

Oracle® Communications

Cloud Native Core, Security Edge Protection Proxy REST Specification Guide



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3 HTTP Response Codes and Error Codes

Preface

- [Documentation Accessibility](#)
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Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
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Acronyms

The following table provides information about the acronyms used in the document.

Table Acronyms

Acronym	Description
Cat-0	Cat-0 SBI Message Schema Validation Feature
Cat-1	Cat-1 Service API Validation Feature
Cat-2	Cat-2 Network ID Validation Feature
Cat-3	Cat 3 - Previous Location Check
CNC Console	Oracle Communications Cloud Native Configuration Console
CRD	Custom Resource Definition
CNE	Oracle Communications Cloud Native Core, Cloud Native Environment
cSEPP/C-SEPP	Consumer Security Edge Protection Proxy
DB	Database
DNS	Domain Name System
DRL	Drools Rule Language
EGW	Egress Gateway
FQDN	Fully Qualified Domain Name
GSMA	Groupe Speciale Mobile Association (GSMA). Represents the interests of mobile operators and the broader mobile industry worldwide.
Hosted SEPP	Hosted SEPP functionality provides selective routing in Roaming Hub Mode
IGW	Ingress Gateway
IPX	Internetwork Packet Exchange
K8s	Kubernetes
Local PLMN	PLMN managed by Local SEPP
Local SEPP	SEPP in Local PLMN
MNO	Mobile Network Operator
NDB	Network Database
NF	Network Function
Network Function	A functional building block within a network infrastructure, which has well defined external interfaces and well defined functional behavior. In practical terms, a network function is often a network node or physical appliance.
NF Consumer	A generic way to refer to an NF which consumes services provided by another NF. Example: An AMF acts as a Consumer NF that consumes AMPolicy services provided by the PCF.
NF Instance	A specific instance of a network function type.
NF Producer or NF Provider	A generic way to refer to an NF which provides services that can be consumed by another NF. Example: A PCF acts as a Producer NF that provides AMPolicy Services to the AMF.

Table (Cont.) Acronyms

Acronym	Description
NRF	Oracle Communications Cloud Native Core, Network Repository Function
OHC	Oracle Help Center
OSDC	Oracle Software Delivery Cloud
PDB	PodDisruptionBudget
PLMN	Public Land Mobile Network
pSEPP/P-SEPP	Producer Security Edge Protection Proxy
Remote PLMN	PLMN managed by Remote SEPP
Remote SEPP	SEPP in Remote PLMN
Remote SEPP Set (RSS)	Set of Remote SEPPs to allow alternate routing across Remote SEPPs
REST API	Representational State Transfer Application Programming Interface
Roaming Hub	Roaming Hub is the deployment mode of SEPP. Roaming Hub is used as an intermediate proxy. Each SEPP connects to the Roaming Hub which further connect to another SEPP. All the Remote SEPPs can communicate with each other through roaming hub.
Scaling	Ability to dynamically extend or reduce resources granted to the Virtual Network Function (VNF) as needed. This includes scaling out and in or scaling up and down.
SCM	Security Countermeasure
SEPP	Oracle Communications Cloud Native Core, Security Edge Protection Proxy
SUPI	Subscription Permanent Identifier
SVC	Service
TLS	Transport Layer Security
TH	Topology Hiding
TUH	Topology Unhiding
TPS	Transactions Per Second
UE	User Equipment
UDR	Oracle Communications Cloud Native Core, Unified Data Repository

What's New in This Guide

This section introduces the documentation updates for Release 25.1.2xx.

Release 25.1.202 - G33935-03, December 2025

- Added a note about modifying the `sbiroutingerroractionset` and `sbiroutingerrorcriteriaset` parameters to the [N32 Egress Gateway Configuration](#) section.

Release 25.1.201 - G33935-02, August 2025

There are no updates made to this document in this release.

Release 25.1.200 - G33935-01, July 2025

- Added the REST APIs for configuring the [Cat-1 NRF Service API Query Parameters Validation](#) feature.
- Added the REST API details for header and body GET request for configuring [Topology Hiding](#) feature.
- Updated the name of the REST API as [SOR Config Trigger Rule List](#).
- Updated the description of PUT method in [SOR Config Trigger Rule List](#).
- Removed the `mncLength` parameter from [Network ID in Body Validation Configuration](#) and [Network ID in Header Validation Configuration](#) REST APIs.

1

Introduction

This document provides information about configuring the services and manageable objects in Oracle Communication Security Edge Protection Proxy (OCSEPP) using Representational State Transfer Application Program Interfaces (REST APIs).

1.1 Overview

Security Edge Protection Proxy (SEPP) is a key component of the 5G Service Based Architecture. It is a proxy Network Function (NF) which is used for the secured communication for inter Public Land Mobile Network (PLMN) messages.

For more information about the SEPP architecture, see *Oracle Communications Cloud Native Core, Security Edge Protection Proxy User Guide*.

The user can install either SEPP or Roaming Hub/Hosted SEPP.

Note

The performance and capacity of the SEPP system may vary based on the call model, Feature/Interface configuration, and underlying CNE and hardware environment.

1.1.1 References

Refer the following documents for more information about Security Edge Protection Proxy (SEPP):

- *Oracle Communications Cloud Native Core, Security Edge Protection Proxy User Guide*
- *Oracle Communications Cloud Native Core, cnDBTier Installation, Upgrade, and Fault Recovery Guide*
- *Oracle Communications Cloud Native Core, Security Edge Protection Proxy Troubleshooting Guide*
- *Oracle Communications Cloud Native Core, Security Edge Protection Proxy Network Impact Report*

2

SEPP REST Specifications

This chapter provides information about REST specifications used in Oracle Communications Security Edge Protection Proxy (SEPP).

2.1 Handshake Status

Handshake Status REST API returns the handshake status corresponding to the SEPP Name.

Table 2-1 Handshake Status REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/handshakestatus	Returns the handshake status. Empty list [], if no handshake status.		List of HandshakeStatus	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/handshakestatus -X GET
GET	/sepp-configuration/v1/handshakestatus/{fqdn}	Returns handshake status of the SEPP FQDN. Returns the error code 404, if not found Exception: Handshake Status not found for the fqdn	SEPP FQDN of the handshake status	HandshakeStatus	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/handshakestatus/fqdn/10.75.237.33 -X GET
GET	/sepp-configuration/v1/handshakestatus/{name}	Returns handshake status of the SEPP by name. Returns the error code 404, if not found. Exception: Handshake Status not found for the name.	SEPP Name of the handshake status	HandshakeStatus	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/handshakestatus/SEPP-2 -X GET
GET	/sepp-configuration/v1/handshakestatus/name/{name}	Returns handshake status of the SEPP by name. Returns the error code 404, if not found Exception: Handshake Status not found for the name.	SEPP Name of the handshake status	HandshakeStatus	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/handshakestatus/name/SEPP-2 -X GET

Handshake Status Parameters

Table 2-2 Handshake Status Parameters

Attribute	Description	Details
domain	This is an optional parameter. Domain of the Remote SEPP.	Data Type: string Default Value: NA
n32fContextStateEnum	This is a mandatory parameter. Specifies current state of handshake.	Data Type: string Range: CAPABILITY_EXCHNAGE_STATE, N32F_ESTABLISHED_STATE Default Value: NA
securityCapability	This is a mandatory parameter. This parameter decides the security mechanism to be used for protecting N32f messages. Values can be "TLS" or "TLS and PRINS".	Data Type: string Range: TLS, TLS and PRINS Default Value: TLS
seppFQDN	This is a mandatory parameter. FQDN of remote SEPP.	Data Type: string Range: NA Default Value: NA
seppId	This is a mandatory parameter. Parameter to uniquely identify the Remote SEPP Name.	Data Type: string Range: NA Default Value: NA
3GppSbiTargetApiRootSupported	Indicates if local SEPP supports 3gppSbiTargetApiRoot header. If it is set to False, it is the responsibility of Remote SEPP to not send 3gpp-sbi-target-apiRoot header in N32F message.	Data Type: Boolean Range: False or True Default Value: True
localPlmnIdList	PLMN ID List	Data Type: string Range: For SEPP mode: localPlmnIdList is 1 to 30. For IPX mode: localPlmnIdList is 1 to 400 Default Value: NA
reInitN32fContextState	This parameter shows if handshake reinitiation is successful or not. If the value is "CAPABILITY_EXCHANGE_STATE", then the handshake reinitiation is in progress. If the value is blank, the reinitiation did not happen. When SEPP is a producer, after successful handshake reInitN32fContextState value will be set to "N32F_ESTABLISHED_STATE".	Data Type: string Default Value: Blank string/No value
handshakeTimestamp	This parameter displays the time of handshake, and the time is updated if handshake reinitiation is done.	Data Type: timestamp Default Value: Blank

Sample Response body structure for GET operations:

Resource API: *sepp-configuration/v1/handshakestatus*

Resource Method: GET

Content Type: application/json

Response Body

```
[{
  "securityCapability": "TLS",
  "n32fContextStateEnum": "N32F_ESTABLISHED_STATE",
  "domain": "svc.com",
  "seppId": "RS1",
  "localPlmnIdList": "333222, 444555",
  "reInitN32fContextState": "CAPABILITY_EXCHANGE_STATE",
  "seppFQDN": "rs1.inter.oracle.com",
  "3GppSbiTargetApiRootSupported": false
  "handshakeTimestamp": "2022-11-07T05:10:40.000+00:00"
}]
```

2.2 Remote SEPP

The Remote SEPP REST API returns all the configured Remote SEPP profiles.

The following table describes the resource name to retrieve and update the Remote SEPP profiles.

Table 2-3 Remote SEPP REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/remotesepp/{name}	Returns configured Remote SEPP. If no Remote SEPP is present, then returns error code as 404.	Name of Remote SEPP as requested in the URL.	Requested Remote SEPP and the parameters with values	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/remotesepp/SEPP-3 -X GET
GET	/sepp-configuration/v1/remotesepp	Returns all the configured Remote SEPPs. if no Remote SEPP is configured, an empty list is returned.	None	List of Remote SEPPs	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/remotesepp -X GET

Table 2-3 (Cont.) Remote SEPP REST API

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/remotesepp	Returns configured Remote SEPP	Remote SEPP object	Remote SEPP with details	<pre>curl -v -X POST http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ remotesepp -H 'Content-Type: application/json' -d '{"name":"abc","plmn IdList": [{"mcc":"111", "mnc":"123"}, {"mcc":"190", "mnc":"128"}], "seppFqdn":"sepp8.i nter.oracle.com","re moteSepplpAddress ": "10.233.62.145", "virtualHost":"psepp. 5gc.mnc111.mcc34 5.3gppnetwork.org", "securityCapabilityLi st": ["TLS"], "isEnabled":"TRUE", "apiPrefix":"", "apiVersion":"v1", "priority":0,"port":30 043, "n32fFQDN": "n32f.fqdn", "n32fAddress": "10.233.20.163" , "n32fPort": 8090 }'</pre>
DELETE	/sepp-configuration/v1/remotesepp/{name}	Delete managed object. If no Remote SEPP is present, then returns error code as 404.	Name of Remote SEPP as request parameter	Remote SEPP. Returns 204, if No Content	<pre>curl -v -X DELETE http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ remotesepp/SEPP-3</pre>

Table 2-3 (Cont.) Remote SEPP REST API

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/remotesepp/{name}	Update configured Remote SEPP. Creates the record, if not found	Name of Remote SEPP as request parameter and updated Remote SEPP object	Updated Remote SEPP	curl -v -X PUT http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/remotesepp/abc -H 'Content-Type: application/json' -d '{ "name": "abc", "plmnIdList": [{"mcc": "111", "mnc": "123"}, {"mcc": "190", "mnc": "128"}], "domain": "svc.clusters.com", "seppFqdn": "sepp8.inter.oracle.com", "remoteSeppIpAddress": "10.233.62.145", "virtualHost": "psepp.5gc.mnc111.mcc345.3gppnetwork.org", "securityCapabilityList": ["TLS"], "isEnabled": "TRUE", "apiPrefix": "", "apiVersion": "v1", "priority": 0, "port": 30043, "n32fQDN": "n32f.fqdn", "n32fAddress": "10.233.20.163", "n32fPort": 8090 }'
PATCH	/sepp-configuration/v1/remotesepp/{name}	Used to update only 'isEnabled' field of configured Remote SEPP. If no Remote SEPP is present, then returns error code as 404.	Name of Remote SEPP as request parameter and the fields of Remote SEPP to be updated.	Updated Remote SEPP	curl -v -X PATCH http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/remotesepp/abc -H 'Content-Type: application/json' -d '{ "isEnabled": "FALSE" }'

Remote SEPP Parameters

Table 2-4 Remote SEPP Parameters

Attribute	Data Type	Compliance	Description
name	String	M	Name of the Remote SEPP which is provided in their local profile

Table 2-4 (Cont.) Remote SEPP Parameters

Attribute	Data Type	Compliance	Description
plmnIdList	String	M	PLMN ID List
seppfqdn	String	M	FQDN
domain	String	O	Domain of the Remote SEPP. Default value: mncxxx.mccyyy.3gppnetwork.org
securityCapabilityList	String	O	TLS/PRINS. Default Value: TLS
remoteSepplpAddress	string	O	Remote SEPP IPv4 or IPv6 Address. If Remote SEPP IP is provided, it will be added in authority header while sending HTTP2 headers towards Remote SEPP. If Remote SEPP IP is not provided, FQDN is resolved to the corresponding IP endpoint using DNS. Hence, DNS configuration should be present for the FQDN. In this case, the authority header contains FQDN. Note: If IP is provided, the Server Name Indication (SNI) field in the TLS handshake message will not be populated with the SEPP FQDN. For SNI, only SEPP FQDN should be present and not the remote SEPP IP address.
isEnabled	boolean	O	Remote SEPP is True (enabled) or False (disabled). Default Value: False
port	integer	O	Valid port number.
apiPrefix	String	M	Prefix that can be appended in the URI for route matching. Default Value: ""
apiVersion	String	O	V1 (version 1) is the supported value. Default Value: v1
priority	Integer	O	This parameter is currently not in use and is reserved for future release.
peerSetIds	String		This parameter is currently not in use and is reserved for future release.
sanValidationRequired	Boolean	O	SAN validation is enabled for incoming capability-exchange handshake request or not.
n32fqdn	String	O	This is a conditional parameter. This parameter describes the FQDN used for the forwarding plane. This is a mandatory parameter if user wants to use port segregation feature and configure different control plane and forward plane.

Table 2-4 (Cont.) Remote SEPP Parameters

Attribute	Data Type	Compliance	Description
n32fAddress	String	O	This parameter describes the IP Address used for the forwarding plane. The IP address can be IPv4 or IPv6. This will be configured only if control plane and forwarding plane configurations are different. Note: If IP is provided, the Server Name Indication (SNI) field in the TLS handshake message will not be populated with the SEPP FQDN. For SNI, only SEPP FQDN should be present and not the remote SEPP IP address.
n32fPort	String	C	This is a conditional parameter. This parameter describes the port used for the forwarding plane. This is a mandatory parameter if user wants to use port segregation feature and configure different control plane and forward plane.
Virtual Host	String	O	This parameter describes the virtual FQDN used for the load sharing between the Remote SEPPs.
healthApiPath	String	C	Conditional parameter. If present, healthAPIMethod also needs to be present. default value is null. URI sent as part of proactive monitoring of remote peer
healthApiMethod	String	C	Conditional parameter. If present, healthAPIPath also needs to be present. default value is null. URI sent as part of proactive monitoring of remote peer Only 2 Methods supported: GET and OPTIONS

PLMN Parameters

Table 2-5 PLMN Parameters

Attribute	Data Type	Compliance	Description
mcc	String	M	PLMN -Mobile Country code
mnc	String	M	PLMN- Mobile network code

Sample response body structure for GET operations:Resource API: *sepp-configuration/v1/RemoteSepp/*

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "name": "SEPP-5",
  "plmnIdList": [
    { "mcc": "333", "mnc": "222" },
    { "mcc": "444", "mnc": "666" }
  ],
  "domain": "multi.svc",
  "seppFqdn": "multiplmn2.inter.oracle.com",
  "securityCapabilityList": [
    "TLS"
  ],
  "remoteSeppIpAddress": "10.99.164.59",
  "port": 443,
  "apiPrefix": "",
  "isEnabled": "TRUE",
  "apiVersion": "v1",
  "priority": 0,
  "peerSetIds": "RPS-1"
}
```

Resource API: */sepp-configuration/v1/remotesepp/{name}*

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "name": "SEPP-5",
  "plmnIdList": [
    { "mcc": "333", "mnc": "222" },
    { "mcc": "444", "mnc": "666" }
  ],
  "domain": "multi.svc",
  "seppFqdn": "multiplmn2.inter.oracle.com",
  "securityCapabilityList": [
    "TLS"
  ],
  "remoteSeppIpAddress": "10.99.164.59",
  "port": 443,
  "apiPrefix": "",
  "isEnabled": "TRUE",
  "apiVersion": "v1",
  "priority": 0,
  "peerSetIds": "RPS-1"
}
```

Sample response body structure for POST operations:

Resource API: *sepp-configuration/v1/RemoteSepp/*

Resource Method: POST

Content Type: application/json

Response Body

```
{
  "name": "SEPP-6",
  "plmnIdList": [
    { "mcc": "333", "mnc": "222" },
    { "mcc": "444", "mnc": "555" }
  ],
  "domain": "chandra.svc",
  "seppFqdn": "sepp8.inter.oracle.com",
  "securityCapabilityList": [
    "TLS"
  ],
  "remoteSeppIpAddress": "10.99.164.59",
  "virtualHost": "psepp.5gc.mnc111.mcc345.3gppnetwork.org",
  "port": 443,
  "apiPrefix": "",
  "isEnabled": "TRUE",
  "apiVersion": "v1",
  "priority": 0,
  "n32fFQDN": "n32f.fqdn",
  "n32fAddress": "10.233.20.163",
  "n32fPort": 8090
}
```

Sample response body structure for PUT operations:

Resource API: *sepp-configuration/v1/RemoteSepp/*

Resource Method: PUT

Content Type: application/json

Response Body

```
{
  "name": "SEPP-5",
  "plmnIdList": [
    { "mcc": "335", "mnc": "222" },
    { "mcc": "666", "mnc": "789" },
    { "mcc": "444", "mnc": "555" }
  ],
  "domain": "multi.svc",
  "seppFqdn": "sepp1.inter.oracle.com",
  "securityCapabilityList": [
    "TLS"
  ],
  "remoteSeppIpAddress": "10.99.121.202",
  "port": 443,
  "apiPrefix": "",
  "isEnabled": "TRUE",
  "apiVersion": "v1",
  "priority": 0,
  "n32fFQDN": "n32f.fqdn",

```

```
"n32fAddress": "10.233.20.163" ,
  "remoteSeppIpAddress": "10.233.62.145", "n32fPort": 8090}
```

Sample response body structure for DELETE operations:

Resource API: *sepp-configuration/v1/RemoteSepp/*

Resource Method: DELETE

Content Type: application/json

Response Body

```
{204 No Content}
```

If there is an error, then the response will be error message.

Sample Response body structure for PATCH operations:

Resource API: *sepp-configuration/v1/RemoteSepp/*

Resource Method: PATCH

Content Type: application/json

Response Body:

```
{"plmnIdList":[{"mcc":"335","mnc":"222"}, {"mcc":"444","mnc":"555"},
{"mcc":"666","mnc":"769"}], "port":0, "priority":0}
```

2.3 Remote SEPP Set

Remote SEPP Set REST API returns all the configured Remote SEPP Sets.

Table 2-6 Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/remotesepset	This API is used to fetch the complete list of configured Remote SEPP Set (RSS).	Not required	List of RSS configured	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/remotesepset' \ -H 'accept: */*'

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/ remotesepset/ {name}	This API is used to fetch a particular Remote SEPP Set, the name of which is given as input.	name	RSS Configuration	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ remotesepset/ RSS-1' \ -H 'accept: */*'

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/remotesepset	This API is used to create Remote SEPP Set. Some additional parameters for newly added features have been added to this API.	RoamingPartnerSetDTO		<pre> curl -X 'POST' \ '<a href="http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/remotesepset">http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/remotesepset' \ -H 'accept: */.*' \ -H 'Content- Type: application /json' \ - d ' { { "name": "RPS-1", "primary": "SEPP-1", "serviceAPI AllowedList Options": { "serviceAPI AllowedList Name": "Default" }, "networkIdV alidationEn abled": { "networkIdV alidationLi stName": "Default", "messageFil teringOnNet </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre> workIdHeaderValidation ": false, "messageFilteringOnNetworkIdBodyValidation": false }, "ingressRateLimitingOptions": { "ingressRateLimitingEnabled": false, "capacity": 16000, "refillRate": 10000, "duration": 300, "requestTokens": 500, "errorConfiguration": { "action": "REJECT", "title": "string", "statusCode": 406 } }, "messageVal </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre> validationRemoteSeppSetConfiguration": { "messageValidationListName": "Default", "messageValidationOnBodyEnabled": false, "messageValidationOnQueryParametersEnabled": false }, "previousLocationCheckValidationEnabled": { "messageFilterOnPreviousLocationCheckEnabled": false, "previousLocationTriggerListName": : "Default" }, "verboseScmErrRspRSSConfiguration": { "verboseErrorResponseEnabled": false }, </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre>"timeUnAuth CheckValida tionEnabled ": { "messageFil terOnTimeUn AuthCheckEn abled": false } }</pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/ remoteseppset/ {name}	This API is used to update Remote SEPP Set configuration. Some additional parameters for newly added features have been added to this API.	RoamingPartnerSet Detailed Object		<pre> curl -X 'PUT' \ 'http:// <SEPP- Configurati on IP>:<PORT> /sepp- configurati on/v1/ remotesepps et/ <Name> ' \ -H 'accept: */*' \ -H 'Content- Type: application /json' \ -d ' { "name": "RPS-1", "primary": "SEPP-1", "serviceAPI AllowedList Options": { "serviceAPI AllowedList Name": "Default" }, "networkIdV alidationEn abled": { "networkIdV alidationLi </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre> stName": "Default", "messageFil teringOnNet workIdHeade rValidation ": false, "messageFil teringOnNet workIdBodyV alidation": false }, "ingressRat eLimitingOp tions": { "ingressRat eLimitingEn abled": false, "capacity": 16000, "refillRate ": 10000, "duration": 300, "requestTok ens": 500, "errorConfi guration": { "action": "REJECT", "title": "string", "statusCode </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre> ": 406 } }, "messageVal idationRemo teSeppSetCo nfiguration ": { "messageVal idationList Name": "Default", "messageVal idationOnBo dyEnabled": false, "messageVal idationOnQu eryParamete rsEnabled": false }, "previousLo cationCheck ValidationE nabled": { "messageFil terOnPrevio usLocationC heckEnabled ": false, "previousLo cationTrigg erListName" : "Default" }, "verboseScm ErrRspRSSCo nfig": { </pre>

Table 2-6 (Cont.) Remote SEPP Set REST API

Method	URL	Description	Input	Return	Example
					<pre> "verboseErrorResponseEnabled": false }, "timeUnAuthCheckValidationEnabled": { "messageFilterOnTimeUnAuthCheckEnabled": false } } </pre>
DELETE	/sepp-configuration/v1 / remoteseppset/{name}	This API is used to delete a specific remote partner set.	name	No content	<pre> curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1 / remoteseppset/RSS-1' \ -H 'accept: */*' </pre>

Remote SEPP Set Parameters

Table 2-7 Remote SEPP Set Parameters

Attribute	Description	Details
name	This is a mandatory parameter. The Profile name, which is a unique Identifier of record.	Data Type: String
primary	This is a conditional parameter. The name of Primary SEPP configured in the Remote SEPP Set, which is treated as the primary route in the forward plane.	Data Type: String
secondary	This is a conditional parameter. The name of Secondary SEPP configured in the Remote SEPP Set, which is treated as the secondary route in the forward plane.	Data Type: String

Table 2-7 (Cont.) Remote SEPP Set Parameters

Attribute	Description	Details
tertiary	This is a conditional parameter. The name of Tertiary SEPP configured in the Remote SEPP Set, which is treated as the tertiary route in the forward plane.	Data Type: String
serviceAPIAllowedListName	This is a mandatory parameter. Name of allowed list with allowed resource URIs and methods supported by Remote SEPP Set.	Data Type: String
triggerRuleListName	This is an optional parameter. This parameter contains the mediation trigger list name and trigger rules supported by the particular Remote SEPP Set.	Data Type: String
allowedProducerRemoteSeppSets	This is an optional parameter. List of allowed producer Remote SEPP Sets that can receive the N32F traffic from the specific consumer.	Data Type: String
ingressRateLimitingOptions	This is an optional parameter. It contains Ingress rate limiting configuration parameters for this Remote SEPP Set.	Data Type: Object
ingressRateLimitingEnabled	This is an optional parameter. A boolean value to enable and disable the Ingress rate limiting feature at this RSS level. True indicates that the feature is enabled. False indicates that the feature is disabled.	Data Type: boolean
networkIdValidationListName	This is a mandatory parameter. It contains the network ID validation list name supported by the particular Remote SEPP Set. This is a mandatory parameter, if the parameters <code>messageFilteringOnNetworkIdHeaderValidation</code> or <code>messageFilteringOnNetworkIdBodyValidation</code> are enabled.	Data Type: String
messageFilteringOnNetworkIdHeaderValidation	This is a mandatory parameter. Enables the network ID header validation feature.	Data Type: boolean
messageFilteringOnNetworkIdBodyValidation	This is a mandatory parameter. Enables network ID body validation feature	Data Type: boolean
sortTriggerRuleListName	This is an optional parameter. SOR trigger rule list name supported by the particular Remote SEPP Set.	Data Type: String
SorRemoteSeppValidation	This is an optional parameter. Check whether SOR is enabled at RSS Level.	Data Type: String

Table 2-7 (Cont.) Remote SEPP Set Parameters

Attribute	Description	Details
messageValidationOnBodyEnabled	This is an optional parameter. A boolean value to enable or disable the message validation on body at RSS level. True indicates that the feature is enabled. False indicates that the feature is disabled.	Data Type: boolean
messageValidationOnQueryParametersEnabled	This is an optional parameter. A boolean value to enable and disable the message validation on query parameters at RSS level. True indicates that the message validation on query parameters is enabled. False indicates that the message validation on query parameters is disabled.	Data Type: boolean
messageValidationListName	This is an optional parameter. Message validation list name supported by Remote SEPPs Set.	Data Type: string
featureEnabled	This is an optional parameter. A boolean value to enable or disable the Originating Network ID Header Support feature at Remote SEPP Set level. True indicates that the feature is enabled. False indicates that the feature is disabled.	Data Type: boolean
originatingNetworkIdHeaderName	This is a mandatory parameter. User needs to provide one of the header values, 3gpp-Sbi-Originating-Network-Id or 3gpp-Sbi-Asserted-Plmn-Id. Note: - When 3gpp-Sbi-Originating-Network-Id or 3gpp-Sbi-Asserted-PLMN-Id header is not present in incoming request at C-SEPP, then this configured header at Remote SEPP Set level is added in the request. - This configuration is not used by P-SEPP.	Data Type: String Default Value: 3gpp-Sbi-Originating-Network-Id
remotePlmnId	This is an optional parameter. User needs to provide a single remote PLMN ID string (mcc-mnc) from one of the supported PLMN IDs by this Remote SEPP Set. Note: User can only configure this after the RSS have been created and have been assigned the PLMN IDs. While creating the RSS, user needs to provide this as an empty string.	Data Type: String

Table 2-7 (Cont.) Remote SEPP Set Parameters

Attribute	Description	Details
verboseErrorResponseEnabled	This is an optional parameter. A boolean value to enable or disable the security counter measure feature error responses verbosity at Remote SEPP Set level. True indicates verbosity is enabled. False indicates verbosity is disabled. Note: If the boolean value is not provided, it will be saved as false while saving the Remote SEPP Set configuration.	Data Type: boolean Default Value: False
messageFilterOnTimeUnAuthCheckEnabled	This is an optional parameter. A boolean value to enable or disable the Cat-3 Time Check feature at Remote SEPP Set level. True indicates verbosity is enabled. False indicates verbosity is disabled.	Data Type: boolean Default Value: False

Note

- Remote SEPP Sets are created per PLMN. Every Remote SEPP Set consists of minimum 1 and maximum 3 Remote SEPP in primary, secondary, tertiary mode, and is used for N32F SBI message routing.
- The user must configure atleast one of the primary, secondary, or tertiary parameters.

Sample response body structure for GET operations:

Resource API: sepp-configuration/v1/RemoteSeppSet/

Resource Method: GET

Content Type: application/json

Response Body

```
[
  {
    "name": "RPS-1",
    "primary": "RPS-1",
    "serviceAPIAllowedListOptions": {
      "serviceAPIAllowedListName": "Default"
    },
    "mediationFeatureOptions": {},
    "plmnIdList": {
      "plmnIdList": [
        {
          "mcc": "900",
          "mnc": "900"
        }
      ]
    }
  }
]
```



```

    ]
  },
  "allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": []
  },
  "networkIdValidationEnabled": {
    "networkIdValidationListName": "Default",
    "messageFilteringOnNetworkIdHeaderValidation": false,
    "messageFilteringOnNetworkIdBodyValidation": false
  },
  "sorEnabled": {
    "sorTriggerRuleListName": "Default",
    "sorRemoteSeppValidation": false
  },
  "ingressRateLimitingOptions": {
    "ingressRateLimitingEnabled": false,
    "capacity": 500,
    "refillRate": 500,
    "duration": 500,
    "requestTokens": 500,
    "errorConfiguration": {
      "action": "REJECT",
      "title": "Too many requests sent3",
      "statusCode": 428
    }
  }
},
{
  "name": "RPSX",
  "primary": "RPSX",
  "serviceAPIAllowedListOptions": {
    "serviceAPIAllowedListName": "Default"
  },
  "mediationFeatureOptions": {},
  "plmnIdList": {
    "plmnIdList": [
      {
        "mcc": "222",
        "mnc": "110"
      },
      {
        "mcc": "222",
        "mnc": "011"
      },
      {
        "mcc": "222",
        "mnc": "108"
      },
      {
        "mcc": "222",
        "mnc": "109"
      },
      {
        "mcc": "222",
        "mnc": "100"
      }
    ]
  },

```

```
{
  "mcc": "222",
  "mnc": "122"
},
{
  "mcc": "222",
  "mnc": "123"
},
{
  "mcc": "222",
  "mnc": "102"
},
{
  "mcc": "222",
  "mnc": "124"
},
{
  "mcc": "222",
  "mnc": "103"
},
{
  "mcc": "222",
  "mnc": "125"
},
{
  "mcc": "222",
  "mnc": "126"
},
{
  "mcc": "222",
  "mnc": "104"
},
{
  "mcc": "222",
  "mnc": "127"
},
{
  "mcc": "222",
  "mnc": "105"
},
{
  "mcc": "222",
  "mnc": "128"
},
{
  "mcc": "222",
  "mnc": "106"
},
{
  "mcc": "222",
  "mnc": "129"
},
{
  "mcc": "222",
  "mnc": "107"
},
},
```

```

        {
            "mcc": "222",
            "mnc": "120"
        },
        {
            "mcc": "222",
            "mnc": "121"
        },
        {
            "mcc": "222",
            "mnc": "119"
        },
        {
            "mcc": "222",
            "mnc": "111"
        },
        {
            "mcc": "222",
            "mnc": "112"
        },
        {
            "mcc": "222",
            "mnc": "113"
        },
        {
            "mcc": "222",
            "mnc": "114"
        },
        {
            "mcc": "222",
            "mnc": "115"
        },
        {
            "mcc": "222",
            "mnc": "116"
        },
        {
            "mcc": "222",
            "mnc": "117"
        },
        {
            "mcc": "222",
            "mnc": "118"
        }
    ]
},
"allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": []
},
"networkIdValidationEnabled": {
    "networkIdValidationListName": "Default",
    "messageFilteringOnNetworkIdHeaderValidation": false,
    "messageFilteringOnNetworkIdBodyValidation": false
},
"sorEnabled": {
    "sorTriggerRuleListName": "Default",

```

```

        "sorRemoteSeppValidation": false
    },
    "ingressRateLimitingOptions": {
        "ingressRateLimitingEnabled": false,
        "capacity": 1,
        "refillRate": 1,
        "duration": 10,
        "requestTokens": 1,
        "errorConfiguration": {
            "action": "REJECT",
            "title": "Too many requests sent2",
            "statusCode": 429
        }
    }
},
{
    "name": "RPS2",
    "primary": "RPS2",
    "serviceAPIAllowedListOptions": {
    "serviceAPIAllowedListName": "Default"
},
    "mediationFeatureOptions": {},
    "plmnIdList": {
        "plmnIdList": [
            {
                "mcc": "333",
                "mnc": "110"
            },
            {
                "mcc": "333",
                "mnc": "111"
            },
            {
                "mcc": "333",
                "mnc": "109"
            },
            {
                "mcc": "333",
                "mnc": "101"
            },
            {
                "mcc": "333",
                "mnc": "123"
            },
            {
                "mcc": "333",
                "mnc": "102"
            },
            {
                "mcc": "333",
                "mnc": "124"
            },
            {
                "mcc": "333",
                "mnc": "125"
            }
        ]
    }
},

```

```
{
  "mcc": "333",
  "mnc": "103"
},
{
  "mcc": "333",
  "mnc": "126"
},
{
  "mcc": "333",
  "mnc": "104"
},
{
  "mcc": "333",
  "mnc": "105"
},
{
  "mcc": "333",
  "mnc": "127"
},
{
  "mcc": "333",
  "mnc": "128"
},
{
  "mcc": "333",
  "mnc": "106"
},
{
  "mcc": "333",
  "mnc": "107"
},
{
  "mcc": "333",
  "mnc": "129"
},
{
  "mcc": "333",
  "mnc": "108"
},
{
  "mcc": "333",
  "mnc": "120"
},
{
  "mcc": "333",
  "mnc": "121"
},
{
  "mcc": "333",
  "mnc": "100"
},
{
  "mcc": "333",
  "mnc": "122"
},
},
```

```

        {
            "mcc": "333",
            "mnc": "112"
        },
        {
            "mcc": "333",
            "mnc": "113"
        },
        {
            "mcc": "333",
            "mnc": "114"
        },
        {
            "mcc": "333",
            "mnc": "115"
        },
        {
            "mcc": "333",
            "mnc": "116"
        },
        {
            "mcc": "333",
            "mnc": "117"
        },
        {
            "mcc": "333",
            "mnc": "118"
        },
        {
            "mcc": "333",
            "mnc": "119"
        }
    ]
},
"allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": []
},
"networkIdValidationEnabled": {
    "networkIdValidationListName": "Default",
    "messageFilteringOnNetworkIdHeaderValidation": false,
    "messageFilteringOnNetworkIdBodyValidation": false
},
"sorEnabled": {
    "sorTriggerRuleListName": "Default",
    "sorRemoteSeppValidation": false
},
"ingressRateLimitingOptions": {
    "ingressRateLimitingEnabled": false,
    "capacity": 1,
    "refillRate": 1,
    "duration": 10,
    "requestTokens": 1,
    "errorConfiguration": {
        "action": "REJECT",
        "title": "Too many requests sent2",
        "statusCode": 429
    }
}

```

```

    }
  },
  {
    "name": "RPS3",
    "primary": "RPS3",
    "serviceAPIAllowedListOptions": {
      "serviceAPIAllowedListName": "Default"
    },
    "mediationFeatureOptions": {},
    "plmnIdList": {
      "plmnIdList": [
        {
          "mcc": "111",
          "mnc": "112"
        }
      ]
    },
    "allowedProducerRemoteSeppSets": {
      "allowedProducerRemoteSeppSets": []
    },
    "networkIdValidationEnabled": {
      "networkIdValidationListName": "Default",
      "messageFilteringOnNetworkIdHeaderValidation": false,
      "messageFilteringOnNetworkIdBodyValidation": false
    },
    "sorEnabled": {
      "sorTriggerRuleListName": "Default",
      "sorRemoteSeppValidation": false
    },
    "ingressRateLimitingOptions": {
      "ingressRateLimitingEnabled": false,
      "capacity": 2000,
      "refillRate": 2000,
      "duration": 1,
      "requestTokens": 10,
      "errorConfiguration": {
        "action": "REJECT",
        "title": "Too many requests sent",
        "statusCode": 429
      }
    },
    "messageValidationRemoteSeppSetConfiguration": {
      "messageValidationOnQueryParametersEnabled": false,
      "messageValidationOnBodyEnabled": false,
      "messageValidationListName": "Default"
    },
    "originatingNetworkIdHeaderSupport": {
      "featureEnabled": true,
      "originatingNetworkIdHeaderName": "3gpp-Sbi-Asserted-Plmn-Id",
      "remotePlmnId": "111-222"
    },
    "previousLocationCheckValidationEnabled": {
      "messageFilterOnPreviousLocationCheckEnabled": false,
      "previousLocationTriggerListName": "Default"
    }
  },

```

```

    "verboseScmErrRspRSSConfig": {
      "verboseErrorResponseEnabled": false
    },
    "timeUnAuthCheckValidationEnabled": {
      "messageFilterOnTimeUnAuthCheckEnabled": false
    }
  }
]

```

Sample response body structure for GET operations:

Resource API: /sepp-configuration/v1/remotesepplibset/{name}

Resource Method: GET

Content Type: application/json

Response Body

```

[ {
  "name": "RPS3",
  "primary": "RPS3",
  "serviceAPIAllowedListOptions": {
    "serviceAPIAllowedListName": "Default"
  },
  "mediationFeatureOptions": {},
  "plmnIdList": {
    "plmnIdList": [
      {
        "mcc": "111",
        "mnc": "112"
      }
    ]
  },
  "allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": []
  },
  "networkIdValidationEnabled": {
    "networkIdValidationListName": "Default",
    "messageFilteringOnNetworkIdHeaderValidation": false,
    "messageFilteringOnNetworkIdBodyValidation": false
  },
  "sorEnabled": {
    "sorTriggerRuleListName": "Default",
    "sorRemoteSeppValidation": false
  },
  "ingressRateLimitingOptions": {
    "ingressRateLimitingEnabled": false,
    "capacity": 2000,
    "refillRate": 2000,
    "duration": 1,
    "requestTokens": 10,
    "errorConfiguration": {
      "action": "REJECT",
      "title": "Too many requests sent",
      "statusCode": 429
    }
  }
} ],

```



```

    "messageValidationRemoteSeppSetConfiguration": {
      "messageValidationOnQueryParametersEnabled": true,
      "messageValidationOnBodyEnabled": true,
      "messageValidationListName": "Default" }

    "originatingNetworkIdHeaderSupport": {
      "featureEnabled": true,
      "originatingNetworkIdHeaderName": "3gpp-Sbi-Asserted-Plmn-Id",
      "remotePlmnId": "111-222"
    },
    "previousLocationCheckValidationEnabled": {
      "messageFilterOnPreviousLocationCheckEnabled": false,
      "previousLocationTriggerListName": "Default"
    }
  },
  "verboseScmErrRspRSSConfig": {
    "verboseErrorResponseEnabled": false
  },
  "timeUnAuthCheckValidationEnabled": {
    "messageFilterOnTimeUnAuthCheckEnabled": false
  }
}

```

Sample response body structure for POST operations:

Resource API: sepp-configuration/v1/RemoteSeppSet/

Resource Method: POST

Content Type: application/json

Request Body

```

curl -v http://127.0.0.1:9090/sepp-configuration/v1/remotesepset -d '{
  "name": "RSS-2",
  "primary": "RSS-2",
  "secondary": "string",
  "tertiary": "string",
  "serviceAPIAllowedListOptions": {
    "serviceAPIAllowedListName": "Default"
  },
  "mediationFeatureOptions": {
    "triggerRuleListName": "Default"
  },
  "plmnIdList": {
    "plmnIdList": [
      {
        "mcc": "string",
        "mnc": "string"
      }
    ]
  },
  "allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": [
      "string"
    ]
  },
  "networkIdValidationEnabled": {

```

```

        "networkIdValidationListName": "Default",
        "messageFilteringOnNetworkIdHeaderValidation": true,
        "messageFilteringOnNetworkIdBodyValidation": true
    },
    "sorEnabled": {
        "sorTriggerRuleListName": "string",
        "sorRemoteSeppValidation": true
    },
    "ingressRateLimitingOptions": {
        "ingressRateLimitingEnabled": true,
        "capacity": 16000,
        "refillRate": 10000,
        "duration": 300,
        "requestTokens": 500,
        "errorConfiguration": {
            "action": "REJECT",
            "title": "Too Many Requests sent",
            "statusCode": 429
        }
    }
}
    "messageValidationRemoteSeppSetConfiguration": {
        "messageValidationOnQueryParametersEnabled": true,
    "messageValidationOnBodyEnabled": true,
        "messageValidationListName": "Default"
    }
    "originatingNetworkIdHeaderSupport": {
        "featureEnabled": true,
        "originatingNetworkIdHeaderName": "3gpp-Sbi-Asserted-Plmn-Id",
        "remotePlmnId": "111-222"
    },
    "previousLocationCheckValidationEnabled": {
        "messageFilterOnPreviousLocationCheckEnabled": false,
        "previousLocationTriggerListName": "Default"
    },
    "verboseScmErrRspRSSConfig": {
        "verboseErrorResponseEnabled": false
    },
    "timeUnAuthCheckValidationEnabled": {
        "messageFilterOnTimeUnAuthCheckEnabled": false
    }
}

```

Response Body

HTTP/1.1 200OK

Sample response body structure for PUT operations:

Resource API: sepp-configuration/v1/RemoteSeppSet/psepp-2

Resource Method: PUT

Content Type: application/json

Request Body

```

curl -X 'PUT' \
  'http://127.0.0.1:9090/sepp-configuration/v1/remotesepset/RSS-2' \

```

```

-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "name": "RSS-2",
  "primary": "RSS-2",
  "secondary": "string",
  "tertiary": "string",
  "serviceAPIAllowedListOptions": {
    "serviceAPIAllowedListName": "Default"
  },
  "mediationFeatureOptions": {
    "triggerRuleListName": "default"
  },
  "plmnIdList": {
    "plmnIdList": [
      {
        "mcc": "string",
        "mnc": "string"
      }
    ]
  },
  "allowedProducerRemoteSeppSets": {
    "allowedProducerRemoteSeppSets": [
      "string"
    ]
  },
  "networkIdValidationEnabled": {
    "networkIdValidationListName": "default",
    "messageFilteringOnNetworkIdHeaderValidation": true,
    "messageFilteringOnNetworkIdBodyValidation": true
  },
  "sorEnabled": {
    "sorTriggerRuleListName": "string",
    "sorRemoteSeppValidation": true
  },
  "ingressRateLimitingOptions": {
    "ingressRateLimitingEnabled": true,
    "capacity": 16000,
    "refillRate": 10000,
    "duration": 300,
    "requestTokens": 500,
    "errorConfiguration": {
      "action": "REJECT",
      "title": "Too Many Requests sent",
      "statusCode": 429
    }
  },
  "originatingNetworkIdHeaderSupport": {
    "featureEnabled": true,
    "originatingNetworkIdHeaderName": "3gpp-Sbi-Asserted-Plmn-Id",
    "remotePlmnId": "111-222"
  },
  "messageValidationRemoteSeppSetConfiguration": {
    "messageValidationOnQueryParametersEnabled": true,
    "messageValidationOnBodyEnabled": true,
    "messageValidationListName": "Default"
  }
}'

```

```
"verboseScmErrRspRSSConfig": {  
    "verboseErrorResponseEnabled": false  
},  
"timeUnAuthCheckValidationEnabled": {  
    "messageFilterOnTimeUnAuthCheckEnabled": false  
}
```

Response Body

HTTP/1.1 200OK

Sample response body structure for DELETE operations:

Resource API: sepp-configuration/v1/RemoteSeppSet/{name}

Resource Method: DELETE

Content Type: application/json

Response Body

Resource API: sepp-configuration/v1/remotesep/{name}

{204 No Content}

If there is error, then the response will be the error message.

2.4 Topology Hiding

Topology Hiding REST API enables or disables the topology hiding feature. The user can configure the topology header, body, and path configurations.

Table 2-8 Topology Hiding

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/topology/configuration	Adds Actual to Pseudo values configuration required for Topology hiding 400 If bad request 409 If Value already exists If success, then 201 status code.	Actual value and list of pseudo values to be mapped with the given actual value	Configuration added successfully.	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/configuration -H 'Content-Type:application/json' -X POST -d '{ "actualValue": "udm26.5gc.mnc340.mcc313.3gppnetwork.org", "type": "FQDN", "pseudoValues": ["cyc009-cnf.nk.udm-001.5gc.mnc340.mcc313.3gppnetwork.org", "cyc010-cnf.nk.udm-002.5gc.mnc340.mcc313.3gppnetwork.org", "cyc011-cnf.nk.udm-003.5gc.mnc340.mcc313.3gppnetwork.org"]}'
DELETE	/sepp-configuration/v1/topology/configuration/{actualValue}	Delete the actual to pseudo mapping 400 If bad request If success, then 204 status code.	Actual Value to be deleted	HTTP Status 204	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/configuration/udm25.5gc.mnc340.mcc313.3gppnetwork.org -H 'Content-Type:application/json' -X DELETE

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/topology/configuration	Get all the actual-pseudo values.		List of actual - pseudo values	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/configuration -X GET
GET	/sepp-configuration/v1/topology/configuration/{actualValue}	Get pseudo values for particular actual value.		Pseudo values corresponding to actual value with type	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/configuration/udm1.5gc.mnc340.mcc313.3gpnetwork.org -X GET

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/topology/configuration/{actualValue}	Inserts a new record of actual-pseudo value 400 If bad request 409 If Value already exists If success, then 201 status code.		Configuration added successfully	curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/configuration/udm26.5gc.mnc340.mcc313.3gppnetwork.org -H 'Content-Type:application/json' -X PUT -d '{ "actualValue": "udm26.5gc.mnc340.mcc313.3gppnetwork.org", "type": "FQDN", "pseudoValues": ["cyc009-cnf.nk.udm-001.5gc.mnc340.mcc313.3gppnetwork.org", "cyc010-cnf.nk.udm-002.5gc.mnc340.mcc313.3gppnetwork.org", "cyc011-cnf.nk.udm-003.5gc.mnc340.mcc313.3gppnetwork.org"] '}
GET	/sepp-configuration/v1/topology/header/{headerId}	Fetch header that would be eligible for TH/TUH.	headerId	HeaderConfigurationDTO	curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/header/{headerId}
GET	/sepp-configuration/v1/topology/body/{topologyId}	Fetch topology body that would be eligible for TH/TUH	topologyId	TopologyBodyConfig	curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/body/{topologyId}

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/topology/body/{topologyId}	Insert a new identifier that would be eligible for Topology Hiding/Topology Recovery.	TopologyBodyConfig	Configuration added successfully.	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/configuration/udm26.5gc.mnc340.mcc313.3gppnetwork.org -H 'Content-Type:application/json' -X PUT -d '{ "topologyId": 0, "triggerPoints": "N32_Ingress_Request", "operation": "TH", "method": "GET", "apiUrl": "string", "identifier": "string", "pattern": "string" }'
GET	/sepp-configuration/v1/topology/body	Fetch all the identifiers.	NA	List of TopologyBodyConfig	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/body \ -H 'accept: */*'
DELETE	/sepp-configuration/v1/topology/body/{topologyId}	delete the identifier that belongs to id - topologyId.	topologyId	HTTP Status 204	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/body/4 \ -H 'accept: */*'
GET	/sepp-configuration/v1/topology/header	Fetch all the header configuration available in header table.	NA	List of headers	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/header \ -H 'accept: */*'

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/topology/header/{headerId}	Insert a new header that would be eligible for TH/TUH.	headerId,HeaderConfiguration	Header created successfully	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/header/3' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "headerId": 0, "headerName": "string", "triggerPoints": "N32_Egress_Request", "operation": "TH", "regExp": "string"}'
DELETE	/sepp-configuration/v1/topology/header/{headerId}	Delete associated header.	headerId	HTTP Status 204	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/header/6' \ -H 'accept: */*'
GET	/sepp-configuration/v1/topology/options	List topology configuration options available.	TopologyOptionsDTO	TopologyOptions	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/options' \ -H 'accept: */*'

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/topology/options	Update options configurations.	TopologyOption sDTO	HTTP Status 200	<pre>curl -X 'PUT' \ 'http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/options' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "optionId": 0, "messageRoute": "FORWARD", "errorCode": "string", "errorDescription": "string", "multiPseudoValueOptionEnable": true, "topologyHiding": true }' q</pre>
GET	/sepp-configuration/v1/topology/path	Fetch all the path configurations.	NA	List of TopologyPathConfig	<pre>curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/path</pre>

Table 2-8 (Cont.) Topology Hiding

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/topology/path/{topologyId}	Insert a new identifier configuration that would be eligible for Topology Hiding/Topology Recovery.	TopologyPathConfig	Configuration added successfully.	curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/sepp-configuration/v1/topology/path/1 -H 'Content-Type:application/json' -X PUT -d '{ "topologyId":0, "triggerPoints": "N32_Ingress_Request", "operation": "TH", "method": "GET", "apiUrl": "string", "string", "identifier": "string", "pattern": "string" }'
DELETE	/sepp-configuration/v1/topology/path/{topologyId}	Delete the identifier that belongs to id - topologyId.	topologyId	HTTP Status 204	curl -v http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/path/4' \ -H 'accept: */*'

GET	/sepp-configuration/v1/topology/header/{headerId}	Fetch header that would be eligible for TH/TUH.	headerId	HeaderConfigurationDTO	curl -v <a href="http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/header/{headerId}">http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/header/{headerId}
GET	/sepp-configuration/v1/topology/body/{topologyId}	Fetch Topology Body that would be eligible for TH/TUH	topologyId	TopologyBodyConfig	curl -v <a href="http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/body/{topologyId}">http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/topology/body/{topologyId}

Topology Hiding Parameters

Table 2-9 Topology Hiding Parameters

Attribute	Data type	Description
pseudoValueConfiguration	Object	This is a mandatory parameter. Actual to Pseudo Value Configuration.
actualValueConfiguration	Object	This is a mandatory parameter. Actual Value in the Actual to Pseudo mapping.
topologyOptionsDTO	Boolean	This is an optional parameter. Options available to configure in the topology. The feature is disabled (set to false) by default.
headerConfigurationDTO	Object	This is a mandatory parameter. Headers configuration to add new header.
topologyBodyConfig	Object	This is a mandatory parameter. Configuration to add new body.
topologyPathConfig	Object	This is a mandatory parameter. Configuration to add new path.

Pseudo Value Configuration**Table 2-10 Pseudo Value Configuration**

Attribute	Data type	Description
actualValue	String	This is a mandatory parameter. This is used to compare with the individual header value
pseudoValues	String	This is a mandatory parameter. List of all pseudo values for a particular actual value
type	Enum	This is a mandatory parameter. Type of actual value to be updated

Actual Configuration**Table 2-11 Actual Configuration**

Attribute	Data type	Description
actualValue	String	This is a mandatory parameter. Actual value

Topology Options

Table 2-12 Topology Options

Attribute	Data type	Description
optionId	Integer	This is a mandatory parameter. primary ID
messageDirection	Enum	This is a mandatory parameter. REJECT/FORWARD
errorCode	String	This is a mandatory parameter. Error code.
errorDescription	String	This is a mandatory parameter. error description.
multiPseudoValueOptionEnable	boolean	This is an optional parameter. To enable or disable the multiPseudoValueOptionEnable. The feature is disabled (set to false) by default.
topologyHiding	boolean	This is an optional parameter. To enable or disable topology hiding. The feature is disabled (set to false) by default.

Header Configurations**Table 2-13 Header Configurations**

Attribute	Data type	Description
headerId	Integer	This is a mandatory parameter. primary ID.
headerName	String	This is a mandatory parameter. Name of the header.
regExp	String	This is a mandatory parameter. Regular Expression for the header.
triggerPoint	Enum	This is a mandatory parameter. Request Ingress, Response Ingress, Request Egress, Response Egress.
operation	Enum	This is a mandatory parameter. Topology Hiding or Topology Recovery.

Topology Body Configurations**Table 2-14 Topology Body Configurations**

Attribute	Data type	Description
topologyId	Integer	This is a mandatory parameter. primary id.

Table 2-14 (Cont.) Topology Body Configurations

Attribute	Data type	Description
apiUrl	String	This is a mandatory parameter. API Resource that comes from default table.
identifier	String	This is a mandatory parameter. identifier.
pattern	String	This is a mandatory parameter. regularExpression for identifier.
triggerPoints	Enum	This is a mandatory parameter. Request Ingress, Response Ingress, Request Egress, Response Egress.
operation	Enum	This is a mandatory parameter. Topology Hiding /Topology Recovery.
method	Enum	This is a mandatory parameter. GET/PUT/POST/DELETE/ PATCH

Topology Path Configurations**Table 2-15 Topology Path Configurations**

Attribute	Data type	Description
topologyId	Integer	This is a mandatory parameter. primary id.
apiUrl	String	This is a mandatory parameter. API Resource that comes from default table.
pattern	String	This is a mandatory parameter. Regular Expression for identifier.
triggerPoints	Enum	This is a mandatory parameter. Request Ingress, Response Ingress, Request Egress, Response Egress.
operation	Enum	This is a mandatory parameter. Topology Hiding/Topology Recovery.
method	Enum	This is a mandatory parameter. GET/PUT/POST/DELETE/ PATCH

Resource API : /sepp-configuration/v1/topology/configuration

Resource Method : GET

Content Type: application/json

Response Body

```
[{ "actualValue": "pcf1.inter.oracle.com", "pseudoValues":
[ "value1.inter.oracle.com"], "type": "FQDN" }, { "actualValue": "abc.com",
"pseudoValues": [ "pqr.com" ], "type": "FQDN" }, { "actualValue":
"udm26.5gc.mnc340.mcc313.3gppnetwork.org", "pseudoValues": [ "cyc009-
cnf.nk.udm-001.5gc.mnc340.mcc313.3gppnetwork.org", "cyc010-
cnf.nk.udm-002.5gc.mnc340.mcc313.3gppnetwork.org", "cyc011-
cnf.nk.udm-003.5gc.mnc340.mcc313.3gppnetwork.org" ], "type": "FQDN"}]
```

Resource API : /sepp-configuration/v1/topology/configuration/{actualValue}

Resource Method : GET

Content Type: application/json

Response Body

```
{ "actualValue": "pcf1.inter.oracle.com", "pseudoValues":
[ "value1.inter.oracle.com"], "type": "FQDN" }
```

Resource API : /sepp-configuration/v1/topology/configuration/{actualValue}

Resource Method : PUT

Content Type: application/json

Response Body

Configuration added successfully

Sample Response body structure for POST operations:

Resource API : /sepp-configuration/v1/topology/configuration

Resource Method : POST

Content Type: application/json

Response Body

Configuration added successfully

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/v1/topology/configuration/{actualValue}

Resource Method : DELETE

Content Type: application/json

Response Body

Status code 204

If there is an error then the response will be error message.

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/v1/topology/options (PUT)

Resource Method : PUT

Content Type: application/json

Response Body

Request:

```
curl -X 'PUT' \
  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
options' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "multiPseudoValueOptionEnable": true,
    "messageRoute": "FORWARD",
    "errorCode": "500",
    "errorDescription": "Internal Server",
    "topologyHiding": true
  }'
```

Response:

Saved

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/topology/options (GET)

Resource Method : GET

Content Type: application/json

Response Body

Request:

```
curl -X 'GET' \
  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
options' \
  -H 'accept: */*'
```

Response: {

```
  "optionId": 1,
  "multiPseudoValueOptionEnable": true,
  "messageRoute": "REJECT",
  "errorCode": "500",
  "errorDescription": "Internal Server",
  "topologyHiding": true }
```

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/topology/body (GET)

Resource Method : GET

Content Type: application/json

Response Body

```
[
  {
    "topologyId": 73,
    "triggerPoints": "N32_Egress_Request",
    "operation": "TH",
    "method": "POST",
    "apiUrl": "/nudm-sdm/v2/{supi}/sdm-subscriptions",
    "identifier": "nfInstanceId",
    "pattern": "^([0-9A-Fa-f]{8}-[0-9A-Fa-f]{4}-4[0-9A-Fa-f]{3}-[0-9A-Fa-f]{4}-[0-9A-Fa-f]{12})$"
  },
  {
    "topologyId": 113,
    "triggerPoints": "N32_Egress_Response",
    "operation": "TH",
    "method": "GET",
    "apiUrl": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "identifier": "smfInstanceId",
    "pattern": "^([0-9A-Fa-f]{8}-[0-9A-Fa-f]{4}-4[0-9A-Fa-f]{3}-[0-9A-Fa-f]{4}-[0-9A-Fa-f]{12})$"
  },
  {
    "topologyId": 149,
    "triggerPoints": "N32_Egress_Request",
    "operation": "TH",
    "method": "PUT",
    "apiUrl": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "pcscfRestorationCallbackUri",
    "pattern": "(?<=http://|https://)[^:/?]+"
  },
  {
    "topologyId": 177,
    "triggerPoints": "N32_Ingress_Response",
    "operation": "TUH",
    "method": "GET",
    "apiUrl": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "deregCallbackUri",
    "pattern": "(?<=http://|https://)[^:/?]+"
  },
  {
    "topologyId": 265,
    "triggerPoints": "N32_Egress_Request",
    "operation": "TH",
    "method": "PUT",
    "apiUrl": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
    "identifier": "pgwFqdn",
    "pattern": "^((?!:)/)(?=[1,255]$)(([1,63].){1,127}(?![0-9]*$)[a-z0-9-]?)"
  },
  {
    "topologyId": 289,
    "triggerPoints": "N32_Ingress_Response",
    "operation": "TUH",
    "method": "PUT",

```

```

    "apiUrl": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
    "identifier": "smfInstanceId",
    "pattern": "^[0-9A-Fa-f]{8}-[0-9A-Fa-f]{4}-4[0-9A-Fa-f]{3}-[0-9A-Fa-f]{4}-[0-9A-Fa-f]{12}$"
  },
  {
    "topologyId": 117,
    "triggerPoints": "N32_Egress_Response",
    "operation": "TH",
    "method": "GET",
    "apiUrl": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "identifier": "pgwFqdn",
    "pattern": "^(?!:/.)(?=[1,255]$)((.[1,63].){1,127}(?![0-9]*$)[a-z0-9-]?"
  }
]

```

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/v1/topology/body (PUT)

Resource Method : PUT

Content Type: application/json

Response Body

Request:

```

curl -X 'PUT' \
  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/body' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "triggerPoints": "N32_Egress_Request",
    "operation": "TH",
    "method": "GET",
    "apiUrl": "/nnrf-disc/v1/nf-instances",
    "identifier": "nfInstanceId",
    "pattern": "ALL"
  }'

```

Response:

Configuration updated successfully.

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/v1/topology/body (DELETE)

Resource Method : DELETE

Content Type: application/json

Response Body

```

Request: curl -X 'GET' \ curl -X 'DELETE' \
  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/body/1' \

```

```
-H 'accept: */*'
```

Response:
204 No Content

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/topology/header (GET)

Resource Method : GET

Content Type: application/json

Response Body

```
Request: curl -X 'GET' \
'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
header' \
-H 'accept: */*'
```

```
Response:  [  [
{
  "headerId": 1,
  "headerName": "via",
  "regExp": "(?<=SCP-).*|(?<=http://|https://)[^:/?]+",
  "triggerPoints": "N32_Egress_Request",
  "operation": "TH"
},
{
  "headerId": 2,
  "headerName": "via",
  "regExp": "(?<=SCP-).*",
  "triggerPoints": "N32_Egress_Response",
  "operation": "TH"
},
{
  "headerId": 3,
  "headerName": "location",
  "regExp": "(?<=http://|https://)[^:/?]+",
  "triggerPoints": "N32_Egress_Response",
  "operation": "TUH"
},
{
  "headerId": 4,
  "headerName": "server",
  "regExp": "(?<=http://|https://)[^:/?]+",
  "triggerPoints": "N32_Egress_Response",
  "operation": "TH"
},
{
  "headerId": 5,
  "headerName": "3gpp-sbi-target-apiroot",
  "regExp": "(?<=http://|https://)[^:/?]+",
  "triggerPoints": "N32_Ingress_Request",
  "operation": "TUH"
},
{

```

```

        "headerId": 6,
        "headerName": "3gpp-sbi-routing-binding",
        "regExp": "(?<=http://|https://)[^:/?]+",
        "triggerPoints": "N32_Egress_Response",
        "operation": "TH"
    },
    {
        "headerId": 7,
        "headerName": "3gpp-sbi-binding",
        "regExp": "(?<=http://|https://)[^:/?]+",
        "triggerPoints": "N32_Ingress_Request",
        "operation": "TUH"
    }
] ]

```

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/v1/topology/header (PUT)

Resource Method : PUT

Content Type: application/json

Response Body

Request:

```

curl -X 'PUT' \
  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
header' \
  -H 'accept: */*' \
  -H 'Content-Type: application/json' \
  -d '{
    "headerName": "via",
    "triggerPoints": "N32_Egress_Response",
    "operation": "TH",
    "regExp": "(?<=SCP-).*"
  }'

```

Response:

Header created successfully

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/v1/topology/header (DELETE)

Resource Method : DELETE

Content Type: application/json

Response Body

Request: curl -X 'DELETE' \

```

  'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
header/7' \
  -H 'accept: */*'

```

Response:
204 No Content

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/topology/body/{topologyId} (GET)

Resource Method : GET

Content Type: application/json

Response Body

Request:
curl -X 'GET' \
'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
body/59' \
-H 'accept: */*'

```
Response: {
  "topologyId": 59,
  "operation": "TH",
  "method": "GET",
  "apiUrl": "/nnrf-disc/v1/nf-instances",
  "identifier": "requester-nf-instance-id",
  "pattern": "(?<=SCP-).*|(?<=http://|https://)[^:/?]+"
}
```

Sample Response body structure for GET operations:

Resource API :/sepp-configuration/v1/topology/path (GET)

Resource Method : GET

Content Type: application/json

Response Body

```
[
  {
    "topologyId": 73,
    "triggerPoints": "N32_Egress_Request",
    "operation": "TH",
    "method": "POST",
    "apiUrl": "/nudm-sdm/v2/{supi}/sdm-subscriptions",
    "pattern": "^[[0-9A-Fa-f]{8}-[0-9A-Fa-f]{4}-4[0-9A-Fa-f]{3}-[0-9A-Fa-f]{4}-[0-9A-Fa-f]{12}$"
  },
  {
    "topologyId": 113,
    "triggerPoints": "N32_Egress_Response",
    "operation": "TH",
    "method": "GET",
    "apiUrl": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "pattern": "^[[0-9A-Fa-f]{8}-[0-9A-Fa-f]{4}-4[0-9A-Fa-f]{3}-[0-9A-Fa-f]{4}-[0-9A-Fa-f]{12}$"
  }
]
```

```
}
]
```

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/v1/topology/path (PUT)

Resource Method : PUT

Content Type: application/json

Response Body

Request:

```
curl -X 'PUT' \
'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/path' \
-H 'accept: */*' \
-H 'Content-Type: application/json' \
-d '{
  "triggerPoints": "N32_Egress_Request",
  "operation": "TH",
  "method": "GET",
  "apiUrl": "/nnrf-disc/v1/nf-instances",
  "pattern": "ALL"
}'
```

Response:

Configuration updated successfully.

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/v1/topology/path (DELETE)

Resource Method : DELETE

Content Type: application/json

Response Body

```
Request: curl -X 'GET' \ curl -X 'DELETE' \
'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/path/1' \
-H 'accept: */*'
Response:
204 No Content
```

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/topology/path/{topologyId} (GET)

Resource Method : GET

Content Type: application/json

Response Body

Request:

```
curl -X 'GET' \
```

```
'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/topology/
path/59' \
-H 'accept: */*'
```

```
Response: {
  "topologyId": 59,
  "operation": "TH",
  "method": "GET",
  "apiUrl": "/nnrf-disc/v1/nf-instances",
  "pattern": "(?<=SCP-).*|(?<=http://|https://)[^:/?]+"
}
```

2.5 Logging

Logging Rest API returns the application based log level and package based log level.

Table 2-16 Logging Rest API

Method	URL	Description	Input	Return	Example
GET All	/sepp-configuration/sepp/nf-common-component/v1/all/logging	Retrieve log level details for all common and SEPP modules	NA	Log Level Options	curl -X GET http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/sepp/nf-common-component/v1/all/logging
GET	/sepp-configuration/sepp/nf-common-component/v1/{name}/logging	Retrieve log level details by name for SEPP modules other than Gateway.	Name of module	App and package log level	curl -X GET http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/sepp/nf-common-component/v1/cn32/logging
PUT	/sepp-configuration/sepp/nf-common-component/v1/{name}/logging	Update log level details by name for SEPP modules other than Gateway.	Path Parameter name of module and json app and package log level	App and package log level	curl -X PUT -H 'Content-Type: application/json' -d '{"appLogLevel": "DEBUG", "packageLogLevel": [{"packageName": "root", "logLevelForPackage": "DEBUG"}]}' http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/sepp/nf-common-component/v1/cn32c/logging
GET (Common Service)	/sepp/nf-common-component/v1/{serviceName}/{instanceId}/logging	Retrieve the log level details for common services such as IGW and EGW	NA	Log Level Options	curl -X GET http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/egw/n32/logging

Table 2-16 (Cont.) Logging Rest API

Method	URL	Description	Input	Return	Example
PUT (Common Service)	/sepp/nf-common-component/v1/{serviceName}/{instanceId}/logging	Update log level for common services such as IGW and EGW	Log Level Options	Log Level Options	curl -X PUT -H 'Content-Type: application/json' -d '{"appLogLevel": "DEBUG", "packageLogLevel": [{"packageName": "root", "logLevelForPackage": "DEBUG"}], {"packageName": "oauth", "logLevelForPackage": "DEBUG"}]' http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/egw/n32/logging

Logging Parameters

Table 2-17 Logging Parameters

Attribute	Data Type	Compliance	Description
appLogLevel	String	M	Application based Log Level
packageName	String	M	Package Name
logLevelForPackage	String	M	Log level of each corresponding packages. Example: For Package root, the loglevel can be ERROR.

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/sepp/nf-common-component/v1/all/logging

Resource Method : GET All

Content Type: application/json

Response Body

```
[{"n32-ingress-gateway":{"appLogLevel":"ERROR","logDiscarding":
{"enabled":false,"featureToThresholdMapping":
[{"feature":"RATE_LIMITING","thresholdFactor":100},
{"feature":"OVERLOAD_CONTROL","thresholdFactor":100},
{"feature":"ROUTE_LEVEL_RATE_LIMITING","thresholdFactor":100},
{"feature":"RSS_RATE_LIMITING","thresholdFactor":100},
{"feature":"EGRESS_RATE_LIMITING","thresholdFactor":100}], "packageLogL
evel":[{"packageName":"root","logLevelForPackage":"ERROR"},
{"packageName":"oauth","logLevelForPackage":"ERROR"}]}, "logSubscriberI
```



```

nfo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"n32-egress-
gateway\": {\"appLogLevel\": \"ERROR\", \"logDiscarding\":
{\"enabled\": false, \"featureToThresholdMapping\":
[{\"feature\": \"RATE_LIMITING\", \"thresholdFactor\": 100},
{\"feature\": \"NOTIFICATION_RATE_LIMITING\", \"thresholdFactor\": 100}], \"packa
geLogLevel\": [{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"},
{\"packageName\": \"oauth\", \"logLevelForPackage\": \"ERROR\"}], \"logSubscriberI
nfo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"plmn-ingress-
gateway\": {\"appLogLevel\": \"ERROR\", \"logDiscarding\":
{\"enabled\": false, \"featureToThresholdMapping\":
[{\"feature\": \"RATE_LIMITING\", \"thresholdFactor\": 100},
{\"feature\": \"OVERLOAD_CONTROL\", \"thresholdFactor\": 100},
{\"feature\": \"ROUTE_LEVEL_RATE_LIMITING\", \"thresholdFactor\": 100},
{\"feature\": \"RSS_RATE_LIMITING\", \"thresholdFactor\": 100},
{\"feature\": \"EGRESS_RATE_LIMITING\", \"thresholdFactor\": 100}], \"packageLogL
evel\": [{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"},
{\"packageName\": \"oauth\", \"logLevelForPackage\": \"ERROR\"}], \"logSubscriberI
nfo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"plmn-egress-
gateway\": {\"appLogLevel\": \"ERROR\", \"logDiscarding\":
{\"enabled\": false, \"featureToThresholdMapping\":
[{\"feature\": \"RATE_LIMITING\", \"thresholdFactor\": 100},
{\"feature\": \"NOTIFICATION_RATE_LIMITING\", \"thresholdFactor\": 100}], \"packa
geLogLevel\": [{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"},
{\"packageName\": \"oauth\", \"logLevelForPackage\": \"ERROR\"}], \"logSubscriberI
nfo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"alternate-
route\": {\"appLogLevel\": \"WARN\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"WARN\"}], \"additionalError
Logging\": \"DISABLED\"}, \"config-mgr-
svc\": {\"appLogLevel\": \"ERROR\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"}]}, \"cn32c-
svc\": {\"appLogLevel\": \"ERROR\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"}]}, \"pn32c-
svc\": {\"appLogLevel\": \"ERROR\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"}]}, \"pn32f-
svc\": {\"appLogLevel\": \"ERROR\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"}]}, \"nrf-client-
nfmanagement\": {\"appLogLevel\": \"WARN\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"WARN\"}], \"logSubscriberIn
fo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"nrf-client-
nfdiscovery\": {\"appLogLevel\": \"WARN\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"WARN\"}], \"logSubscriberIn
fo\": \"DISABLED\", \"additionalErrorLogging\": \"DISABLED\"}, \"perf-
info\": {\"appLogLevel\": \"INFO\"}, \"app-
info\": {\"appLogLevel\": \"INFO\"}, \"nf-
mediation\": {\"appLogLevel\": \"WARN\", \"packageLogLevel\": null}, \"coherence\":
{\"appLogLevel\": \"ERROR\", \"packageLogLevel\":
[{\"packageName\": \"root\", \"logLevelForPackage\": \"ERROR\"}]}}]

```

Resource API : /sepp-configuration/sepp/nf-common-component/v1/{name}/logging

Resource Method : GET

Content Type: application/json

Response Body

```
{ "appLogLevel": "DEBUG", "packageLogLevel":
[{"packageName": "root", "logLevelForPackage": "DEBUG"}]}
```

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/sepp/nf-common-component/v1/{name}/logging

Resource Method : PUT

Content Type: application/json

Response Body

```
{ "appLogLevel": "DEBUG", "packageLogLevel":
[{"packageName": "root", "logLevelForPackage": "DEBUG"}]}
```

2.6 CNCC SEPP Menu and Data Model API

This API is integrated with Console. Invoking this API returns menuCncc.json and SEPP json data models.

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/cncc/datamodel/{configType}	This API is integrated with Console. Invoking this API returns menuCncc.json and SEPP json data models.. 404 Error if configType not found.	Input configType : Value can be SEPP menu (menuCncc) or SEPP JSON data model file name (handshake.json, roamingProfile.json etc)	Response menuCncc json file or any other SEPP cncc configuration json file for which request is received.	curl -v http://<SEPPConfiguration IP>:<PORT> /sepp-configuration/v1/cncc/datamodel/ menuCncc-X GET

CNCC Data Model: Parameters

Table 2-18 CNCC Data Model Parameters

Attribute	Description	Details
configType	This is mandatory parameter. Name of cncc configuration json file	DataType: String Default Value:

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/cncc/datamodel/{configType}

Resource Method: GET

Content Type: application/json

Response Body

```

{
  "menu": {
    "routeConfig": {
      "home": {
        "label": "Home",
        "value": "home",
        "isDefault": true
      },
      "commonServices": {
        "label": "Common Services",
        "value": "commonServices",
        "isDefault": true
      },
      "services/{nf}/{service}": {
        "label": "Services",
        "value": "services"
      },
      "configurations/{nf}/{configType}": {
        "label": "Configurations",
        "value": "configurations"
      },
      "provisioning/{nf}/{provisioningType}": {
        "label": "Provisioning",
        "value": "provisioning"
      }
    },
    "menuItems": [
      {
        "attr": {
          "id": "home",
          "name": "Home"
        }
      },
      {
        "attr": {
          "id": "commonServices/cs",
          "name": "Common Services"
        }
      },
      {
        "attr": {
          "id": "nf-sepp",
          "name": "SEPP",
          "sequence": 1
        },
        "children": [
          {
            "attr": {
              "id": "configurations/sepp/handshake",
              "name": "Handshake Status",
              "sequence": 10
            }
          }
        ]
      },
      {

```

```

        "attr": {
          "id": "services/sepp/conLoggingLevel",
          "name": "Logging Config",
          "sequence": 20
        }
      },
      {
        "attr": {
          "id": "configurations/sepp/roamingProfile",
          "name": "Remote SEPP",
          "sequence": 30
        }
      },
      {
        "attr": {
          "id": "configurations/sepp/roamingProfileSet",
          "name": "Remote SEPP Set",
          "sequence": 40
        }
      },
      {
        "attr": {
          "id": "services/sepp/feature",
          "name": "System Options",
          "sequence": 50
        }
      },
      {
        "attr": {
          "id": "TOPOLOGY HIDING",
          "name": "Topology Hiding",
          "sequence": 60
        },
        "children": [
          {
            "attr": {
              "id": "configurations/sepp/configuration",
              "name": "Pseudo Values",
              "sequence": 10
            }
          }
        ]
      }
    ]
  }
}

```

2.7 Mediation System Option

Mediation System Option REST API enables or disables the mediation feature.

Table 2-19 Mediation System Option

Method	URL	Description	Input	Return	Example
GET	sepp-configuration/v1/mediation/feature	Fetch mediation feature option details and Error Configuration Data	MediationTriggerRulesSystemOptions Object containing Mediation Feature Option value and Error Configuration Data	MediationTriggerRulesSystemOptions	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/mediation/feature -X GET
PUT	sepp-configuration/v1/mediation/feature	Edit mediation feature option details and Error Configuration Data	MediationTriggerRulesSystemOptions Object containing Mediation Feature Option value and Error Configuration Data	MediationTriggerRulesSystemOptions	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/mediation/feature' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d ' { "enabled": true, "errorConfiguration": { "title": "Mediation Service error", "statusCode": 406, "action": "REJECT" } }

Mediation System Option Parameters

Table 2-20 Mediation System Option Parameters

Attribute	Data Type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
enabled	Boolean	O	Specifies the whether to enable or disable the mediation feature. The feature is disabled (set to false) by default.
errorConfiguration	MediationErrorResponseConfigurationDTO	C Optional, if feature is disabled. Mandatory, if feature is enabled.	Error Configuration Data
title	String	M	Title and details of Error
statusCode	Integer	M	Status Code of error of configured
action	String	M	Action need to be taken when mediation filtering condition reaches an error state. Range: REJECT or CONTINUE

Sample Response body structure for GET operations:

Resource API : sepp-configuration/v1/mediation/feature

Resource Method : GET

Content Type: application/json

Response Body

```
{
  "enabled": true,
  "errorConfiguration": {
    "title": "string",
    "statusCode": 0,
    "action": "string"
  }
}
```

Sample Response body structure for PUT operations:

Resource API : sepp-configuration/v1/mediation/feature

Resource Method : PUT

Content Type: application/json

Response Body

```
{
  "enabled": true,
  "errorConfiguration": {
    "title": "string",
    "statusCode": 0,
    "action": "string"
  }
}
```

2.8 Mediation Trigger Rule Configuration

Mediation Trigger Rule REST API allows the user to configure a set of trigger rules which act as a filtering criteria for SEPP to send a particular request for mediation.

