri-scheme http version

Specify the HTTP version of the URI scheme.

uri-version v2

Specify the version for URI.

Usage Guidelines

Use this command to configure SMSF parameters.

profile nf-client nf-type udm udm-profile

Configures UDM profile parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **profile nf-client nf-type udm { udm-profile** *profile_name* **{ locality** *locality_name*| **server-name** *server_name* **} | oauthenabled { true | false } }**

udm-profile *udm_profile_name*

Specify name of the UDM profile.

Must be a string.

locality *locality_name*

Specify the locality.

Must be a string.

server-name *server_name*

Specify the server name.

Must be a string.

oauthenabled { true | false }

Enable the oauthenabled profile configuration.

The default value is false.

Usage Guidelines Use this command to configure the UDM profile parameters. The CLI prompt changes to the UDM Profile Configuration mode (config-udm-profile-<profile_name>).

profile nf-client nf-type udm udm-profile locality

Configures the UDM profile locality parameters.

Command Modes Exec > Global Configuration (config) > UDM Profile Configuration (config-udm-profile-*profile_name*)

Syntax Description **`locality`** *`locality_name`* **`[ priority`** *`priority`* **`]`**

locality *locality_name*

Specify name of the locality.

Must be a string.

priority *priority*

This keyword sets the priority for the locality configuration.

Must be an integer in the range of 0-65535.

Usage Guidelines Use this command to configure the UDM profile locality parameter.

profile nf-client nf-type udm udm-profile locality service name type

Configures the UDM service name type parameter.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*)

Syntax Description

service name type *service_name_type* **[responsetimeout** *response_timeout* **]**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *service_name_type*

Specify the UDM service name type.

Must be one of the following:

- **nudm-sdm**
- **nudm-uecm**

Usage Guidelines

Use this command to configure the UDM service name type parameter. The CLI prompt changes to the Service Name Type Configuration mode (config-type-<service_name_type>).

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile

Configures endpoint profile parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

endpoint-profile *endpoint_profile_name* **{ capacity** *capacity_value* **| priority** *profile_priority* **| api-uri-prefix** *api_uri_prefix* **| api-root** *api_root* **| uri-scheme** *uri_scheme* **}**

api-root *api_root*

Specify the API root.

Must be a string.

api-uri-prefix *api_uri_prefix*

Specify the API URI prefix.

Must be a string.

capacity *capacity_value*

Specify the profile capacity.

Must be an integer in the range of 0-65535.

Default Value: 10.

endpoint-profile *endpoint_profile_name*

Specify name of the endpoint profile.

Must be a string.

priority *profile_priority*

Specify the priority of the profile.

Must be an integer in the range of 0-65535.

Default Value: 1.

uri-scheme *uri_scheme*

Specify the URI scheme.

Must be one of the following:

- **http**: HTTP.

- **https**: HTTPS.

Usage Guidelines Use this command to configure endpoint profile parameters. The CLI prompt changes to the Endpoint Profile Configuration mode (config-endpoint-profile-<profile_name>).

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile endpoint-name

Configures the endpoint name parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-smf) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

endpoint-name *endpoint_name* **[priority** *node_priority* **| capacity** *node_capacity* **]**

capacity *node_capacity*

Specify the node capacity for the endpoint.

Must be an integer in the range of 0-65535.

endpoint-name *endpoint_name*

Specify name of the endpoint. You can configure the primary, secondary, and tertiary host (IP: Port) within each endpoint for NF server failover handling. The server failover configuration accepts both IPv4 and IPv6 addresses. However, the SMF gives preference to the IPv4 address.

Must be a string.

priority *node_priority*

Specify the node priority for the endpoint.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this configuration to configure the endpoint name parameters. The CLI prompt changes to the Endpoint Name Configuration mode (config-endpoint-name-<endpoint_name>).

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile endpoint-name primary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile endpoint-name secondary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile endpoint-name tertiary ip-address

Configures the endpoint IP address and port number parameters. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Service Name Type Configuration (config-type-*service_name_type*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*) > Endpoint Name Configuration (config-endpoint-name-*endpoint_name*)

Syntax Description

{ primary | secondary | tertiary } ip-address { [ipv4 *ipv4_address* **| ipv6** *ipv6_address* **] [port** *port_number* **] }**

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.

ipv6 *ipv6_address*

Specify the IPv6 address.

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 port number.

Must be an integer in the range of 0-65535.

Usage Guidelines

Use this command to configure the endpoint IP address and port number parameters.

profile nf-client nf-type udm udm-profile locality service name type endpoint-profile version uri-version

Configures the URI version parameter. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > UDM Profile Configuration (config-udm-profile-*profile_name*) > Locality Configuration (config-locality-*locality_name*) > Endpoint Profile Configuration (config-endpoint-profile-*profile_name*)

Syntax Description

`version uri-version {` *`uri_version`* **`| full-version`** *`full_version`* **`}`**

full-version *full_version*

Specify the full version in the format *major-version*.*minor-version*.*patch-version*.[alpha-*draft-number*]

Must be a string.

uri-version *uri_version*

Specify the URI version.

Must be a string in the pattern v\d.

Usage Guidelines

Use this command to configure the URI version parameter.

profile nf-client-failure nf-type amf

Configures the AMF Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type amf`

Usage Guidelines Use this command to configure the AMF Profile Failure Handling parameters. The CLI prompt changes to the AMF Configuration mode (config-amf).

profile nf-client-failure nf-type amf profile failure-handling

Configures the AMF Failure Handling Template parameters.

Command Modes

Exec > Global Configuration (config) > AMF NF Client Failure Configuration (config-amf)

Syntax Description

`profile failure-handling` *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the AMF failure handling template.

Must be a string.

Usage Guidelines

Use this command to configure the AMF Failure Handling Template parameters. The CLI prompt changes to the Failure Handling <profile_name> Configuration (config-failure-handling-<profile_name>).

profile nf-client-failure nf-type amf profile failure-handling service name type

Configures the AMF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > AMF NF-Client Configuration (config-amf) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`amf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *amf_service_name_type*

Specify the AMF service name type.

Must be one of the following:

- **namf-comm**
- **namf-evts**
- **namf-loc**
- **namf-mt**

Usage Guidelines

Use this command to configure AMF Failure Handling parameters. The CLI prompt changes to the Failure Handling Service Name Type Configuration mode (config-type-<service_name_type>)

profile nf-client-failure nf-type amf profile failure-handling service name type message type

Configures the AMF message type parameters.

Command Modes

Exec > Global Configuration (config) > AMF NF Client Configuration (config-amf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type *amf_message_type*

type *amf_message_type*

Specify the AMF message type.

Must be one of the following:

- **AmfCommCreateUeContext**
- **AmfCommEBIAssignment**
- **AmfCommN1N2MessageTransfer**
- **AmfCommReleaseUeContext**
- **AmfCommSMStatusChangeNotify**
- **AmfCommUeContextTransfer**
- **AmfCommUeContextTransferUpdate**
- **AmfN1MessageNotifyClient**
- **AmfN2InfoNotifyClient**

Usage Guidelines

Use this command to configure the AMF message type parameters.

profile nf-client-failure nf-type amf profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AMF NF Client Configuration (config-amf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines

Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type any

Configures the Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type any`

Usage Guidelines Use this command to configure the Profile Failure Handling parameters. The CLI prompt changes to the any configuration mode (config-any).

profile nf-client-failure nf-type any profile failure-handling

Configures the Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > any NF client failure configuration (config-any)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

profile failure-handling *fh_template_name*

Specify name of the failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the Failure Handling Template parameters. The CLI prompt changes to the Failure Handling <profile_name> Configuration (config-failure-handling-<profile_name>).

profile nf-client-failure nf-type any profile failure-handling service name type

Configures the Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > any nf-client configuration (config-any) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

service name type *service_name_type* **[responsetimeout** *response_timeout* **]**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

service name type *amf_service_name_type*

Specify the service name type as **namf-evts**.