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/sepp-mediation-trigger-rule-list	Retrieves all Mediation trigger point configurations.	NA`	List<MediationTriggerRulesDTO> List of Trigger Rules.	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/{version}/sepp-mediation-trigger-rule-list -X GET
GET	/sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}	Gets Mediation trigger point configuration for given ruleName	Trigger Rule Name	MediationTriggerRulesDTO Trigger Rules for the specific name.	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{ruleName} -X GET

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}	Configures Mediation trigger point configuration for given data	MediationTriggerRulesDTO TriggerRulesList configuration details	MediationTriggerRulesDTO Trigger Rules for the specific name.	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sepp-mediation-trigger-rule-list/TRL1' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "triggerRuleListName": "TRL1", "triggerRules": [{ "triggerPoints": ["N32_Egress_Request"], "resourceURI": "/nsmf-pdusession/v1/pdu-sessions", "groupId": "SMF", "httpMethod": "POST" }], "matchAllEnabled": false, "ruleApplied": "REMOTE", "matchAllTriggerPoints": ["N32_Egress_Request"], "matchAllGroupId": "string" }'

Method	URL	Description	Input	Return	Example
DELETE	/sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}	Deletes Mediation trigger point configuration for given ruleName	Trigger Rule Name	HTTP Status 204	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{ruleName} -X DELETE

Mediation Trigger Rules Data Model Parameters

Table 2-21 Mediation Trigger Rules Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
triggerRuleListName	String	M	Name of Trigger Rule List Name
triggerRules	String	M	List of MediationTriggerRule
matchAllEnabled	Boolean	M	if Enabled, Rule will be applied on every Request coming to SEPP. If Disabled, Rule will be applied on the basis of Trigger Rules.
ruleApplied	String	M	Rule is Applied for Local SEPP or Remote SEPP. Range: LOCAL or REMOTE
matchAllTriggerPoints	string	M	List of Trigger Point. It can be "N32_Egress_Request", "N32_Ingress_Response", "N32_Ingress_Request", "N32_Egress_Response"
matchAllGroupId	String	M	Group ID for which mediation configuration is to be done. This is passed to the Mediation Service for grouping similar rules.

Mediation Trigger Rule Parameters

Table 2-22 Mediation Trigger Rule Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
triggerPoints	String	M	List of Trigger Point. It can be "N32_Egress_Request", "N32_Ingress_Response", "N32_Ingress_Request", "N32_Egress_Response"
resourceURI	String	M	Resource URI
groupId	String	M	Group ID for which mediation configuration is to be done. This is passed to the Mediation Service for grouping similar rules.
httpMethod	String	M	Request URI Method. Range: GET,POST,PUT,PATCH,DELETE, or OPTIONS

Mediation Trigger Rule Option Parameters

Table 2-23 Mediation Trigger Rule Option Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
enabled	boolean	M	Enable/Disable Mediation Feature
errorConfiguration	MediationErrorResponseConfigurationDTO	C Optional if feature not enable Mandatory if enabled	Error Configuration Data

Mediation Trigger Rule Error Configuration Parameters

Table 2-24 Mediation Trigger Rule Error Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
title	String	M	Title and details of Error
statusCode	Integer	M	Status Code of error of configured

Table 2-24 (Cont.) Mediation Trigger Rule Error Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
action	String	M	action need to be taken when mediation filtering condition reaches an error state. Range: REJECT or CONTINUE

Sample Response body structure for GET ALL operations:

Resource API : /sepp-configuration/{version}/sepp-mediation-trigger-rule-list

Resource Method : GET ALL

Content Type: application/json

Response Body

Request :
/sepp-configuration/v1/sepp-mediation-trigger-rule-list

Response: 200

```
[
  {
    "triggerRuleListName": "SI- Test 1",
    "triggerRules": [
      {
        "triggerPoints": [
          "N32_Ingress_Request"
        ],
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
        "groupId": "AUSF",
        "httpMethod": "PUT"
      },
      {
        "triggerPoints": [
          "N32_Ingress_Request"
        ],
        "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
        "groupId": "AMF",
        "httpMethod": "POST"
      },
      {
        "triggerPoints": [
          "N32_Ingress_Request",
          "N32_Egress_Response"
        ],
      }
    ]
  }
]
```

```

        "resourceURI": "/nnrf-disc/v1/nf-instances",
        "groupId": "NRF",
        "httpMethod": "GET"
    }
],
"matchAllEnabled": false,
"ruleApplied": "REMOTE"
},
{
    "triggerRuleListName": "SI Test 2",
    "triggerRules": [
        {
            "triggerPoints": [
                "N32_Egress_Request"
            ],
            "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
            "groupId": "SMF",
            "httpMethod": "POST"
        }
    ],
    "matchAllEnabled": false,
    "ruleApplied": "REMOTE"
}
]

```

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}

Resource Method : GET

Content Type: application/json

Response Body

Request:

/sepp-configuration/v1/sepp-mediation-trigger-rule-list/SI-%20Test%201

Response:

```

[
  {
    "triggerRuleListName": "SI- Test 1",
    "triggerRules": [
      {
        "triggerPoints": [
          "N32_Ingress_Request"
        ],
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
        "groupId": "AUSF",
        "httpMethod": "PUT"
      },
      {
        "triggerPoints": [
          "N32_Ingress_Request"
        ]
      }
    ]
  }
]

```

```

    ],
    "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
    "groupId": "AMF",
    "httpMethod": "POST"
  },
  {
    "triggerPoints": [
      "N32_Ingress_Request",
      "N32_Egress_Response"
    ],
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "groupId": "NRF",
    "httpMethod": "GET"
  }
],
"matchAllEnabled": false,
"ruleApplied": "REMOTE"
}
]

```

Sample Response body structure for PUT operations:

Resource API : sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}

Resource Method : PUT

Content Type: application/json

Response Body

Response: 201

```

{
  "triggerRuleListName": "SI Test 3",
  "triggerRules": [
    {
      "triggerPoints": [
        "N32_Egress_Request"
      ],
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
      "groupId": "SMF",
      "httpMethod": "POST"
    }
  ],
  "matchAllEnabled": false,
  "ruleApplied": "REMOTE"
}

```

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/{version}/sepp-mediation-trigger-rule-list/{triggerRuleListName}

Resource Method : DELETE

Content Type: application/json

Response Body

Response code :204

Sample Response body structure for GET (feature) operations:

Resource API : sepp-configuration/v1/mediation/feature

Resource Method : GET

Content Type: application/json

Response Body

```
{
  "mediationTriggerRuleEnabled": {
    "enabled": true,
    "errorConfiguration": {
      "title": "SI Test Mediation Error Config Title",
      "statusCode": 406,
      "action": "CONTINUE"
    }
  }
}
```

Sample Response body structure for PUT (feature) operations:

Resource API : sepp-configuration/v1/mediation/feature

Resource Method : PUT

Content Type: application/json

Response Body

```
{
  "mediationTriggerRuleEnabled": {
    "enabled": true,
    "errorConfiguration": {
      "title": "Mediation Failure",
      "statusCode": 503,
      "action": "REJECT"
    }
  }
}
```

2.9 Mediation Rules Configuration

Mediation Rules Configuration

Mediation rules configuration REST API allows the user to create, modify, delete, compile, clone, and get rules using CNC Console or REST APIs.

Table 2-25 Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/mediation/v1/rules	Get all mediation rules	NA	List<Rule> Rule contains name, format, mode, status, and code.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/mediation/v1/rules' \ -H 'accept: application/json'
GET	/sepp-configuration/mediation/v1/rules/{ruleName}	Get mediation rule with {ruleName}	ruleName	Rule Rule contains name, format, mode, status, and code.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/mediation/v1/rules/test' \ -H 'accept: application/json'

Table 2-25 (Cont.) Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/mediation/v1/rules/{ruleName}	Updates the existing rule definition	ruleName and Rule	Rule Rule contains name, format, mode, status, code, state, and newName.	<pre> curl -X 'PUT' \ 'http:// <SEPP- Configurati on IP>:<PORT>/ sepp- configurati on/ mediation/v 1/rules/ test' \ -H 'accept: application /json' \ -H 'Content- Type: application /json' \ -d '{ "name": "test", "format": "DRL", "mode": "MEDIATION_ ACTIVE", "status": "DRAFT", "code": "package com.oracle. cgbu.ocmedi ation.nfmed iation;\n \n import com.oracle. cgbu.ocmedi ation.nfrul engine.NFD rulesRuleEn gine;\n </pre>

Table 2-25 (Cont.) Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
					<pre> import com.oracle. cgbu.ocmedi ation.factd etails.Requ est\n import com.oracle. cgbu.ocmedi ation.factd etails.Resp onse;\n import java.util.M ap;\n import java.util.H ashMap;\n \n dialect \"mvel\"\n \n rule \"Rule_show _add_header \"'\n when\n req : Request(hea ders.has(\" 3gpp-Sbi- Message- Priority\") == true) \n then\n req.headers .add(\"3gpp -Sbi- Message- Priority\", \"10\") \n end\", \"state\" : \"save\" }' </pre>

Table 2-25 (Cont.) Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/mediation/v1/rules/{ruleName}	Creates the new rule definition	ruleName and Rule	Rule Rule contains name, format, mode, status, code, state, and newName.	<pre>curl -X 'POST' \ 'http:// <SEPP- Configurati on IP>:<PORT>/ sepp- configurati on/ mediation/v 1/rules/ TestRule' \ -H 'accept: application /json' \ -H 'Content- Type: application /json' \ -d '{ "name": "TestRule", "format": "DRL", "mode": "MEDIATION_ ACTIVE", "status": "DRAFT", "state": "save", "code": "package com.oracle. cgbu.ocmedi ation.nfmed iation;\n \n import com.oracle. cgbu.ocmedi ation.nfrul engine.NFD</pre>

Table 2-25 (Cont.) Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
					<pre> rulesRuleEn gine;\n import com.oracle. cgbu.ocmedi ation.factd etails.Requ est\n import com.oracle. cgbu.ocmedi ation.factd etails.Resp onse;\n import java.util.M ap;\n import java.util.H ashMap;\n \n dialect \"mvel\"\nr ule \"Rule1\"\n agenda- group \"vaibhav- N32_Ingress _Request\"\n n when\n req : Request(hea ders.has(\" 3gpp-sbi- message- priority\") == false) \n then\n req.headers .add(\"3gpp -sbi- message- priority\", \"30\") </pre>

Table 2-25 (Cont.) Mediation Rules Configuration

Method	URL	Description	Input	Return	Example
					\n end" '}
DELETE	/sepp-configuration/mediation/v1/rules/{ruleName}	Deletes mediation rule with {ruleName}	ruleName	Response status (String)	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/mediation/v1/rules/test' \ -H 'accept: */*'

Table 2-26 Mediation Rules Configuration Parameters

Attribute	Data Type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
Name	String	M	Name for mediation rule configuration.
Format	Enum	M	Rule format. Only DRL is supported currently.
Mode	Enum	M	MEIDATION_ACTIVE: is applicable only to mediation active mode MEDIATION_TEST: is applicable only to mediation test mode The user is required to configure the mediation rules using MEDIATION_ACTIVE mediation mode. MEDIATION_TEST mode is only for internal purpose.
Status	Enum	M	Mediation rule status: APPLIED or DRAFT

Table 2-26 (Cont.) Mediation Rules Configuration Parameters

Attribute	Data Type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
Code	String	M	Mediation rule code content User has to prepend the following data block along with the needed rules in the code section and provide state as Save to create a new rule in DRAFT status. If the user wants to apply this rule on mediation microservice then user need to modify the rule state to Apply. <pre> package com.oracle.cgbu.ocmediation.nfmediation; import com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine; import com.oracle.cgbu.ocmediation.factdetails.Request; import com.oracle.cgbu.ocmediation.factdetails.Response; import java.util.Map; import java.util.HashMap; dialect "mvel" </pre> Following is a sample mediation rule code with above data block, including necessary escaped characters: <pre> "package com.oracle.cgbu.ocmediation.nfmediation;\n\nimport com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\nimport </pre>

Table 2-26 (Cont.) Mediation Rules Configuration Parameters

Attribute	Data Type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
			<pre> com.oracle.cgbu.o cmediation.factde tails.Request\nim port com.oracle.cgbu.o cmediation.factde tails.Response;\n import java.util.Map;\ni mport java.util.HashMap ;\nimport java.lang.Object; \nimport java.util.ArrayLi st;\n\ndialect \"mvel\"\"n\nrule \"New Rule1\"\"n agenda-group \"sepp17- N32_Ingress_Respo nse\"\"nwhen\n rsp : Response(body.ha s(\"\$.amData.mcsP riority\")) \nthen\n rsp.body.del(\"\$. amData.mcsPriorit y\")\n rsp.body.put(\"\$. amData\", \"sepp\" / \"sepp\");\nend" </pre>
State	Enum	M	The states are Compile, Clone, Save, Draft, and Apply. The user can choose one of these states.
NewName	String	C	New name of the rule to be given only when state is clone.

Note

The rule name for a rule in the **DRAFT** status must be unique. Otherwise, the new rule overwrites the old one.

Sample response body structure for GET operations:

Resource API : /sepp-configuration/mediation/v1/rules

Resource Method : GET

Content Type: application/json

Response status : 200 OK

Response Body

```
[
  {
    "name": "test",
    "format": "DRL",
    "mode": "MEDIATION_ACTIVE",
    "status": "DRAFT",
    "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n\nimport
com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\nimport
com.oracle.cgbu.ocmediation.factdetails.Request\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport java.util.Map;\nimport
java.util.HashMap;\nimport java.lang.Object;\nimport java.util.ArrayList;\n\nndialect
\"mvel\"\n\nrule \"New Rule1\"\n  agenda-group \"sepp17-
N32_Ingress_Response\"\nwhen\n  rsp : Response(body.has(\"$.amData.mcsPriority\"))
\nthen\n  rsp.body.del(\"$.amData.mcsPriority\")\n
rsp.body.put(\"$.amData\", \"sepp\", \"sepp\");\nend"
  },
  {
    "name": "test2",
    "format": "DRL",
    "mode": "MEDIATION_ACTIVE",
    "status": "DRAFT",
    "code": "import com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\nimport
com.oracle.cgbu.ocmediation.factdetails.Request\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport java.util.Map;\nimport
java.util.HashMap;\nimport java.util.regex.Pattern;\nimport java.util.regex.Matcher;\n
\nndialect \"mvel\"\n\nrule \"Host-Header-Validation\"\n  agenda-group \"test-
N32_Ingress_Response\"\nwhen\n  rsp: Response((headers.has(\"host\") == true) &&
(headers.has(\"3gpp-sbi-target-apiroot\") == false))\nthen\n  rsp.headers.put(\"x-
hostHeader-validation\", \"successful\")\nend\nrule \"Host-Header-Validation-PSEPP\"\n
agenda-group \"psepp-N32_Egress_Response\"\nwhen\n  rsp: Response((headers.has(\"host\")
== true) && (headers.has(\"3gpp-sbi-target-apiroot\") == false))\nthen\n
rsp.headers.put(\"x-hostHeader-validation\", \"successful\")\nend\n"
  }
]
```

Resource API : /sepp-configuration/mediation/v1/rules/{ruleName}

Resource Method : GET

Content Type: application/json

Response status : 200 OK

Response Body

```
{
  "name": "test",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n\nimport
com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\nimport
com.oracle.cgbu.ocmediation.factdetails.Request\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport java.util.Map;\nimport
java.util.HashMap;\nimport java.lang.Object;\nimport java.util.ArrayList;\n\nndialect
\"mvel\"\n\nrule \"New Rule1\"\n    agenda-group \"sepp17-
N32_Ingress_Response\"\nwhen\n    rsp : Response(body.has(\"$.amData.mcsPriority\"))
\nthen\n    rsp.body.del(\"$.amData.mcsPriority\")\n
rsp.body.put(\"$.amData\", \"sepp\", \"sepp\");\nend"
```

Sample response body structure for PUT operation:

Resource API : /sepp-configuration/mediation/v1/rules/{ruleName}

Resource Method : PUT

Content Type: application/json

Response status : 200 OK

Response Body

```
{
  "name": "test",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n\nimport
com.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\nimport
com.oracle.cgbu.ocmediation.factdetails.Request\nimport
com.oracle.cgbu.ocmediation.factdetails.Response;\nimport java.util.Map;\nimport
java.util.HashMap;\nimport java.lang.Object;\nimport java.util.ArrayList;\n\nndialect
\"mvel\"\n\nrule \"New Rule1\"\n    agenda-group \"sepp17-
N32_Ingress_Response\"\nwhen\n    rsp : Response(body.has(\"$.amData.mcsPriority\"))
\nthen\n    rsp.body.del(\"$.amData.mcsPriority\")\n
rsp.body.put(\"$.amData\", \"sepp\", \"sepp\");\nend"
}
```

Sample response body structure for POST operation:

Resource API : /sepp-configuration/mediation/v1/rules/{ruleName}

Resource Method : POST

Content Type: application/json

Response status : 201 Created

Response Body

```
{
  "name": "TestRule",
  "format": "DRL",
  "mode": "MEDIATION_ACTIVE",
  "status": "DRAFT",
  "code": "package com.oracle.cgbu.ocmediation.nfmediation;\n      \n      import\ncom.oracle.cgbu.ocmediation.nfruleengine.NFDroolsRuleEngine;\n      import\ncom.oracle.cgbu.ocmediation.factdetails.Request\n      import\ncom.oracle.cgbu.ocmediation.factdetails.Response;\n      import java.util.Map;\n      import\njava.util.HashMap;\n      \n      dialect \"mvel\"\n      \"nrule \"Rule1\"\n      \"agenda-group \"vaibhav-
```



```

N32_Ingress_Request\"\\n when\\n      req : Request(headers.has(\"3gpp-sbi-message-
priority\") == false)\\n      then\\n      req.headers.add(\"3gpp-sbi-message-
priority\", \"30\")\\n      end\"
}

```

Sample response body structure for DELETE operation:

Resource API : /sepp-configuration/mediation/v1/rules/{ruleName}

Resource Method : DELETE

Content Type: application/json

Response status : 204

Response Body

204

2.10 Cat-1 Service API Validation Feature State

The Cat-1 Service API Validation Feature State REST API is used to enable or disable the Cat-1 Service API Validation feature.

Table 2-27 Cat-1 Service API Validation Feature State REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/feature	Fetch Cat-1 Service API Validation Feature State		Returns Security Counter Measure Options	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/feature -X GET
PUT	/sepp-configuration/v1/security-counter-measure/feature		Boolean enable flag to determine Cat-1 Service API Validation feature to be enable/disabled	Cat-1 Service API Validation feature is Enabled.	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/feature -H 'Content-Type: application/json' -X PUT -d '{ "messageFilteringOnResourceUriAndHttpMethodEnabled": { "enabled": true } }'

Table 2-28 Cat-1 Service API Validation Feature State Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
enabled	Boolean	O	This is used to enable or disable Cat-1 Service API Validation feature. The feature is disabled (set to false) by default.

Sample Response body structure for PUT operations:

Resource API: /v1/security-counter-measure/feature

Resource Method: PUT

Content Type: application/json

Response Body

Request:

```
{
  "messageFilteringOnResourceUriAndHttpMethodEnabled": {
    "enabled": true
  }
}
```

Response:

```
{
  "messageFilteringOnResourceUriAndHttpMethodEnabled": {
    "enabled": true
  }
}
```

Sample Response body structure for GET operations:

Resource API: /v1/security-counter-measure/feature

Resource Method [: GET

Content Type: application/json

Response Body

Response:

```
{
  "messageFilteringOnResourceUriAndHttpMethodEnabled": {
    "enabled": true
  }
}
```

2.11 Security Countermeasure Service API Allowed List Name

The Security Countermeasure Service API Allowed List Name REST API is used to do the configurations on the allowed list.

Table 2-29 Security Countermeasure Service API Allowed List Name

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/{allowedListName}	Create a new Allowed List	Creating a Security Countermeasure Service API Allowed List Name	HTTP Status 200	<pre>curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/{allowedListName} -H 'Content-Type:application/json' -X POST -d '{ "serviceAPIAllowedListName": "{serviceAPIAllowedListName}", "ingressRule": [{ "resourceURI": "/namf-evts/v1/subscriptions", "httpMethod": "POST" }, { "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}", "httpMethod": "DELETE" }], "egressRule": [{ "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info", "httpMethod": "POST" }, { "resourceURI": "/nausf-auth/v1/ue-</pre>

Table 2-29 (Cont.) Security Countermeasure Service API Allowed List Name

Method	URL	Description	Input	Return	Example
					<pre> "authentications" , "httpMethod": "POST" }}, "ingressAction": { "action": "REJECT", "statusCode": "422", "title": "Service API is not in allowedlist for ingress" }, "egressAction": { "action": "REJECT", "statusCode": "422", "title": "Service API is not in allowedlist for egress" } } </pre>

Table 2-29 (Cont.) Security Countermeasure Service API Allowed List Name

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/{allowedListName}	Update Allowed List	Updating Security Countermeasure Service API Allowed List Name Configuration		<pre>curl -v http:// <SEPP-Configuration IP>:<PORT>/ sepp-configuration/v1 /security-counter- measure/ service-api- allowed-list/ {allowedListName} -H 'Content- Type:application /json' -X PUT - d '{ "serviceAPIAllowedListName": "Default": "{allowedListName}", "ingressRule":[{"resourceURI": "/namf-evts/v1/ subscriptions", "httpMethod":"P OST" }], { "resourceURI": "/namf-evts/v1/ subscriptions/ {subscriptionId} ", "httpMethod":"D ELETE" }], "egressRule":[{"resourceURI": "/namf-loc/v1/ {ueContextId}/ provide-loc- info", "httpMethod":"P OST" }], { "resourceURI": "/nausf- auth/v1/ue-</pre>

Table 2-29 (Cont.) Security Countermeasure Service API Allowed List Name

Method	URL	Description	Input	Return	Example
					<pre> "authentications" , "httpMethod":"DELETE" }}, "ingressAction": { "action":"REJECT", "statusCode":"422", "title": "Service API is not in allowedlist for ingress" }, "egressAction":{ "action":"REJECT", "statusCode":"422", "title": "Service API is not in allowedlist for egress" } }' </pre>
GET	/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/{allowedListName}	Fetching Configuration for Ingress/Egress Rules based on Allowed List Name	Security Countermeasure Service API Allowed List Name	Configuration for Ingress/Egress Rules for the Allowed List Name given in the input	<pre> curl -v GET http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/{allowedListName} -X GET </pre>
GET	/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/	Fetching complete list of Configuration for Ingress/Egress Rules for all the Allowed List Names configured in the system		Complete list of Configuration for Ingress/Egress Rules for all the Allowed List Names configured in the system 200 OK	<pre> curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-countermeasure/service-api-allowed-list/ -X GET </pre>

Table 2-29 (Cont.) Security Countermeasure Service API Allowed List Name

Method	URL	Description	Input	Return	Example
DELETE	/sepp-configuration/v1/security-counter-measure/service-api-allowed-list/{allowedListName}	API will be used whenever there is a need to delete allowed List Name as well as its corresponding Ingress/Egress Rules and Ingress/Egress Actions	Allowed List Name which has to be deleted.	204 No Content	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-allowed-list/{allowedListName} -X DELETE

Default Service API List Configuration Parameters**Table 2-30 Default Service API List Configuration Parameters**

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
id	Integer	M	Primary Key of the Table (List Id)
resourceURI	String	M	Service API
method	String	M	Service API Method. Example: GET, POST, PUT, PATCH, and DELETE
regex	String	M	Regex for Service API

Security Allowed List Content Parameters**Table 2-31 Security Allowed List Content Parameters**

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
id	Integer	M	Primary key of the table (List Id)
serviceAPIAllowedListName	String	M	Security counter measure service API feature Allowed List Name.
ingressActionId	Integer	M	Allowed List Ingress action ID
egressActionId	Integer	M	Allowed List Egress action ID

Security Allowed List Action Parameters

Table 2-32 Security Allowed List Action Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
Id	Integer	M	Primary Key (Rule Id)
httpMethod	string	M	HTTP Method. Example: GET, POST, PUT, PATCH, and DELETE
resourceURI	string	M	Service API
regex	string	M	Regex for Service API

Security Allowed List Content Rule Parameters**Table 2-33 Security Allowed List Content Rule Parameters**

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
listId	Integer	M	List ID
ruleId	Integer	M	Rule ID

Security Allowed List Action Parameters**Table 2-34 Security Allowed List Action Parameters**

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
Id	Integer	M	Primary Key (Rule Id)
action	string	M	Action. Example: Reject
title	string	M	Title/Detail of Error
statusCode	Integer	M	Status Code of error configured

Sample Response body structure for GET operations:

Resource API: v1/security-counter-measure/service-api-allowed-list/{allowedListName}

Resource Method: GET

Content Type: application/json

Response Body

Request :

v1/security-counter-measure/service-api-allowed-list/default

Response:

```
{
```

```

"serviceAPIAllowedListName": "default",
"ingressRule": [
  {
    "id": 848,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "httpMethod": "PUT"
  },
  {
    "id": 854,
    "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
    "httpMethod": "GET"
  },
  {
    "id": 855,
    "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
    "httpMethod": "GET"
  },
  {
    "id": 883,
    "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
    "httpMethod": "DELETE"
  },
  {
    "id": 902,
    "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
    "httpMethod": "POST"
  },
  {
    "id": 858,
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "httpMethod": "DELETE"
  },
  {
    "id": 868,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
    "httpMethod": "GET"
  },
  {
    "id": 846,
    "resourceURI": "/nudm-sdm/v2/{supi}",
    "httpMethod": "GET"
  },
  {
    "id": 863,
    "resourceURI": "/notification",
    "httpMethod": "POST"
  },
  {
    "id": 906,
    "resourceURI": "/namf-comm/v1/subscriptions",
    "httpMethod": "POST"
  },
  {
    "id": 900,
    "resourceURI": "/nudm-sdm/v1/{supi}/nssai",

```

```

    "httpMethod": "GET"
  },
  {
    "id": 872,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
    "httpMethod": "PUT"
  },
  {
    "id": 853,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
    "httpMethod": "POST"
  },
  {
    "id": 889,
    "resourceURI": "/nnssf-nssselection/v1/network-slice-information",
    "httpMethod": "GET"
  },
  {
    "id": 885,
    "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
    "httpMethod": "GET"
  },
  {
    "id": 886,
    "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
    "httpMethod": "GET"
  },
  {
    "id": 887,
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "httpMethod": "GET"
  },
  {
    "id": 892,
    "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
    "httpMethod": "GET"
  },
  {
    "id": 893,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
    "httpMethod": "GET"
  },
  {
    "id": 895,
    "resourceURI": "/nudm-sdm/v1/{supi}",
    "httpMethod": "GET"
  },
  {
    "id": 847,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
    "httpMethod": "DELETE"
  },
  {
    "id": 896,
    "resourceURI": "/nnrf-disc/v1/nf-instances",

```

```

        "httpMethod": "GET"
      },
      {
        "id": 891,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "httpMethod": "GET"
      },
      {
        "id": 877,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "PUT"
      },
      {
        "id": 856,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}",
        "httpMethod": "POST"
      },
      {
        "id": 888,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PUT"
      },
      {
        "id": 866,
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
        "httpMethod": "PATCH"
      },
      {
        "id": 860,
        "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
        "httpMethod": "PUT"
      },
      {
        "id": 852,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "GET"
      },
      {
        "id": 905,
        "resourceURI": "/nudm-sdm/v1/shared-data",
        "httpMethod": "GET"
      },
      {
        "id": 865,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "PUT"
      },
      {
        "id": 844,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
        "httpMethod": "POST"
      },
      {
        "id": 842,

```

```

    "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
    "httpMethod": "GET"
  },
  {
    "id": 850,
    "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
    "httpMethod": "POST"
  },
  {
    "id": 843,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
    "httpMethod": "PUT"
  },
  {
    "id": 857,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
    "httpMethod": "GET"
  },
  {
    "id": 876,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "httpMethod": "GET"
  },
  {
    "id": 870,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mt-data",
    "httpMethod": "POST"
  },
  {
    "id": 875,
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "httpMethod": "GET"
  },
  {
    "id": 890,
    "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions/{subscriptionId}",
    "httpMethod": "DELETE"
  },
  {
    "id": 851,
    "resourceURI": "/nnrf-nfm/v1/NfStatusChangeNotification",
    "httpMethod": "POST"
  },
  {
    "id": 861,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "httpMethod": "POST"
  },
  {
    "id": 869,
    "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
    "httpMethod": "PATCH"
  },
  {
    "id": 859,

```

```

        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "DELETE"
    },
    {
        "id": 899,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 845,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 909,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
release",
        "httpMethod": "POST"
    },
    {
        "id": 862,
        "resourceURI": "/nnssf-nsselection/v2/network-slice-information",
        "httpMethod": "GET"
    },
    {
        "id": 864,
        "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
        "httpMethod": "GET"
    },
    {
        "id": 903,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "POST"
    },
    {
        "id": 897,
        "resourceURI": "/nnrf-nfm/v1/subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 867,
        "resourceURI": "/nudm-sdm/v2/shared-data",
        "httpMethod": "GET"
    },
    {
        "id": 882,
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 880,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PATCH"
    },
    },

```

```

    {
      "id": 873,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
      "httpMethod": "POST"
    },
    {
      "id": 884,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
      "httpMethod": "POST"
    },
    {
      "id": 849,
      "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 871,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 878,
      "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
      "httpMethod": "GET"
    },
    {
      "id": 907,
      "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
      "httpMethod": "GET"
    },
    {
      "id": 908,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mo-data",
      "httpMethod": "POST"
    },
    {
      "id": 881,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    },
    {
      "id": 904,
      "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 894,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
      "httpMethod": "PATCH"
    },
    {
      "id": 898,
      "resourceURI": "/namf-evts/v1/subscriptions",
      "httpMethod": "POST"
    }
  ]
}

```

```

    },
    {
      "id": 879,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
      "httpMethod": "PUT"
    },
    {
      "id": 901,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 874,
      "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
      "httpMethod": "PATCH"
    },
    {
      "id": 910,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 911,
      "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
      "httpMethod": "DELETE"
    }
  ],
  "egressRule": [
    {
      "id": 959,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
      "httpMethod": "PUT"
    },
    {
      "id": 939,
      "resourceURI": "/nudm-sdm/v1/shared-data",
      "httpMethod": "GET"
    },
    {
      "id": 977,
      "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
      "httpMethod": "GET"
    },
    {
      "id": 938,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 978,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",

```



```

        "httpMethod": "POST"
      },
      {
        "id": 970,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
release",
        "httpMethod": "POST"
      },
      {
        "id": 981,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
      },
      {
        "id": 940,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "GET"
      },
      {
        "id": 960,
        "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
        "httpMethod": "GET"
      },
      {
        "id": 952,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
        "httpMethod": "PATCH"
      },
      {
        "id": 932,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "GET"
      },
      {
        "id": 948,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "httpMethod": "GET"
      },
      {
        "id": 972,
        "resourceURI": "/oauth2/token",
        "httpMethod": "POST"
      },
      {
        "id": 934,
        "resourceURI": "/nnrf-nfm/v1/NfStatusChangeNotification",
        "httpMethod": "POST"
      },
      {
        "id": 971,
        "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
        "httpMethod": "POST"
      },
      {
        "id": 916,

```

```

        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "DELETE"
    },
    {
        "id": 962,
        "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
        "httpMethod": "PATCH"
    },
    {
        "id": 961,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PATCH"
    },
    {
        "id": 943,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "GET"
    },
    {
        "id": 974,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}",
        "httpMethod": "POST"
    },
    {
        "id": 949,
        "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
        "httpMethod": "PATCH"
    },
    {
        "id": 946,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 923,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions/{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 944,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 956,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mt-data",
        "httpMethod": "POST"
    },
    {
        "id": 942,
        "resourceURI": "/nnrf-nfm/v1/subscriptions",
        "httpMethod": "POST"
    },
    {

```

```

      "id": 924,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
      "httpMethod": "GET"
    },
    {
      "id": 953,
      "resourceURI": "/npcf-ue-policy-control/v1/policies",
      "httpMethod": "POST"
    },
    {
      "id": 915,
      "resourceURI": "/nnssf-nssselection/v2/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 936,
      "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "id": 933,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
      "httpMethod": "PATCH"
    },
    {
      "id": 969,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 958,
      "resourceURI": "/nnssf-nssselection/v1/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 928,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 963,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 967,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "DELETE"
    },
    {
      "id": 921,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
      "httpMethod": "GET"
    },
    {
      "id": 945,

```

```

        "resourceURI": "/namf-comm/v1/subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 920,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 965,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
        "httpMethod": "POST"
    },
    {
        "id": 914,
        "resourceURI": "/nudm-sdm/v1/{supi}",
        "httpMethod": "GET"
    },
    {
        "id": 937,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PUT"
    },
    {
        "id": 912,
        "resourceURI": "/nnrf-disc/v1/nf-instances",
        "httpMethod": "GET"
    },
    {
        "id": 935,
        "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 926,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "PUT"
    },
    {
        "id": 968,
        "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET"
    },
    {
        "id": 927,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 950,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mo-data",
        "httpMethod": "POST"
    },
    },

```

```

{
  "id": 913,
  "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
  "httpMethod": "GET"
},
{
  "id": 980,
  "resourceURI": "/nudm-sdm/v2/{supi}",
  "httpMethod": "GET"
},
{
  "id": 918,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
  "httpMethod": "PUT"
},
{
  "id": 930,
  "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
  "httpMethod": "DELETE"
},
{
  "id": 947,
  "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
  "httpMethod": "DELETE"
},
{
  "id": 919,
  "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
  "httpMethod": "POST"
},
{
  "id": 931,
  "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
  "httpMethod": "PUT"
},
{
  "id": 979,
  "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
  "httpMethod": "DELETE"
},
{
  "id": 955,
  "resourceURI": "/namf-evts/v1/subscriptions",
  "httpMethod": "POST"
},
{
  "id": 964,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
  "httpMethod": "GET"
},
{
  "id": 922,
  "resourceURI": "/nudm-sdm/v2/shared-data",
  "httpMethod": "GET"
}

```

```

    },
    {
      "id": 941,
      "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "id": 975,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 951,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 957,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 954,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    },
    {
      "id": 976,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
      "httpMethod": "POST"
    },
    {
      "id": 917,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
      "httpMethod": "POST"
    },
    {
      "id": 925,
      "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
      "httpMethod": "GET"
    },
    {
      "id": 929,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
      "httpMethod": "GET"
    },
    {
      "id": 973,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 966,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "POST"
    }
  ]
}

```

```

    ],
    "ingressAction": {
      "title": "Service API not in allowed list",
      "statusCode": 406,
      "action": "REJECT"
    },
    "egressAction": {
      "title": "Service API not in allowed list",
      "statusCode": 406,
      "action": "REJECT"
    }
  }
}

```

Sample Response body structure for PUT operations:

Resource API : /v1/security-counter-measure/service-api-allowed-list/{allowedListName}

Resource Method : PUT

Content Type: application/json

Response Body

Request :

```

{
  "serviceAPIAllowedListName": "test",
  "ingressRule": [
    {
      "id": 0,
      "resourceURI": "/notification",
      "httpMethod": "POST"
    }
  ],
  "egressRule": [
    {
      "id": 0,
      "resourceURI": "/token",
      "httpMethod": "POST"
    }
  ],
  "ingressAction": {
    "title": "Service API not in allowed list",
    "statusCode": 0,
    "action": "REJECT"
  },
  "egressAction": {
    "title": "Service API not in allowed list",
    "statusCode": 0,
    "action": "REJECT"
  }
}

```

Response:
same as request.

Sample Response body structure for POST operations:

Resource API : /v1/security-counter-measure/service-api-allowed-list/{allowedListName}

Resource Method : POST

Content Type: application/json

Response Body

Request :

```
{
  "serviceAPIAllowedListName": "test",
  "ingressRule": [
    {
      "id": 0,
      "resourceURI": "/notification",
      "httpMethod": "POST"
    }
  ],
  "egressRule": [
    {
      "id": 0,
      "resourceURI": "/token",
      "httpMethod": "POST"
    }
  ],
  "ingressAction": {
    "title": "Service API not in allowed list",
    "statusCode": 0,
    "action": "REJECT"
  },
  "egressAction": {
    "title": "Service API not in allowed list",
    "statusCode": 0,
    "action": "REJECT"
  }
}
```

Response:

same as request.

Sample Response body structure for DELETE operations:

Resource API : /v1/security-counter-measure/service-api-allowed-list/{allowedListName}

Resource Method : POST

Content Type: application/json

Response Body

Request:

/v1/security-counter-measure/service-api-allowed-list/test1

Response:
204

2.12 Service APIs

Service APIs REST API has list of all APIs supported by SEPP.

Table 2-35 Service APIs

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/service-apis	Fetch list of Supported Service APIs configured in the system		List of Supported Service API's configured in the system	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/service-apis -X GET
GET	/sepp-configuration/v1/service-apis/{defaultId}	Fetch Supported Service API's based on defaultId	defaultId		curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/service-apis/1 -X GET
POST	/sepp-configuration/v1/service-apis/{defaultId}	Update Supported Service API's	resource URI, httpMethod and regex	200 OK	curl http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/service-apis/1 -H 'Content-Type:application/json' -X POST -d '{ "resourceURI": "/nsmf-pdusession/v1/pdu-sessions", "httpMethod": "POST", "regex": "^/nsmf-pdusession/v1/pdu-sessions/?\$" }'
DELETE	/sepp-configuration/v1/service-apis/{defaultId}	Delete Supported Service API's		204 No Content	curl http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/service-apis/1 -X DELETE -d '{"resourceURI": "/nsmf-pdusession/v1/pdu-sessions", "httpMethod": "POST", "regex": "^/nsmf-pdusession/v1/pdu-sessions/?\$"}'

Service API Parameters

Table 2-36 Service API Parameters

Attribute	Datatype	Compliance	Pattern	Description
resourceURI	String	M		Service API
httpMethod	String	M	GET,POST,PUT,PATCH,DELETE,OPTIONS	Service API Method

Table 2-36 (Cont.) Service API Parameters

Attribute	Datatype	Compliance	Pattern	Description
regex	String	M		Regex for Service API

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/service-apis

Resource Method : GET

Content Type: application/json

Response Body

Request:

sepp-configuration/v1/service-apis/23

Response:

```
{
  "defaultId": 23,
  "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
  "httpMethod": "DELETE",
  "regex": "^/nnrf-nfm/v1/subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
```

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/service-apis/{defaultId}

Resource Method : GET

Content Type: application/json

Response Body

```
[
  {
    "defaultId": 1,
    "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
    "httpMethod": "GET",
    "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/am-data/?$"
  },
  {
    "defaultId": 2,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "httpMethod": "GET",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
    extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-non-3gpp-access/?$"
  },
  {

```

```

        "defaultId": 3,
        "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/nssai/?$"
    },
    {
        "defaultId": 4,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/transfer-
mo-data",
        "httpMethod": "POST",
        "regex": "^/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/transfer-
mo-data/?$"
    },
    {
        "defaultId": 5,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "DELETE",
        "regex": "^/nausf-auth/v1/ue-authentications/([0-9a-zA-Z-]+|.+)/5g-aka-
confirmation/?$"
    },
    {
        "defaultId": 6,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}",
        "httpMethod": "POST",
        "regex": "^/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/?$"
    },
    {
        "defaultId": 7,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PUT",
        "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-3gpp-access/?$"
    },
    {
        "defaultId": 8,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
        "httpMethod": "PATCH",
        "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-non-3gpp-access/?$"
    },
    {
        "defaultId": 9,
        "resourceURI": "/nnssf-nsselection/v2/network-slice-information",
        "httpMethod": "GET",
        "regex": "^/nnssf-nsselection/v2/network-slice-information/?$"
    },
    {
        "defaultId": 10,
        "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
        "httpMethod": "DELETE",
        "regex": "^/namf-comm/v1/subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
    },
    {
        "defaultId": 11,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",

```

```

    "httpMethod": "PUT",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
    extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-non-3gpp-access/?$"
  },
  {
    "defaultId": 12,
    "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
    "httpMethod": "PATCH",
    "regex": "^/nnrf-nfm/v1/subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
  },
  {
    "defaultId": 13,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
    {pduSessionId}",
    "httpMethod": "PUT",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
    extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smf-registrations/(([01]?
    [0-9][0-9]?|2[0-4][0-9]|25[0-5])+)/?$"
  },
  {
    "defaultId": 14,
    "resourceURI": "/nudm-sdm/v1/{supi}/am-data/upu-ack",
    "httpMethod": "PUT",
    "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/am-data/upu-ack/?$"
  },
  {
    "defaultId": 15,
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "httpMethod": "DELETE",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-
    [^@]+@[^@]+|gci-.+|gli-.+|.+)/sdm-subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
  },
  {
    "defaultId": 16,
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "httpMethod": "PATCH",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-
    [^@]+@[^@]+|gci-.+|gli-.+|.+)/sdm-subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
  },
  {
    "defaultId": 17,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "httpMethod": "GET",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
    extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-3gpp-access/?$"
  },
  {
    "defaultId": 18,
    "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
    "httpMethod": "POST",
    "regex": "^/namf-loc/v1/(imsi-[0-9]{5,15}|nai-.+|gli-.+|gci-.+|imei-[0-9]
    {15}|imeisv-[0-9]{16}|.+)/provide-loc-info/?$"
  },
  {
    "defaultId": 19,
    "resourceURI": "/nudm-sdm/v1/{supi}",

```

```

        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/?$"
    },
    {
        "defaultId": 20,
        "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/nssai/?$"
    },
    {
        "defaultId": 21,
        "resourceURI": "/namf-evts/v1/subscriptions",
        "httpMethod": "POST",
        "regex": "^/namf-evts/v1/subscriptions/?$"
    },
    {
        "defaultId": 22,
        "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/sm-data/?$"
    },
    {
        "defaultId": 23,
        "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
        "httpMethod": "DELETE",
        "regex": "^/nnrf-nfm/v1/subscriptions/(([0-9]{5,6}-)?[^-]+)/?$"
    },
    {
        "defaultId": 24,
        "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/ue-context-in-smf-data/?$"
    },
    {
        "defaultId": 25,
        "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
        "httpMethod": "GET",
        "regex": "^/namf-mt/v1/ue-contexts/(imsi-[0-9]{5,15}|nai-.+|gli-.+|gci-.+|.+)/?$"
    },
    {
        "defaultId": 26,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PATCH",
        "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-3gpp-access/?$"
    },
    {
        "defaultId": 27,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
        "httpMethod": "DELETE",
        "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-3gpp-access/?$"
    },
    {

```

```

{
  "defaultId": 28,
  "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
  "httpMethod": "DELETE",
  "regex": "^/npcf-ue-policy-control/v1/policies/([0-9a-zA-Z-]+|.|.+)/?$"
},
{
  "defaultId": 29,
  "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions/{subscriptionId}",
  "httpMethod": "DELETE",
  "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/sdm-subscriptions/([0-9]{5,6}-)?[^-+]/?$"
},
{
  "defaultId": 30,
  "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
  "httpMethod": "PUT",
  "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-data/upu-ack/?$"
},
{
  "defaultId": 31,
  "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
  "httpMethod": "POST",
  "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/sdm-subscriptions/?$"
},
{
  "defaultId": 32,
  "resourceURI": "/nnrf-disc/v1/nf-instances",
  "httpMethod": "GET",
  "regex": "^/nnrf-disc/v1/nf-instances/?$"
},
{
  "defaultId": 33,
  "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
  "httpMethod": "POST",
  "regex": "^/npcf-ue-policy-control/v1/policies/([0-9a-zA-Z-]+|.|.+)/update/?$"
},
{
  "defaultId": 34,
  "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
  "httpMethod": "PUT",
  "regex": "^/namf-comm/v1/subscriptions/([0-9]{5,6}-)?[^-+]/?$"
},
{
  "defaultId": 35,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
  "httpMethod": "PUT",
  "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-3gpp-access/?$"
},
{
  "defaultId": 36,
  "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",

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        "httpMethod": "POST",
        "regex": "^/nsmf-pdusession/v1/pdu-sessions/?$"
    },
    {
        "defaultId": 37,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/sms-
data/?$"
    },
    {
        "defaultId": 38,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
        "httpMethod": "PUT",
        "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-non-3gpp-access/?$"
    },
    {
        "defaultId": 39,
        "resourceURI": "/npcf-ue-policy-control/v1/policies",
        "httpMethod": "POST",
        "regex": "^/npcf-ue-policy-control/v1/policies/?$"
    },
    {
        "defaultId": 40,
        "resourceURI": "/nudm-sdm/v1/shared-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v1/shared-data/?$"
    },
    {
        "defaultId": 41,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
        "httpMethod": "POST",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-
data/?$"
    },
    {
        "defaultId": 42,
        "resourceURI": "/nudm-sdm/v2/shared-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/shared-data/?$"
    },
    {
        "defaultId": 43,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "GET",
        "regex": "^/npcf-ue-policy-control/v1/policies/([0-9a-zA-Z-]+|.+)/?$"
    },
    {
        "defaultId": 44,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/smf-
select-data/?$"
    },
    {

```

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    "defaultId": 45,
    "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
    "httpMethod": "PATCH",
    "regex": "^/namf-evts/v1/subscriptions/([0-9]{5,6}-)?[^-+]/?$"
  },
  {
    "defaultId": 46,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
    "httpMethod": "PUT",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-
data/sor-ack/?$"
  },
  {
    "defaultId": 47,
    "resourceURI": "/nudm-sdm/v2/{supi}",
    "httpMethod": "GET",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/?$"
  },
  {
    "defaultId": 48,
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "httpMethod": "GET",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/sms-
mng-data/?$"
  },
  {
    "defaultId": 49,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
    "httpMethod": "GET",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-
data/?$"
  },
  {
    "defaultId": 50,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "httpMethod": "GET",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-non-3gpp-access/?$"
  },
  {
    "defaultId": 51,
    "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
    "httpMethod": "POST",
    "regex": "^/nausf-auth/v1/ue-authentications/([0-9a-zA-Z-]+|.+)/5g-aka-
confirmation/?$"
  },
  {
    "defaultId": 52,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "httpMethod": "DELETE",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-non-3gpp-access/?$"
  },
  {
    "defaultId": 53,

```



```

    "resourceURI": "/namf-comm/v1/subscriptions",
    "httpMethod": "POST",
    "regex": "^/namf-comm/v1/subscriptions/?$"
  },
  {
    "defaultId": 54,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/transfer-
mt-data",
    "httpMethod": "POST",
    "regex": "^/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/transfer-
mt-data/?$"
  },
  {
    "defaultId": 55,
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
    "httpMethod": "GET",
    "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/ue-
context-in-smsf-data/?$"
  },
  {
    "defaultId": 56,
    "resourceURI": "/oauth2/token",
    "httpMethod": "POST",
    "regex": "^/oauth2/token/?$"
  },
  {
    "defaultId": 57,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
    "httpMethod": "DELETE",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smf-registrations/(([01]?
[0-9][0-9]?|2[0-4][0-9]|25[0-5])+)/? $"
  },
  {
    "defaultId": 58,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
    "httpMethod": "GET",
    "regex": "^/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|
extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smf-3gpp-access/? $"
  },
  {
    "defaultId": 59,
    "resourceURI": "/nnssf-nsselection/v1/network-slice-information",
    "httpMethod": "GET",
    "regex": "^/nnssf-nsselection/v1/network-slice-information/? $"
  },
  {
    "defaultId": 60,
    "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
    "httpMethod": "DELETE",
    "regex": "^/namf-evts/v1/subscriptions/(([0-9]{5,6}-)?[^-]+)/? $"
  },
  {
    "defaultId": 61,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",

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        "httpMethod": "POST",
        "regex": "^/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/release/?$"
    },
    {
        "defaultId": 62,
        "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/sm-
data/?$"
    },
    {
        "defaultId": 63,
        "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/ue-context-in-smf-
data/?$"
    },
    {
        "defaultId": 64,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
        "httpMethod": "POST",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/sdm-subscriptions/?$"
    },
    {
        "defaultId": 65,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "PUT",
        "regex": "^/nausf-auth/v1/ue-authentications/([0-9a-zA-Z-]+|.+)/5g-aka-
confirmation/?$"
    },
    {
        "defaultId": 66,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
        "httpMethod": "POST",
        "regex": "^/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/modify/?$"
    },
    {
        "defaultId": 67,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
        "httpMethod": "PUT",
        "regex": "^/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/am-data/sor-ack/?$"
    },
    {
        "defaultId": 68,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST",
        "regex": "^/nausf-auth/v1/ue-authentications/?$"
    },
    {
        "defaultId": 69,
        "resourceURI": "/nnrf-nfm/v1/subscriptions",
        "httpMethod": "POST",
        "regex": "^/nnrf-nfm/v1/subscriptions/?$"
    },
    {

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        "defaultId": 70,
        "resourceURI": "/nnrf-nfm/v1/NfStatusChangeNotification",
        "httpMethod": "POST",
        "regex": "^/nnrf-nfm/v1/NfStatusChangeNotification/?$"
    },
    {
        "defaultId": 71,
        "resourceURI": "J",
        "httpMethod": "POST",
        "regex": "KK"
    },
    {
        "defaultId": 72,
        "resourceURI": "/notification",
        "httpMethod": "POST",
        "regex": "^/notification/?$"
    }
]

```

Sample Response body structure for POST operations:

Resource API : /sepp-configuration/v1/service-apis/{defaultId}

Resource Method : POST

Content Type: application/json

Response Body

Request:

```

{
  "defaultId": 0,
  "resourceURI": "/seppnotification",
  "httpMethod": "POST",
  "regex": "/seppnotification"
}

```

Response:

201 CREATED

Sample Response body structure for DELETE operations:

Resource API : /sepp-configuration/v1/service-apis/{defaultId}

Resource Method : DELETE

Content Type: application/json

Response Body

Request :

sepp-configuration/v1/service-apis/74

Response:
204

2.13 Overload Control

User can enable and configure the Overload Control feature using this REST API.

Table 2-37 Overload Control

Method	URL	Description	Input	Return	Example
GET	sepp/nf-common-component/v1/igw/n32/errorcodeprofiles	Retrieve Error code profiles defined at IGW	NA	Error code , Description and Name	curl -X GET http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/igw/n32/errorcodeprofiles

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
PUT	sepp/nf-common-component/v1/i/gw/n32/errorcodeprofiles	Update error code profile for IGW	Error code , Description and Name	Error code , Description and Name	<pre>curl -X PUT http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/i/gw/n32/errorcodeprofiles -H 'Content-Type: application/json' -d '{ "name": "error429", "errorCode": 429, "errorCause": "Too many requests", "errorTitle": "Too many requests", "errorDescription": "Too many requests" }'</pre>
GET	sepp/nf-common-component/v1/i/gw/n32/ocdiscardpolicies	Retrieve Discard Policies for Overload Control at IGW	NA	Scheme , Policies	<pre>curl -X GET http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/i/gw/n32/ocdiscardpolicies</pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
PUT	sepp/nf-common-component/v1/i-gw/n32/ocdiscardpolicies	Define Discard Policies for Overload control at IGW	Scheme , Policies	Scheme , Policies	<pre>curl -X PUT http://<SEPP- Configuration IP>:<PORT>/ sepp/nf- common- component/v1/i- gw/n32/ ocdiscardpolicie s -H 'Content- Type: application/json' -d' [{ "name": "OCDP1", "scheme": "PriorityBa sed", "policies": [{ "level": "Warning", "value": 30, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, {</pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre> "level": "Minor", "value": 24, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, { "level": "Major", "value": 15, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, { "level": "Critical", </pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre> "value": 10, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }] }, { "name": "OCDP2", "scheme": "Percentage Based", "policies": [{ "level": "Warning", "value": 0, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, </pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre>{ "level": "Minor", "value": 5, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, { "level": "Major", "value": 10, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" }, { "level": "Critical",</pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre> "value": 25, "action": "RejectWith ErrorCode", "errorCodeP rofile": "error429" } }]' </pre>
GET	sepp/nf-common-component/v1/i gw/n32/ ocpolicymapping	retrieve Overload Control enable/ disable status	NA	Service name , sampling period , enable	curl -X GET http://<SEPP- Configuration IP>:<PORT>/ sepp/nf- common- component/v1/i gw/n32/ ocpolicymapping

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
PUT	sepp/nf-common-component/v1/i-gw/n32/ocpolicymapping	Enable/Disable Overload Control	Enable and service name	Details for Overload control enable	<pre>curl -X PUT http://<SEPP- Configuration IP>:<PORT>/ sepp/nf- common- component/v1/i- gw/n32/ ocpolicymapping -H 'Content- Type: application/json' -d '{ "enabled": true, "mappings": [{ "svcName": "ocsepp- release- pn32f-svc", "policyName": "Policy1" }], "samplingPeriod": 5000 }'</pre>
GET	sepp/nf-common-component/v1/perf-info/overloadLevelThreshold	fetch Threshold levels defined for Overload control at Perf-info	NA		<pre>curl -X GET http://<SEPP- Configuration IP>:<PORT>/ sepp/nf- common- component/v1/ perf-info/ overloadLevelThreshold</pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
PUT	sepp/nf-common-component/v1/perf-info/overloadLevelThreshold	Update Threshold levels defined at Perf-info	Threshold level - onset and abatement values. Service name	threshold levels for CPU and memory	<pre>curl -X PUT http://<SEPP-Configuration IP>:<PORT>/sepp/nf-common-component/v1/perf-info/overloadLevelThreshold -H 'Content-Type: application/json' -d '{ "svcName": "ocsepp-release-pn32f-svc", "metricsThresholdList": [{ "metricsName": "memory", "levelThresholdList": [{ "level": "Warning", "onsetValue": 50, "abatementValue": 45 }, { "level": "Minor", "onsetValue": 50 }] }] }</pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre> ": 70, "abatementV alue": 65 }, { "level": "Major", "onsetValue ": 80, "abatementV alue": 75 }, { "level": "Critical", "onsetValue ": 90, "abatementV alue": 85 } }, { "metricsNam e": "cpu", "levelThres holdList": [{ "level": "Warning", "onsetValue ": 65, </pre>

Table 2-37 (Cont.) Overload Control

Method	URL	Description	Input	Return	Example
					<pre> "abatementV alue": 60 }, { "level": "Minor", "onsetValue ": 75, "abatementV alue": 70 }, { "level": "Major", "onsetValue ": 85, "abatementV alue": 80 }, { "level": "Critical", "onsetValue ": 95, "abatementV alue": 90 } } }]' </pre>

Error Code profile Parameters

Table 2-38 Error Code profile Parameters

Attribute	DataType	Compliance	Description
name	string	M	name of error profile
errorCode	integer	M	http error code
errorCause	string	O	error cause
errorTitle	string	O	error title
errorDescription	string	O	Error description

OC Discard Policies Parameters**Table 2-39 OC Discard Policies Parameters**

Attribute	DataType	Compliance	Description
name	string	M	name of policy
scheme	string	M	scheme for discard. It can be PercentageBased or PriorityBased
policies	object	M	policy definition
level	string	M	name of level
value	integer	M	threshold value
action	string	M	action applied on discarded message that will be RejectWithErrorCode
errorCodeProfile	string	M	Error Code Profile name mapping

OC Policy mapping Parameters**Table 2-40 OC Policy mapping Parameters**

Attribute	DataType	Compliance	Description
enabled	string	O	enable overload control. The feature is disabled (set to false) by default.
mappings	object	M	
svcName	string	M	map to service name
policyName	string	M	map to policy name
samplingPeriod	integer	M	sampling period interval in milliseconds

Overload threshold Level Parameters**Table 2-41 Overload threshold Level Parameters**

Attribute	DataType	Compliance	Description
svcName	string	M	service name

Table 2-41 (Cont.) Overload threshold Level Parameters

Attribute	DataType	Compliance	Description
metricThresholdList	object	M	
metrics name	string	M	metrics on which overload level calculated
levelThresholdList	object	M	Threshold level definition
level	string	M	error name
onset-value	integer	M	Value for which level is applied
abatement-value	integer	M	Value till which the level remains active

Sample Response body structure for GET operations:Resource API: *sepp/nf-common-component/v1/igw/n32/errorcodeprofiles*

Resource Method: GET

Content Type: application/json

Response Body

```
[
  {
    "name": "error429",
    "errorCode": 429,
    "errorCause": "Too many requests",
    "errorTitle": "Too many requests",
    "errorDescription": "Too many requests"
  },
  {
    "name": "error503",
    "errorCode": 503,
    "errorCause": "Service Unavailable",
    "errorTitle": "Service Unavailable",
    "errorDescription": ""
  }
]
```

Sample Response body structure for PUT operations:Resource API: *sepp/nf-common-component/v1/igw/n32/errorcodeprofiles*

Resource Method: PUT

Content Type: application/json

Response Body

```
[
  {
    "name": "error429",
    "errorCode": 429,
```



```

        "errorCause": "Too many requests",
        "errorTitle": "Too many requests",

        "errorDescription": "Too many requests"
    },
    {
        "name": "error503",
        "errorCode": 503,
        "errorCause": "Service Unavailable",
        "errorTitle": "Service Unavailable",

        "errorDescription": ""
    } ]

```

Sample Response body structure for GET operations:

Resource API: *sepp/nf-common-component/v1/igw/n32/ocdiscardpolicies*

Resource Method: GET

Content Type: application/json

Response Body

```

[
    {
        "name": "OCDP1",
        "scheme": "PriorityBased",
        "policies": [
            {
                "level": "Warning",
                "value": 30,
                "action": "RejectWithErrorCode",
                "errorCodeProfile": "error429"
            },
            {
                "level": "Minor",
                "value": 24,
                "action": "RejectWithErrorCode",
                "errorCodeProfile": "error429"
            },
            {
                "level": "Major",
                "value": 15,
                "action": "RejectWithErrorCode",
                "errorCodeProfile": "error429"
            },
            {
                "level": "Critical",
                "value": 10,
                "action": "RejectWithErrorCode",
                "errorCodeProfile": "error429"
            }
        ]
    },
    {

```

```

    "name": "OCDP2",
    "scheme": "PercentageBased",
    "policies": [
      {
        "level": "Warning",
        "value": 0,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      },
      {
        "level": "Minor",
        "value": 5,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      },
      {
        "level": "Major",
        "value": 10,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      },
      {
        "level": "Critical",
        "value": 25,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      }
    ]
  }
]

```

Sample Response body structure for PUT operations:

Resource API: *sepp/nf-common-component/v1/igw/n32/ocdiscardpolicies*

Resource Method: PUT

Content Type: application/json

Response Body

```

[
  {
    "name": "OCDP1",
    "scheme": "PriorityBased",
    "policies": [
      {
        "level": "Warning",
        "value": 30,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      },
      {
        "level": "Minor",
        "value": 24,
        "action": "RejectWithErrorCode",
        "errorCodeProfile": "error429"
      }
    ]
  }
]

```

```

        },
        {
            "level": "Major",
            "value": 15,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        },
        {
            "level": "Critical",
            "value": 10,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        }
    ]
},
{
    "name": "OCDP2",
    "scheme": "PercentageBased",
    "policies": [
        {
            "level": "Warning",
            "value": 0,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        },
        {
            "level": "Minor",
            "value": 5,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        },
        {
            "level": "Major",
            "value": 10,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        },
        {
            "level": "Critical",
            "value": 25,
            "action": "RejectWithErrorCode",
            "errorCodeProfile": "error429"
        }
    ]
}
]
}
]

```

Sample Response body structure for GET operations:Resource API: *sepp/nf-common-component/v1/igw/n32/ocpolicymapping*

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "enabled": true,
  "mappings": [
    {
      "svcName": "ocsepp-release-pn32f-svc",
      "policyName": "OCDP1"
    }
  ],
  "samplingPeriod": 5000
}
```

Sample Response body structure for PUT operations:

Resource API: *sepp/nf-common-component/v1/igw/n32/ocpolicymapping*

Resource Method: PUT

Content Type: application/json

Response Body

```
{
  "enabled": true,
  "mappings": [
    {
      "svcName": "ocsepp-release-pn32f-svc",
      "policyName": "OCDP1"
    }
  ],
  "samplingPeriod": 5000
}
```

Sample Response body structure for GET operations:

Resource API: *sepp/nf-common-component/v1/perf-info/overloadLevelThreshold*

Resource Method: GET

Content Type: application/json

Response Body

```
[{
  "svcName": "ocsepp-release-pn32f-svc",
  "metricsThresholdList": [{
    "metricsName": "memory",
    "levelThresholdList": [{
      "level": "Warning",
      "onsetValue": 50,
      "abatementValue": 45
    }, {
      "level": "Minor",
      "onsetValue": 70,
      "abatementValue": 65
    }, {
```

```

        "level": "Major",
        "onsetValue": 80,
        "abatementValue": 75
      }, {
        "level": "Critical",
        "onsetValue": 90,
        "abatementValue": 85
      }
    ]
  }, {
    "metricsName": "cpu",
    "levelThresholdList": [{
      "level": "Warning",
      "onsetValue": 65,
      "abatementValue": 60
    }, {
      "level": "Minor",
      "onsetValue": 75,
      "abatementValue": 70
    }, {
      "level": "Major",
      "onsetValue": 85,
      "abatementValue": 80
    }, {
      "level": "Critical",
      "onsetValue": 95,
      "abatementValue": 90
    }
  ]
}]
}]

```

Sample Response body structure for PUT operations:

Resource API: *sepp/nf-common-component/v1/perf-info/overloadLevelThreshold*

Resource Method: PUT

Content Type: application/json

Response Body

```

[ {
  "svcName": "ocsepp-release-pn32f-svc",
  "metricsThresholdList": [ {
    "metricsName": "memory",
    "levelThresholdList": [ {
      "level": "Warning",
      "onsetValue": 50,
      "abatementValue": 45
    }, {
      "level": "Minor",
      "onsetValue": 70,
      "abatementValue": 65
    }, {
      "level": "Major",
      "onsetValue": 80,
      "abatementValue": 75
    }, {

```

```

        "level": "Critical",
        "onsetValue": 90,
        "abatementValue": 85
    }, {
        "metricsName": "cpu",
        "levelThresholdList": [{
            "level": "Warning",
            "onsetValue": 65,
            "abatementValue": 60
        }, {
            "level": "Minor",
            "onsetValue": 75,
            "abatementValue": 70
        }, {
            "level": "Major",
            "onsetValue": 85,
            "abatementValue": 80
        }, {
            "level": "Critical",
            "onsetValue": 95,
            "abatementValue": 90
        }
    ]
}
}]
}]

```

2.14 Hosted SEPP

The Hosted SEPP REST API allows the user to enable or disable the Hosted SEPP feature.

Table 2-42 Hosted SEPP REST API

Method	URL	Description	Input	Return	Example
GET	sepp-configuration/v1/hosted-sepp/feature	Returns if the Hosted SEPP feature is enabled or not "true" indicates enabled "false" indicates disabled	NIL	HostedSEPPOptionDTO	curl -v http://127.0.0.1:9090/sepp-configuration/v1/hosted-sepp/feature -H 'Content-Type:application/json' -X GET
PUT	sepp-configuration/v1/hosted-sepp/feature	To Enable/ Disable the Hosted SEPP Feature To enable the feature, value should be set to true To disable the feature, value should be set to false	HostedSEPPOptionDTO to enable/disable the feature	String with response status	curl -v http://127.0.0.1:9090/sepp-configuration/v1/hosted-sepp/feature -H 'Content-Type:application/json' -X PUT -d '{ "hostedSepp": { "enabled": true } '

Table 2-43 Hosted SEPP Parameters

Attribute	Description	Details
enabled	This is an optional parameter. To enable or disable the the Hosted SEPP feature.	DataType: Boolean Range: True or False Default Value: False

Sample Response body structure for GET operations:Resource API: *sepp-configuration/v1/hosted-sepp/feature*

Resource Method: GET

Content Type: application/json

Response Body

```
{  "hostedSepp": {
                                "enabled": false
                                }
}
```

Sample Response body structure for PUT operations:Resource API: *sepp-configuration/v1/hosted-sepp/feature*

Resource Method: PUT

Content Type: application/json

Response Body

200 0k

2.15 Cat 2–Network ID Validation System Option

Cat 2 – Network ID Validation System Option REST API enables or disables the Cat 2 – Network ID Validation feature.

Table 2-44 Cat 2 – Network ID Validation System Option

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation/options	Returns whether header and body Network ID Validation features are enable or disabled.	NA	NetworkID ValidationFeaturesOptions	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/options' \ -H 'accept: */*'

Table 2-44 (Cont.) Cat 2 – Network ID Validation System Option

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/network-id-validation/options	Enables or disables the Network ID Validation feature.	NetworkIDValidationFeaturesOptions Object containing Cat-2 Network ID Validation Feature Option Value	NetworkIDValidationFeaturesOptions	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ security-counter-measure/network-id- validation/options' \ -H 'accept: */* \ -H 'Content-Type: application/json' \ -d '{ { "networkIdValidationEnabled": { "messageFilteringOnNetworkIdHeaderValidation": true, "messageFilteringOnNetworkIdBodyValidation": true } } }'</pre>

Cat-2 Network ID Validation Feature System Option Parameters

Table 2-45 Cat-2 Network ID Validation Feature System Option Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
messageFilteringOnNetworkIdHeaderValidation	boolean	O	Enable Network ID Header Validation Feature. Default value: False
messageFilteringOnNetworkIdBodyValidation	boolean	O	Enable Network ID Body Validation Feature. Default value: False

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/options

Resource Method: GET

Content Type: application/json

Response Body

```
"networkIdValidationEnabled": {
  "messageFilteringOnNetworkIdHeaderValidation": true,
  "messageFilteringOnNetworkIdBodyValidation": true
}
```


Sample Response body structure for PUT operations:

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/options

Resource Method: PUT

Content Type: application/json

Response Body

```
{
  200 OK
}
```

2.16 Network ID Validation List Configuration

Network ID Validation List allows user to configure Ingress/Egress Rules along with their corresponding Ingress and Egress Actions for SEPP Mode and Egress Rules along with Egress Action for Roaming Hub mode.

Table 2-46 Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
GET	sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list	Returns all the Network ID Validation lists created as part of Network ID Validation Feature with their Ingress Rules, Egress Rules, Ingress Action and Egress Action.	No Input Required	All Network ID Validation lists configured in the system.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list' \ -H 'accept: */*'

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	Returns the Network ID Validation list based on Network ID List Name	networkIdValidationListName	Returns the detailed object which comprises of Ingress/Egress Rules along with their corresponding Ingress and Egress Actions	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }' \ -H 'accept: */*' </pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	This API is used to Add new Network ID validation list along with Ingress/ Egress rules and their Error configuration.	networkIdValidationListName	networkIdValidationListName and the detailed object comprising of rules and error configurations.	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ security-counter-measure/network- id-validation-allowed-list/ NewList' \ -H 'accept: */.*' \ -H 'Content- Type: application/ json' \ -d '{ "networkIdValidationListName ": "NewList", "ingressRule": [{ "id": 0, "resourceURI": "/ namf-loc/v1/ {ueContextId}/ provide-loc- info", "httpMethod": "POST" }], "egressRule": [{ "id": 0, "resourceURI": "/ namf-loc/v1/ {ueContextId}/ provide-loc- info", "httpMethod": "POST" } }</pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
					<pre>], "ingressAction": { "title": "Network ID Validation Failure", "statusCode": 406, "action": "REJECT" }, "egressAction": { "title": "Network ID Validation Failure", "statusCode": 406, "action": "REJECT" } }' </pre>
DELETE	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	This API is used to Delete an already Existing Network ID Validation List for which Network ID Validation List Name is provided.	networkId ValidationListName	204	<pre> curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/NewList' \ -H 'accept: */*' </pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	This API is used to UpdateNetwork ID validation List along with Ingress/ Egress rules and their Error configuration.	networkIdValidationListName	201 CREATED	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }' \ -H 'accept: */* ' \ -H 'Content-Type: application/json' \ -d '{ "networkIdValidationListName ": "NewList", "ingressRule": [{ "id": 141, "resourceURI": "/nudm-sdm/v2/{supi}/sms-data", "httpMethod": "GET" }], "ingressAction": { "title": "Network ID Validation Failure", "statusCode": 406, "action": "REJECT" },</pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
					<pre>"egressAction": { "title": "Network ID Validation Failure", "statusCode": 406, "action": "REJECT" }</pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	This API is used to add a specific rule to an existing list. We need to specify the proper rule in either Ingress or Egress Rules	networkIdValidationListName and the detailed objects containing rules.	200 OK	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ security-counter-measure/network- id-validation-allowed-list/ update-rules/ ListRSS_1' \ -H 'accept: */*' \ -H 'Content- Type: application/ json' \ -d '{ "networkIdValidationListName": "ListRSS_1", "ingressRule": [{ "id": 0, "resourceURI": "/ namf-evts/v1/ subscriptions", "httpMethod": "POST" }], "egressRule": [{ "id": 0, "resourceURI": "/ namf-evts/v1/ subscriptions/ {subscriptionId}" }, "httpMethod": "DELETE" }] }</pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
					}']

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
DELETE	/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName }	This API is used to delete a specific rule to an existing list. User has to specify the proper rule in Ingress and Egress Rules. Note: SEPP in Roaming Hub mode supports only Egress Rules.	networkIdValidationListName and the detailed objects containing rules.	204	<pre>curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/delete-rules/ListRSS_1' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "networkIdValidationListName": "ListRSS_1", "ingressRule": [{ "id": 0, "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}" }, { "httpMethod": "DELETE" }], "egressRule": [{ "id": 0, "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}" }, { "httpMethod":</pre>

Table 2-46 (Cont.) Network ID Validation List Configuration

Method	URL	Description	Input	Return	Example
					<pre>"DELETE" }] }'</pre>

Network ID List Configuration Parameters**Table 2-47 Network ID List Configuration Parameters**

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
networkIdValidationListName	string	M	Network ID Validation List Name
ingressRule	String	O	Ingress Rule with Resource URI and Http Method
egressRule	String	O	Egress Rule with Resource URI and Http Method
ingressAction	String	M	Ingress Action: • REJECT • FORWARD
egressAction	String	M	Egress Action: • REJECT • FORWARD

Table 2-48 Allowed Ingress/ Egress Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
resourceURI	string	O	Resource URI for which Validation will happen
httpMethod	String	O	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

Error Response Configuration Data Model Parameters

Table 2-49 Error Response Configuration Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
title	string	M	Title and details of Error
statusCode	integer	M	Status Code of configured errors
action	enum	M	Action needs to be taken when PLMN ID validation fails. Range: REJECT or FORWARD

Sample Response body structure for GET operations

Resource API : sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list

Resource Method : GET

Content Type : application/json

Response Body

```
[
  {
    "networkIdValidationListName": "Default",
    "ingressRule": [
      {
        "id": 76,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "GET"
      },
      {
        "id": 111,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "POST"
      },
      {
        "id": 102,
        "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
        "httpMethod": "DELETE"
      },
      {
        "id": 54,
        "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
        "httpMethod": "POST"
      },
      {
        "id": 90,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "httpMethod": "GET"
      }
    ]
  }
]
```

```

    },
    {
      "id": 43,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
      "httpMethod": "PUT"
    },
    {
      "id": 82,
      "resourceURI": "/nnssf-nsselection/v2/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 3,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 1,
      "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
      "httpMethod": "GET"
    },
    {
      "id": 21,
      "resourceURI": "/namf-evts/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 98,
      "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
      "httpMethod": "PUT"
    },
    {
      "id": 50,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
      "httpMethod": "GET"
    },
    {
      "id": 103,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
      "httpMethod": "DELETE"
    },
    {
      "id": 118,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
      "httpMethod": "PATCH"
    },
    {
      "id": 66,
      "resourceURI": "/nudm-sdm/v1/shared-data",
      "httpMethod": "GET"
    },
    {
      "id": 104,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",

```

```

        "httpMethod": "PUT"
      },
      {
        "id": 23,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
        "httpMethod": "POST"
      },
      {
        "id": 34,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/
update",
        "httpMethod": "POST"
      },
      {
        "id": 99,
        "resourceURI": "/nudm-sdm/v1/{supi}",
        "httpMethod": "GET"
      },
      {
        "id": 70,
        "resourceURI": "/namf-comm/v1/subscriptions",
        "httpMethod": "POST"
      },
      {
        "id": 114,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "PUT"
      },
      {
        "id": 116,
        "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
        "httpMethod": "GET"
      },
      {
        "id": 20,
        "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET"
      },
      {
        "id": 140,
        "resourceURI": "/oauth2/token",
        "httpMethod": "POST"
      },
      {
        "id": 106,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "PUT"
      },
      {
        "id": 65,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
      },
      {

```

```

        "id": 129,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
        "httpMethod": "GET"
    },
    {
        "id": 131,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 26,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 100,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
        "httpMethod": "POST"
    },
    {
        "id": 59,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions/
{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 79,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 133,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}",
        "httpMethod": "POST"
    },
    {
        "id": 60,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 24,
        "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET"
    },
    {
        "id": 25,
        "resourceURI": "/nudm-sdm/v2/shared-data",
        "httpMethod": "GET"
    },
    {
        "id": 10,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "GET"
    }

```

```

    },
    {
      "id": 55,
      "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 8,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
      "httpMethod": "GET"
    },
    {
      "id": 40,
      "resourceURI": "/nnrf-disc/v1/nf-instances",
      "httpMethod": "GET"
    },
    {
      "id": 35,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/
{subscriptionId}",
      "httpMethod": "PATCH"
    },
    {
      "id": 52,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
release",
      "httpMethod": "POST"
    },
    {
      "id": 64,
      "resourceURI": "/nnrf-nfm/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 83,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 7,
      "resourceURI": "/nnssf-nselection/v1/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 137,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 139,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 73,
      "resourceURI": "/npcf-ue-policy-control/v1/policies",

```

```

        "httpMethod": "POST"
    },
    {
        "id": 120,
        "resourceURI": "/nudm-sdm/v2/{supi}",
        "httpMethod": "GET"
    },
    {
        "id": 16,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
        "httpMethod": "POST"
    },
    {
        "id": 78,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PATCH"
    },
    {
        "id": 125,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "PUT"
    },
    {
        "id": 80,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "DELETE"
    },
    {
        "id": 58,
        "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
        "httpMethod": "DELETE"
    },
    {
        "id": 123,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
        "httpMethod": "GET"
    },
    {
        "id": 115,
        "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
        "httpMethod": "GET"
    },
    {
        "id": 41,
        "resourceURI": "/nnrf-nfm/v1/NfStatusChangeNotification",
        "httpMethod": "POST"
    },
    {
        "id": 127,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 33,