Usage Guidelines

Use this command to configure Failure Handling parameters. The CLI prompt changes to the Failure Handling Service Name Type Configuration mode (config-type-<service_name_type>)

profile nf-client-failure nf-type any profile failure-handling service name type message type

Configures the message type parameters for failure handling profile.

Command Modes

Exec > Global Configuration (config) > any nf client configuration (config-any) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type *amf_message_type*

type *amf_message_type*

Specify the AMF message type as **AmfEventNotification**.

Usage Guidelines

Use this command to configure the message type parameters.

profile nf-client-failure nf-type any profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NF Client Configuration (config-any) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines

Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type ausf

Configures AUSF Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type ausf`

Usage Guidelines Use this command to configure AUSF Profile Failure Handling parameters. The CLI prompt changes to the AUSF Configuration mode (config-ausf).

profile nf-client-failure nf-type ausf profile failure-handling

Configures the AUSF Failure Handling Template parameters.

Command Modes

Exec > Global Configuration (config) > AUSF NF Client Failure Configuration (config-ausf)

Syntax Description

`profile failure-handling` *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the AUSF failure handling template.

Must be a string.

Usage Guidelines

Use this command to configure the AUSF Failure Handling Template parameters. The CLI prompt changes to the Failure Handling Profile Configuration mode (config-failure-handling-<profile_name>).

profile nf-client-failure nf-type ausf profile failure-handling service name type

Configures the AUSF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > AUSF Configuration (config-ausf) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`ausf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout.

Must be an integer.

Default Value: 2000.

type *ausf_service_name_type*

Specify the AUSF service name type.

Must be one of the following:

- **nausf-auth**

Usage Guidelines

Use this command to configure the AUSF Failure Handling parameters.

profile nf-client-failure nf-type ausf profile failure-handling service name type message type

Configures the AUSF message type parameters.

Command Modes

Exec > Global Configuration (config) > AUSF NF Client Configuration (config-ausf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type *ausf_message_type*

type *ausf_message_type*

Specify the AUSF message type.

Must be one of the following:

- **AusfAuthenticationCfm**
- **AusfAuthenticationReq**

Usage Guidelines

Use this command to configure the AUSF message type parameters.

profile nf-client-failure nf-type ausf profile failure-handling service name type message type status-code httpv2

Configures HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > AUSF NF Client Configuration (config-ausf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code httpv2 { range *httpv2_range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code httpv2 *httpv2_range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines

Use this command to configure HTTPv2 status codes.

profile nf-client-failure nf-type eir

Configures EIR Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type eir`

Usage Guidelines Use this command to configure EIR Profile Failure Handling parameters. The CLI prompt changes to the EIR Configuration mode (config-eir).

profile nf-client-failure nf-type eir profile failure-handling

Configures the EIR Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > EIR NF Client Failure Configuration (config-eir)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the EIR failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the EIR Failure Handling Template parameters.

profile nf-client-failure nf-type eir profile failure-handling service name type

Configures the EIR Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > EIR NF-Client Configuration (config-eir) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`eir_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *eir_service_name_type*

Specify the EIR service name type.

Must be one of the following:

- **n5g-eir-eic**

Usage Guidelines

Use this command to configure the EIR Failure Handling parameters.

profile nf-client-failure nf-type eir profile failure-handling service name type message type

Specify the EIR message type parameters.

Command Modes

Exec > Global Configuration (config) > EIR Configuration (config-eir) > Failure Handling *profile_name* Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

`message type` *`eir_message_type`*

type *eir_message_type*

Specify the EIR message type.

Must be one of the following:

- **EirCheckEquipmentIdentity**

Usage Guidelines

Use this command to configure the EIR message type parameters.

profile nf-client-failure nf-type eir profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > EIR NF Client Configuration (config-eir) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and reject the registration with appropriate cause.
- **retry-and-ignore**: Specify to retry as per the configured retry count and continue with the registration.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines

Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type gmlc

Configures GMLC profile failure handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type gmlc`

Usage Guidelines Use this command to configure GMLC failure handling parameters. The CLI prompt changes to the GMLC Configuration mode (config-gmlc).

profile nf-client-failure nf-type gmlc profile failure-handling

Configures the GMLC Failure Handling Profile parameters.

Command Modes

Exec > Global Configuration (config) > GMLC NF Client Failure Configuration (config-gmlc)

Syntax Description

`profile failure-handling` *`fh_profile_name`*

failure-handling *fh_profile_name*

Specify name of the GMLC failure handling profile.

Must be a string.

Usage Guidelines

Use this command to configure the GMLC Failure Handling Profile parameters. The CLI prompt changes to the Failure Handling <profile_name> Configuration (config-failure-handling-<profile_name>).

profile nf-client-failure nf-type gmlc profile failure-handling service name type

Configures the GMLC service name type.

Command Modes

Exec > Global Configuration (config) > GMLC Configuration (config-gmlc) > Failure Handling *profile_name* Configuration mode (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`gmlc_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

service name type *gmlc_service_name_type*

Specify the GMLC service name type.

Must be one of the following:

- **ngmlc-loc**
- **namf-evts**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds. Default value is 2000 milliseconds.

Must be an integer.

Usage Guidelines

Use this command to configure the GMLC service name type.

profile nf-client-failure nf-type gmlc profile failure-handling service name type message type

Configures the GMLC message type parameters.

Command Modes

Exec > Global Configuration (config) > GMLC Configuration (config-gmlc) > Failure Handling *profile_name* Configuration mode (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

`message type` *`gmlc_message_type`*

type *gmlc_message_type*

Specify the GMLC message type as one of the following:

- **AmfEventNotification**
- **NotifiedPosInfo**

Usage Guidelines

Use this command to configure the GMLC message type parameters.

profile nf-client-failure nf-type gmlc profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status code.

Command Modes

Exec > Global Configuration (config) > GMLC NF Client Configuration (config-gmlc) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

`status-code [ dns | httpv2 ] { range` *`range`* **`} | action`** *`action`* **`| retransmit`** *`retransmit`* **`| retransmit-interval`** *`retransmit_interval`* **`| rety-count`** *`retry_count`* **`}`**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

rety-count *retry_count*

Specify the number for the retry count.

Must be an integer.

Usage Guidelines Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type lmf

Configures LMF profile failure handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type lmf`

Usage Guidelines Use this command to configure LMF failure handling parameters. The CLI prompt changes to the LMF Configuration mode (config-lmf).

profile nf-client-failure nf-type lmf profile failure-handling

Configures the LMF Failure Handling Template parameters.

Command Modes

Exec > Global Configuration (config) > LMF NF Client Failure Configuration (config-lmf)

Syntax Description

`profile failure-handling` *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the LMF failure handling template.

Must be a string.

Usage Guidelines

Use this command to configure the LMF Failure Handling Template parameters. The CLI prompt changes to the Failure Handling <profile_name> Configuration (config-failure-handling-<profile_name>).

profile nf-client-failure nf-type lmf profile failure-handling service name type

Configures the LMF service name type.

Command Modes

Exec > Global Configuration (config) > LMF Configuration (config-lmf) > Failure Handling *profile_name* Configuration mode (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`lmf_service_name_type`* **`responsetimeout`** *`response_timeout`* **`}`**

responsetimeout *response_timeout*

Specify the response timeout.

Must be an integer.

type *lmf_service_name_type*

Specify the LMF service name type.

Must be one of the following:

- **nlmf-loc**

Usage Guidelines

Use this command to configure the LMF service name type.

profile nf-client-failure nf-type lmf profile failure-handling service name type message type

Configures the LMF message type parameters.

Command Modes

Exec > Global Configuration (config) > LMF Configuration (config-lmf) > Failure Handling *profile_name* Configuration mode (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

`message type` *`lmf_message_type`*

type *lmf_message_type*

Specify the LMF message type.

Must be one of the following:

- **LmfDetermineLocation**
- **LmfN1MessageNotify**
- **LmfN1N2MsgTxfrFailureNotification**
- **LmfN2InfoNotify**

Usage Guidelines

Use this command to configure the LMF message type parameters.

profile nf-client-failure nf-type lmf profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes.