```



```

        "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
        "httpMethod": "GET"
    },
    {
        "id": 18,
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/
{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 89,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "GET"
    },
    {
        "id": 72,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mo-data",
        "httpMethod": "POST"
    },
    {
        "id": 88,
        "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
        "httpMethod": "PATCH"
    },
    {
        "id": 84,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
    },
    {
        "id": 138,
        "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
        "httpMethod": "GET"
    },
    {
        "id": 68,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET"
    },
    {
        "id": 85,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mt-data",
        "httpMethod": "POST"
    },
    {
        "id": 122,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "DELETE"
    },
    {
        "id": 11,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",

```

```

        "httpMethod": "PUT"
      },
      {
        "id": 86,
        "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
        "httpMethod": "PATCH"
      }
    ],
    "egressRule": [
      {
        "id": 71,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
        "httpMethod": "GET"
      },
      {
        "id": 14,
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "httpMethod": "GET"
      },
      {
        "id": 121,
        "resourceURI": "/oauth2/token",
        "httpMethod": "POST"
      },
      {
        "id": 17,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
        "httpMethod": "DELETE"
      },
      {
        "id": 6,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
        "httpMethod": "GET"
      },
      {
        "id": 38,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "DELETE"
      },
      {
        "id": 47,
        "resourceURI": "/nnssf-nselection/v1/network-slice-information",
        "httpMethod": "GET"
      },
      {
        "id": 126,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/transfer-mo-data",
        "httpMethod": "POST"
      },
      {
        "id": 95,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
      }
    ]
  }
}

```

```

    },
    {
      "id": 63,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 107,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/
{subscriptionId}",
      "httpMethod": "PATCH"
    },
    {
      "id": 62,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
transfer-mt-data",
      "httpMethod": "POST"
    },
    {
      "id": 101,
      "resourceURI": "/namf-evts/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 117,
      "resourceURI": "/nudm-sdm/v1/{supi}",
      "httpMethod": "GET"
    },
    {
      "id": 134,
      "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
      "httpMethod": "PATCH"
    },
    {
      "id": 112,
      "resourceURI": "/nnssf-nselection/v2/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 19,
      "resourceURI": "/nnrf-disc/v1/nf-instances",
      "httpMethod": "GET"
    },
    {
      "id": 12,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "DELETE"
    },
    {
      "id": 44,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
      "httpMethod": "PUT"
    },
    {
      "id": 4,

```

```

        "resourceURI": "/nudm-sdm/v2/shared-data",
        "httpMethod": "GET"
    },
    {
        "id": 105,
        "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 97,
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/
{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 27,
        "resourceURI": "/namf-comm/v1/subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 9,
        "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
        "httpMethod": "GET"
    },
    {
        "id": 81,
        "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
        "httpMethod": "GET"
    },
    {
        "id": 46,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "PATCH"
    },
    {
        "id": 75,
        "resourceURI": "/npcf-ue-policy-control/v1/policies",
        "httpMethod": "POST"
    },
    {
        "id": 42,
        "resourceURI": "/nudm-sdm/v2/{supi}",
        "httpMethod": "GET"
    },
    {
        "id": 13,
        "resourceURI": "/nudm-sdm/v1/shared-data",
        "httpMethod": "GET"
    },
    {
        "id": 136,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "PUT"
    },
    {

```

```

        "id": 51,
        "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET"
    },
    {
        "id": 94,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions/
{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 36,
        "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}",
        "httpMethod": "GET"
    },
    {
        "id": 49,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 69,
        "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 92,
        "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 135,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
    },
    {
        "id": 109,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 130,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 113,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
        "httpMethod": "POST"
    },
    {
        "id": 96,
        "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
        "httpMethod": "GET"
    }
},

```

```

    {
      "id": 37,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
      "httpMethod": "PUT"
    },
    {
      "id": 74,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
      "httpMethod": "POST"
    },
    {
      "id": 56,
      "resourceURI": "/nnrf-nfm/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 110,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
      "httpMethod": "POST"
    },
    {
      "id": 32,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 132,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
      "httpMethod": "GET"
    },
    {
      "id": 22,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 57,
      "resourceURI": "/nnrf-nfm/v1/subscriptions/{subscriptionID}",
      "httpMethod": "DELETE"
    },
    {
      "id": 28,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
      "httpMethod": "POST"
    },
    {
      "id": 87,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "PUT"
    },
    {

```

```

        "id": 53,
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 124,
        "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
        "httpMethod": "PUT"
    },
    {
        "id": 77,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "GET"
    },
    {
        "id": 5,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "DELETE"
    },
    {
        "id": 61,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "PATCH"
    },
    {
        "id": 128,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "GET"
    },
    {
        "id": 15,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
        "httpMethod": "POST"
    },
    {
        "id": 91,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
        "httpMethod": "GET"
    },
    {
        "id": 30,
        "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
        "httpMethod": "GET"
    },
    {
        "id": 31,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET"
    },
    {
        "id": 48,
        "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
        "httpMethod": "POST"
    }

```

```

    },
    {
      "id": 119,
      "resourceURI": "/nnrf-nfm/v1/NfStatusChangeNotification",
      "httpMethod": "POST"
    },
    {
      "id": 29,
      "resourceURI": "/namf-evts/v1/subscriptions/{subscriptionId}",
      "httpMethod": "PATCH"
    },
    {
      "id": 39,
      "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "id": 2,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
      "httpMethod": "POST"
    },
    {
      "id": 108,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}",
      "httpMethod": "POST"
    },
    {
      "id": 93,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data/upu-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 45,
      "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
      "httpMethod": "GET"
    },
    {
      "id": 67,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "PUT"
    }
  ],
  "ingressAction": {
    "title": "PLMN ID Validation Failed",
    "statusCode": 406,
    "action": "REJECT"
  },
  "egressAction": {
    "title": "PLMN ID Validation Failed",
    "statusCode": 406,
    "action": "REJECT"
  }
},
{
  "networkIdValidationListName": "NewCustomList",

```



```

    "ingressRule": [
      {
        "id": 141,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
      }
    ],
    "egressRule": [
      {
        "id": 142,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
      }
    ],
    "ingressAction": {
      "title": "PLMN ID Validation Failure",
      "statusCode": 406,
      "action": "REJECT"
    },
    "egressAction": {
      "title": "PLMN ID Validation Failure",
      "statusCode": 406,
      "action": "REJECT"
    }
  }
]

```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName}

Resource Method : GET

Content Type : application/json

Response Body

```

{
  "networkIdValidationListName": "NewCustomList",
  "ingressRule": [
    {
      "id": 141,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    }
  ],
  "egressRule": [
    {
      "id": 142,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    }
  ],
  "ingressAction": {
    "title": "Network ID Validation Failed",

```

```
        "statusCode": 406,  
        "action": "REJECT"  
    },  
    "egressAction": {  
        "title": "Network ID Validation Failed",  
        "statusCode": 406,  
        "action": "REJECT"  
    }  
}
```

Sample Response body structure for POST operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName}

Resource Method : POST

Content Type : application/json

Response Body

201 CREATED

Sample Response body structure for DELETE operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName}

Resource Method : DELETE

Content Type : application/json

Response Body

204

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/{networkIdValidationListName}

Resource Method : PUT

Content Type : application/json

Response Body

201 CREATED

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/update-rules/{networkIdValidationListName }

Resource Method : PUT

Content Type : application/json**Response Body**

200 OK

Sample Response body structure for DELETE operations

Resource API : /sepp-configuration/v1/security-counter-measure/network-id-validation-allowed-list/delete-rules/{networkIdValidationListName}**Resource Method** : DELETE**Content Type** : application/json**Response Body**

204

2.17 Network ID in Header Validation Configuration

Network ID in Header Validation Configuration REST API allows the user to configure the headers for which Network ID validation take place.

Table 2-50 Network ID in Header Validation Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation/header	This API is used to fetch Header configurations	Not Required	List of header detailed objects.	curl -X 'GET'\ 'http ://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/header'\ -H 'accept: */*'

Table 2-50 (Cont.) Network ID in Header Validation Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation/header/{headerId}	This API is used to fetch the Header configurations for which {headerId} is given	{headerId}	Header Configuration	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/header/1' \ -H 'accept: */*'</pre>

Table 2-50 (Cont.) Network ID in Header Validation Configuration

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/network-id-validation/header	This API is used to add new Header Configurations.	Header Configurations	201 Network ID Header Created Successfully.	<pre>curl -X 'POST' \ 'http://10.75.151.234:32427/sepp-configuration/v1/security-counter-measure/network-id-validation/header' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "headerId": 0, "headerName": "test", "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access", "direction": "CSEPP", "regularExpression": "test", "httpMethod": "GET" }</pre>

Table 2-50 (Cont.) Network ID in Header Validation Configuration

Method	URL	Description	Input	Return	Example
					}'
DELETE	/sepp-configuration/v1/security-counter-measure/network-id-validation/header/{headerId}	This API is used to delete header configuration for the given header Id.	header Id	204 No Content	<pre>curl -X 'DELETE' \ 'http:// <SEPP- Configurati on IP>:<PORT>/ sepp- configurati on/v1/ security- counter- measure/ network-id- validation/ header/28' \ -H 'accept: */*' </pre>

Network ID in Header Validation Configuration Parameters

Table 2-51 Network ID in Header Validation Configuration Parameters

Attribute	Data type	Description
headerId	Integer	This is a mandatory parameter. Header id for which Network ID Validation should happen.
headerName	String	This is a mandatory parameter. Header Name for which PLMN ID validation should happen.
regularExpression	String	This is a mandatory parameter. Regular Expression to fetch PLMN ID (MCC and MNC).
resourceURI	String	This is a mandatory parameter. Resource URI for which Validation will happen.
httpMethod	Enum	This is a mandatory parameter. HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

Table 2-51 (Cont.) Network ID in Header Validation Configuration Parameters

Attribute	Data type	Description
direction	Enum	This is a mandatory parameter. PSEPP or CSEPP

Note

The mncLength parameter has been removed from Release 25.1.200 onwards and now the mnc length will be populated from PLMN table where mnc length is configured according to the PLMNs given in Remote SEPP.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/header

Resource Method: GET

Content Type: application/json

Response Body

```
[
  {
    "headerId": 9,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 17,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 41,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 53,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
```

```

    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 57,
    "headerName": "supi",
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 65,
    "headerName": "ueId",
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "DELETE"
  },
  {
    "headerId": 85,
    "headerName": "ueContextId",
    "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 105,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 109,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 73,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 113,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sdm-subscriptions",

```



```

    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "POST"
  },
  {
    "headerId": 117,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 29,
    "headerName": "ueId",
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "POST"
  },
  {
    "headerId": 37,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 69,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 77,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 93,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",

    "direction": "PSEPP",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 13,
    "headerName": "ueId",

```

```

"resourceURI": "/nudm-sdm/v2{ueId}/sdm-subscriptions/{subscriptionId}",

"direction": "PSEPP",
"regularExpression": "(?<=imsi-)[0-9]{15,16}",
"httpMethod": "DELETE"
},
{
  "headerId": 33,
  "headerName": "ueId",
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",

  "direction": "PSEPP",
  "regularExpression": "(?<=imsi-)[0-9]{15,16}",
  "httpMethod": "PUT"
},
{
  "headerId": 49,
  "headerName": "supi",
  "resourceURI": "/nudm-sdm/v2/{supi}/nssai",

  "direction": "PSEPP",
  "regularExpression": "(?<=imsi-)[0-9]{15,16}",
  "httpMethod": "GET"
},
{
  "headerId": 45,
  "headerName": "supi",
  "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",

  "direction": "PSEPP",
  "regularExpression": "(?<=imsi-)[0-9]{15,16}",
  "httpMethod": "GET"
},
{
  "headerId": 25,
  "headerName": "ueId",
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",

  "direction": "PSEPP",
  "regularExpression": "(?<=imsi-)[0-9]{15,16}",
  "httpMethod": "DELETE"
},
{
  "headerId": 4177,
  "headerName": "target-plmn",
  "resourceURI": "/nnrf-disc/v1/nf-instances",

  "direction": "PSEPP",
  "regularExpression": "(?<=msi-)[0-9]{15,16}",
  "httpMethod": "GET"
},
{
  "headerId": 1,
  "headerName": "ueId",
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",

```

```

        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "PUT"
    },
    {
        "headerId": 21,
        "headerName": "supi",
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "direction": "PSEPP",

        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
    },
    {
        "headerId": 101,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",

        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "DELETE"
    },
    {
        "headerId": 5,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",

        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
    },
    {
        "headerId": 89,
        "headerName": "ueContextId",
        "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",

        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "POST"
    },
    {
        "headerId": 61,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",

        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
    },
    {
        "headerId": 81,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
        "direction": "PSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    }

```

```

        "httpMethod": "DELETE"
      },
      {
        "headerId": 97,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
        "direction": "CSEPP",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
      }
    ]
  }
}

```

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/header/{headerId}

Resource Method: GET

Content Type: application/json

Response Body

```

{
  "headerId": 1,
  "headerName": "ueId",
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
  "direction": "CSEPP",
  "regularExpression": "(?<=imsi-)[0-9]{15,16}",
  "httpMethod": "PUT"
}

```

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/header

Resource Method: POST

Content Type : application/json

Response Body

```

201
Network ID Header Created Successfully.

```

Sample Response body structure for DELETE operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/header/{headerId}

Resource Method: DELETE

Content Type: application/json

Response Body204
No Content

2.18 Network ID in Body Validation Configuration

Network ID in Body Validation Configuration REST APIs allow the user to configure the Body IEs for which C-SEPP and P-SEPP PLMN ID Validation happens.

Table 2-52 Network ID in Body Validation Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation/body	This API is used to fetch the complete list of Body IE's Configuration	Not Required	List of Network ID Validation Body IE detailed object.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/body' \ -H 'accept: */*'
GET	/sepp-configuration/v1/security-counter-measure/network-id-validation/body/{bodyId}	This API is used to fetch the Body IE's Configuration for which bodyId is given	bodyId value of the configuration	Body IE detailed object configuration.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/body/1' \ -H 'accept: */*'

Table 2-52 (Cont.) Network ID in Body Validation Configuration

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/network-id-validation/body	This API is used to add Body IE's Configuration for which Network ID Validation is required.	Body IE Configuration	201	<pre>curl -X 'POST' \ 'http://10.75.151.234:32427/sepp-configuration/v1/security-counter-measure/network-id-validation/body' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "bodyId": 0, "": 2, "resourceURI": "/oauth2/token", "identifier": "test", "direction": "CSEPP", "httpMethod": "POST", "regularExpression": "test" }'</pre>
DELETE	/sepp-configuration/v1/security-counter-measure/network-id-validation/body/{bodyId}	This API is used to delete Body IE's Configuration	bodyId	204	<pre>curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/network-id-validation/body/1' \ -H 'accept: */*'</pre>

Network ID in Body Validation Configuration Parameters

Table 2-53 Network ID in Body Validation Configuration Parameters

Attribute	Data Type	Description
httpMethod	Enum	This is a mandatory parameter. HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]
resourceURI	String	This is a mandatory parameter. Resource URI for which Validation will happen
identifier	String	This is a mandatory parameter. Body IE Identifier for which Network ID Validation should happen.
direction	Enum	This is a mandatory parameter. Currently only PSEPP is supported
regularExpression	String	This is a mandatory parameter. Regular Expression to fetch PLMN ID (MCC and MNC)

Note

The mncLength parameter has been removed from Release 25.1.200 onwards and now the mnc length will be populated from PLMN table where mnc length is configured according to the PLMNs given in Remote SEPP.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/body

Resource Method: GET

Content Type: application/json

Response Body

```
[
  {
    "bodyId": 9,
    "resourceURI": "/oauth2/token",
    "identifier": "requesterPlmnList",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 17,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "ueLocation",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  }
]
```

```

    },
    {
      "bodyId": 41,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "identifier": "guamiList",
      "direction": "CSEPP",
      "httpMethod": "PUT",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 53,

      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
      "identifier": "addUeLocation",
      "direction": "CSEPP",
      "httpMethod": "POST",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 57,
      "resourceURI": "/nnrf-nfm/v1/subscriptions",
      "identifier": "PlmnSnssai",
      "direction": "CSEPP",
      "httpMethod": "POST",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 65,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
      "identifier": "guami",
      "direction": "CSEPP",
      "httpMethod": "POST",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 85,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/transfer-
mo-data",
      "identifier": "ueLocation",
      "direction": "CSEPP",
      "httpMethod": "POST",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 105,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
      "identifier": "addUeLocation",
      "direction": "CSEPP",
      "httpMethod": "POST",
      "regularExpression": "mcc-mnc"
    },
    {
      "bodyId": 109,
      "resourceURI": "/oauth2/token",
      "identifier": "requesterPlmn",
      "direction": "CSEPP",

```



```

    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 145,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "guami",
    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 73,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "servingNetwork",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 113,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "eventList",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 149,
    "resourceURI": "/nudm-sdm/v2/{supi}/sdm-subscriptions",
    "identifier": "plmnId",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 157,
    "resourceURI": "/nausf-auth/v1/ue-authentications",
    "identifier": "supiOrSuci",
    "direction": "PSEPP",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{6}|(?<=suci-0-)[0-9]{3}-[0-9]{3}"
  },
  {
    "bodyId": 117,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "reqSnpnList",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 133,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "supi",
    "direction": "PSEPP",

```

```

    "httpMethod": "PUT",
    "regularExpression": "(?<=imsi-)[0-9]{6}"
  },
  {
    "bodyId": 29,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "addUeLocation",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 37,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "identifier": "userLoc",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 121,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "guami",
    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 69,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "supi",
    "direction": "PSEPP",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{6}"
  },
  {
    "bodyId": 77,
    "resourceURI": "/namf-comm/v1/subscriptions",
    "identifier": "guamiList",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 93,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
    "identifier": "plmnId",
    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 125,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "reqPlmnList",

```

```

    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 141,
    "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
    "identifier": "userLoc",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 13,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "identifier": "plmnId",
    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 33,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "supi",
    "direction": "PSEPP",
    "httpMethod": "PUT",
    "regularExpression": "(?<=imsi-)[0-9]{6}"
  },
  {
    "bodyId": 49,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "ueLocation",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 25,
    "resourceURI": "/nausf-auth/v1/ue-authentications",
    "identifier": "servingNetworkName",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "(mcc)([0-9]*)|(mnc)([0-9]*)"
  },
  {
    "bodyId": 153,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "oldGuami",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 129,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
    "identifier": "plmnId",

```

```

    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 1,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "supi",
    "direction": "PSEPP",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{6}"
  },
  {
    "bodyId": 21,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "guamiList",
    "direction": "CSEPP",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 101,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "guami",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 5,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "identifier": "supi",
    "direction": "PSEPP",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{6}"
  },
  {
    "bodyId": 89,
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
    "identifier": "plmnId",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 137,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "servingNetwork",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 45,
    "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
    "identifier": "plmnId",

```

```

        "direction": "CSEPP",
        "httpMethod": "POST",
        "regularExpression": "mcc-mnc"
    },
    {
        "bodyId": 61,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
        "identifier": "ueLocation",
        "direction": "CSEPP",
        "httpMethod": "POST",
        "regularExpression": "mcc-mnc"
    },
    {
        "bodyId": 81,
        "resourceURI": "/nnrf-nfm/v1/subscriptions",
        "identifier": "plmnId",
        "direction": "PSEPP",
        "httpMethod": "POST",
        "regularExpression": "mcc-mnc"
    },
    {
        "bodyId": 97,
        "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
        "identifier": "guamiList",
        "direction": "CSEPP",
        "httpMethod": "PUT",
        "regularExpression": "mcc-mnc"
    }
}
]

```

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/body/{bodyId}

Resource Method: GET

Content Type: application/json

Response Body

```

{
    "bodyId": 1,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "PlmnSnssai",
    "direction": "CSEPP",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
}

```

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/body

Resource Method: POST

Content Type: application/json

Response Body

200 CREATED

Sample Response body structure for DELETE operations

Resource API: /sepp-configuration/v1/security-counter-measure/network-id-validation/body/{bodyId}

Resource Method: DELETE

Content Type: application/json

Response Body

204

2.19 Ingress Rate Limiting System Option

Ingress Rate Limiting Option REST API enables and configures the global parameters for ingress rate limiting feature.

Table 2-54 Ingress Rate Limiting System Option

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/ingress-rate-limiting	This returns the global configuration for ingress rate limiting feature.	No Input Required	IngressRateLimitingDTO	curl -X 'GET' 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ingress-rate-limiting' -H 'accept: */*'

Table 2-54 (Cont.) Ingress Rate Limiting System Option

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/ingress-rate-limiting	This updates the global configuration for ingress rate limiting feature.	IngressRateLimitingDTO Object containing ingress rate limiting feature Option Value	IngressRateLimitingDTO	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/ingress-rate-limiting' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "header": ["3GPP-SBI-ASSERTED-PLMN-ID"], "ingressRateLimitingOptions": { "ingressRateLimitingEnabled": true, "capacity": 16000, "refillRate": 10000, "duration": 300, "requestTokens": 500, "errorConfiguration": { "action": "REJECT", "title": "Too Many Requests sent", "statusCode": 429 } } }</pre>

Ingress rate limiting Option Parameters

Table 2-55 Ingress rate limiting Option Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
header	String	M	Header to Get PLMN ID from the request. [3GPP-SBI-ASSERTED-PLMN-ID, 3GPP-SBI-ORIGINATING-NETWORK-ID]
ingressRateLimitingOptions	Object	O	It contains Ingress Rate Limiting Configuration parameters for this RSS.
ingressRateLimitingEnabled	boolean	O	To enable or disable ingress rate limiting. The feature is disabled (set to false) by default.
capacity	integer	M	Integer Number for setting the Bucket Capacity as an input for Token Bucket Algorithm. Bucket size defined the capacity to handle traffic burst.
refillRate	integer	M	Refill rate to define the number of tokens to be added to refill the bucket.
duration	integer	M	Duration to decide how frequently to refill bucket
requestTokens	integer	M	Request Token to define the Pre loaded tokens to refill the bucket.
errorConfiguration	Object	M	Error configuration parameters.
action	String	M	By default, reject is selected as SBI request will be rejected with the user configured error configuration when the number of SBI requests is above the configured limit.
title	String	M	Title and details of error.
statusCode	integer	M	Error Status Code to be used in the Error Response for discarding the SBI requests when the number of SBI requests is above the configured limit.

Sample Response body structure for GET operations:

Resource API : /sepp-configuration/v1/ingress-rate-limiting

Resource Method : GET

Content Type: application/json

Response Body

```
{
  "header": [
    "3GPP-SBI-ASSERTED-PLMN-ID",
    "3GPP-SBI-ORIGINATING-NETWORK-ID"
  ],
  "ingressRateLimitingOptions": {
    "ingressRateLimitingEnabled": true,
    "capacity": 600,
    "refillRate": 600,
    "duration": 500,
    "requestTokens": 500,
    "errorConfiguration": {
      "action": "REJECT",
      "title": "Too many requests sent",
      "statusCode": 429
    }
  }
}
```

Sample Response body structure for PUT operations:

Resource API : /sepp-configuration/v1/ingress-rate-limiting

Resource Method : PUT

Content Type: application/json

Response Body

201 Created

2.20 SOR

SOR REST API enables or disables the SOR feature. The user can configure the trigger list and other configurations.

Table 2-56 SOR

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/{version}/sor/feature	Retrieves SOR feature options, SOR servers, and other configurational details.	NA	Feature options, error codes, SOR servers	<pre>curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sor/feature -X GET</pre>

Table 2-56 (Cont.) SOR

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/{version}/sor/feature	Configures SOR feature options, SOR servers, and other configurational details.	SOR feature Options SOR server Deatils Error Codes	Feature options, error codes, SOR servers	<pre> curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sor/feature -d'{ "enabled": true, "retryToProducer": true, "redirection": { "enabled": true, "codes": "308" }, "servers": [{ "priority": "PRIMARY", "httpScheme": "http", "sorFqdn": "service-nodejs-2-mnc100-mcc111-3gppnetwork-org.adity-sepp2", "sorPort": "7070", "apiPrefix": "sor", "serverHeader": "SOR-service-nodejs-2-mnc100-mcc111-3gppnetwork-org.adity-sepp2" }], "retryWait": { "retryAltSor": false, "retryTime": 1000, "retryCount": 0 }, "httpCodes": { "errorCodes": "501", "exceptions": "java.util.concurren t.TimeoutException" }, "errorConfiguration" : { "errorCodesToConsume </pre>

Table 2-56 (Cont.) SOR

Method	URL	Description	Input	Return	Example
					<pre> r": "408", "errorMessageToConsumer": "Timeout at SOR" } }' -H 'Content- Type:application/ json' -X PUT </pre>
GET	/sepp-configuration/{version}/sorconfig	Retrieves Resource URI and Http method for all configured SOR Trigger Lists.		allowedListName sorRule-Resource URI+HTTPMethod	<pre> curl -v http:// <SEPP- Configuration IP>:<PORT>/sepp- configuration/v1/ sorconfig -H 'Content- Type:application/ json' -X GET </pre>
DELETE	/sepp-configuration/{version}/sor/feature	Deletes Resource URI and Http method for all configured SOR Trigger Lists.			

SOR Parameters

Table 2-57 SOR Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
enabled	boolean	M	To enable or disable the SOR feature.
retryWait:retryAltSor	boolean	M	To enable or disable the alternative SOR option.
retryToProducer	boolean	M	To enable or disable the retry, in case of an error from SOR producer NF occurs.

Table 2-57 (Cont.) SOR Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
redirection: enabled	boolean	M	If this parameter is enabled, then SOR responds to SEPP and SEPP sends request to producer. If this parameter is disabled, then SOR sends request to producer directly.
Redirection: codes	String	M	This parameter is used to configure all the 3xx HTTP response codes that contain valid location header parameter in response, for which user wants to get the redirection applied.
servers: priority	String	M	SOR server priority must be as Primary, Secondary, and Tertiary. The first entry will always be saved as PRIMARY in database.
servers: httpScheme	String	M	The scheme can be http or https
servers: sorFqdn	String	M	Indicates the FQDN of SOR Server.
servers: sorPort	String	M	Indicates the Port of SOR Server.
servers: apiPrefix	String	M	Indicates the API Prefix for SOR Server.
servers: serverHeader	String	M	Server header that is expected to be received from Sor Server. Typically, SOR-<SoR FQDN>.
retryWait: retryTime	integer	M	Indicates the timer to set for retries towards SOR
retryWait: retryCount	integer	M	Indicates the number of times to retry towards the primary SOR end point

Table 2-57 (Cont.) SOR Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
httpCodes: errorCodes	string	M	This is the list of expected response codes (multiple 5xx response codes separated by (.)) can be configured. Example: 501,504,510) from SOR that will need SEPP to contact the Producer directly in case of retry to producer is enabled.
httpCodes: exceptions	string	M	The exceptions that are expected to be returned from SOR in case of timeout.
errorConfiguration: errorCodesToConsumer	string	M	Error code that will be relayed to consumer in case of SOR timeout.
errorConfiguration: errorMessageToConsumer	string	M	Error message that will be relayed to consumer in case of SOR timeout.

Sample response body structure for GET ALL operations:

Resource API : /sepp-configuration/{version}/sorconfig

Resource Method : GET ALL

Content Type: application/json

Response Body

Request : /sepp-configuration/v1/sorconfig

Response: 200

```
[
  {
    "allowedListName": "Default",
    "sorRule": [
      {
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
        "httpMethod": "POST"
      }
    ]
  },
  {
    "allowedListName": "RSS-1",
    "sorRule": [
      {
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
```

```

        "httpMethod": "PUT"
      },
      {
        "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
        "httpMethod": "GET"
      }
    ]
  }
}
]

```

Sample response body structure for POST operations:

Resource API: /sepp-configuration/v1/sorconfig/Test

Resource Method: POST

Content Type: application/json

Response Body

```

Response: 201 {
  "allowedListName": "Test",
  "sorRule": [
    {
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    }
  ]
}

```

Sample response body structure for DELETE operations:

Resource API: /sepp-configuration/v1/sorconfig/Test

Resource Method: DELETE

Content Type: application/json

Response Body

Response code :204

2.21 SOR Config Trigger Rule List

The SOR Config Trigger Rule List REST API allows the user to configure the combination of the selected URIs and HTTP methods on which SOR feature is going to be applied.

Table 2-58 SOR Config Trigger Rule List

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/{version}/sorconfig/{allowedListName}	Retrieves Resource URI and Http Method for particular SOR Trigger List name.	allowedListName	allowedListName sorRule-Resource URI+HTTPMethod	c url -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sorconfig/Test1 -H 'Content-Type:application/json' -X GET
POST	/sepp-configuration/{version}/sorconfig/{allowedListName}	Configures Resource URI and Http Method for particular SOR Trigger List name. Create new list, if list is already present, returns the error code 400	allowedListName sorRule	allowedListName sorRule-Resource URI+HTTPMethod	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sorconfig/Test1 -d '{ "allowedListName": "Test1", "sorRule": [{ "resourceURI": "/nausf-auth/v1/ue-authentications", "httpMethod": "POST" }] }' -H 'Content-Type:application/json' -X POST

Table 2-58 (Cont.) SOR Config Trigger Rule List

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/{version}/sorconfig/{allowedListName}	Configures SOR Trigger list for given data.	allowedListName sorRule	allowedListName sorRule-Resource URI+HTTPMethod	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sorconfig/Test1 -d '{ "allowedListName": "Test1", "sorRule": [{ "resourceURI": "/nausf-auth/v1/ue-authentications", "httpMethod": "POST" }]}' -H 'Content-Type:application/json' -X PUT
DELETE	/sepp-configuration/{version}/sorconfig/{allowedListName}	Deletes particular SOR Trigger list, which name is given in input.	SOR allowedListName	HTTP Status 204	curl -v http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/sorconfig/Test1 -H 'Content-Type:application/json' -X DELETE

SOR Config Trigger Rule List Parameters

Table 2-59 SOR Config Trigger Rule List Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
allowedListName	string	M	Name of the SOR Trigger List
sorRule: resourceURI	string	M	Resource URI

Table 2-59 (Cont.) SOR Config Trigger Rule List Parameters

Attribute	Data type	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
sorRule: httpMethod	string	M	Request URI Method.Range: POST, PUT, GET, PATCH, DELETE, OPTIONS, HEAD

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/{version}/sorconfig/{allowedListName}

Resource Method: GET

Content Type: application/json

Response Body

Request: /sepp-configuration/v1/sorconfig/RSS-1

Response: 200

```
{
  "allowedListName": "RSS-1",
  "sorRule": [
    {
      "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "PUT"
    }
  ]
}
```

2.22 Cat 3 - Previous Location Check System Option

Cat 3 – Previous Location Check System Option REST API enables or disables the Cat 3 – Previous Location Check feature.

Table 2-60 Cat 3 - Previous Location Check System Option

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/options	This API is used to check whether the previous location check feature is enabled or disabled.	NA	PreviousLocationCheckSystemOptions 200	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/options' \ -H 'accept: */*' \
PUT	/sepp-configuration/v1/security-counter-measure/previous-location-validation/options	This API is used to enable or disable previous location check feature.	PreviousLocationCheckSystemOptions Object containing Previous Location Check Feature Enable/Disable status	PreviousLocationCheckSystemOptions 200	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/options' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ { "previousLocationCheckValidationEnabled": { "messageFilteringOnPreviousLocationCheckValidation": true, "cacheRefreshTimer": 5 } } '

Previous Location Check System Option Parameters

Table 2-61 Previous Location Check System Option Parameters

Attribute	Datatype	Description
messageFilteringOnPreviousLocationCheckValidation	Boolean	This is a mandatory parameter. Enable or disable Previous Location Check Validation feature. Default Value: False
cacheRefreshTimer	Integer	This is a mandatory parameter. Timer to clean coherence cache storing UE Authentication status Default Value: 120000

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/options

Resource Method : GET

Content Type : application/json

Response Body: 200

```
"previousLocationCheckValidationEnabled": {
  "messageFilteringOnPreviousLocationCheckValidation": true,
  "cacheRefreshTimer": 120000
}
```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/options

Resource Method : PUT

Content Type : application/json

Response Body: 200

```
"previousLocationCheckValidationEnabled": {
  "messageFilteringOnPreviousLocationCheckValidation": true,
  "cacheRefreshTimer": 120000
}
```

2.23 Cat-3 Time Check for Roaming Subscribers REST APIs

Following are the REST APIs for the Cat-3 Time Check for Roaming Subscribers feature.

2.23.1 Unauthenticated Location

Unauthenticated Location REST API allows the users to configure Cat-3 Time Check for Roaming Subscribers feature along with error and exception configurations.

/sepp-configuration/v1/security-counter-measure/time-location-check/
unauthenticated-location

Table 2-62 Unauthenticated Location REST API Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location	This API is used to get the following configurations: unAuthLocationId messageFilteringOnUnAuthLocationEnabled avgFlightVelocity blockListRefreshTimer timeUnit cacheRefreshTimer errorAction:title errorAction: statusCode errorAction:action exceptionAction:title exceptionAction:statusCode exceptionAction:action	Not Required	Configured parameters for time location check - uthauthenticated location.	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location' \ -H 'accept: */*'</pre>

Table 2-62 (Cont.) Unauthenticated Location REST API Methods

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location	This API is used to configure the following: unAuthLocationId messageFilteringOnUnAuthenticatedLocationEnabled avgFlightVelocity blockListRefreshTimer timeUnit cacheRefreshTimer errorAction:title errorAction: statusCode errorAction:action exceptionAction:title exceptionAction:statusCode exceptionAction:action	Valid configurations for all mandatory parameters.	200 Saved	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location' \ -H 'accept: */* \ -H 'Content-Type: application/json' \ -d '{ "timeUnAuthenticatedCheckValidationEnabled": { "unAuthLocationId": 1111, "messageFilteringOnUnAuthenticatedLocationEnabled": true, "avgFlightVelocity": 70, "blockListRefreshTimer": 11, "timeUnit": "SECONDS", "cacheRefreshTimer": 11, "errorAction": { "title": "Unauthenticated location check failed", "statusCode": 406, "action": "REJECT" }, "exceptionAction": { "title": "Unauthenticated location check failed", "statusCode": 406, "action": "REJECT" } } }</pre>

Table 2-62 (Cont.) Unauthenticated Location REST API Methods

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location	This API is used to configure the following: unAuthLocationId messageFilteringOnUnAuthLocationEnabled avgFlightVelocity blockListRefreshTimer timeUnit cacheRefreshTimer errorAction:title errorAction: statusCode errorAction:action exceptionAction:title exceptionAction:statusCode exceptionAction:action	Valid configurations for all mandatory parameters.	200 Saved	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location' \ -H 'accept: */* \ -H 'Content-Type: application/json' \ -d '{ "timeUnAuthenticatedCheckValidationEnabled": { "unAuthLocationId": 1111, "messageFilteringOnUnAuthLocationEnabled": true, "avgFlightVelocity": 70, "blockListRefreshTimer": 11, "timeUnit": "SECONDS", "cacheRefreshTimer": 11, "errorAction": { "title": "Unauthenticated location check failed", "statusCode": 406, "action": "REJECT" }, "exceptionAction": { "title": "Unauthenticated location check failed", "statusCode": 406, "action": "REJECT" } } }</pre>

Table 2-63 Unauthenticated Location Parameters

Parameter Name	Data Type	Parameter Description
unAuthLocationId	Integer	This is an optional parameter. This is the ID given by the DB once the configurations are saved.
messageFilteringOnUnAuthLocationEnabled	Boolean	This is a mandatory parameter. Value to enable or disable the Cat-3 Time Location Check feature. true indicates feature enabled. false indicates feature disabled.
avgFlightVelocity	Integer	This is a mandatory parameter. The average flight velocity of the user while travelling from one location to the other. Note: The default value is set as 12000 km/hr.
blockListRefreshTimer	Integer	This is a mandatory parameter. In case a user is blocklisted because of malicious activity, the blocklist will be refreshed according to the value given for 'Blocklist Refresh Timer Value'
timeUnit	String	This is a mandatory parameter. 'Blocklist Refresh Time Unit' specifies the unit for the value given in 'Blocklist Refresh Timer Value'
cacheRefreshTimer	Integer	This is a mandatory parameter. The parameter specifies the time after which the cache is refreshed.
errorAction: action	String	This is a mandatory parameter. Determines the action to be taken, either reject or forward if an error is encountered.
error Action: statusCode	Integer	This is a mandatory parameter. Indicates if an error has occurred with the specified error code.
error Action: title	String	This is a mandatory parameter. Indicates if an error has occurred with the specified title for the error.
exception Action: action	String	This is a mandatory parameter. Determines the action to be taken, either reject or forward if an error is encountered.
exception Action: statusCode	Integer	This is a mandatory parameter. Indicates if an error has occurred with the specified error code.

Table 2-63 (Cont.) Unauthenticated Location Parameters

Parameter Name	Data Type	Parameter Description
exception Action: title	String	This is a mandatory parameter. Indicates if an error has occurred with the specified title for the error.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location

Resource Method: GET

Content Type: application/json

Response Body:

```
{
  "timeUnAuthenticatedCheckValidationEnabled": {
    "unAuthLocationId": 1,
    "messageFilteringOnUnAuthLocationEnabled": true,
    "avgFlightVelocity": 70,
    "blockListRefreshTimer": 11,
    "timeUnit": "SECONDS",
    "cacheRefreshTimer": 11,
    "errorAction": {
      "title": "Unauthenticated location check failed",
      "statusCode": 406,
      "action": "REJECT"
    },
    "exceptionAction": {
      "title": "Unauthenticated location check failed",
      "statusCode": 406,
      "action": "REJECT"
    }
  }
}
```

Sample Response body structure for PUT operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location

Resource Method: PUT

Content Type: application/json

Response Body: 200

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/unauthenticated-location

Resource Method: POST

Content Type: application/json**Response Body:** 200

2.23.2 Country Configurations

Country Configurations REST API allows the users to list the existing country configurations and configure the new country configurations.

/sepp-configuration/v1/security-counter-measure/time-location-check/country-config

Table 2-64 Country Configurations REST API Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/time-location-check/country-config	This API is used to get the following configurations for all countries in the DB: countryId mcc latitude longitude countryName	Not Required	Configured parameters for time location check -country config	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/country-config' \ -H 'accept: */*'</pre>
POST	/sepp-configuration/v1/security-counter-measure/time-location-check/country-config	This API is used to configure the following: countryId mcc latitude longitude countryName	Valid configurations for all mandatory parameters.	201	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/country-config' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "countryId": 25, "mcc": "999", "latitude": "48°50"N", "longitude": "02°20"E", "countryName": "France" }'</pre>

Table 2-65 Country Configurations Parameters

Parameter Name	Data Type	Parameter Description
countryId	Integer	This is an optional parameter. This is the ID given by the DB once the configurations are saved.
mcc	string	This is a mandatory parameter. The input takes the MCC of the country the user wishes to add.
latitude	String	This is a mandatory parameter. The input takes the latitude of the country the user wishes to add.
longitude	String	This is a mandatory parameter. The input takes the longitude of the country the user wishes to add.
countryName	String	This is a mandatory parameter. The input takes the name of the country the user wishes to add.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/country-config

Resource Method: GET

Content Type: application/json

Response Body:

```
[
  {
    "countryId": 13,
    "mcc": "208",
    "latitude": "48°50'N",
    "longitude": "02°20'E",
    "countryName": "France"
  },
  {
    "countryId": 1,
    "mcc": "202",
    "latitude": "37°58'N",
    "longitude": "23°46'E",
    "countryName": "Greece"
  },
  {
    "countryId": 21,
    "mcc": "213",
    "latitude": "42°31'N",
    "longitude": "01°32'E",
    "countryName": "Andorra"
  },
]
```

```
{
  "countryId": 5,
  "mcc": "204",
  "latitude": "52°23'N",
  "longitude": "04°54'E",
  "countryName": "Netherlands"
},
{
  "countryId": 9,
  "mcc": "206",
  "latitude": "50°51'N",
  "longitude": "04°21'E",
  "countryName": "Belgium"
},
{
  "countryId": 17,
  "mcc": "212",
  "latitude": "43°74'N",
  "longitude": "7°25'E",
  "countryName": "Monaco"
}
]
```

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/country-config

Resource Method: POST

Content Type: application/json

Response Body:

```
201
Country Config created successfully2049
```

2.23.3 Country Configurations (Country Id)

Country Configurations (Country Id) REST API allows the users to search and list the existing country configurations using the country id.

/sepp-configuration/v1/security-counter-measure/time-location-check/country-config/{countryId}

Table 2-66 Country Configurations (Country Id) REST API Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/time-location-check/country-config/{countryId}	This API is used to get the following configurations for the given countryId if it exists in the DB: countryId mcc latitude longitude countryName	{countryId}	Configured parameters for time location check -country config against given {countryId}	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/country-config/1' \ -H 'accept: */*'
DELETE	/sepp-configuration/v1/security-counter-measure/time-location-check/country-config/{countryId}	This API is used delete these configurations against given {countryId} countryId mcc latitude longitude countryName	{countryId}	204	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/country-config/1' \ -H 'accept: */*'

Table 2-67 Country Configurations (Country Id) Parameters

Parameter Name	Data Type	Mandatory(M)/Optional(O)/Conditional(C) parameters	Parameter Description
countryId	Integer	M	This is the ID given by the DB once the configurations are saved.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/country-config/{countryId}

Resource Method: GET

Content Type: application/json**Response Body:**

```
{
  "countryId": 21,
  "mcc": "213",
  "latitude": "42°31'N",
  "longitude": "01°32'E",
  "countryName": "Andorra"
}
```

Sample Response body structure for DELETE operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/country-config/{countryId}**Resource Method:** DELETE**Content Type:** application/json**Response Body:**

204

2.23.4 Exception MCC

Exception MCC REST API allows the users to list the existing exception MCCs and configure the new exception MCCs.

/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc

Table 2-68 Exception MCC REST API Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc	This API is used to get the following configurations for all countries in the DB: mccId mcc exceptionMcc	Not Required	Configured list of exception mcc and mcc values.	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc' \ -H 'accept: */*'</pre>

Table 2-68 (Cont.) Exception MCC REST API Methods

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc	This API is used to configure the following: mccId mcc exceptionMcc	Valid configurations for all mandatory parameters.	201	curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d { "mccId": 0, "mcc": "412", "exceptionMcc": "410" }

Table 2-69 Exception MCC Parameters

Parameter Name	Data Type	Mandatory(M)/Optional(O)/Conditional(C) parameters	Parameter Description
mccId	Integer	O	This is the ID given by the DB once the configurations are saved.
mcc	String	M	The input takes the MCC of the country the user wishes to add.
exceptionMcc	String	M	The input takes the MCC of the countries against which the time-check feature should not be applied. Multiple exception mcc values can be configured against the same value for MCC.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc

Resource Method: GET

Content Type: application/json

Response Body:

```
[
  {
    "mccId": 9,
    "mcc": "412",
    "exceptionMcc": "460"
  },
  {
    "mccId": 17,
    "mcc": "412",
    "exceptionMcc": "410"
  },
  {
    "mccId": 41,
    "mcc": "276",
    "exceptionMcc": "297"
  },
  {
    "mccId": 53,
    "mcc": "603",
    "exceptionMcc": "609"
  },
  {
    "mccId": 57,
    "mcc": "603",
    "exceptionMcc": "604"
  },
  {
    "mccId": 65,
    "mcc": "603",
    "exceptionMcc": "605"
  },
  {
    "mccId": 85,
    "mcc": "631",
    "exceptionMcc": "649"
  },
  {
    "mccId": 105,
    "mcc": "722",
    "exceptionMcc": "744"
  },
  {
    "mccId": 209,
    "mcc": "206",
    "exceptionMcc": "208"
  },
  {
    "mccId": 109,
    "mcc": "722",
    "exceptionMcc": "748"
  },
  {
    "mccId": 145,
    "mcc": "232",
```



```
"exceptionMcc": "295"
},
{
  "mccId": 73,
  "mcc": "213",
  "exceptionMcc": "214"
},
{
  "mccId": 113,
  "mcc": "283",
  "exceptionMcc": "400"
},
{
  "mccId": 149,
  "mcc": "232",
  "exceptionMcc": "231"
},
{
  "mccId": 177,
  "mcc": "400",
  "exceptionMcc": "286"
},
{
  "mccId": 157,
  "mcc": "232",
  "exceptionMcc": "228"
},
{
  "mccId": 161,
  "mcc": "400",
  "exceptionMcc": "283"
},
{
  "mccId": 229,
  "mcc": "616",
  "exceptionMcc": "613"
},
{
  "mccId": 233,
  "mcc": "616",
  "exceptionMcc": "614"
},
{
  "mccId": 117,
  "mcc": "283",
  "exceptionMcc": "282"
},
{
  "mccId": 133,
  "mcc": "232",
  "exceptionMcc": "262"
},
{
  "mccId": 169,
  "mcc": "400",
  "exceptionMcc": "432"
```

```
    },  
    {  
      "mccId": 189,  
      "mcc": "257",  
      "exceptionMcc": "247"  
    },  
    {  
      "mccId": 29,  
      "mcc": "412",  
      "exceptionMcc": "434"  
    },  
    {  
      "mccId": 37,  
      "mcc": "276",  
      "exceptionMcc": "294"  
    },  
    {  
      "mccId": 121,  
      "mcc": "283",  
      "exceptionMcc": "432"  
    },  
    {  
      "mccId": 173,  
      "mcc": "400",  
      "exceptionMcc": "250"  
    },  
    {  
      "mccId": 69,  
      "mcc": "213",  
      "exceptionMcc": "208"  
    },  
    {  
      "mccId": 77,  
      "mcc": "631",  
      "exceptionMcc": "630"  
    },  
    {  
      "mccId": 93,  
      "mcc": "722",  
      "exceptionMcc": "736"  
    },  
    {  
      "mccId": 125,  
      "mcc": "283",  
      "exceptionMcc": "286"  
    },  
    {  
      "mccId": 141,  
      "mcc": "232",  
      "exceptionMcc": "222"  
    },  
    {  
      "mccId": 165,  
      "mcc": "400",  
      "exceptionMcc": "282"  
    },  
  ],
```

```
{
  "mccId": 205,
  "mcc": "257",
  "exceptionMcc": "255"
},
{
  "mccId": 13,
  "mcc": "412",
  "exceptionMcc": "432"
},
{
  "mccId": 33,
  "mcc": "276",
  "exceptionMcc": "202"
},
{
  "mccId": 181,
  "mcc": "470",
  "exceptionMcc": "404"
},
{
  "mccId": 217,
  "mcc": "206",
  "exceptionMcc": "270"
},
{
  "mccId": 49,
  "mcc": "603",
  "exceptionMcc": "610"
},
{
  "mccId": 193,
  "mcc": "257",
  "exceptionMcc": "246"
},
{
  "mccId": 201,
  "mcc": "257",
  "exceptionMcc": "250"
},
{
  "mccId": 225,
  "mcc": "702",
  "exceptionMcc": "334"
},
{
  "mccId": 25,
  "mcc": "412",
  "exceptionMcc": "438"
},
{
  "mccId": 153,
  "mcc": "232",
  "exceptionMcc": "293"
},
{

```

```
"mccId": 185,  
"mcc": "470",  
"exceptionMcc": "414"  
},  
{  
  "mccId": 129,  
  "mcc": "232",  
  "exceptionMcc": "230"  
},  
{  
  "mccId": 45,  
  "mcc": "603",  
  "exceptionMcc": "606"  
},  
{  
  "mccId": 197,  
  "mcc": "257",  
  "exceptionMcc": "260"  
},  
{  
  "mccId": 221,  
  "mcc": "702",  
  "exceptionMcc": "704"  
},  
{  
  "mccId": 61,  
  "mcc": "603",  
  "exceptionMcc": "614"  
},  
{  
  "mccId": 81,  
  "mcc": "631",  
  "exceptionMcc": "629"  
},  
{  
  "mccId": 97,  
  "mcc": "722",  
  "exceptionMcc": "724"  
},  
{  
  "mccId": 213,  
  "mcc": "206",  
  "exceptionMcc": "262"  
},  
{  
  "mccId": 1,  
  "mcc": "289",  
  "exceptionMcc": "250"  
},  
{  
  "mccId": 21,  
  "mcc": "412",  
  "exceptionMcc": "436"  
},  
{  
  "mccId": 101,
```

```
    "mcc": "722",  
    "exceptionMcc": "730"  
  },  
  {  
    "mccId": 5,  
    "mcc": "289",  
    "exceptionMcc": "282"  
  },  
  {  
    "mccId": 89,  
    "mcc": "631",  
    "exceptionMcc": "645"  
  },  
  {  
    "mccId": 137,  
    "mcc": "232",  
    "exceptionMcc": "216"  
  }  
]
```

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc

Resource Method: POST

Content Type: application/json

Response Body:

201

Exception MCC Configuration created successfully with the ID 8193

2.23.5 Exception MCC (MCC Id)

Exception MCC (MCC Id) REST API allows the users to search and list the existing exception MCC using the MCC Id.

/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/{mccId}

Table 2-70 Exception MCC (MCC Id) REST API Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/{mccId}	This API is used to get the following configurations for the given mccId if it exists in the DB: mccId mcc exceptionMcc	{mccId}	Configured parameters for time location check -country config against given {countryId}	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/1' \ -H 'accept: */*'
DELETE	/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/{mccId}	This API is used to delete these configurations against given {mccId} mccId mcc exceptionMcc	{mccId}	204	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/1' \ -H 'accept: */*'

Table 2-71 Exception MCC (MCC Id) Parameter

Parameter Name	Data Type	Mandatory(M)/ Optional(O)/ Conditional(C) parameters	Parameter Description
mccId	Integer	M	This is the ID given by the DB once the configurations are saved.

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/{mccId}

Resource Method: GET

Content Type: application/json

Response Body:

```
{
  "mccId": 1,
  "mcc": "289",
  "exceptionMcc": "250"
}
```

Sample Response body structure for DELETE operations

Resource API: /sepp-configuration/v1/security-counter-measure/time-location-check/exception-mcc/{mccId}

Resource Method: DELETE

Content Type: application/json

Response Body:

204

2.24 Previous Location Check Trigger List Configuration

Previous Location Check Trigger List allows the users to configure Ingress Rules along with their corresponding Ingress Actions for SEPP Mode.

Table 2-72 Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
GET	sepp-configuration/v1/security-counter-measure/previous-location-validation	This API is used to fetch all the Previous Location Check Trigger Lists created as part of Previous Location Check Feature with their Ingress Rules, Error Action and Exception Action.	No Input Required	List of Previous Location Check Trigger lists configured in the system.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation' \ -H 'accept: */*'

Table 2-72 (Cont.) Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}	This API is used to fetch the Previous Location Check Trigger List based on Previous Location Trigger List Name	previousLocationTriggerListName	Returns object which comprises of Ingress Rules along with their corresponding Error Action and Exception Action.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}' \ -H 'accept: */*'

Table 2-72 (Cont.) Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}	This API is used to add Previous Location Check Trigger List based on Previous Location Trigger List Name	previousLocationTriggerListName	previousLocationTriggerListName and DTO comprising of rules and error configurations.	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/NewList' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "previousLocationTriggerListName": "NewList", "ingressRule": [{ "id": 0, "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info", "httpMethod": "POST" }], "errorAction": { "title": "Previous Location check validation Failure", "statusCode": 406, "action": "REJECT" }, "exceptionAction": { "title": "Previous Location check validation Failure",</pre>

Table 2-72 (Cont.) Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
					"statusCode": 406, "action": "REJECT" }}'
DELETE	/sepp-configuration/v1 /security-counter-measure/ previous-location-validation/ {previousLocationTriggerListName}	This API is used to delete Previous Location Check Trigger List based on Previous Location Trigger List Name	previousLocationTriggerListName	204	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/NewList' \ -H 'accept: */*'

Table 2-72 (Cont.) Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}	This API is used to update Previous Location Check Trigger List based on Previous Location Trigger List Name	previousLocationTriggerListName	previousLocationTriggerListName and DTO comprising of rules and error configurations.	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/NewList' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "previousLocationTriggerListName": "NewList", "ingressRule": [{ "id": 0, "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info", "httpMethod": "POST" }], "errorAction": { "title": "Previous Location check validation Failure", "statusCode": 406, "action": "REJECT" }, "exceptionAction": { "title": "Previous Location check validation Failure",</pre>

Table 2-72 (Cont.) Previous Location Check Trigger List Configuration

Method	URL	Description	Input	Return	Example
					"statusCode": 406, "action": "REJECT" }}'

Previous Location Check Trigger List Configuration Parameters

Table 2-73 Previous Location Check Trigger List Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
previousLocationTrigger ListName	string	M	Previous Location Check Validation List Name.
ingressRule	string	O	Ingress Rule with Resource URI and Http Method.
errorAction	string	M	Ingress Action: - REJECT - FORWARD
exceptionAction	string	M	Egress Action: - REJECT - FORWARD

Allowed Ingress Data Model Parameters

Table 2-74 Allowed Ingress Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
resourceURI	string	O	Resource URI for which Validation will happen
httpMethod	HTTP Method	O	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

Error Response Configuration Data Model Parameters

Table 2-75 Error Response Configuration Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
title	string	M	Title and details of Error

Table 2-75 (Cont.) Error Response Configuration Data Model Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
statusCode	integer	M	Status Code of error of configured. Status codes 401 and 407 are not supported at present.
action	enum	M	Action need to be taken when mediation filtering condition reaches an error state. Range: REJECT or FORWARD

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}

Resource Method : GET

Content Type : application/json

Response Body:

```
{
  "previousLocationTriggerListName": "NewCustomList",
  "ingressRule": [
    {
      "id": 141,
      "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
      "httpMethod": "POST"
    }
  ],
  "errorAction": {
    "title": "Previous Location Check validation Failed",
    "statusCode": 406,
    "action": "REJECT"
  },
  "exceptionAction": {
    "title": "Previous Location Check Validation Failed due to exception",
    "statusCode": 406,
    "action": "REJECT"
  }
}
```

Sample Response body structure for POST operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}

Resource Method : POST

Content Type : application/json

Response Body:

Previous Location Trigger Rule List Created Successfully

Sample Response body structure for DELETE operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}

Resource Method : DELETE

Content Type : application/json

Response Body:

204

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/{previousLocationTriggerListName}

Resource Method : PUT

Content Type : application/json

Response Body:

Previous Location Trigger Rule List Created Successfully

2.25 Previous Location Check Header Configuration

2.25.1 Serving Network ID

This set of APIs allows the users to configure the serving network name header, for which the validation takes place.

Table 2-76 Serving Network ID

Description	Method	URL	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/header	This API is used to fetch Header configurations for Serving Network ID	Not Required	List of header DTOs	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/header' \ -H 'accept: */*'
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/header/{headerId}	This API is used to fetch the Serving Network ID Header configurations for which {headerId} is given	{headerId}	Header Configuration	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/header/1' \ -H 'accept: */*'

Table 2-76 (Cont.) Serving Network ID

Description	Method	URL	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/previous-location-validation/header	This API is used to add new Serving Network ID Header Configurations.	PreviousLocationValidationServingHeaderDTO Header DTO object	201 Serving Network ID Header Created Successfully.	curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/header' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "headerId": 0, "headerName": "custom", "regularExpression": "(?<=imsi-)[0-9]{6}", "resourceURI": "/nudm-sdm/v2/{ueid}/sdm-subscriptions", "httpMethod": "POST" }'
DELETE	/sepp-configuration/v1/security-counter-measure/previous-location-validation/header/{headerId}	This API is used to delete Serving Network ID header configuration for the given headerId.	headerId	204 No Content	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/header/28' \ -H 'accept: */*' \

Previous Location Check Header Configuration Parameters

Table 2-77 Previous Location Check Header Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
headerName	String	M	Header Name for which Cat 3 - Previous Location Check should happen
resourceURI	String	M	Resource URI for which Cat 3 - Previous Location Check will happen
regularExpression	String	M	Regular Expression to fetch Serving Network ID (MCC and MNC)
httpMethod	Enum	M	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/header

Resource Method : GET

Content Type : application/json

Response Body

```
[
  {
    "headerId": 1,
    "headerName": "plmn-id",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
    "regularExpression": "mcc-mnc",
    "httpMethod": "GET"
  },
  {
    "headerId": 3,
    "headerName": "plmn-id",
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "regularExpression": "mcc-mnc",
    "httpMethod": "GET"
  },
  {
    "headerId": 5,
    "headerName": "plmn-id",
    "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
    "regularExpression": "mcc-mnc",
    "httpMethod": "GET"
  },
  {
    "headerId": 6,
```

```

        "headerName": "plmn-id",
        "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
        "regularExpression": "mcc-mnc",
        "httpMethod": "GET"
    },
    {
        "headerId": 7,
        "headerName": "plmn-id",
        "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
        "regularExpression": "mcc-mnc",
        "httpMethod": "GET"
    },
    {
        "headerId": 33,
        "headerName": "plmn-id",
        "resourceURI": "/nudm-sdm/v2/{supi}",
        "regularExpression": "mcc-mnc",
        "httpMethod": "GET"
    },
    {
        "headerId": 34,
        "headerName": "3gpp-sbi-asserted-plmn-Id",
        "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
        "regularExpression": "[0-9]{2,3}",
        "httpMethod": "POST"
    }
}
]

```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/header/{headerId}

Resource Method : GET

Content Type : application/json

Response Body

```

{
  "headerId": 1,
  "headerName": "plmn-id",
  "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
  "regularExpression": "mcc-mnc",
  "httpMethod": "GET"
}

```

Sample Response body structure for POST operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/header

Resource Method : POST

Content Type : application/json

Response Body

201 Serving Header Created Successfully.

Sample Response body structure for Delete operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/header/{headerId}

Resource Method : DELETE

Content Type : application/json

Response Body

204 No Content

2.25.2 UE ID

This set of APIs allow user to configure UE ID header for which the validation takes place.

Table 2-78 UE ID

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-ue-location/header	This API is used to fetch ue id Header configurations	Not Required	List of header DTOs	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/header' \ -H 'accept: */*'
GET	/sepp-configuration/v1/security-counter-measure/previous-ue-location/header/{headerId}	This API is used to fetch the ue id header configurations for which {headerId} is given	{headerId}	Header Configuration	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/header/1' \ -H 'accept: */*'

Table 2-78 (Cont.) UE ID

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/previous-ue-location/header	This API is used to add new ue id header configurations.	PreviousLocationValidationServiceHeaderDTO object	201 Previous Location UE Configuration Header Created Successfully.	curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/header' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "headerId": 0, "headerName": "custom", "regularExpression": "(?<=imsi-)[0-9]{6}", "resourceURI": "/nudm-sdm/v2/{ueid}/sdm-subscriptions", "httpMethod": "POST"}'
DELETE	/sepp-configuration/v1/security-counter-measure/previous-ue-location/header/{headerId}	This API is used to delete ue id header configuration for the given headerId.	headerId	204 No Content	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/header/28' \ -H 'accept: */*'

Previous Location Check UE ID Header Configuration Parameters

Table 2-79 Previous Location Check UE ID Header Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
headerName	String	M	UE ID Header Name for which Previous Location Check should happen

Table 2-79 (Cont.) Previous Location Check UE ID Header Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
resourceURI	String	M	Resource URI for which UE is configured.
regularExpression	String	M	Regular Expression to Fetch UE ID
httpMethod	Enum	M	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-ue-location/header

Resource Method : GET

Content Type : application/json

Response Body

```
[
  {
    "headerId": 9,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 17,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 41,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 53,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 57,
```

```

    "headerName": "supi",
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 65,
    "headerName": "ueId",
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "DELETE"
  },
  {
    "headerId": 85,
    "headerName": "ueContextId",
    "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 105,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 109,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 73,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 113,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sdm-subscriptions",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "POST"
  },
  {
    "headerId": 117,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 29,

```

```

    "headerName": "ueId",
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "POST"
  },
  {
    "headerId": 37,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 69,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 77,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 93,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 13,
    "headerName": "ueId",
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions/{subscriptionId}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "DELETE"
  },
  {
    "headerId": 33,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 49,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 45,

```

```

    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 25,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "DELETE"
  },
  {
    "headerId": 4177,
    "headerName": "target-plmn",
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "regularExpression": "(?<=msi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 1,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
  },
  {
    "headerId": 21,
    "headerName": "supi",
    "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 101,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "DELETE"
  },
  {
    "headerId": 5,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "GET"
  },
  {
    "headerId": 89,
    "headerName": "ueContextId",
    "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "POST"
  },
  {

```



```

        "headerId": 61,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
    },
    {
        "headerId": 81,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "DELETE"
    },
    {
        "headerId": 97,
        "headerName": "ueId",
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
        "regularExpression": "(?<=imsi-)[0-9]{15,16}",
        "httpMethod": "GET"
    }
]

```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-ue-location/header/{headerId}

Resource Method : GET

Content Type : application/json

Response Body

```

{
    "headerId": 1,
    "headerName": "ueId",
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}",
    "httpMethod": "PUT"
}

```

2.26 Previous Location Check Body Configuration

2.26.1 Serving Network ID

Previous Location Check Serving Network Name Json IE Configuration REST APIs allows the users to configure the Body IEs, for which previous location check validation takes place.

Table 2-80 Serving Network ID

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/body	This API is used to fetch the complete list of Body IE's Configuration for CAT 3 Previous Location Check feature.	Not Required	List of PreviousLocationCheckServingNameBodyDTO	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/body' \ -H 'accept: */*'
GET	/sepp-configuration/v1/security-counter-measure/previous-location-validation/body/{bodyId}	This API is used to fetch the Body IE's Configuration for which bodyId is given	bodyId value of the configuration	Body DTO object.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/body/1' \ -H 'accept: */*'

Table 2-80 (Cont.) Serving Network ID

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/previous-location-validation/body	This API is used to add Body IE's Configuration for which Previous Location Check is required.	PreviousLocationCheckServingNameBodyDTO body DTO object	Body DTO object.	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/body' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "bodyId": 0, "httpMethod": "POST", "resourceURI": "/nausf-auth/v1/ue-authentications" , "identifier": "supiOrSuci", "regularExpression": "(?<=imsi-)[0-9]{6}?(?<=suci-0-)[0-9]{6}" }'</pre>

Table 2-80 (Cont.) Serving Network ID

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/previous-location-validation/body	This API is used to update Body IE's Configuration for which Previous Location Check is required.	PreviousLocationCheckServingNameBodyDTO body DTO object	200	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/body' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "bodyId": 5, "httpMethod": "PUT", "resourceURI": "/nudm-uecm/v1/{ueld}/registrations/amf-3gpp-access", "identifier": "ueld", "regularExpression": "(?<=imsi-)[0-9]{6}" }'
DELETE	/sepp-configuration/v1/security-counter-measure/previous-location-validation/body/{bodyId}	This API is used to delete Body IE's Configuration	bodyId	204	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-location-validation/body/1' \ -H 'accept: */*'

Previous Location Check Validation Serving Name Json IE Configuration Parameters

Table 2-81 Previous Location Check Validation Serving Name Json IE Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
resourceURI	String	M	Resource URI for which Validation happens.
identifier	String	M	Body IE Identifier for which Previous Location Check Validation should happen.
httpMethod	Enum	M	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]
regularExpression	String	M	Regular Expression to Fetch PLMN ID (MCC & MNC)

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/body

Resource Method: GET

Content Type : application/json

Response Body

```
[
  {
    "bodyId": 73,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "supi",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}"
  },
  {
    "bodyId": 113,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "ueLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 149,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/transfer-
mo-data",
    "identifier": "ueLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 157,
```

```

    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "guamiList",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 29,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "identifier": "supi",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}"
  },
  {
    "bodyId": 37,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "guami",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 121,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "identifier": "userLoc",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 9,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "servingNetwork",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 17,
    "resourceURI": "/nudm-sdm/v2/{supi}/sdm-subscriptions",
    "identifier": "plmnId",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 41,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "servingNetwork",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 53,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
    "identifier": "addUeLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 57,

```

```

    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "supi",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}"
  },
  {
    "bodyId": 65,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "guamiList",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 85,
    "resourceURI": "/oauth2/token",
    "identifier": "requesterPlmn",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 105,
    "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
    "identifier": "plmnId",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 109,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "identifier": "plmnId",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 145,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "addUeLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 117,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
    "identifier": "ueLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 133,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "oldGuami",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 69,

```

```

    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "guami",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 77,
    "resourceURI": "/nausf-auth/v1/ue-authentications",
    "identifier": "supiOrSuci",
    "httpMethod": "POST",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}|(?<=suci-0-)[0-9]{15,16}"
  },
  {
    "bodyId": 93,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
    "identifier": "supi",
    "httpMethod": "PUT",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}"
  },
  {
    "bodyId": 125,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "guami",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 141,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
    "identifier": "supi",
    "httpMethod": "PUT",
    "regularExpression": "(?<=imsi-)[0-9]{15,16}"
  },
  {
    "bodyId": 13,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "plmnId",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 33,
    "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
    "identifier": "plmnId",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 45,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "identifier": "eventList",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 1,

```



```

    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "PlmnSnssai",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 21,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "guami",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 101,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
    "identifier": "plmnId",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 5,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
    "identifier": "addUeLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 89,
    "resourceURI": "/oauth2/token",
    "identifier": "requesterPlmnList",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 137,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
    "identifier": "plmnId",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 49,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "reqSnpnList",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 25,
    "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
    "identifier": "userLoc",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {

```

```

    "bodyId": 153,
    "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
    "identifier": "guamiList",
    "httpMethod": "PUT",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 61,
    "resourceURI": "/namf-comm/v1/subscriptions",
    "identifier": "guamiList",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 81,
    "resourceURI": "/nnrf-nfm/v1/subscriptions",
    "identifier": "reqPlmnList",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 97,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "ueLocation",
    "httpMethod": "POST",
    "regularExpression": "mcc-mnc"
  },
  {
    "bodyId": 129,
    "resourceURI": "/nausf-auth/v1/ue-authentications",
    "identifier": "servingNetworkName",
    "httpMethod": "POST",
    "regularExpression": "(mcc)([0-9]*)|(mnc)([0-9]*)"
  }
]

```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/body/{bodyId}

Resource Method: GET

Content Type : application/json

Response Body

```

{
  "bodyId": 1,
  "resourceURI": "/nnrf-nfm/v1/subscriptions",
  "identifier": "PlmnSnssai",
  "httpMethod": "POST",
  "regularExpression": "mcc-mnc"
}

```

Sample Response body structure for POST operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/body

Resource Method: POST

Content Type : application/json

Response Body

Serving Body Created Successfully

Sample Response body structure for DELETE operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-location-validation/{bodyId}

Resource Method: DELETE

Content Type : application/json

Response Body

204

2.26.2 UE ID

Previous Location Check UE ID Body IE Configuration REST APIs allows user to configure the UE ID Body IEs, for which CAT 3 - Previous Location check takes place.

Table 2-82 Previous Location Check UE ID Body IE Configuration REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/previous-ue-location/body	This API is used to fetch the complete list of UE ID Body IEs configuration.	Not Required	List of PreviousLocationCheckServingNameBodyDTO	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/body' \ -H 'accept: */*'
GET	/sepp-configuration/v1/security-counter-measure/previous-ue-location/body/{bodyId}	This API is used to fetch the UE ID Body IEs configuration for which bodyId is given.	bodyId value of the configuration	Body DTO object.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/body/1' \ -H 'accept: */*'

Table 2-82 (Cont.) Previous Location Check UE ID Body IE Configuration REST API

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/previous-ue-location/body	This API is used to add UE ID Body IEs Configuration for which Previous Location Check is required.	PreviousLocationCheckServingNameBodyDTO body DTO object	Body DTO object.	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/body' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "bodyId": 0, "httpMethod": "POST", "resourceURI": "/nausf-auth/v1/ue-authentications" , "identifier": "supiOrSuci", "regularExpression": "(?<=imsi-)[0-9]{6}?(?<=suci-0-)[0-9]{6}" }'</pre>
DELETE	/sepp-configuration/v1/security-counter-measure/previous-ue-location/body/{bodyId}	This API is used to delete UE ID Body IEs configuration.	bodyId	204	<pre>curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/previous-ue-location/body/1' \ -H 'accept: */*' \</pre>

Previous Location Check UE ID Json IE Configuration Parameters

Table 2-83 Previous Location Check UE ID Json IE Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
bodyId	Integer		
resourceURI	String	M	Resource URI for which Cat-3 Previous Location Check happens.
identifier	String	M	UE ID Body IE Identifier for which Previous Location Check Validation should happen.
httpMethod	Enum	M	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]
regularExpression	String	M	Regular Expression to Fetch UE ID

Sample Response body structure for GET operations

Resource API: /sepp-configuration/v1/security-counter-measure/previous-ue-location/body

Resource Method: GET

Content Type : application/json

Response Body

```
[
  {
    "bodyId": 51,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "identifier": "supi",
    "httpMethod": "POST",
    "regularExpression": "(imsi-)[0-9]{15,16}"
  }
]
```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/previous-ue-location/body/{bodyId}

Resource Method : GET

Content Type : application/json

Response Body

```
[
  {
    "bodyId": 51,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
```

```
    "identifier": "supi",  
    "httpMethod": "POST",  
    "regularExpression": "(imsi-)[0-9]{15,16}"  
  }  
]
```

Sample Response body structure for POST operations

Resource API: /sepp-configuration/v1/security-counter-measure/previous-ue-location/body

Resource Method: POST

Content Type : application/json

Response Body

201 Body UE Configuration Created Successfully

Sample Response body structure for DELETE operations

Resource API: /sepp-configuration/v1/security-counter-measure/previous-ue-location/body/
{bodyId}

Resource Method: DELETE

Content Type : application/json

Response Body

204

2.27 Cat-0 SBI Message Schema Validation REST APIs

The following are the Cat-0 SBI Message Schema Validation REST APIs.

2.27.1 Message Validation System Option

Message Validation Option REST API enables or disables the message validation feature.

Table 2-84 Message Validation Option REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/message-validation/options	This API is used to get the following information: - if message validation is enabled on request body. - if message validation is enabled on request query parameters - current value of maximum allowed request size - current value of maximum number of allowed query parameters		MessageValidationSystemOption DTO having below data: messageValidationOnBodyEnabled messageValidationOnQueryParametersEnabled maxRequestSize maxNumberOfQueryParams	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation/options' \ -H 'accept: */*'</pre>

Table 2-84 (Cont.) Message Validation Option REST API

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/message-validation/options	This API is used to configure the below information: - enable or disable the message validation on request body. - enable or disable the message validation on request query parameters. - value of maximum allowed request size. - value of maximum number of allowed query parameters.	MessageValidationSystemOption DTO having below data: <pre>messageValidationOnBodyEnabled messageValidationOnQueryParametersEnabled maxRequestSize maxNumberOfQueryParams</pre>	ResponseEntity<String> 200 Saved	<pre>curl -X 'PUT' \ 'http://<SEPP-ConfigurationIP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation/options' \ -H 'accept: */* ' \ -H 'Content-Type: application/json' \ -d '{ "messageValidationOption": { "messageValidationOnBodyEnabled": true, "messageValidationOnQueryParametersEnabled": true, "maxRequestSize": 0, "maxNumberOfQueryParams": 0 } }'</pre>

Table 2-85 Message Validation Option Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
messageValidationOnBodyEnabled	boolean	O	Enables or disables the message validation on request body.
messageValidationOnQueryParametersEnabled	boolean	O	Enables or disables the message validation on request query parameters.
maxRequestSize	integer	O	Provides maximum allowed request body size (Default 40 KB).
maxNumberOfQueryParams	integer	O	Provides maximum number of allowed query parameters (Default 100)

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/message-validation/options

Resource Method : GET

Content Type : application/json

Response Body

```
{
  "messageValidationOption": {
    "messageValidationOnBodyEnabled": false,
    "messageValidationOnQueryParametersEnabled": false,
    "maxRequestSize": 40,
    "maxNumberOfQueryParams": 100
  }
}
```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/security-counter-measure/message-validation/options

Resource Method : PUT

Content Type : application/json

Response Body

200

2.27.2 Message Validation List Configuration

Message Validation List Configuration REST API allows the user to configure the message validation list, Ingress/Egress rule, and Ingress/Egress error configurations.