Command Modes

Exec > Global Configuration (config) > LMF NF Client Configuration (config-lmf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore if retry count is exhausted.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines

Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type nssf

Configures NSSF Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type nssf`

Usage Guidelines Use this command to configure NSSF Failure Handling parameters. The CLI prompt changes to the NSSF Configuration mode (config-nssf).

profile nf-client-failure nf-type nssf profile failure-handling

Configures the NSSF Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > NSSF NF Client Failure Configuration (config-nssf)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the NSSF failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the NSSF Failure Handling Template parameters.

profile nf-client-failure nf-type nssf profile failure-handling service name type

Configures the NSSF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > NSSF NF-Client Configuration (config-nssf) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`nssf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *nssf_service_name_type*

Specify the NSSF service name type.

Must be one of the following:

- **nnssf-nsselection**

Usage Guidelines

Use this command to configure the NSSF Failure Handling parameters.

profile nf-client-failure nf-type nssf profile failure-handling service name type message type

Configures the NSSF message type parameters.

Command Modes

Exec > Global Configuration (config) > NSSF NF Client Configuration (config-nssf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type *nssf_message_type*

type *nssf_message_type*

Specify the NSSF message type.

Must be one of the following:

- **NssfNSSelectionReq**

Usage Guidelines

Use this command to configure the NSSF message type parameters.

profile nf-client-failure nf-type nssf profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > NSSF NF Client Configuration (config-nssf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type pcf

Configures PCF Profile Failure Fandling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type pcf`

Usage Guidelines Use this command to configure PCF Profile Failure Handling parameters. The CLI prompt changes to the PCF Configuration mode (config-pcf).

profile nf-client-failure nf-type pcf profile failure-handling

Configures the PCF Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > PCF NF Client Failure Configuration (config-pcf)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the PCF failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the PCF Failure Handling Template parameters.

profile nf-client-failure nf-type pcf profile failure-handling service name type

Configures the PCF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > PCF NF-Client Configuration (config-pcf) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`pcf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *pcf_service_name_type*

Specify the PCF service name type.

Must be one of the following:

- **npcf-am-policy-control**

Usage Guidelines

Use this command to configure the PCF Failure handling parameters.

profile nf-client-failure nf-type pcf profile failure-handling service name type message type

Configures the PCF message type parameters.

Command Modes

Exec > Global Configuration (config) > PCF NF Client Configuration (config-pcf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

`message type` *`pcf_message_type`*

type *pcf_message_type*

Specify the PCF message type.

Must be one of the following:

- **PcfAmfPolicyControlCreate**
- **PcfAmfPolicyControlDelete**

Usage Guidelines

Use this command to configure the PCF message type parameters.

profile nf-client-failure nf-type pcf profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > PCF NF Client Configuration (config-pcf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type scp

Configures the failure handling for NF clients using specific service and error handling parameters.

Command Modes

Exec > Global Configuration (config) > NF Client Failure Configuration (config-nf-client-failure-*nf_type*)

Syntax Description

profile nf-client-failure nf-type *nf_type* **[profile failure-handling** *failure_handlr_profile_name* **[service-name-type** *service_name_type* **[responsetimeout** *responsetimeout_value* **| message type** *message_type* **{ status-code** *status_code* **| retry** *retry_count* **| action { continue | retry-and-continue | retry-and-fallback | retry-and-ignore | retry-and-terminate | terminate } | nf-action { continue | retry-and-fallback | retry-and-ignore | terminate } }]]]**

profile nf-client-failure nf-type *nf_type* [profile failure-handling *failure_handling_profile_name* [service-name-type *service_name_type* [responsetimeout *responsetimeout_value* | message type *message_type* { status-code *status_code* | retry *retry_count* | action { continue | retry-and-continue | retry-and-fallback | retry-and-ignore | retry-and-terminate | terminate } | nf-action { continue | retry-and-fallback | retry-and-ignore | terminate } }]]]

- **profile nf-client-failure nf-type** *nf_type* —Specify the NF client failure configuration.
- **profile failure-handling** *failure_handling_profile_name* —Specify the failure handling profile name.
- **service-name-type** *service_name_type* —Specify the the service name and type.
- **responsetimeout** *responsetimeout_value* —Specify the responsetimeout value in miliseconds.
- **message type** *message_type* —Specify the the message type.
- **status-code** *status_code* —Specify the status code for http2 error or DNS failure.
- **retry** *retry_count* —Specify the retry count.
- **action { continue | retry-and-continue | retry-and-fallback | retry-and-ignore | retry-and-terminate | terminate }**—Specify any action from the preceding options for retry.
- **nf-action { continue | retry-and-fallback | retry-and-ignore | terminate }**—Specify NF action from the preceding options for retry.

Usage Guidelines

Use this command to configure failure handling and its related action.

profile nf-client-failure nf-type smf

Configures SMF Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type smf`

Usage Guidelines Use this command to configure SMF Proflie Failure Handling parameters. The CLI prompt changes to the SMF Configuration mode (config-smf).

profile nf-client-failure nf-type smf profile failure-handling

Configures the SMF Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > SMF NF Client Failure Configuration (config-smf)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the SMF failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the SMF Failure Handling Template parameters.

profile nf-client-failure nf-type smf profile failure-handling service name type

Configures the SMF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > SMF NF-Client Configuration (config-smf) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`smf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *smf_service_name_type*

Specify the SMF service name type.

Must be one of the following:

- **nsmf-pdusession**

Usage Guidelines

Use this command to configure the SMF Failure Handling parameters.

profile nf-client-failure nf-type smf profile failure-handling service name type message type

Configures the SMF message type parameters.

Command Modes

Exec > Global Configuration (config) > SMF NF Client Configuration (config-smf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type *smf_message_type*

type *smf_message_type*

Specify the SMF message type.

Must be one of the following:

- **SmfN1N2MsgTxfrFailureNotification**
- **SmfSmContextCreate**
- **SmfSmContextDelete**
- **SmfSmContextRetrieve**
- **SmfSmContextUpdate**

Usage Guidelines

Use this command to configure the SMF message type parameters.

profile nf-client-failure nf-type smf profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > SMF NF Client Configuration (config-smf) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type udm

Configures UDM Profile Failure Handling parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description `profile nf-client-failure nf-type udm`

Usage Guidelines Use this command to configure UDM Profile Failure Handling parameters. The CLI prompt changes to the UDM Configuration mode (config-udm).

profile nf-client-failure nf-type udm profile failure-handling

Configures the UDM Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > UDM NF Client Failure Configuration (config-udm)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the UDM failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the UDM Failure Handling Template parameters.

profile nf-client-failure nf-type udm profile failure-handling service name type

Configures UDM Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > UDM NF-Client Configuration (config-udm) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`udm_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *udm_service_name_type*

Specify the UDM service name type.

Must be one of the following:

- **nudm-sdm**
- **nudm-uecm**

Usage Guidelines

Use this command to configure the UDM Failure Handling parameters.

profile nf-client-failure nf-type udm profile failure-handling service name type message type

Configures the UDM message type parameters.

Command Modes

Exec > Global Configuration (config) > UDM NF Client Configuration (config-udm) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

`message type` *`udm_message_type`*

type *udm_message_type*

Specify the UDM message type.

Must be one of the following:

- **UdmDeRegistrationReq**
- **UdmRegistrationReq**
- **UdmSubscriptionReq**
- **UdmUnSubscriptionReq**
- **UdmSorAckInfoReq**
- **UdmSubscribedSnssaisAckReq**

Usage Guidelines

Use this command to configure the UDM message type parameters.

profile nf-client-failure nf-type udm profile failure-handling service name type message type status-code

Configures DNS/HTTPv2 status codes. This command is common to multiple NF clients, and is available in the following configuration modes.

Command Modes

Exec > Global Configuration (config) > UDM NF Client Configuration (config-udm) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*) > Failure Handling Message Type Configuration (config-type-*message_type_name*)

Syntax Description

status-code [dns | httpv2] { range *range* **} { action** *action* **| retransmit** *retransmit* **| retransmit-interval** *retransmit_interval* **| retry** *retry_value* **}**

action *action*

Specify the action.