Method	URL	Description	Input	Return	Example
GET	"/sepp-configuration/v1/security-counter-measure/message-validation-list"	This API is used to fetch all the message validation list created as part of message validation feature with their Ingress Rules, Egress Rules, Ingress Action, and Egress Action.	No Input Required	List<MessageValidationListConfiguration> List of message validation lists configured in the system.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation-list' \ -H 'accept: */*'
GET	"/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"	This API is used to fetch the message validation list based on message validation list Name.	MessageValidationListName	MessageValidationListConfiguration DTO which comprises of list name, ingress/egress Rules along with their corresponding ingress and egress actions	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation-list/Default' \ -H 'accept: */*'

Method	URL	Description	Input	Return	Example
PUT	"/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"	This API is used to update the already existing message validation list along with Ingress/Egress rules and their error configuration. Note: The acceptable value for id is zero.	Existing MessageValidationListName and MessageValidationListConfiguration	201 Created	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation-list/TestList' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "messageValidationListName": "TestList", "ingressAllowedServiceApis": [{ "id": 0, "resourceURI": "/nausf-auth/v1/ue-authentications", "httpMethod": "POST" }], "egressAllowedServiceApis": [{ "id": 0, "resourceURI": "/nausf-</pre>

Method	URL	Description	Input	Return	Example
					<pre> auth/v1/ue- authentication s/ {authCtxId}/5 g-aka- confirmation" , "httpMethod": "PUT" }], "ingressError ResponseConfi guration": { "title": "Message Validation Failed", "statusCode": 406, "action": "REJECT" }, "egressErrorR esponseConfig uration": { "title": "Message Validation Failed", "statusCode": 406, "action": "FORWARD" } }' </pre>

Method	URL	Description	Input	Return	Example
POST	"/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"	This API is used to add a new message validation list along with Ingress/Egress rules and their error configuration. Note: The acceptable value for id is zero.	MessageValidationListName and MessageValidationListConfiguration (DTO) comprising of Ingress/Egress rules and error configurations.	201 Created	<pre> curl -X 'POST' \ 'http:// <SEPP- Configuration IP>:<PORT>/ sepp- configuration /v1/security- counter- measure/ message- validation- list/ NewTestList' \ -H 'accept: */*' \ -H 'Content- Type: application/ json' \ -d '{ "messageValid ationListName ": "NewTestList" , "ingressAllow edServiceApis ": [{ "id": 0, "resourceURI" : "/namf- evts/v1/ subscriptions ", "httpMethod": "POST" }], "egressAllowe dServiceApis" : [{ "id": 0, </pre>

Method	URL	Description	Input	Return	Example
					<pre> "resourceURI" : "/nausf- auth/v1/ue- authentication ns/ {authCtxId}/5 g-aka- confirmation" , "httpMethod": "PUT" }], "ingressError ResponseConfi guration": { "title": "Message Validation Failed", "statusCode": 406, "action": "REJECT" }, "egressErrorR esponseConfig uration": { "title": "Message Validation Failed", "statusCode": 406, "action": "FORWARD" } }' </pre>

Method	URL	Description	Input	Return	Example
DELETE	"/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"	This API is used to delete an already existing message validation list corresponding to given name.	MessageValidationListName	No Content	<pre>curl -X 'DELETE' \ 'http:// <SEPP- Configuration IP>:<PORT>/ sepp- configuration /v1/security- counter- measure/ message- validation- list/ NewTestList' \ -H 'accept: */*'</pre>

Method	URL	Description	Input	Return	Example
PUT	"/sepp-configuration/v1/security-counter-measure/message-validation-list/update-rules/{listName}"	This API is used to update or override existing rule(s) in an existing message validation list. The user has to specify the proper Ingress/Egress rules.	MessageValidationListName MessageValidationRulesDTO	201 CREATED	<pre> curl -X 'PUT' \ 'http:// <SEPP- Configuration IP>:<PORT>/ sepp- configuration /v1/security- counter- measure/ message- validation- list/update- rules/ TestList' \ -H 'accept: */*' \ -H 'Content- Type: application/ json' \ -d '{ "ingressRules ": [{ "id": 0, "resourceURI ": "/namf- evts/v1/ subscriptions ", "httpMethod": "POST" }], "egressRules" : [{ "id": 0, "resourceURI" : "/namf- loc/v1/ {ueContextId} /provide-loc- info", "httpMethod": </pre>

Method	URL	Description	Input	Return	Example
					"POST" }] '}

Method	URL	Description	Input	Return	Example
DELETE	"/sepp-configuration/v1/security-counter-measure/message-validation-list/delete-rules/{listName}"	This API is used to delete a specific rule to an existing list. The user has to specify the proper rule in Ingress/Egress Rules.	MessageValidationListName	No Content	<pre> curl -X 'DELETE' \ 'http:/ <SEPP- Configuration IP>:<PORT>/ sepp- configuration /v1/security- counter- measure/ message- validation- list/delete- rules/ TestList' \ -H 'accept: */'*' \ -H 'Content- Type: application/ json' \ -d '{ "ingressRules ": [{ "id": 0, "resourceURI" : "/nnrf- disc/v1/nf- instances", "httpMethod": "GET" }], "egressRules" : [{ "id": 0, "resourceURI" : "/namf- loc/v1/ {ueContextId} /provide-loc- info", "httpMethod": "POST" </pre>

Method	URL	Description	Input	Return	Example
					<pre> }] }' </pre>

Message Validation List Configuration Parameters

Table 2-86 Message Validation List Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
messageValidationListName	string	M	Message validation list name.
ingressAllowedServiceApis (ingress rules)	List<AllowedServiceApi>	O	Ingress Rule(s) with corresponding Resource URI and HTTP Method.
egressAllowedServiceApis (egress rules)	List<AllowedServiceApi>	O	Egress Rule(s) with corresponding Resource URI and HTTP Method.
ingressErrorResponseConfiguration (ingressErrorAction)	ErrorResponseConfiguration	O	Ingress Action: - REJECT - FORWARD
egressErrorResponseConfiguration (egressErrorAction)	ErrorResponseConfiguration	O	Egress Action: - REJECT - FORWARD

AllowedServiceApi (Allowed Ingress/Egress Data Model) Parameters

Table 2-87 AllowedServiceApi (Allowed Ingress/Egress Data Model) Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
resourceURI	string	M	Resource URI for which Validation happens.
httpMethod	HTTP Method	M	HTTP Method [POST, PUT, GET, PATCH, DELETE, OPTION, HEAD]

ErrorResponseConfigurationDTO (Error Response Configuration Data Model) Parameters

Table 2-88 ErrorResponseConfigurationDTO (Error Response Configuration Data Model) Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
title	string	M	Title and details of error.
statusCode	integer	M	Status Code of error of configured.
action	enum	M	Action need to be taken when mediation filtering condition reaches an error state. Range: REJECT, FORWARD

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/security-counter-measure/message-validation-list

Resource Method : GET

Content Type : application/json

```
[
  {
    "messageValidationListName": "Default",
    "ingressAllowedServiceApis": [
      {
        "id": 197,
        "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
        "httpMethod": "GET"
      },
      {
        "id": 148,
        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
        "httpMethod": "PUT"
      },
      {
        "id": 187,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
        "httpMethod": "POST"
      },
      {
        "id": 139,
        "resourceURI": "/nudm-sdm/v1/{supi}",
        "httpMethod": "GET"
      },
      {
        "id": 111,
        "resourceURI": "/nudm-sdm/v1/shared-data",
        "httpMethod": "GET"
      },
      {
        "id": 123,
```

```

        "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
        "httpMethod": "PUT"
    },
    {
        "id": 142,
        "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
        "httpMethod": "GET"
    },
    {
        "id": 131,
        "resourceURI": "/nnssf-nsselection/v1/network-slice-information",
        "httpMethod": "GET"
    },
    {
        "id": 173,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "DELETE"
    },
    {
        "id": 162,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "PUT"
    },
    {
        "id": 154,
        "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 192,
        "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
        "httpMethod": "GET"
    },
    {
        "id": 203,
        "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
        "httpMethod": "GET"
    },
    {
        "id": 147,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
        "httpMethod": "POST"
    },
    {
        "id": 121,
        "resourceURI": "/nnrf-nfm/v1/subscriptions",
        "httpMethod": "POST"
    },
    {
        "id": 141,
        "resourceURI": "/npcf-ue-policy-control/v1/policies",
        "httpMethod": "POST"
    },
    },

```

```

    {
      "id": 116,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 124,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 180,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/
update",
      "httpMethod": "POST"
    },
    {
      "id": 172,
      "resourceURI": "/nudm-sdm/v2/{supi}",
      "httpMethod": "GET"
    },
    {
      "id": 198,
      "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
      "httpMethod": "POST"
    },
    {
      "id": 145,
      "resourceURI": "/nudm-sdm/v2/shared-data",
      "httpMethod": "GET"
    },
    {
      "id": 137,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 207,
      "resourceURI": "/namf-evts/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 183,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
      "httpMethod": "GET"
    },
    {
      "id": 176,
      "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 208,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
      "httpMethod": "GET"
    }
  ],

```

```

    {
      "id": 163,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
retrieve",
      "httpMethod": "POST"
    },
    {
      "id": 210,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "GET"
    },
    {
      "id": 178,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 120,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
      "httpMethod": "DELETE"
    },
    {
      "id": 119,
      "resourceURI": "/namf-comm/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 150,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 125,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
      "httpMethod": "GET"
    },
    {
      "id": 144,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 171,
      "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
      "httpMethod": "PUT"
    },
    {
      "id": 156,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
      "httpMethod": "PUT"
    },
    {
      "id": 193,
      "resourceURI": "/nudm-sdm/v2/{supi}/nssai",

```

```

        "httpMethod": "GET"
    },
    {
        "id": 118,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
release",
        "httpMethod": "POST"
    },
    {
        "id": 122,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
        "httpMethod": "GET"
    },
    {
        "id": 153,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
        "httpMethod": "DELETE"
    },
    {
        "id": 167,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "GET"
    },
    {
        "id": 190,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "PUT"
    },
    {
        "id": 199,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "PUT"
    },
    {
        "id": 174,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
    },
    {
        "id": 201,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET"
    },
    {
        "id": 202,
        "resourceURI": "/nnssf-nssselection/v2/network-slice-information",
        "httpMethod": "GET"
    },
    {
        "id": 143,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-non-3gpp-
access",
        "httpMethod": "GET"
    }

```



```

    },
    {
      "id": 166,
      "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
      "httpMethod": "GET"
    },
    {
      "id": 112,
      "resourceURI": "/nnrf-disc/v1/nf-instances",
      "httpMethod": "GET"
    }
  ],
  "egressAllowedServiceApis": [
    {
      "id": 157,
      "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
      "httpMethod": "GET"
    },
    {
      "id": 135,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 188,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
      "httpMethod": "POST"
    },
    {
      "id": 134,
      "resourceURI": "/nudm-sdm/v1/{supi}",
      "httpMethod": "GET"
    },
    {
      "id": 114,
      "resourceURI": "/nudm-sdm/v1/shared-data",
      "httpMethod": "GET"
    },
    {
      "id": 133,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 146,
      "resourceURI": "/nnssf-nsselection/v1/network-slice-information",
      "httpMethod": "GET"
    },
    {
      "id": 138,
      "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
      "httpMethod": "GET"
    },
    {
      "id": 186,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/

```

```

    {pduSessionId}",
      "httpMethod": "DELETE"
    },
    {
      "id": 170,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
      "httpMethod": "PUT"
    },
    {
      "id": 129,
      "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 204,
      "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "id": 132,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 136,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
modify",
      "httpMethod": "POST"
    },
    {
      "id": 113,
      "resourceURI": "/nnrf-nfm/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 195,
      "resourceURI": "/npcf-ue-policy-control/v1/policies",
      "httpMethod": "POST"
    },
    {
      "id": 115,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "PUT"
    },
    {
      "id": 130,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
      "httpMethod": "GET"
    },
    {
      "id": 149,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/
update",
      "httpMethod": "POST"
    },
  },

```

```

{
  "id": 159,
  "resourceURI": "/nudm-sdm/v2/{supi}",
  "httpMethod": "GET"
},
{
  "id": 151,
  "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
  "httpMethod": "POST"
},
{
  "id": 196,
  "resourceURI": "/nudm-sdm/v2/shared-data",
  "httpMethod": "GET"
},
{
  "id": 209,
  "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
  "httpMethod": "POST"
},
{
  "id": 155,
  "resourceURI": "/namf-evts/v1/subscriptions",
  "httpMethod": "POST"
},
{
  "id": 185,
  "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
  "httpMethod": "GET"
},
{
  "id": 175,
  "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
  "httpMethod": "GET"
},
{
  "id": 140,
  "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
  "httpMethod": "GET"
},
{
  "id": 164,
  "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
retrieve",
  "httpMethod": "POST"
},
{
  "id": 165,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
  "httpMethod": "GET"
},
{
  "id": 181,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
  "httpMethod": "PUT"
},

```

```

    {
      "id": 158,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
      "httpMethod": "DELETE"
    },
    {
      "id": 117,
      "resourceURI": "/namf-comm/v1/subscriptions",
      "httpMethod": "POST"
    },
    {
      "id": 126,
      "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
      "httpMethod": "PUT"
    },
    {
      "id": 127,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
      "httpMethod": "GET"
    },
    {
      "id": 191,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "GET"
    },
    {
      "id": 194,
      "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
      "httpMethod": "PUT"
    },
    {
      "id": 200,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
      "httpMethod": "PUT"
    },
    {
      "id": 182,
      "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
      "httpMethod": "GET"
    },
    {
      "id": 206,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/
release",
      "httpMethod": "POST"
    },
    {
      "id": 152,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
      "httpMethod": "GET"
    },
    {
      "id": 177,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",

```

```

        "httpMethod": "DELETE"
      },
      {
        "id": 169,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-
access",
        "httpMethod": "GET"
      },
      {
        "id": 184,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
        "httpMethod": "PUT"
      },
      {
        "id": 128,
        "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
        "httpMethod": "PUT"
      },
      {
        "id": 160,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET"
      },
      {
        "id": 189,
        "resourceURI": "/nausf-auth/v1/ue-authentications",
        "httpMethod": "POST"
      },
      {
        "id": 179,
        "resourceURI": "/nnssf-nsselection/v2/network-slice-information",
        "httpMethod": "GET"
      },
      {
        "id": 168,
        "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
        "httpMethod": "GET"
      },
      {
        "id": 205,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-
access",
        "httpMethod": "GET"
      },
      {
        "id": 161,
        "resourceURI": "/nnrf-disc/v1/nf-instances",
        "httpMethod": "GET"
      }
    ],
    "ingressErrorResponseConfiguration": {
      "title": "Message validation failed",
      "statusCode": 406,
      "action": "REJECT"
    }
  }

```

```

    },
    "egressErrorResponseConfiguration": {
      "title": "Message validation failed",
      "statusCode": 406,
      "action": "REJECT"
    }
  }
}
]

```

Sample Response body structure for GET operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"

Resource Method : GET

Content Type : application/json

```

{
  "messageValidationListName": "TestList",
  "ingressAllowedServiceApis": [
    {
      "id": 216,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST"
    }
  ],
  "egressAllowedServiceApis": [
    {
      "id": 215,
      "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-confirmation",
      "httpMethod": "PUT"
    }
  ],
  "ingressErrorResponseConfiguration": {
    "title": "Message Validation Failed",
    "statusCode": 406,
    "action": "REJECT"
  },
  "egressErrorResponseConfiguration": {
    "title": "Message Validation Failed",
    "statusCode": 406,
    "action": "FORWARD"
  }
}

```

Sample Response body structure for PUT operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"

Resource Method : PUT

Content Type : application/json

201 CREATED

Sample Response body structure for POST operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"

Resource Method : POST

Content Type : application/json

201 CREATED

Sample Response body structure for DELETE operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/{listName}"

Resource Method : DELETE

Content Type : application/json

204 NO CONTENT

Sample Response body structure for PUT operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/update-rules/{listName}"

Resource Method : PUT

Content Type : application/json

201 CREATED

Sample Response body structure for DELETE operations

Resource API : "/sepp-configuration/v1/security-counter-measure/message-validation-list/delete-rules/{listName}"

Resource Method : DELETE

Content Type : application/json

204 NO CONTENT

2.27.3 Message Validation Services API

Message Validation Services REST API allows the user to fetch the complete list of services APIs for which the configured or default schema available in the system.

Method	URL	Description	Input	Return	Example
GET	"/sepp-configuration/v1/security-counter-measure/message-validation/default-service-apis"	This API is used to fetch the complete list of services APIs for which we have the default/configured message schema available.	Not required	List<DefaultAPIID> List of services apis	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/message-validation/default-service-apis' \ -H 'accept: */*'

Sample Response body structure for GET operations

Resource API :"/sepp-configuration/v1/security-counter-measure/message-validation/default-service-apis"

Resource Method : GET

Content Type : application/json

```
[
  {
    "defaultId": 1,
    "resourceURI": "/npcf-ue-policy-control/v1/policies",
    "httpMethod": "POST",
    "regex": "^(?:[^\#,{,},?,^])*?npcf-ue-policy-control/v1/policies/?$"
  },
  {
    "defaultId": 2,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
    "httpMethod": "PUT",
    "regex": "^(?:[^\#,{,},?,^])*?nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-data/sor-ack/?$"
  },
  {
    "defaultId": 4,
    "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smf-data",
    "httpMethod": "GET",
    "regex": "^(?:[^\#,{,},?,^])*?nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/ue-context-in-smf-data/?$"
  },
  {
    "defaultId": 5,
    "resourceURI": "/namf-comm/v1/subscriptions",
    "httpMethod": "POST",
    "regex": "^(?:[^\#,{,},?,^])*?namf-comm/v1/subscriptions/?$"
  }
]
```



```

    },
    {
      "defaultId": 7,
      "resourceURI": "/nudm-sdm/v2/{supi}/am-data",
      "httpMethod": "GET",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/am-data/?$"
    },
    {
      "defaultId": 8,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
      "httpMethod": "GET",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-non-3gpp-access/?$"
    },
    {
      "defaultId": 9,
      "resourceURI": "/nudm-sdm/v1/{supi}/sdm-subscriptions",
      "httpMethod": "POST",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/sdm-subscriptions/?$"
    },
    {
      "defaultId": 10,
      "resourceURI": "/nudm-sdm/v2/{supi}/ue-context-in-smsf-data",
      "httpMethod": "GET",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/ue-context-in-smsf-data/?$"
    },
    {
      "defaultId": 11,
      "resourceURI": "/namf-loc/v1/{ueContextId}/provide-loc-info",
      "httpMethod": "POST",
      "regex": "^(?:[^#,{,},?,^])*?/namf-loc/v1/(imsi-[0-9]{5,15}|nai-.+|gli-.+|gci-.+|imei-[0-9]{15}|imeisv-[0-9]{16}|.+)/provide-loc-info/?$"
    },
    {
      "defaultId": 12,
      "resourceURI": "/nausf-auth/v1/ue-authentications",
      "httpMethod": "POST",
      "regex": "^(?:[^#,{,},?,^])*?/nausf-auth/v1/ue-authentications/?$"
    },
    {
      "defaultId": 14,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
      "httpMethod": "DELETE",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smsf-3gpp-access/?$"
    },
    {
      "defaultId": 15,
      "resourceURI": "/nudm-sdm/v2/shared-data",
      "httpMethod": "GET",
      "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/shared-data/?$"
    }
  ]

```

```

    },
    {
      "defaultId": 18,
      "resourceURI": "/nnssf-nsselection/v1/network-slice-information",
      "httpMethod": "GET",
      "regex": "^(?:[^\#,\{\},\?,^])*/nnssf-nsselection/v1/network-slice-information/?$"
    },
    {
      "defaultId": 19,
      "resourceURI": "/nudm-sdm/v2/{supi}",
      "httpMethod": "GET",
      "regex": "^(?:[^\#,\{\},\?,^])*/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/?$"
    },
    {
      "defaultId": 20,
      "resourceURI": "/nudm-sdm/v1/{supi}/sm-data",
      "httpMethod": "GET",
      "regex": "^(?:[^\#,\{\},\?,^])*/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/sm-data/?$"
    },
    {
      "defaultId": 22,
      "resourceURI": "/npcf-ue-policy-control/v1/policies/{polAssoId}/update",
      "httpMethod": "POST",
      "regex": "^(?:[^\#,\{\},\?,^])*/npcf-ue-policy-control/v1/policies/([0-9a-zA-Z-]+|.+)/update/?$"
    },
    {
      "defaultId": 23,
      "resourceURI": "/nudm-sdm/v2/{ueId}/sdm-subscriptions",
      "httpMethod": "POST",
      "regex": "^(?:[^\#,\{\},\?,^])*/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/sdm-subscriptions/?$"
    },
    {
      "defaultId": 24,
      "resourceURI": "/nudm-sdm/v2/{supi}/sms-data",
      "httpMethod": "GET",
      "regex": "^(?:[^\#,\{\},\?,^])*/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/sms-data/?$"
    },
    {
      "defaultId": 25,
      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
      "httpMethod": "DELETE",
      "regex": "^(?:[^\#,\{\},\?,^])*/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/registrations/smsf-non-3gpp-access/?$"
    },
    {
      "defaultId": 27,
      "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/modify",
      "httpMethod": "POST",
      "regex": "^(?:[^\#,\{\},\?,^])*/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-

```

```

Z-]|.|.)/modify/?$"
},
{
  "defaultId": 28,
  "resourceURI": "/nudm-sdm/v1/{supi}/am-data/sor-ack",
  "httpMethod": "PUT",
  "regex": "^(?:[^\#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.|.)/am-
data/sor-ack/?$"
},
{
  "defaultId": 31,
  "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/release",
  "httpMethod": "POST",
  "regex": "^(?:[^\#,{,},?,^])*?/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-
Z-]|.|.)/release/?$"
},
{
  "defaultId": 32,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-3gpp-access",
  "httpMethod": "PUT",
  "regex": "^(?:[^\#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+\|gci-.+|gli-.+|.|.)/registrations/
smsf-3gpp-access/?$"
},
{
  "defaultId": 33,
  "resourceURI": "/nudm-sdm/v2/{supi}/am-data/upu-ack",
  "httpMethod": "PUT",
  "regex": "^(?:[^\#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|
gli-.+|.|.)/am-data/upu-ack/?$"
},
{
  "defaultId": 35,
  "resourceURI": "/nausf-auth/v1/ue-authentications/{authCtxId}/5g-aka-
confirmation",
  "httpMethod": "PUT",
  "regex": "^(?:[^\#,{,},?,^])*?/nausf-auth/v1/ue-authentications/([0-9a-zA-
Z-]|.|.)/5g-aka-confirmation/?$"
},
{
  "defaultId": 36,
  "resourceURI": "/nnrf-nfm/v1/subscriptions",
  "httpMethod": "POST",
  "regex": "^(?:[^\#,{,},?,^])*?/nnrf-nfm/v1/subscriptions/?$"
},
{
  "defaultId": 37,
  "resourceURI": "/nudm-sdm/v2/{supi}/sm-data",
  "httpMethod": "GET",
  "regex": "^(?:[^\#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|
gli-.+|.|.)/sm-data/?$"
},
{
  "defaultId": 38,
  "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",
  "httpMethod": "PUT",

```

```

    "regex": "^(?:[^\#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/registrations/amf-3gpp-
access/?$"
  },
  {
    "defaultId": 40,
    "resourceURI": "/namf-mt/v1/ue-contexts/{ueContextId}",
    "httpMethod": "GET",
    "regex": "^(?:[^\#,{,},?,^])*?/namf-mt/v1/ue-contexts/(imsi-[0-9]{5,15}|
nai-.+|gli-.+|gci-.+|.+)/?$"
  },
  {
    "defaultId": 41,
    "resourceURI": "/nudm-sdm/v1/{supi}",
    "httpMethod": "GET",
    "regex": "^(?:[^\#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/?$"
  },
  {
    "defaultId": 45,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/
{pduSessionId}",
    "httpMethod": "DELETE",
    "regex": "^(?:[^\#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/registrations/smf-
registrations/((([01]?[0-9][0-9]?|2[0-4][0-9]|25[0-5])+)/?$"
  },
  {
    "defaultId": 46,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "httpMethod": "PUT",
    "regex": "^(?:[^\#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/registrations/smsf-
non-3gpp-access/?$"
  },
  {
    "defaultId": 47,
    "resourceURI": "/nudm-sdm/v1/{supi}/am-data",
    "httpMethod": "GET",
    "regex": "^(?:[^\#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/am-
data/?$"
  },
  {
    "defaultId": 48,
    "resourceURI": "/namf-evts/v1/subscriptions",
    "httpMethod": "POST",
    "regex": "^(?:[^\#,{,},?,^])*?/namf-evts/v1/subscriptions/?$"
  },
  {
    "defaultId": 49,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "httpMethod": "GET",
    "regex": "^(?:[^\#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^\@]+\@[^\@]+|gci-.+|gli-.+|.+)/registrations/smsf-
non-3gpp-access/?$"
  },
  {

```

```

    "defaultId": 50,
    "resourceURI": "/nudm-sdm/v1/{supi}/ue-context-in-smf-data",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/ue-
context-in-smf-data/?$"
  },
  {
    "defaultId": 51,
    "resourceURI": "/nudm-sdm/v1/shared-data",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v1/shared-data/?$"
  },
  {
    "defaultId": 52,
    "resourceURI": "/nsmf-pdusession/v1/pdu-sessions",
    "httpMethod": "POST",
    "regex": "^(?:[^#,{,},?,^])*?/nsmf-pdusession/v1/pdu-sessions/?$"
  },
  {
    "defaultId": 54,
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nnrf-disc/v1/nf-instances/?$"
  },
  {
    "defaultId": 55,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-3gpp-access",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|
msisdn-[0-9]{5,15}|extid-[^@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/
smf-3gpp-access/?$"
  },
  {
    "defaultId": 56,
    "resourceURI": "/nnssf-nsselection/v2/network-slice-information",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nnssf-nsselection/v2/network-slice-
information/?$"
  },
  {
    "defaultId": 57,
    "resourceURI": "/namf-comm/v1/subscriptions/{subscriptionId}",
    "httpMethod": "PUT",
    "regex": "^(?:[^#,{,},?,^])*?/namf-comm/v1/subscriptions/(([0-9]{5,6})-)?
[^-]+)?/?$"
  },
  {
    "defaultId": 60,
    "resourceURI": "/nudm-sdm/v2/{supi}/sms-mng-data",
    "httpMethod": "GET",
    "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|
gli-.+|.+)/sms-mng-data/?$"
  },
  {
    "defaultId": 63,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-3gpp-access",

```

```

        "httpMethod": "GET",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-3gpp-access/?$"
    },
    {
        "defaultId": 64,
        "resourceURI": "/nudm-sdm/v1/{supi}/nssai",
        "httpMethod": "GET",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v1/(imsi-[0-9]{5,15}|nai-.+|.+)/nssai/?$"
    },
    {
        "defaultId": 65,
        "resourceURI": "/nudm-sdm/v2/{supi}/nssai",
        "httpMethod": "GET",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/nssai/?$"
    },
    {
        "defaultId": 66,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
        "httpMethod": "PUT",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/amf-non-3gpp-access/?$"
    },
    {
        "defaultId": 67,
        "resourceURI": "/nudm-sdm/v2/{supi}/smf-select-data",
        "httpMethod": "GET",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-sdm/v2/(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)/smf-select-data/?$"
    },
    {
        "defaultId": 69,
        "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smf-registrations/{pduSessionId}",
        "httpMethod": "PUT",
        "regex": "^(?:[^#,{,},?,^])*?/nudm-uecm/v1/(imsi-[0-9]{5,15}|nai-.+|msisdn-[0-9]{5,15}|extid-[@]+@[^@]+|gci-.+|gli-.+|.+)/registrations/smf-registrations/(([01]?[0-9][0-9]?|2[0-4][0-9]|25[0-5])+)/?"
    },
    {
        "defaultId": 85,
        "resourceURI": "/nsmf-pdusession/v1/pdu-sessions/{pduSessionRef}/retrieve",
        "httpMethod": "POST",
        "regex": "^(?:[^#,{,},?,^])*?/nsmf-pdusession/v1/pdu-sessions/([0-9a-zA-Z-]+|.+)/retrieve/?$"
    }
}
]

```

2.27.4 Message Validation Schema Configuration

Message Validation Schema Configuration REST API allows the user to configure the schema for a given Resource URI and HTTP Methods.

Table 2-89 Message Validation Schema Configuration REST API

Method	URL	Description	Input	Return	Example
GET	"/sepp-configuration/v1/message-validation-api-config"	This API is used to fetch the complete list of message validation default apis schema configurations		List<MessageValidationApiConfig>	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/message-validation-api-config' \ -H 'accept: */*'
GET	"/sepp-configuration/v1/message-validation-api-config/{id}"	This API is used to fetch a particular api and its schema corresponding to given id (picked from message_validation_api_config db table id column) as an input	id	MessageValidationApiConfig	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/message-validation-api-config/1' \ -H 'accept: */*'

Table 2-89 (Cont.) Message Validation Schema Configuration REST API

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/message-validation-api-config/{id}"	This API is used to add new Message validation api (resource URI, HTTP method and schema Value(JSON format)).User provided id and the id which will be saved in db might not be same.Note: Before adding any resource URI and corresponding schema using this API, that resource URI/ HTTP method combination need to be present in default_service_api_list_configuration table first.	id and MessageValidationApiConfig	201 CREATED	<pre>curl -X 'POST' \ 'http:// localhost:9090/ sepp- configuration/v1/ message- validation-api- config/51' \ -H 'accept: */.*' \ -H 'Content- Type: application/ json' \ -d '{ "defaultId": 51, "resourceURI" : "/namf- loc/v1/ {ueContextId} /provide-loc- info", "httpMethod": "POST", "schemaValue" : {"type": "object", "properties": {"req5gsLoc": { "type": "boolean", "default": false }, "reqRatType": { "type": "boolean", "default": false }, "reqTimeZone": { "type": "boolean", "default": false }, "reqCurrentLoc": { "type": "boolean"</pre>

Table 2-89 (Cont.) Message Validation Schema Configuration REST API

Method	URL	Description	Input	Return	Example
					<pre>oolean\", \"default\": false }, \"supported Features\": { \"type\": \"s tring\", \"pat tern\": \"^[A- Fa-f0-9]*\$ \"}}}\" }'</pre>

Table 2-89 (Cont.) Message Validation Schema Configuration REST API

Method	URL	Description	Input	Return	Example
PUT	"/sepp-configuration/v1/message-validation-api-config/{id}"	This API is used to update existing resource URI, HTTP method, schema corresponding to given id (picked from message_validation_api_config db table id column) as an input	id and MessageValidationApiConfig	201 CREATED	<pre>curl -X 'PUT' \ 'http:// localhost:9090/ sepp- configuration/v1/ message- validation-api- config/33' \ -H 'accept: */.*' \ -H 'Content- Type: application/ json' \ -d '{ "defaultId": 33, "resourceURI" : "/nudm- uecm/v1/ {ueId}/ registrations /smsf-3gpp- access", "httpMethod": "GET", "schemaValue" : "[{"in": "query", "name": "supported- features", "schema": { "type": "string", "pattern": "[A-Fa-f0-9]*\$"}, "required": false}]' }</pre>

Table 2-89 (Cont.) Message Validation Schema Configuration REST API

Method	URL	Description	Input	Return	Example
DELETE	"/sepp-configuration/v1/message-validation-api-config/{id}"	This API is used to delete an existing message validation api and corresponding schema.	ID	204 No Content	<pre>curl -X 'DELETE' \ 'http:// <SEPP- Configuration IP>:<PORT>/ sepp- configuration /v1/message- validation- api- config/1' \ - H 'accept: */' \ /sepp- configuration /v1/message- validation- api- config/1' \ -H 'accept: */'</pre>

Table 2-90 Message Validation Schema Configuration Parameters

Attribute	Datatype	Mandatory(M)/ Conditional(C)/ Optional(O)	Description
defaultId	integer	M	Id
resourceURI	String	M	Resource URI
httpMethod	HTTPMethod	M	HTTP Method
schemaValue	String	M	schema value (JSON)

Sample Response body structure for GET operations

Resource API :"/sepp-configuration/v1/message-validation-api-config"

Resource Method : GET

Content Type : application/json

```
[
  {
    "defaultId": 1,
    "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access",
    "httpMethod": "DELETE",
    "schemaValue": "[{\"in\": \"query\", \"name\": \"smsf-set-id\",
\\schema\": {\\type\": \"string\", \\required\": false}}]"
  },
  {
    "defaultId": 2,
    "resourceURI": "/nudm-sdm/v2/{supi}/am-data/sor-ack",
```

```

    "httpMethod": "PUT",
    "schemaValue": "{ \"type\": \"object\", \"required\":
[\"provisioningTime\", \"properties\": { \"sorMacIue\": { \"type\":
\"string\", \"pattern\": \"^[A-Fa-f0-9]{32}$\"}, \"upuMacIue\": { \"type\":
\"string\", \"pattern\": \"^[A-Fa-f0-9]{32}$\"}, \"securedPacket\":
{ \"type\": \"string\", \"format\": \"byte\"}, \"ueNotReachable\": { \"type\":
\"boolean\", \"default\": false}, \"provisioningTime\": { \"type\":
\"string\", \"format\": \"date-time\"}} }"
  },
  {
    "defaultId": 3,
    "resourceURI": "/nnrf-disc/v1/nf-instances",
    "httpMethod": "GET",
    "schemaValue": "[ { \"in\": \"query\", \"name\": \"target-nf-type\",
\"schema\": { \"anyOf\": [ { \"enum\": [ \"NRF\", \"UDM\", \"AMF\", \"SMF\",
\"AUSF\", \"NEF\", \"PCF\", \"SMSF\", \"NSSF\", \"UDR\", \"LMF\", \"GMLC\",
\"5G_EIR\", \"SEPP\", \"UPF\", \"N3IWF\", \"AF\", \"UDSF\", \"BSF\", \"CHF\",
\"NWDAF\", \"PCSCF\", \"CBCF\", \"HSS\", \"UCMF\", \"SOR_AF\", \"SPAF\",
\"MME\", \"SCSAS\", \"SCEF\", \"SCP\", \"NSSAAF\", \"ICSCF\", \"SCSCF\",
\"DRA\", \"IMS_AS\", \"CEF\" ], \"type\": \"string\" }, { \"type\":
\"string\" } ], \"description\": \"NF types known to NRF\", \"required\":
true }, { \"in\": \"query\", \"name\": \"requester-nf-type\", \"schema\":
{ \"anyOf\": [ { \"enum\": [ \"NRF\", \"UDM\", \"AMF\", \"SMF\", \"AUSF\",
\"NEF\", \"PCF\", \"SMSF\", \"NSSF\", \"UDR\", \"LMF\", \"GMLC\", \"5G_EIR\",
\"SEPP\", \"UPF\", \"N3IWF\", \"AF\", \"UDSF\", \"BSF\", \"CHF\", \"NWDAF\",
\"PCSCF\", \"CBCF\", \"HSS\", \"UCMF\", \"SOR_AF\", \"SPAF\", \"MME\",
\"SCSAS\", \"SCEF\", \"SCP\", \"NSSAAF\", \"ICSCF\", \"SCSCF\", \"DRA\",
\"IMS_AS\", \"CEF\" ], \"type\": \"string\" }, { \"type\": \"string\" } ],
\"description\": \"NF types known to NRF\", \"required\": true }, { \"in\":
\"query\", \"name\": \"requester-nf-instance-id\", \"schema\": { \"type\":
\"string\", \"format\": \"uuid\" }, \"required\": false }, { \"in\": \"query\",
\"name\": \"service-names\", \"schema\": { \"type\": \"array\", \"items\":
{ \"anyOf\": [ { \"enum\": [ \"nnrf-nfm\", \"nnrf-disc\", \"nnrf-oauth2\", \"nudm-
sdm\", \"nudm-uecm\", \"nudm-ueau\", \"nudm-ee\", \"nudm-pp\", \"nudm-
niddau\", \"nudm-mt\", \"namf-comm\", \"namf-evts\", \"namf-mt\", \"namf-
loc\", \"nsmf-pdusession\", \"nsmf-event-exposure\", \"nsmf-nidd\", \"nausf-
auth\", \"nausf-sorprotection\", \"nausf-upuprotection\", \"nnef-
pfdmanagement\", \"nnef-smcontext\", \"nnef-eventexposure\", \"3gpp-cp-
parameter-provisioning\", \"3gpp-device-triggering\", \"3gpp-bdt\", \"3gpp-
traffic-influence\", \"3gpp-chargeable-party\", \"3gpp-as-session-with-qos\",
\"3gpp-msisdn-less-mo-sms\", \"3gpp-service-parameter\", \"3gpp-monitoring-
event\", \"3gpp-nidd-configuration-trigger\", \"3gpp-nidd\", \"3gpp-
analyticsexposure\", \"3gpp-racs-parameter-provisioning\", \"3gpp-ecr-
control\", \"3gpp-applying-bdt-policy\", \"3gpp-mo-lcs-notify\", \"npcf-am-
policy-control\", \"npcf-smpolicycontrol\", \"npcf-policyauthorization\",
\"npcf-bdtpolicycontrol\", \"npcf-eventexposure\", \"npcf-ue-policy-
control\", \"nsmf-sms\", \"nsmf-nssaiavailability\", \"nsmf-
management\", \"nchf-spendinglemitcontrol\", \"nchf-convergedcharging\",
\"nchf-offlineonlycharging\", \"nnwdafeventsubscription\", \"nnwdafe-
analyticsinfo\", \"ngmlc-loc\", \"nucmf-provisioning\", \"nucmf-
uecapabilitymanagement\", \"nhss-sdm\", \"nhss-uecm\", \"nhss-ueau\", \"nhss-
ee\", \"nhss-ims-sdm\", \"nhss-ims-uecm\", \"nhss-ims-ueau\", \"nsepp-
telescopic\", \"nsoraf-sor\", \"nspaf-secured-packet\", \"nudsf-dr\",
\"nssaa-nssaa\" ], \"type\": \"string\" }, { \"type\": \"string\" } ],
\"description\": \"Service names known to NRF\", \"minItems\": 1,