Must be one of the following:

- **continue**: Specify to continue the session without any retry. The retry count configuration is invalid with this action.
- **retry-and-continue**: Specify to retry as per the configured retry count and continue the session.
- **retry-and-ignore**: Specify to retry as per the configured retry count and ignore the session in case all retry fails.
- **retry-and-terminate**: Specify to retry as per the configured retry count and terminate the session in case all retry fails.
- **terminate**: Specify to terminate the session without any retry. Retry count configuration is invalid with this action.

status-code [dns | httpv2] *range*

Specify the code, or a range of status codes separated by either - (hyphen) or , (comma).

retransmit-interval *retransmit_interval*

Specify the retransmit interval in milliseconds.

Must be an integer.

retransmit *retransmit*

Specify the retransmit value.

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

retry *retry_value*

Specify the number of times the NF service must retry before proceeding with the action.

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

Usage Guidelines Use this command to configure DNS/HTTPv2 status codes.

profile nf-client-failure nf-type smsf

Configures the SMSF Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > SMSF NF Client Failure Configuration (config-udm)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the SMSF failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the SMSF Failure Handling Template parameters.

profile nf-client-failure nf-type smsf profile failure-handling

Configures the SMSF Failure Handling Template parameters.

Command Modes Exec > Global Configuration (config) > SMSF NF Client Failure Configuration (config-udm)

Syntax Description **`profile failure-handling`** *`fh_template_name`*

failure-handling *fh_template_name*

Specify name of the SMSF failure handling template.

Must be a string.

Usage Guidelines Use this command to configure the SMSF Failure Handling Template parameters.

profile nf-client-failure nf-type smsf profile failure-handling service name type

Configures SMSF Failure Handling parameters.

Command Modes

Exec > Global Configuration (config) > SMSF NF-Client Configuration (config-udm) > Failure Handling Profile Configuration (config-failure-handling-*profile_name*)

Syntax Description

`service name type` *`smsf_service_name_type`* **`[ responsetimeout`** *`response_timeout`* **`]`**

responsetimeout *response_timeout*

Specify the response timeout interval in milliseconds.

Must be an integer.

Default Value: 2000.

type *smsf_service_name_type*

Specify the SMSF service name type.

Must be the following:

- **nsmsf-sms**

Usage Guidelines

Use this command to configure the SMSF Failure Handling parameters.

profile nf-client-failure nf-type smsf profile failure-handling service name type message type status-code

Configures the SMSF message type parameters.

Command Modes

Exec > Global Configuration (config) > SMSF NF Client Configuration (config-udm) > Failure Handling Configuration (config-failure-handling-*profile_name*) > Failure Handling Service Name Type Configuration (config-type-*service_name_type*)

Syntax Description

message type SmsfActivationReq { status-code [DNS | httpv2] | action [retry-and-ignore] | retry*retry_count***} SmsfDeactivationReq { status-code [httpv2] | action [retry-and-ignore] | retransmit** *retransmit_count***| retransmit-interval***retransmit_interval***} SmsfSendSms { status-code [httpv2] | action [retry-and-ignore] | retransmit** *retransmit_count***| retransmit-interval***retransmit_interval***}**

type *smsf_message_type*

Specify the SMSF message type.

Must be one of the following:

- **SmsfActivationReq**
- **SmsfDeactivationReq**
- **SmsfSendSms**

Usage Guidelines

Use this command to configure the SMSF message type parameters.

profile nf-pair nf-type

Configures the NF client pair type parameter.

Command Modes

Exec > Global Configuration (config)

Syntax Description

profile nf-pair nf-type *nf_type* **[[limit** *max_discovery_profiles* **] [max-payload-size** *max_payload_size* **] [nrf-discovery-group** *group_name* **]]**

limit *max_discovery_profiles*

Specify the maximum number of discovery profiles that NRF can send.

Must be an integer in the range of 1-1000.

Default Value: 10.

max-payload-size *max_payload_size*

Specify the maximum payload size of the discovery response.

Must be an integer in the range of 124-2000.

Default Value: 124.

nf-type *nf_type*

Specify the NF client pair type.

Must be one of the following:

- **5G_EIR**
- **AMF**
- **AUSF**
- **GMLC**
- **LMF**
- **NRF**
- **NSSF**
- **PCF**
- **SCP**
- **SMF**
- **SMSF**
- **UDM**

nrf-discovery-group *group_name*

Specify name of the NRF discovery group.

Must be a string.

Usage Guidelines

Configures NF client pair parameters. Use this command to configure the NF client pair type parameter.

profile nf-pair nf-type cache invalidation true

Configures the invalidation cache for "true" case.

Command Modes

Exec > Global Configuration (config) > NF Type Configuration (config-nf-type-*nf_type*)

Syntax Description

`cache invalidation { false | true [ timeout` *`timeout_duration`* **`] }`**

timeout *timeout_duration*

Specify the invalidation cache timeout duration in milliseconds.

Must be an integer.

Default Value: 0.

true

True condition.

Usage Guidelines

Use this command to configure the true case parameters for invaldation cache.

profile nf-pair nf-type locality

Configures client locality parameter.

Command Modes

Exec > Global Configuration (config) > NF Type Configuration (config-nf-type-*nf_type*)

Syntax Description

locality { client *locality_name* **| geo-server** *locality_name* **| preferred-server** *locality_name* **}**

client *locality_name*

Specify the Client Locality information.

Must be a string.

geo-server *locality_name*

Specify the Geo Service Locality information.

Must be a string.

preferred-server *locality_name*

Specify the preferred server locality information.

Must be a string.

Usage Guidelines

Use this command to configure the client locality parameter.

profile nf-pair nf-type nrf-auth-group nrf-discovery-group

Configures the AMF ID (**nrf-auth-group nrf-discovery-group** in the **nf-pair**) to specify `auth-groups` containing the NRF endpoint details for each NF type.

Command Modes

Exec > Global Configuration (`config`) > AMF Configuration (`config-amf` *amf_name*) > NF Profile Name Configuration (`config-nf-profile-nf` *nf_profile_name*) > NF Profile Type Configuration (`config-nf-type-profile` *profile_type_name*) > `nrf-auth-group` > `nrf-discovery-group`

Syntax Description

profile nf-pair nf-type *nf_type_name* **{ nrf-auth-group** *nrf_auth_group_name* **| nrf-discovery-group** *nrf_discovery_group_name* **| cache invalidation { true | false } timeout** *timeout_number* **}**

profile nf-pair nf-type *nf_type_name*

Specify the `nf-type` under the `nf-pair` in the profile name to authenticate. Must be a string.

nrf-auth-group *nrf_auth_group_name*

Specify the `nrf-auth-group` name.

nrf-discovery-group *nrf_discovery_group_name*

Specify the `nrf-discovery-group` name.

cache invalidation { true | false } timeout *timeout_number*

Enable the cache invalidation configuration. The default value is false.

Usage Guidelines

Use this command to associate a specific Network Function (NF) type with its corresponding NRF authentication and discovery groups. This configuration is essential for the AMF to correctly identify and communicate with the NRF for the specified NF type.

quit

Exits the management session.

Command Modes Exec

Syntax Description `quit`

Usage Guidelines Use this command to exit the management session.

resource pod

Configures Pod resource parameter.

Command Modes Exec > Global Configuration (config)

Syntax Description **resource** *pod_type*

resource *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 resource information.

Command Modes Exec

Syntax Description `show resources [ info ]`

Usage Guidelines Use this command to view information about the configured resources.

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.

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 the system's current status information.

Command Modes

Exec

Syntax Description

```
show running-status [ info ]
```

Usage Guidelines

Use this command to view the system's current 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.

Must be an integer.

Usage Guidelines

Use this command to configure 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.

Must be an integer.

Usage Guidelines Use this command to configure the number of columns that the terminal screen displays.

sctp-parameter-profile parameters

Configures operational parameters for an SCTP profile.

Command Modes

Exec > Global Configuration (config)

Syntax Description

sctp-parameter-profile *profile_name* **{ parameters { association { heartbeat-interval** *heartbeat_interval_value* **| max-assoc-retry-count** *max_assoc_retry_count* **| path-max-rtery-count** *path_max_rtery_count* **| valid-cookie-life** *valid_cookie_life* **} | client-idle-timeout** *client_idle_timeout_value* **| mtu-size** *mtu_size* **| rto { initial | max | min } | sack { sack-frequency | sack-period } } } } }**

- **sctp-parameter-profile**: Specify the SCTP prfile name.
- **parameters**: Groups specific configuration settings for the SCTP protocol.
- **association**: Manages settings related to the SCTP association establishment and maintenance.
- **heartbeat-interval**: Sets the time interval between sending heartbeat chunks to monitor path availability.
- **max-assoc-retry-count**: Defines the maximum number of attempts to establish an SCTP association.
- **path-max-rtery-count**: Sets the maximum number of retransmission attempts for a specific network path.
- **valid-cookie-life**: Configures the duration for which an initialization cookie remains valid during the handshake.
- **client-idle-timeout**: Specifies the duration of inactivity before a client connection is terminated.
- **mtu-size**: Sets the Maximum Transmission Unit size for SCTP packets.
- **rto**: Configures Retransmission Timeout (RTO) parameters for the association.
- **initial**: Sets the starting RTO value used for retransmission calculations.
- **max**: Defines the maximum allowable RTO value.
- **min**: Defines the minimum allowable RTO value.
- **sack**: Configures Selective Acknowledgment (SACK) settings for the connection.
- **sack-frequency**: Determines how often SACK chunks are generated and sent.
- **sack-period**: Sets the time interval for reporting SACK information.

Usage Guidelines

Use this command to configure operational parameters for an SCTP profile.

search

Search subscriber by SUPI.

Command Modes Exec > Global Configuration (config)

Syntax Description **`search subscriber supi`** *`supi_info`* **`detailed { false | true }`**

Usage Guidelines Use this command to search subscriber by SUPI.

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 from whom the message must be sent.

Must be a string.

Must be one of the following:

- admin
- confd-api-manager
- confd-message-manager

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 the affinity count per instance.

Command Modes Exec

Syntax Description `show sessions affinity`

Usage Guidelines Use this command to view the affinity count per instance.

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 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 event name/id/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

Indicates whether maintenance mode is enabled or disabled.

Command Modes

Exec

Syntax Description

```
show geo-maintenance-mode
```

Usage Guidelines

Use this command to view whether 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 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 rpc

Displays RPC information.

Command Modes

Exec

Syntax Description

show rpc [all | ipv4 | ipv6] *optional_filter*

rpc [all | ipv4 | ipv6] *optional_filter*

optional_filter must be one of the following:

- connectedTime
- disconnectedTime
- monitorRPCHost
- processingInstanceInfo
- remoteHost
- setName
- status
- type
- version
- vrf

Usage Guidelines

Use this command to view RPC information.

show subscriber

Displays subscriber information.

Command Modes

Exec

Syntax Description

show subscriber { all | supi *supi_value* **count** *session_count* **| gr-instance** *gr_instance* **| imei** *imei_id* **| namespace** *namespace_value* **| nf-service** *nf_service* **| guti** *guti_value* **}**

all

Specify all SUPIs or IMEIs.

count *session_count*

Specify the sessions count.

Must be one of the following:

- **count**

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_value*

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_value*

Specify the subscriber's SUPI ID. Shows output only if the subscriber is registered.

Must be a string.

guti *guti_value*

Specify the subscriber's GUTI ID. Shows output for the subscriber irrespective of the UE state (example, registered, de-registered).

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 ran-opt

Displays and clears subscriber data based on specified criteria.

Command Modes

Exec

Syntax Description

{ clear | show } subscriber gnode-id *gnodeb_id* **mnc** *mobile_network_code* **mcc** *mobile_country_code*

gnodeb-id *gnodeb_id*

Specify the gnodeb-id.

Must be an integer in the range of 0-4294967295.

mcc *mobile_country_code*

Specify the mobile country code.

Must be a string in a three digit pattern.

mnc *mobile_network_code*

Specify the mobile network code.

Must be a string in the two-digit (European standard) or three-digit (North American standard) pattern. For information on the two or three digits pattern, see the Input Pattern Types section.

Usage Guidelines

Use this command to view and to clear subscriber data based on specified criteria.

show-defaults

Configures whether to display default values when showing the configuration.

Command Modes

Exec

Syntax Description

```
show-defaults { false | true }
```

show-defaults { false | true }

Specify whether to display or hide the default values. To hide select false, to display select true.

Must be either "false" or "true".

Usage Guidelines

Use this command to view default values when viewing the configuration commands.

smiuser

Configures the Subscriber Microservices Infrastructure (SMI) user account parameters.

Command Modes

Exec

Syntax Description

smiuser add-group groupname *group_name*

smiuser add-user { username*username* **| password** *password* **}**

smiuser assign-user-group { groupname *group_name* **| username** *username* **}**

smiuser change-password-age { password-expire-days *expire_days* **| username***username* **}**

smiuser change-self-password { confirm-password *confirm_password* **| current-password** *current_password* **| new-password** *new_password* **| password-expire-days** *password_expire_days* **}**

smiuser delete-group groupname *group_name*

smiuser delete-user username username

smiuser show-user username *username*

smiuser unassign-user-group { username *username* **| groupname** *group_name* **}**

smiuser update-password-length length *password_length*

groupname *group_name*

Specify the group name in PAM.

Must be a string.

username *username*

Specify the username in PAM.

Must be a string.

Usage Guidelines

Use this command to configure the SMI user parameters.

system

Configures the NF's system operations.

Command Modes

Exec

Syntax Description

system { ops-center stop | ops-center-debug { start | stop } | synch { start | stop } | upgrade | uuid-override new-uuid *uuid_value* **}**

ops-center stop

Stops the operations center diagnostics.

ops-center debug { start | stop }

Starts or stops operations center debugging.

synch { start | stop }

Starts or stops the automatic 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.

tai-group

Configures Tracking Area Identity (TAI) group parameters.

Command Modes Exec > Global Configuration (config)

Syntax Description **tai-group name** *tai_group_name*

name *tai_group_name*

Specify name of the TAI group.

Must be a string.

Usage Guidelines Use this command to configure TAI group parameters.

tai-group timezone

Configures timezone for Tracking Area Identity (TAI) group.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*)

Syntax Description **`[ timezone offset { + | - } hours`** *`value`* **`[ minutes { 0 | 15 | 30 | 45 } | daylight { 0 | 1 | 2 } ]`**

[timezone offset { + | - } hours *value* [minutes { 0 | 15 | 30 | 45 } | daylight { 0 | 1 | 2 }]

- **{ + | - }**—Specify the offset direction from the Universal Time (UTC).
- **hours** *value*—Specify the offset from UTC in hours. Accepted value must be an integer 0—14.
- **minutes { 0 | 15 | 30 | 45 }**—Specify the offset minutes that are added to the hours value.
- **daylight { 0 | 1 | 2 }**—Specify the number of hours with which the time zone should be offset due to daylight savings time.

Usage Guidelines Use this command to configure timezone and daylight saving values for TAI group.

tai-group network name

Configures short and full network name under Tracking Area Identity (TAI) group.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*)

Syntax Description **network-name { short** *short_network_name* **| full** *full_network_name* **}**

network-name { short *short_network_name* | full *full_network_name* }

- **short** *short_network_name*—Specify the short name for the network.
- **full** *full_network_name*—Specify the full name for the network.

Usage Guidelines Use this command to configure short and full name of the network in a TAI group.

tai-group tais

Configures Tracking Area Identity (TAI).

Command Modes Exec > Global Configuration (config)

Syntax Description **`tai-group name`** *`tai_group_name`* **`tais name`** *`tai_name`*

tais name *tai_name*

Specify name of the TAI.

Must be a string.

Usage Guidelines Use this command to configure TAIs.

tai-group tais tailist

Configures TAI list.

Command Modes

Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*) > TAIS List Configuration (config-tais-*tai_name*)

Syntax Description

mcc *mobile_country_code* **mnc** *mobile_network_code*

mcc *mobile_country_code*

Specify the mobile country code. For example, 123.

Must be a string in a two digit pattern.

mnc *mobile_network_code*

Specify the two- or three-digit mobile network code. For example, 23, 456.

Must be a string in the two-or-three-digit pattern. For information on the two-or-three-digit pattern, see the Input Pattern Types section.

Usage Guidelines

Use this command to configure the TAI list.

You can configure a maximum of 16 elements with this command.

tai-group tais tailist tac

Configures TAI group TAC values.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*) > TAIS List Configuration (config-tais-*tai_name*)

Syntax Description **`tac list`** *`list_of_tac_values`*

list *list_of_tac_values*

Specify the list of TAC values.

Must be an integer in the range of 0-65535.

You can configure a maximum of 16 elements with this keyword.

Usage Guidelines Use this command to configure TAI group TAC values.

tai-group tais tailist tac range

Configures the TAC range.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*) > TAIS List Configuration (config-tais-*tai_name*)

Syntax Description **range start** *tac_range_start* **end** *tac_range_end*

end *tac_range_end*

Specify the end value of the TAC range. Must be greater than the start value.

Must be an integer in the range of 0-65535.

start *tac_range_start*

Specify the start value of the TAC range. Must be lesser than the end value.

Must be an integer in the range of 0-65535.

Usage Guidelines Use this command to configure the TAC range.

You can configure a maximum of 16 elements with this command.

tai-group tais tailist timezone

Configures timezone for Tracking Area Identity (TAI) list.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*) > TAIS List Configuration (config-tais-*tai_name*)

Syntax Description `[ timezone offset { + | - } hours value [ minutes { 0 | 15 | 30 | 45 } | daylight { 0 | 1 | 2 } ]`

[timezone offset { + | - } hours *value* [minutes { 0 | 15 | 30 | 45 } | daylight { 0 | 1 | 2 }]

- **{ + | - }**—Specify the offset direction from the Universal Time (UTC).
- **hours** *value*—Specify the offset from UTC in hours. Accepted value must be an integer 0—14.
- **minutes { 0 | 15 | 30 | 45 }**—Specify the offset minutes that are added to the hours value.
- **daylight { 0 | 1 | 2 }**—Specify the number of hours with which the time zone should be offset due to daylight savings time.

Usage Guidelines Use this command to configure timezone and daylight saving values for TAI list.

tai-group tais tailist network name

Configures short and full network name under Tracking Area Identity (TAI) list.

Command Modes Exec > Global Configuration (config) > TAI Group Configuration (config-tai-group-*tai_group_name*) > TAIS List Configuration (config-tais-*tai_name*)

Syntax Description **`network-name { short`** *`short_network_name`* **`| full`** *`full_network_name`* **`}`**

network-name { short *short_network_name* | full *full_network_name* }

- **short** *short_network_name*—Specify the short name for the network.
- **full** *full_network_name*—Specify the full name for the network.

Usage Guidelines Use this command to configure short and full name of the network in a TAI list.

terminal

Configures the terminal parameters.

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 parameters.

timestamp

Configures the timestamp parameters.

Command Modes Exec

Syntax Description `timestamp { enable | disable }`

timestamp { enable | disable }

Specify the configuration to enable or disable the timestamp display.

Usage Guidelines Use this command to configure the timestamp capability.

tracing

Configures debug settings for AMF NGAP endpoint.

Command Modes

Exec > Global Configuration (config)

Syntax Description

`tracing enable-trace-percent` *`tracing_percentage`* **`append-messages { false | true }`**

append-messages { false | true }

Specify to enable or disable appending messages.

Must be one of the following:

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

Default Value: true.

enable-trace-percent *tracing_percentage*

Specify the tracing percentage.

Must be an integer in the range of 0-100.

Default Value: 100.

Usage Guidelines

Use this command to configure debug settings for the AMF NGAP endpoint.

tracing endpoint

Configures tracing endpoint.

Command Modes Exec > Global Configuration (config)

Syntax Description **`tracing endpoint host`** *`host_name`* **`port`** *`port_number`*

host *host_name*

Specify the host name.

Must be a string.

Default Value: jaeger-collector.

port *port_number*

Specify the port number.

Must be an integer.

Default Value: 9411.

Usage Guidelines Use this command to configure tracing endpoint.

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, Protocol, Date, and Mode information.



Input Pattern Types

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arg-type

```
Pattern:
'[^\*].*|..+'; // must not be single '*'
```

```
Pattern:
'\*'
```

This statement can be used to hide a node from some, or all, northbound interfaces. All nodes with the same value are considered a hide group and are treated the same with regards to being visible or not in a northbound interface.

A node with an hidden property is not shown in the northbound user interfaces (CLI and Web UI) unless an 'unhide' operation is performed in the user interface.

The hidden value 'full' indicates that the node must be hidden from all northbound interfaces, including programmatical interfaces such as NETCONF. The value '*' is not valid. A hide group can be unhidden only if this is explicitly allowed in the confd.conf(5) daemon configuration.

Multiple hide groups can be specified by giving this statement multiple times. The node is shown if any of the specified hide groups is given in the 'unhide' operation. If a mandatory node is hidden, a hook callback function (or similar) might be needed in order to set the element

crypt-hash

```
Pattern:
'$0$.*'
  '|$1$[a-zA-Z0-9./]{1,8}$[a-zA-Z0-9./]{22}'
  '|$5$(rounds=\d+$)?[a-zA-Z0-9./]{1,16}$[a-zA-Z0-9./]{43}'
  '|$6$(rounds=\d+$)?[a-zA-Z0-9./]{1,16}$[a-zA-Z0-9./]{86}'
```

The **crypt-hash** type is used to store passwords using a hash function. The algorithms for applying the hash function and encoding the result are implemented in various UNIX systems as the function crypt(3).

A value of this type matches one of the forms:

- 0<clear text password>
- $<id>$<salt>$<password hash>
- $<id>$<parameter>$<salt>$<password hash>

The '0' prefix signals that the value is clear text. When such a value is received by the server, a hash value is calculated, and the string '$<id>$<salt>$' or $<id>$<parameter>$<salt>$ is prepended to the result. This value is stored in the configuration data store.

If a value starting with '$<id>$', where <id> is not '0', is received, the server knows that the value already represents a hashed value, and stores it as is in the data store.

When a server needs to verify a password given by a user, it finds the stored password hash string for that user, extracts the salt, and calculates the hash with the salt and given password as input. If the calculated hash value is the same as the stored value, the password given by the client is accepted.

This type defines the following hash functions:

Id	Hash Function	Feature
1	MD5	crypt-hash-md5
5	SHA-256	crypt-hash-sha-256
6	SHA-512	crypt-hash-sha-512

The server indicates support for the different hash functions by advertising the corresponding feature.

Reference:

- IEEE Std 1003.1-2008 - crypt() function
- RFC 1321: The MD5 Message-Digest Algorithm
- FIPS.180-3.2008: Secure Hash Standard

date-and-time

```
Pattern:
'\d{4}-\d{2}-\d{2}T\d{2}:\d{2}:\d{2}(\.\d+)?'
 '(Z|[\+\-]\d{2}:\d{2})'
```

The date-and-time type is a profile of the ISO 8601 standard for representation of dates and times using the Gregorian calendar. The profile is defined by the date-time production in Section 5.6 of RFC 3339. The date-and-time type is compatible with the dateTime XML schema type with the following notable exceptions:

1. The date-and-time type does not allow negative years.
2. The date-and-time time-offset -00:00 indicates an unknown time zone (see RFC 3339) while -00:00 and +00:00 and Z all represent the same time zone in dateTime.
3. The canonical format (see below) of data-and-time values differs from the canonical format used by the dateTime XML schema type, which requires all times to be in UTC using the time-offset 'Z'.

This type is not equivalent to the DateAndTime textual convention of the SMIv2 since RFC 3339 uses a different separator between full-date and full-time and provides higher resolution of time-secfrac. The canonical format for date-and-time values with a known time zone uses a numeric time zone offset that is calculated using the device's configured known offset to UTC time.

A change of the device's offset to UTC time will cause date-and-time values to change accordingly. Such changes might happen periodically in case a server follows automatically daylight saving time (DST) time zone offset changes. The canonical format for date-and-time values with an unknown time zone (usually referring to the notion of local time) uses the time-offset -00:00.

Reference:

- RFC 3339: Date and Time on the Internet: Timestamps
- RFC 2579: Textual Conventions for SMIv2
- XSD-TYPES: XML Schema Part 2: Datatypes Second Edition

domain-name

```
Pattern:
'((([a-zA-Z0-9_]([a-zA-Z0-9\-_]){0,61})?[a-zA-Z0-9]\.)*'
 '([a-zA-Z0-9_]([a-zA-Z0-9\-_]){0,61})?[a-zA-Z0-9]\.?)'
 '|\.'
```

The domain-name type represents a DNS domain name. The name must fully qualified whenever possible. Internet domain names are only loosely specified. Section 3.5 of RFC 1034 recommends a syntax (modified in Section 2.1 of RFC 1123). The Pattern above is intended to allow for current practice in domain name use, and some possible future expansion. It is designed to hold various types of domain names, including names used for A or AAAA records (host names) and other records, such as SRV records.

The Internet host names have a stricter syntax (described in RFC 952) than the DNS recommendations in RFCs 1034 and 1123, and that systems that want to store host names in schema nodes using the domain-name type are recommended to adhere to this stricter standard to ensure interoperability.

The encoding of DNS names in the DNS protocol is limited to 255 characters. Since the encoding consists of labels prefixed by a length bytes and there is a trailing NULL byte, only 253 characters can appear in the textual dotted notation.

The description clause of schema nodes using the domain-name type must describe when and how these names are resolved to IP addresses. The resolution of a domain-name value may require to query multiple DNS records. For example, A for IPv4 and AAAA for IPv6. The order of the resolution process and which DNS record takes precedence can either be defined explicitly or may depend on the configuration of the resolver.

Domain-name values use the US-ASCII encoding. Their canonical format uses lowercase US-ASCII characters. Internationalized domain names MUST be A-labels as per RFC 5890.

Reference:

- RFC 952: DoD Internet Host Table Specification
- RFC 1034: Domain Names - Concepts and Facilities
- RFC 1123: Requirements for Internet Hosts -- Application and Support
- RFC 2782: A DNS RR for specifying the location of services (DNS SRV)
- RFC 5890: Internationalized Domain Names in Applications (IDNA): Definitions and Document Framework

dotted-quad

Pattern:

```
'(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}'
 '([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])'
```

An unsigned 32-bit number expressed in the dotted-quad notation, that is, four octets written as decimal numbers and separated with the '.' (full stop) character.

hex-list

Pattern:
'(([0-9a-fA-F]){2}(:([0-9a-fA-F]){2})*)?'

DEPRECATED: Use yang:hex-string instead. There are no plans to remove tailf:hex-list. A list of colon-separated hexa-decimal octets, for example '4F:4C:41:71'.

The statement tailf:value-length can be used to restrict the number of octets. Using the 'length' restriction limits the number of characters in the lexical representation

hex-string

Pattern:
'([0-9a-fA-F]{2}(:[0-9a-fA-F]{2})*)?'

A hexadecimal string with octets represented as hex digits separated by colons. The canonical representation uses lowercase characters.

ipv4-address

Pattern:

```
'(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}'
 '([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])'
 '(%[\p{N}\p{L}]+)?'
```

The ipv4-address type represents an IPv4 address in dotted-quad notation. The IPv4 address may include a zone index, separated by a % sign. The zone index is used to disambiguate identical address values. For link-local addresses, the zone index will typically be the interface index number or the name of an interface. If the zone index is not present, the default zone of the device will be used. The canonical format for the zone index is the numerical format.

ipv4-address-and-prefix-length

Pattern:

```
'(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}'
 '([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])'
 '/(([0-9])|([1-2][0-9])|(3[0-2]))'
```

The ipv4-address-and-prefix-length type represents a combination of an IPv4 address and a prefix length. The prefix length is given by the number following the slash character and must be less than or equal to 32.

ipv4-address-no-zone

Pattern:
'[0-9\.]*'

An IPv4 address is without a zone index and derived from ipv4-address that is used in situations where the zone is known from the context and hence no zone index is needed.

ipv4-prefix

Pattern:

```
'(([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\.){3}'
 '([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])'
 '/(([0-9])|([1-2][0-9])|(3[0-2]))'
```

The ipv4-prefix type represents an IPv4 address prefix. The prefix length is given by the number following the slash character and must be less than or equal to 32.

A prefix length value of 'n' corresponds to an IP address mask that has n contiguous 1-bits from the most significant bit (MSB) and all other bits set to 0.

The canonical format of an IPv4 prefix has all bits of the IPv4 address set to zero that are not part of the IPv4 prefix.

ipv6-address

```
Pattern:
'((:|[0-9a-fA-F]{0,4}):)([0-9a-fA-F]{0,4}:){0,5}'
  '((([0-9a-fA-F]{0,4}:)?(:|[0-9a-fA-F]{0,4}))|'
  '(((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}'Pattern:
  '(25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])))'
  '(%[\p{N}\p{L}]+)?'
```

```
Pattern:
'(([^:]+:){6}(([^:]+:[^:]+)|(.*\..*))|'
 '((([^:]+:)*[^:]+)?::(([^:]+:)*[^:]+)?)'
 '(%.+)?'
```

The ipv6-address type represents an IPv6 address in full, mixed, shortened, and shortened-mixed notation. The IPv6 address may include a zone index, separated by a % sign.

The zone index is used to disambiguate identical address values. For link-local addresses, the zone index will typically be the interface index number or the name of an interface. If the zone index is not present, the default zone of the device will be used.

The canonical format of IPv6 addresses uses the textual representation defined in Section 4 of RFC 5952. The canonical format for the zone index is the numerical format as described in Section 11.2 of RFC 4007.

Reference:

- RFC 4291: IP Version 6 Addressing Architecture
- RFC 4007: IPv6 Scoped Address Architecture
- RFC 5952: A Recommendation for IPv6 Address Text Representation

ipv6-address-and-prefix-length

```
Pattern:
'((:|[0-9a-fA-F]{0,4}):)([0-9a-fA-F]{0,4}:){0,5}'
 '(([0-9a-fA-F]{0,4}:)?(:|[0-9a-fA-F]{0,4}))|'
 '(((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}'
 '(25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])))'
 '(/(([0-9])|([0-9]{2})|(1[0-1][0-9])|(12[0-8])))'
```

```
Pattern:
'(([^:]+:){6}(([^:]+:[^:]+)|(.*\..*))|'
 '(([^:]+:)*[^:]+)?::(([^:]+:)*[^:]+)?)'
 '(/.+)'
```

The ipv6-address-and-prefix-length type represents a combination of an IPv6 address and a prefix length. The prefix length is given by the number following the slash character and must be less than or equal to 128.

ipv6-address-no-zone

Pattern:
'[0-9a-fA-F:\.]*'

An IPv6 address without a zone index. This type, derived from ipv6-address, may be used in situations where the zone is known from the context and hence no zone index is needed.

Reference:

- RFC 4291: IP Version 6 Addressing Architecture
- RFC 4007: IPv6 Scoped Address Architecture
- RFC 5952: A Recommendation for IPv6 Address Text Representation

ipv6-prefix

```
Pattern:
'((:|[0-9a-fA-F]{0,4}):)([0-9a-fA-F]{0,4}:){0,5}'
 '(((0-9a-fA-F]{0,4}:)?(:|[0-9a-fA-F]{0,4}))|'
 '(((25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])\.){3}'Pattern:
 '(25[0-5]|2[0-4][0-9]|[01]?[0-9]?[0-9])))'
 '(/(([0-9])|([0-9]{2})|(1[0-1][0-9])|(12[0-8])))';
```

```
Pattern:
'(([^:]+:){6}(([^:]+:[^:]+)|(.*\..*))|'
 '(([^:]+:)*[^:]+)?::(([^:]+:)*[^:]+)?)'
 '(/.+)'
```

The ipv6-prefix type represents an IPv6 address prefix. The prefix length is given by the number following the slash character and must be less than or equal to 128.

A prefix length value of n corresponds to an IP address mask that has n contiguous 1-bits from the most significant bit (MSB) and all other bits set to 0.

The IPv6 address should have all bits that do not belong to the prefix set to zero. The canonical format of an IPv6 prefix has all bits of the IPv6 address set to zero that are not part of the IPv6 prefix. Furthermore, the IPv6 address is represented as defined in Section 4 of RFC 5952

Reference:

- RFC 5952: A Recommendation for IPv6 Address Text Representation

mac-address

Pattern:
'[0-9a-fA-F]{2}(:[0-9a-fA-F]{2}){5}'

The mac-address type represents an IEEE 802 MAC address. The canonical representation uses lowercase characters. In the value set and its semantics, this type is equivalent to the MacAddress textual convention of the SMIv2.

Reference:

- IEEE 802: IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture
- RFC 2579: Textual Conventions for SMIv2

object-identifier

Pattern:

```
'(([0-1](\.[1-3]?[0-9]))|(2\.(0|([1-9]\d*))))'
 '(\.(0|([1-9]\d*)))*'
```

The object-identifier type represents administratively assigned names in a registration-hierarchical-name tree. The values of this type are denoted as a sequence of numerical non-negative sub-identifier values. Each sub-identifier value MUST NOT exceed 2^32-1 (4294967295). The Sub-identifiers are separated by single dots and without any intermediate whitespace.

The ASN.1 standard restricts the value space of the first sub-identifier to 0, 1, or 2. Furthermore, the value space of the second sub-identifier is restricted to the range 0 to 39 if the first sub-identifier is 0 or 1. Finally, the ASN.1 standard requires that an object identifier has always at least two sub-identifiers. The pattern captures these restrictions.

Although the number of sub-identifiers is not limited, module designers should realize that there may be implementations that stick with the SMIv2 limit of 128 sub-identifiers.

This type is a superset of the SMIv2 OBJECT IDENTIFIER type since it is not restricted to 128 sub-identifiers. Hence, this type SHOULD NOT be used to represent the SMIv2 OBJECT IDENTIFIER type; the object-identifier-128 type SHOULD be used instead.

Reference:

- ISO9834-1: Information technology - Open Systems
- Interconnection - Procedures for the operation of OSI
- Registration Authorities: General procedures and top arcs of the ASN.1 Object Identifier tree

object-identifier-128

Pattern:
'\d*(\.\d*){1,127}'

This type represents object-identifiers restricted to 128 sub-identifiers. In the value set and its semantics, this type is equivalent to the OBJECT IDENTIFIER type of the SMIv2.

Reference:

- RFC 2578: Structure of Management Information Version 2 (SMIv2)

octet-list

Pattern:
'(\d*(.\d*)*)?'

A list of dot-separated octets, for example '192.168.255.1.0'. The statement tailf:value-length can be used to restrict the number of octets. Using the 'length' restriction limits the number of characters in the lexical representation.

phys-address

Pattern:
'([0-9a-fA-F]{2}(:[0-9a-fA-F]{2})*)?'

Represents media- or physical-level addresses represented as a sequence octets, each octet represented by two hexadecimal numbers. Octets are separated by colons. The canonical representation uses lowercase characters. In the value set and its semantics, this type is equivalent to the PhysAddress textual convention of the SMIv2.

Reference:

- RFC 2579: Textual Conventions for SMIv2

sha-256-digest-string

```
Pattern:
'$0$.*'
 '|$5$(rounds=\d+$)?[a-zA-Z0-9./]{1,16}$[a-zA-Z0-9./]{43}'
```

The sha-256-digest-string type automatically computes a SHA-256 digest for a value adhering to this type. A value of this type matches one of the forms:

- 0<clear text password>
- 5<salt>$<password hash>
- 5rounds=<number>$<salt>$<password hash>

The '0' prefix signals that this is plain text. When a plain text value is received by the server, a SHA-256 digest is calculated, and the string '5<salt>$' is prepended to the

result, where <salt> is a random 16 character salt used to generate the digest. This value is stored in the configuration data store. The algorithm can be tuned through the /confdConfig/cryptHash/rounds parameter, which if set to a number other than the default will cause '5rounds=<number>$<salt>$' to be prepended instead of only '5<salt>$'.

If a value starting with '5' is received, the server knows that the value already represents a SHA-256 digest, and stores it as is in the data store.

If a default value is specified, it must have a '5' prefix.

The digest algorithm used is the same as the SHA-256 crypt function used for encrypting passwords for various UNIX systems.

Reference:

- IEEE Std 1003.1-2008 - crypt() function FIPS.180-3.2008: Secure Hash Standard

sha-512-digest-string

```
Pattern:
'$0$.*'
 '|$6$(rounds=\d+$)?[a-zA-Z0-9./]{1,16}$[a-zA-Z0-9./]{86}'
```

The sha-512-digest-string type automatically computes a SHA-512 digest for a value adhering to this type. A value of this type matches one of the forms

- 0<clear text password>
- 6<salt>$<password hash>
- 6rounds=<number>$<salt>$<password hash>

The '0' prefix signals that this is plain text. When a plain text value is received by the server, a SHA-512 digest is calculated, and the string '6<salt>$' is prepended to the

result, where <salt> is a random 16 character salt used to generate the digest. This value is stored in the configuration data store. The algorithm can be tuned through the

/confdConfig/cryptHash/rounds parameter, which if set to a number other than the default will cause '6rounds=<number>$<salt>$' to be prepended instead of only '6<salt>$'.

If a value starting with '6' is received, the server knows that the value already represents a SHA-512 digest, and stores it as is in the data store.

If a default value is specified, it must have a '6' prefix. The digest algorithm used is the same as the SHA-512 crypt function used for encrypting passwords for various UNIX systems.

Reference:

- IEEE Std 1003.1-2008 - crypt() function FIPS.180-3.2008: Secure Hash Standard

size

Pattern:
'S(\d+G)?(\d+M)?(\d+K)?(\d+B)?'

A value that represents a number of bytes. An example could be S1G8M7K956B; meaning 1GB + 8MB + 7KB + 956B = 1082138556 bytes.

The value must start with an S. Any byte magnifier can be left out, for example, S1K1B equals 1025 bytes. The order is significant though, that is S1B56G is not a valid byte size.

In ConfD, a 'size' value is represented as an uint64.

uuid

Pattern:

```
'[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-'
 '[0-9a-fA-F]{4}-[0-9a-fA-F]{12}'
```

A Universally Unique IDentifier in the string representation defined in RFC 4122. The canonical representation uses lowercase characters. The following is an example of a UUID in string representation: f81d4fae-7dec-11d0-a765-00a0c91e6bf6.

Reference:

- RFC 4122: A Universally Unique IDentifier (UUID) URN Namespace

yang-identifier

Pattern:
'[a-zA-Z_][a-zA-Z0-9\-_.]*'

Pattern:
'.|..|[^xX].*|.[^mM].*|..[^lL].*'

A YANG identifier string as defined by the 'identifier' rule in Section 12 of RFC 6020. An identifier must start with an alphabetic character or an underscore followed by an arbitrary sequence of alphabetic or numeric characters, underscores, hyphens, or dots. A YANG identifier MUST NOT start with any possible combination of the lowercase or uppercase character sequence 'xml'.

Reference:

- RFC 6020: YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)