```

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\"uniqueItems\": true}, \"required\": false}, {\"in\": \"query\", \"name\":
\"requester-nf-instance-fqdn\", \"schema\": {\"type\": \"string\",
\"description\": \"Fully Qualified Domain Name\", \"required\": false},
{\"in\": \"query\", \"name\": \"target-plmn-list\", \"content\":
{\"application/json\": {\"schema\": {\"type\": \"array\", \"items\":
{\"type\": \"object\", \"required\": [\"mcc\", \"mnc\"], \"properties\":
{\"mcc\": {\"type\": \"string\", \"pattern\": \"^\\\\\\\\d{3}$\"}, \"mnc\":
{\"type\": \"string\", \"pattern\": \"^\\\\\\\\d{2,3}$\"}}}, \"minItems\": 1}}},
\"required\": false}, {\"in\": \"query\", \"name\": \"requester-plmn-list\",
\"content\": {\"application/json\": {\"schema\": {\"type\": \"array\",
\"items\": {\"type\": \"object\", \"required\": [\"mcc\", \"mnc\"],
\"properties\": {\"mcc\": {\"type\": \"string\", \"pattern\": \"^\\\\\\\\d{3}$
\", \"mnc\": {\"type\": \"string\", \"pattern\": \"^\\\\\\\\d{2,3}$\"}}},
\"minItems\": 1}}}, \"required\": false}, {\"in\": \"query\", \"name\":
\"target-nf-instance-id\", \"schema\": {\"type\": \"string\", \"format\":
\"uuid\", \"required\": false}, {\"in\": \"query\", \"name\": \"target-nf-
fqdn\", \"schema\": {\"type\": \"string\", \"description\": \"Fully Qualified
Domain Name\", \"required\": false}, {\"in\": \"query\", \"name\": \"hnrf-
uri\", \"schema\": {\"type\": \"string\", \"required\": false}, {\"in\":
\"query\", \"name\": \"snssais\", \"content\": {\"application/json\":
{\"schema\": {\"type\": \"array\", \"items\": {\"type\": \"object\",
\"required\": [\"sst\"], \"properties\": {\"sd\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{6}$\"}, \"sst\": {\"type\": \"integer\",
\"maximum\": 255, \"minimum\": 0}}}, \"minItems\": 1}}}, \"required\":
false}, {\"in\": \"query\", \"name\": \"requester-snssais\", \"content\":
{\"application/json\": {\"schema\": {\"type\": \"array\", \"items\":
{\"type\": \"object\", \"required\": [\"sst\"], \"properties\": {\"sd\":
{\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{6}$\"}, \"sst\":
{\"type\": \"integer\", \"maximum\": 255, \"minimum\": 0}}}, \"minItems\":
1}}}, \"required\": false}, {\"in\": \"query\", \"name\": \"plmn-specific-
snssai-list\", \"content\": {\"application/json\": {\"schema\": {\"type\":
\"array\", \"items\": {\"type\": \"object\", \"required\": [\"plmnId\",
\"snssaiList\"], \"properties\": {\"nid\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{11}$\"}, \"plmnId\": {\"type\": \"object\",
\"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\":
\"string\", \"pattern\": \"^\\\\\\\\d{3}$\"}, \"mnc\": {\"type\": \"string\",
\"pattern\": \"^\\\\\\\\d{2,3}$\"}}}, \"snssaiList\": {\"type\": \"array\",
\"items\": {\"allof\": [{\"type\": \"object\", \"required\": [\"sst\"],
\"properties\": {\"sd\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]
{6}$\"}, \"sst\": {\"type\": \"integer\", \"maximum\": 255, \"minimum\":
0}}}, {\"not\": {\"required\": [\"sdRanges\", \"wildcardSd\"]}, \"type\":
\"object\", \"properties\": {\"sdRanges\": {\"type\": \"array\", \"items\":
{\"type\": \"object\", \"properties\": {\"end\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{6}$\"}, \"start\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{6}$\"}}, \"description\": \"A range of SDs (Slice
Differentiators)\", \"minItems\": 1, \"description\": \"When present, it
shall contain the range(s) of Slice Differentiator values supported for the
Slice/Service Type value indicated in the sst attribute of the Snssai data
type\", \"wildcardSd\": {\"enum\": [true], \"type\": \"boolean\",
\"description\": \"When present, it shall be set to true, to indicate that
all SD values are supported for the Slice/Service Type value indicated in the
sst attribute of the Snssai data type\"}}, \"description\": \"List of network
slices (S-NSSAIs) for a given PLMN ID\", \"minItems\": 1}}}, \"required\":
false}, {\"in\": \"query\", \"name\": \"requester-plmn-specific-snssai-

```

```

list\", \"content\": {\"application/json\": {\"schema\": {\"type\":
\"array\", \"items\": {\"type\": \"object\", \"required\": [\"plmnId\",
\"sNssaiList\"], \"properties\": {\"nid\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{11}$\"}, \"plmnId\": {\"type\": \"object\",
\"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\":
\"string\", \"pattern\": \"^[\\d]{3}$\"}, \"mnc\": {\"type\": \"string\",
\"pattern\": \"^[\\d]{2,3}$\"}}}, \"sNssaiList\": {\"type\": \"array\",
\"items\": {\"allOf\": [{\"type\": \"object\", \"required\": [\"sst\"],
\"properties\": {\"sd\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]
{6}$\"}, \"sst\": {\"type\": \"integer\", \"maximum\": 255, \"minimum\":
0}}}, {\"not\": {\"required\": [\"sdRanges\", \"wildcardSd\"]}, \"type\":
\"object\", \"properties\": {\"sdRanges\": {\"type\": \"array\", \"items\":
{\"type\": \"object\", \"properties\": {\"end\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{6}$\"}, \"start\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{6}$\"}}, \"description\": \"A range of SDs (Slice
Differentiators)\", \"minItems\": 1, \"description\": \"When present, it
shall contain the range(s) of Slice Differentiator values supported for the
Slice/Service Type value indicated in the sst attribute of the Snsai data
type\", \"wildcardSd\": {\"enum\": [true], \"type\": \"boolean\",
\"description\": \"When present, it shall be set to true, to indicate that
all SD values are supported for the Slice/Service Type value indicated in the
sst attribute of the Snsai data type\"}}, \"description\": \"Extensions to
the Snsai data type, sdRanges and wildcardSd shall not be present
simultaneously\"}}}, \"minItems\": 1}}, \"description\": \"List of network
slices (S-NSSAIs) for a given PLMN ID\", \"minItems\": 1}}, \"required\":
false}, {\"in\": \"query\", \"name\": \"dnn\", \"schema\": {\"type\":
\"string\", \"required\": false}, {\"in\": \"query\", \"name\": \"nsi-
list\", \"schema\": {\"type\": \"array\", \"items\": {\"type\": \"string\",
\"minItems\": 1}, \"required\": false}, {\"in\": \"query\", \"name\": \"smf-
serving-area\", \"schema\": {\"type\": \"string\", \"required\": false},
{\"in\": \"query\", \"name\": \"tai\", \"content\": {\"application/json\":
{\"schema\": {\"type\": \"object\", \"required\": [\"plmnId\", \"tac\"],
\"properties\": {\"nid\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]
{11}$\"}, \"tac\": {\"type\": \"string\", \"pattern\": \"(^[A-Fa-f0-9]{4}$)|
(^[A-Fa-f0-9]{6}$)\"}, \"plmnId\": {\"type\": \"object\", \"required\":
[\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\": \"string\",
\"pattern\": \"^[\\d]{3}$\"}, \"mnc\": {\"type\": \"string\", \"pattern\":
\"^[\\d]{2,3}$\"}}}}}, \"required\": false}, {\"in\": \"query\", \"name\":
\"amf-region-id\", \"schema\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-
f0-9]{2}$\"}, \"required\": false}, {\"in\": \"query\", \"name\": \"amf-set-
id\", \"schema\": {\"type\": \"string\", \"pattern\": \"^[0-3][A-Fa-f0-9]{2}$
\"}, \"required\": false}, {\"in\": \"query\", \"name\": \"guami\",
\"content\": {\"application/json\": {\"schema\": {\"type\": \"object\",
\"required\": [\"amfId\", \"plmnId\"], \"properties\": {\"amfId\": {\"type\":
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\"object\", \"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\":
{\"type\": \"string\", \"pattern\": \"^[\\d]{3}$\"}, \"mnc\": {\"type\":
\"string\", \"pattern\": \"^[\\d]{2,3}$\"}, \"nid\": {\"type\": \"string\",
\"pattern\": \"^[A-Fa-f0-9]{11}$\"}}}}}, \"required\": false}, {\"in\":
\"query\", \"name\": \"supi\", \"schema\": {\"type\": \"string\",
\"pattern\": \"^(imsi-[0-9]{5,15}|nai-.+|gci-.+|gli-.+|.+)\"}, \"required\":
false}, {\"in\": \"query\", \"name\": \"ue-ipv4-address\", \"schema\":
{\"type\": \"string\", \"example\": \"198.51.100.1\", \"pattern\": \"^([0-9]
[1-9][0-9]|1[0-9][0-9]|2[0-4][0-9]|25[0-5])\\.\\.\\.){3}([0-9]|1[0-9][0-9]|1[0-9]
[0-9]|2[0-4][0-9]|25[0-5])$\"}, \"required\": false}, {\"in\": \"query\",
\"name\": \"ip-domain\", \"schema\": {\"type\": \"string\", \"required\":

```

```
{
    "in": "\query\", \"name\": \"ue-ipv6-prefix\", \"schema\": {
        \"type\": \"string\", \"allof\": [{\"pattern\": \"^((|(?|([1-9a-f][0-9a-f]{0,3})))|((?|([1-9a-f][0-9a-f]{0,3}))){0,6}:|(?|([1-9a-f][0-9a-f]{0,3}))\\\\\\\\\\\\\\\\([0-9]|([0-9]{2})|(1[0-1][0-9])|(12[0-8]))$\"}, {\"pattern\": \"^((([:+]:){7}([[:+]]|(([:+])*[:+]??:(([:+])*[:+]?))\\\\\\\\\\\\.+)$\\\"]\", \"example\": \"2001:db8:abcd:12::0/64\"}, \"required\": false,
        \"in\": \"\query\", \"name\": \"pgw-ind\", \"schema\": {\"type\": \"boolean\"}, \"required\": false,
        \"in\": \"\query\", \"name\": \"gpsi\", \"schema\": {\"type\": \"string\", \"description\": \"Fully Qualified Domain Name\", \"required\": false,
        \"in\": \"\query\", \"name\": \"extid-[[:@]+|.+)\"$, \"required\": false,
        \"in\": \"\query\", \"name\": \"external-group-identity\", \"schema\": {\"type\": \"string\", \"pattern\": \"^extgroupid-[[:@]+|$\"}, \"required\": false,
        \"in\": \"\query\", \"name\": \"internal-group-identity\", \"schema\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10}$\"}, \"required\": false,
        \"in\": \"\query\", \"name\": \"pfd-data\", \"content\": {\"application/json\": {\"schema\": {\"type\": \"object\", \"properties\": {\"afIds\": {\"type\": \"array\", \"items\": {\"type\": \"string\"}, \"minItems\": 1}, \"appIds\": {\"type\": \"array\", \"items\": {\"type\": \"string\"}, \"minItems\": 1}}, \"description\": \"List of Application IDs and/or AF IDs managed by a given NEF Instance\"}}}, \"required\": false,
        \"in\": \"\query\", \"name\": \"data-set\", \"schema\": {\"anyOf\": [{\"enum\": [\"SUBSCRIPTION\", \"POLICY\", \"EXPOSURE\", \"APPLICATION\"], \"type\": \"string\"}, {\"type\": \"string\"}], \"description\": \"Types of data sets stored in UDR\", \"required\": false,
        \"in\": \"\query\", \"name\": \"routing-indicator\", \"schema\": {\"type\": \"string\", \"pattern\": \"^[0-9]{1,4}$\"}, \"required\": false,
        \"in\": \"\query\", \"name\": \"group-id-list\", \"schema\": {\"type\": \"array\", \"items\": {\"type\": \"string\"}, \"minItems\": 1}, \"required\": false,
        \"in\": \"\query\", \"name\": \"dnai-list\", \"schema\": {\"type\": \"array\", \"items\": {\"type\": \"string\"}, \"minItems\": 1}, \"required\": false,
        \"in\": \"\query\", \"name\": \"pdu-session-types\", \"schema\": {\"type\": \"array\", \"items\": {\"anyOf\": [{\"enum\": [\"IPv4\", \"IPv6\", \"IPv4v6\", \"UNSTRUCTURED\", \"ETHERNET\"], \"type\": \"string\"}, {\"type\": \"string\"}]}, \"minItems\": 1}, \"required\": false,
        \"in\": \"\query\", \"name\": \"event-id-list\", \"schema\": {\"type\": \"array\", \"items\": {\"anyOf\": [{\"enum\": [\"LOAD_LEVEL_INFORMATION\", \"NETWORK_PERFORMANCE\", \"NF_LOAD\", \"SERVICE_EXPERIENCE\", \"UE_MOBILITY\", \"UE_COMMUNICATION\", \"QOS_SUSTAINABILITY\", \"ABNORMAL_BEHAVIOUR\", \"USER_DATA_CONGESTION\", \"NSI_LOAD_LEVEL\"], \"type\": \"string\"}, {\"type\": \"string\", \"description\": \"This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in the present version of this API.\"}], \"description\": \"Possible values are - LOAD_LEVEL_INFORMATION: Represent the analytics of load level information of corresponding network slice. - NETWORK_PERFORMANCE: Represent the analytics of network performance information. - NF_LOAD: Indicates that the event subscribed is NF Load. - SERVICE_EXPERIENCE: Represent the analytics of service experience information of the specific applications. - UE_MOBILITY: Represent the analytics of UE mobility. - UE_COMMUNICATION: Represent the analytics of UE communication. - QOS_SUSTAINABILITY: Represent the analytics of QoS sustainability information in the certain area. - ABNORMAL_BEHAVIOUR: Indicates that the event subscribed is abnormal behaviour information. - USER_DATA_CONGESTION: Represent the analytics of the user data congestion inthe certain area. - NSI_LOAD_LEVEL: Represent the analytics of Network Slice and the optionally
```

```

associated Network Slice Instance.\n\n"}, {"minItems": 1}, {"required":
false}, {"in": "query", "name": "nwdafeventlist", "schema":
{"type": "array", "items": {"anyOf": [{"enum":
["SLICE_LOAD_LEVEL", "NETWORK_PERFORMANCE", "NF_LOAD",
"SERVICE_EXPERIENCE", "UE_MOBILITY", "UE_COMMUNICATION",
"QOS_SUSTAINABILITY", "ABNORMAL_BEHAVIOUR", "USER_DATA_CONGESTION",
"NSI_LOAD_LEVEL"], "type": "string"}, {"type": "string",
"description": "This string provides forward-compatibility with future
extensions to the enumeration but is not used to encode content defined in
the present version of this API.\n\n"}], "description": "Possible values
are - SLICE_LOAD_LEVEL: Indicates that the event subscribed is load level
information of Network Slice - NETWORK_PERFORMANCE: Indicates that the event
subscribed is network performance information. - NF_LOAD: Indicates that the
event subscribed is load level and status of one or several Network
Functions. - SERVICE_EXPERIENCE: Indicates that the event subscribed is
service experience. - UE_MOBILITY: Indicates that the event subscribed is UE
mobility information. - UE_COMMUNICATION: Indicates that the event subscribed
is UE communication information. - QOS_SUSTAINABILITY: Indicates that the
event subscribed is QoS sustainability. - ABNORMAL_BEHAVIOUR: Indicates that
the event subscribed is abnormal behaviour. - USER_DATA_CONGESTION: Indicates
that the event subscribed is user data congestion information. -
NSI_LOAD_LEVEL: Indicates that the event subscribed is load level information
of Network Slice and the optionally associated Network Slice Instance\n\n"},
{"minItems": 1}, {"required": false}, {"in": "query", "name":
"supportedfeatures", "schema": {"type": "string", "pattern": "^[A-
Fa-f0-9]*$"}, {"required": false}, {"in": "query", "name": "upfiwk-
eps-ind", "schema": {"type": "boolean"}, {"required": false},
{"in": "query", "name": "chfsupportedplmn", "content":
{"application/json": {"schema": {"type": "object", "required":
["mcc", "mnc"], "properties": {"mcc": {"type": "string",
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false}, {"in": "query", "name": "accesstype", "schema": {"enum":
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false}, {"in": "query", "name": "limit", "schema": {"type":
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"name": "requiredfeatures", "schema": {"type": "array", "items":
{"type": "string", "pattern": "^[A-Fa-f0-9]*$"}, {"minItems": 1},
{"required": false}, {"in": "query", "name": "complexquery",
"content": {"application/json": {"schema": {"oneOf": [{"type":
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{"type": "array", "items": {"type": "object", "required":
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{\"anyOf\": [{\"enum\": [\"DSL\", \"PON\"], \"type\": \"string\"}, {\"type\":
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with future extensions to the enumeration but is not used to encode content
defined in the present version of this API.\n\n\"}], \"description\":
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line\n\n\"}}}, \"utraLocation\": {\"type\": \"object\", \"oneOf\":
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\d{3}$\"}, \"mnc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{2,3}$\"}}}}, \"ecgi\": {\"type\": \"object\", \"required\": [\"eutraCellId\", \"plmnId\"], \"properties\": {\"nid\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{11}$\"}, \"plmnId\": {\"type\": \"object\", \"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{3}$\"}, \"mnc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{2,3}$\"}}}}, \"eutraCellId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{7}$\"}}, \"ignoreTai\": {\"type\": \"boolean\", \"default\": false}, \"ignoreEcgi\": {\"type\": \"boolean\", \"default\": false}, \"globalENbId\": {\"type\": \"object\", \"oneOf\": [{\"required\": [\"n3IwfId\"], \"required\": [\"gnNbId\"], \"required\": [\"ngeNbId\"], \"required\": [\"wagfId\"], \"required\": [\"tngfId\"], \"required\": [\"eNbId\"]}], \"required\": [\"plmnId\"], \"properties\": {\"nid\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{11}$\"}, \"eNbId\": {\"type\": \"string\", \"pattern\": \"^(MacroNB-[A-Fa-f0-9]{5}|MacroNB-[A-Fa-f0-9]{6}|MacroNB-[A-Fa-f0-9]{5}|HomeNB-[A-Fa-f0-9]{7})$\"}, \"gnNbId\": {\"type\": \"object\", \"required\": [\"bitLength\", \"gnBValue\"], \"properties\": {\"gnBValue\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{6,8}$\"}, \"bitLength\": {\"type\": \"integer\", \"maximum\": 32, \"minimum\": 22}}, \"plmnId\": {\"type\": \"object\", \"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{3}$\"}, \"mnc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{2,3}$\"}}}}, \"tngfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"wagfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"n3IwfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"ngeNbId\": {\"type\": \"string\", \"pattern\": \"^(MacroNGeNB-[A-Fa-f0-9]{5}|MacroNGeNB-[A-Fa-f0-9]{6}|MacroNGeNB-[A-Fa-f0-9]{5})$\"}}, \"globalNgenbId\": {\"type\": \"object\", \"oneOf\": [{\"required\": [\"n3IwfId\"], \"required\": [\"gnNbId\"], \"required\": [\"ngeNbId\"], \"required\": [\"wagfId\"], \"required\": [\"tngfId\"], \"required\": [\"eNbId\"]}], \"required\": [\"plmnId\"], \"properties\": {\"nid\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{11}$\"}, \"eNbId\": {\"type\": \"string\", \"pattern\": \"^(MacroNB-[A-Fa-f0-9]{5}|MacroNB-[A-Fa-f0-9]{6}|MacroNB-[A-Fa-f0-9]{5}|HomeNB-[A-Fa-f0-9]{7})$\"}, \"gnNbId\": {\"type\": \"object\", \"required\": [\"bitLength\", \"gnBValue\"], \"properties\": {\"gnBValue\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{6,8}$\"}, \"bitLength\": {\"type\": \"integer\", \"maximum\": 32, \"minimum\": 22}}, \"plmnId\": {\"type\": \"object\", \"required\": [\"mcc\", \"mnc\"], \"properties\": {\"mcc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{3}$\"}, \"mnc\": {\"type\": \"string\", \"pattern\": \"^\\\\d{2,3}$\"}}}}, \"tngfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"wagfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"n3IwfId\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]+$\"}, \"ngeNbId\": {\"type\": \"string\", \"pattern\": \"^(MacroNGeNB-[A-Fa-f0-9]{5}|MacroNGeNB-[A-Fa-f0-9]{6}|MacroNGeNB-[A-Fa-f0-9]{5})$\"}}, \"geodeticInformation\": {\"type\": \"string\", \"pattern\": \"^[0-9A-F]{20}$\"}, \"ueLocationTimestamp\": {\"type\": \"string\", \"format\": \"date-time\"}, \"geographicalInformation\": {\"type\": \"string\", \"pattern\": \"^[0-9A-F]{16}$\"}, \"ageOfLocationInformation\": {\"type\": \"integer\", \"maximum\": 32767, \"minimum\": 0}}}}, \"groupIds\": {\"type\": \"array\", \"items\": {\"type\": \"string\", \"pattern\": \"^[A-Fa-f0-9]{8}-[0-9]{3}-[0-9]{2,3}-([A-Fa-f0-9][A-Fa-f0-9]){1,10}$\"}, \"minItems\": 1}, \"pc5Capab\": {\"anyOf\": [{\"enum\": [\"LTE_PC5\", \"NR_PC5\", \"LTE_NR_PC5\"], \"type\": \"string\"}, {\"type\": \"string\"}, \"description\": \"This string provides forward-compatibility with future extensions to the enumeration but is not used to encode content defined in

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the present version of this API.\n\n"}], \n"description": \n"Possible values
are - LTE_PC5: This value is used to indicate that UE supports PC5 LTE RAT
for V2X communication over PC5 reference point. - NR_PC5: This value is used
to indicate that UE supports PC5 NR RAT for V2X communication over PC5
reference point. - LTE_NR_PC5: This value is used to indicate that UE
supports both PC5 LTE and NR RAT for V2X communication over PC5 reference
point.\n\n"}], \n"suppFeat": {\n"type": \n"string", \n"pattern": \n"^[A-Fa-
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pp", \n"nudm-niddau", \n"nudm-mt", \n"namf-comm", \n"namf-evts", \n"namf-
mt", \n"namf-loc", \n"nsmf-pdusession", \n"nsmf-event-exposure", \n"nsmf-
nidd", \n"nausf-auth", \n"nausf-sorprotection", \n"nausf-upuprotection",
\n"neef-pfdmanagement", \n"neef-smcontext", \n"neef-eventexposure", \n"3gpp-cp-
parameter-provisioning", \n"3gpp-device-triggering", \n"3gpp-bdt", \n"3gpp-
traffic-influence", \n"3gpp-chargeable-party", \n"3gpp-as-session-with-qos",
\n"3gpp-msisdn-less-mo-sms", \n"3gpp-service-parameter", \n"3gpp-monitoring-
event", \n"3gpp-nidd-configuration-trigger", \n"3gpp-nidd", \n"3gpp-
analyticsexposure", \n"3gpp-racs-parameter-provisioning", \n"3gpp-ecr-
control", \n"3gpp-applying-bdt-policy", \n"3gpp-mo-lcs-notify", \n"npcf-am-
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\n"npcf-bdtpolicycontrol", \n"npcf-eventexposure", \n"npcf-ue-policy-
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\n"nudr-dr", \n"nudr-group-id-map", \n"nlmf-loc", \n"n5g-eir-eic", \n"nbsf-
management", \n"nchf-spendinglemitcontrol", \n"nchf-convergedcharging",
\n"nchf-offlineonlycharging", \n"nnwdafeventssubscription", \n"nnwdafe-
analyticsinfo", \n"ngmlc-loc", \n"nucmf-provisioning", \n"nucmf-
uecapabilitymanagement", \n"nhss-sdm", \n"nhss-uecm", \n"nhss-ueau", \n"nhss-
ee", \n"nhss-ims-sdm", \n"nhss-ims-uecm", \n"nhss-ims-ueau", \n"nsepp-
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\n"minItems": 1, \n"description": \n"Alternate or backup FQDN(s) where to send
Notifications."}, \n"notificationUri": {\n"type": \n"string"},
\n"altNotifIpv4Addrs": {\n"type": \n"array", \n"items": {\n"type":
\n"string", \n"example": \n"198.51.100.1", \n"pattern": \n"^([0-9]|[1-9][0-9]|
1[0-9][0-9]|2[0-4][0-9]|25[0-5])\\.([0-9]|[1-9][0-9]|1[0-9][0-9]|2[0-4]
[0-9]|25[0-5])$"}, \n"minItems": 1, \n"description": \n"Alternate or backup
IPv4 Address(es) where to send Notifications."}, \n"altNotifIpv6Addrs":
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{0,3})))|{0,6}:|(?!(0?|([1-9a-f][0-9a-f]{0,3})))$"}, {\n"pattern": \n"^((([^\
+:]{7}|[^\+:])|((([^\+:]*[^\+:]??:|([^\+:]*[^\+:])?))$"}, \n"example":
\n"2001:db8:85a3::8a2e:370:7334"}, \n"minItems": 1, \n"description":
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},
{
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    "pattern": "^[A-Za-f0-9]*$"}, {"required": false}]"}],
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        false}, "supportedFeatures": {"type": "string", "pattern": "^[A-Za-f0-9]*$"}
        }
        ],
        {
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          "httpMethod": "DELETE",
          "schemaValue": [{"in": "query", "name": "smf-set-id",
          "schema": {"type": "string", "required": false}, {"in": "query",
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      "httpMethod": "GET",
      "schemaValue": "[{"in": \"query\", \"name\": \"supported-features\",
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\"required\": false}]"
    },
    {
      "defaultId": 11,
      "resourceURI": "/namf-comm/v1/subscriptions",
      "httpMethod": "POST",
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    },
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\"^[\\d]{2,3}$\"}}}}, \"required\": false}]"
    },
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\"SMF_SEL\", \"UEC_SMF\", \"UEC_SMSF\", \"SMS_SUB\", \"SM\", \"TRACE\",
\"SMS_MNG\"], \"type\": \"string\"}, {\"type\": \"string\"}]}, \"minItems\":
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    },
    {
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      "resourceURI": "/nudm-uecm/v1/{ueId}/registrations/amf-non-3gpp-access",
      "httpMethod": "GET",
      "schemaValue": "[{"in": \"query\", \"name\": \"supported-features\",

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\"schema\": {\"type\": \"string\", \"pattern\": \"^[A-Za-f0-9]*$\"},
\"required\": false}]"
},
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  \"defaultId\": 15,
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\"required\": false}]"
},
{
  \"defaultId\": 16,
  \"resourceURI\": \"/nudm-sdm/v2/{supi}/am-data/upu-ack",
  \"httpMethod\": \"PUT\",
  \"schemaValue\": \"{\"type\": \"object\", \"required\":
[\"provisioningTime\", \"properties\": {\"sorMacIue\": {\"type\":
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\"string\", \"pattern\": \"^[A-Za-f0-9]{32}$\", \"securedPacket\":
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\"boolean\", \"default\": false}, \"provisioningTime\": {\"type\":
\"string\", \"format\": \"date-time\"}}}]"
},
{
  \"defaultId\": 17,
  \"resourceURI\": \"/nnssf-nsselection/v1/network-slice-information",
  \"httpMethod\": \"GET\",
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\"NEF\", \"PCF\", \"SMSF\", \"NSSF\", \"UDR\", \"LMF\", \"GMLC\", \"5G_EIR\",
\"SEPP\", \"UPF\", \"N3IWF\", \"AF\", \"UDSF\", \"BSF\", \"CHF\", \"NWDAF\"],
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\"SUBSCRIPTION_ID_CHANGE\", \"SUBSCRIPTION_ID_ADDITION\",
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[illegible]

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\ "ECGI_CHANGE\ ", \ "TAI_CHANGE\ ", \ "HANDOVER_CANCEL\ ", \ "HANDOVER_START\ ",
\ "HANDOVER_COMPLETE\ ", \ "GFBR_GUARANTEED_STATUS_CHANGE\ ",
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are - LOC_CH: Location change (tracking area). The tracking area of the UE
has changed. - PRA_CH: Change of UE presence in PRA. The AMF reports the
current presence status of the UE in a Presence Reporting Area, and notifies
that the UE enters/leaves the Presence Reporting Area. - UE_POLICY: A MANAGE
UE POLICY COMPLETE message or a MANAGE UE POLICY COMMAND REJECT message, as
defined in Annex D.5 of 3GPP TS 24.501 or a \\\"UE POLICY PROVISIONING
REQUEST\\\" message, as defined in subclause 7.2.1.1 of 3GPP TS 24.587 , has
been received by the AMF and is being forwarded. - PLMN_CH: PLMN change. the
serving PLMN of UE has changed. - CON_STATE_CH: Connectivity state change:
the connectivity state of UE has changed. - GROUP_ID_LIST_CHG: UE Internal
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\"UE_NOT_RESPONDING\", \"N1_MSG_NOT_TRANSFERRED\",
\"UE_NOT_REACHABLE_FOR_SESSION\", \"TEMPORARY_REJECT_REGISTRATION_ONGOING\",

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\"REL_DUE_TO_UP_SEC\", \"DNN_CONGESTION\", \"S_NSSAI_CONGESTION\",
\"REL_DUE_TO_REACTIVATION\", \"5G_AN_NOT_RESPONDING\",
\"REL_DUE_TO_SLICE_NOT_AVAILABLE\", \"REL_DUE_TO_DUPLICATE_SESSION_ID\",
\"PDU_SESSION_STATUS_MISMATCH\", \"HO_FAILURE\",
\"INSUFFICIENT_UP_RESOURCES\", \"PDU_SESSION_HANDED_OVER\",
\"PDU_SESSION_RESUMED\", \"CN_ASSISTED_RAN_PARAMETER_TUNING\",
\"ISMF_CONTEXT_TRANSFER\", \"SMF_CONTEXT_TRANSFER\",
\"REL_DUE_TO_PS_TO_CS_HO\", \"REL_DUE_TO_SUBSCRIPTION_CHANGE\",
\"HO_CANCEL\", \"REL_DUE_TO_SLICE_NOT_AUTHORIZED\",
\"PDU_SESSION_HAND_OVER_FAILURE\", \"DDN_FAILURE_STATUS\",
\"REL_DUE_TO_CP_ONLY_NOT_APPLICABLE\", \"NOT_SUPPORTED_WITH_ISMF\",
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DNN_CONGESTION - S_NSSAI_CONGESTION - REL_DUE_TO_REACTIVATION -
5G_AN_NOT_RESPONDING - REL_DUE_TO_SLICE_NOT_AVAILABLE -
REL_DUE_TO_DUPLICATE_SESSION_ID - PDU_SESSION_STATUS_MISMATCH - HO_FAILURE -
INSUFFICIENT_UP_RESOURCES - PDU_SESSION_HANDED_OVER - PDU_SESSION_RESUMED -
CN_ASSISTED_RAN_PARAMETER_TUNING - ISMF_CONTEXT_TRANSFER -
SMF_CONTEXT_TRANSFER - REL_DUE_TO_PS_TO_CS_HO -
REL_DUE_TO_SUBSCRIPTION_CHANGE - HO_CANCEL - REL_DUE_TO_SLICE_NOT_AUTHORIZED
- PDU_SESSION_HAND_OVER_FAILURE - DDN_FAILURE_STATUS -
REL_DUE_TO_CP_ONLY_NOT_APPLICABLE - NOT_SUPPORTED_WITH_ISMF -
CHANGED_ANCHOR_SMF - CHANGED_INTERMEDIATE_SMF -
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\"PFCP_SES_DEL_REQ\", \"PFCP_SES_DEL_RSP\", \"PFCP_SES_REP_REQ\",
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- DUAL_TRANS_UL_FIRST: Dual packet transmission, firstly uplink packet
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DUAL_TRANS_DL_FIRST: Dual packet transmission, firstly downlink packet
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REL_DUE_TO_DUPLICATE_SESSION_ID - PDU_SESSION_STATUS_MISMATCH - HO_FAILURE -
INSUFFICIENT_UP_RESOURCES - PDU_SESSION_HANDED_OVER - PDU_SESSION_RESUMED -
CN_ASSISTED_RAN_PARAMETER_TUNING - ISMF_CONTEXT_TRANSFER -

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- PDU_SESSION_HAND_OVER_FAILURE - DDN_FAILURE_STATUS -
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```

```

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\n"5G_AN_NOT_RESPONDING\n", \n"REL_DUE_TO_SLICE_NOT_AVAILABLE\n",
\n"REL_DUE_TO_DUPLICATE_SESSION_ID\n", \n"PDU_SESSION_STATUS_MISMATCH\n",
\n"HO_FAILURE\n", \n"INSUFFICIENT_UP_RESOURCES\n", \n"PDU_SESSION_HANDED_OVER\n",
\n"PDU_SESSION_RESUMED\n", \n"CN_ASSISTED_RAN_PARAMETER_TUNING\n",
\n"ISMF_CONTEXT_TRANSFER\n", \n"SMF_CONTEXT_TRANSFER\n",
\n"REL_DUE_TO_PS_TO_CS_HO\n", \n"REL_DUE_TO_SUBSCRIPTION_CHANGE\n",
\n"HO_CANCEL\n", \n"REL_DUE_TO_SLICE_NOT_AUTHORIZED\n",
\n"PDU_SESSION_HAND_OVER_FAILURE\n", \n"DDN_FAILURE_STATUS\n",
\n"REL_DUE_TO_CP_ONLY_NOT_APPLICABLE\n", \n"NOT_SUPPORTED_WITH_ISMF\n",
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5G_AN_NOT_RESPONDING - REL_DUE_TO_SLICE_NOT_AVAILABLE -
REL_DUE_TO_DUPLICATE_SESSION_ID - PDU_SESSION_STATUS_MISMATCH - HO_FAILURE -
INSUFFICIENT_UP_RESOURCES - PDU_SESSION_HANDED_OVER - PDU_SESSION_RESUMED -
CN_ASSISTED_RAN_PARAMETER_TUNING - ISMF_CONTEXT_TRANSFER -
SMF_CONTEXT_TRANSFER - REL_DUE_TO_PS_TO_CS_HO -
REL_DUE_TO_SUBSCRIPTION_CHANGE - HO_CANCEL - REL_DUE_TO_SLICE_NOT_AUTHORIZED
- PDU_SESSION_HAND_OVER_FAILURE - DDN_FAILURE_STATUS -
REL_DUE_TO_CP_ONLY_NOT_APPLICABLE - NOT_SUPPORTED_WITH_ISMF -
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\"UNIT_COUNT_INACTIVITY_TIMER\", \"ABNORMAL_RELEASE\", \"QOS_CHANGE\",
\"VOLUME_LIMIT\", \"TIME_LIMIT\", \"EVENT_LIMIT\", \"PLMN_CHANGE\",
\"USER_LOCATION_CHANGE\", \"RAT_CHANGE\", \"SESSION_AMBR_CHANGE\",
\"UE_TIMEZONE_CHANGE\", \"TARIFF_TIME_CHANGE\",
\"MAX_NUMBER_OF_CHANGES_IN_CHARGING_CONDITIONS\",
\"MANAGEMENT_INTERVENTION\",
\"CHANGE_OF_UE_PRESENCE_IN_PRESENCE_REPORTING_AREA\",
\"CHANGE_OF_3GPP_PS_DATA_OFF_STATUS\", \"SERVING_NODE_CHANGE\",
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\"REMOVAL_OF_ISMF\", \"CHANGE_OF_ISMF\", \"START_OF_SERVICE_DATA_FLOW\",
\"ECGI_CHANGE\", \"TAI_CHANGE\", \"HANDOVER_CANCEL\", \"HANDOVER_START\",
\"HANDOVER_COMPLETE\", \"GFR_GUARANTEED_STATUS_CHANGE\",
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extensions to the enumeration but is not used to encode content defined in
the present version of this API.\\n\\n\"}], \"description\": \"Possible values
are\\n - 64_KBPS\\n - MAX_UE_RATE\\n\\n\"}}}
}
]

```

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/message-validation-api-config/{id}

Resource Method : GET

Content Type : application/json

```

{
  \"defaultId\": 1,
  \"resourceURI\": \"/nudm-uecm/v1/{ueId}/registrations/smsf-non-3gpp-access\",
  \"httpMethod\": \"DELETE\",
  \"schemaValue\": \"[{\\\"in\\\": \\\"query\\\", \\\"name\\\": \\\"smsf-set-id\\\", \\\"schema\\\":
{\\\"type\\\": \\\"string\\\", \\\"required\\\": false}}]\"
}

```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/message-validation-api-config/{id}

Resource Method : PUT

Content Type : application/json

201 CREATED

Sample Response body structure for POST operations

Resource API : /sepp-configuration/v1/message-validation-api-config/{id}

Resource Method : POST

Content Type : application/json

201 CREATED

Sample Response body structure for DELETE operations

Resource API : /sepp-configuration/v1/message-validation-api-config/{id}

Resource Method : DELETE

Content Type : application/json

204

2.28 3gpp-SBI-Originating-Network-Id Header Support Options

3gpp-SBI-Originating-Network-Id Header Support Options REST API allows the user to enable and configure the support for originating network Id header validation, insertion, and transposition feature.

Table 2-91 3gpp-SBI-Originating-Network-Id Header Support Options

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/originating-network-id-header-support/options	This API is used to check whether the feature is enabled or not globally, get the configured local PLMN Id value, and get the configured header name.	Not Required	3gpp-SBI-originating-network-Id header support feature options.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/originating-network-id-header-support/options' \ -H 'accept: */*'

Table 2-91 (Cont.) 3gpp-SBI-Originating-Network-Id Header Support Options

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/originating-network-id-header-support/options	This API is used to configure the feature.	3gpp-SBI-originating-network-Id header support feature options.	200 Saved	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/originating-network-id-header-support/options' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "originatingNetworkIdHeaderSupportOption": { "originatingNetworkIdSupportEnabled": true, "seppSupportedLocalPlmnId": "444-555", "seppSupportedOriginatingNetworkIdHeader": "3gpp-Sbi-Asserted-Plmn-Id" } }'

Table 2-92 Originating Network Id Header Support Option Parameters

Attribute	Description	Details
originatingNetworkIdSupportEnabled	This is an optional parameter. A boolean value to enable or disable the feature at global level. True indicates feature enabled. False indicates feature disabled.	Data type: Boolean Default value: False
seppSupportedLocalPlmnId	This is an optional parameter. This parameter has the SEPP supported Local PLMN ID which is used for populating the header at C SEPP, if the header is not present. The user can provide one of the local PLMN ID supported by SEPP. SEPP selects one of the supported local PLMN IDs when this parameter is not configured while populating the missing header (3gpp-Sbi-Originating-Network-Id or 3gpp-Sbi-Asserted-Plmn-Id) in the request at C SEPP.	Data type: String

Table 2-92 (Cont.) Originating Network Id Header Support Option Parameters

Attribute	Description	Details
seppSupportedOrigNetworkIdHeader	This is a mandatory parameter. This value indicates the supported header name. The user can configure either one of the headers, "3gpp-Sbi-Originating-Network-Id" or "3gpp-Sbi-Asserted-Plmn-Id". P SEPP uses this value to either add the missing request header (3gpp-Sbi-Originating-Network-Id or 3gpp-Sbi-Asserted-Plmn-Id) or header transposition.	Data type: String

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/v1/originating-network-id-header-support/options

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "originatingNetworkIdHeaderSupportOption": {
    "originatingNetworkIdSupportEnabled": true,
    "seppSupportedLocalPlmnId": "444-555",
    "seppSupportedOrigNetworkIdHeader": "3gpp-Sbi-Asserted-Plmn-Id"
  }
}
```

Sample Response body structure for PUT operations:

Resource API: /sepp-configuration/v1/originating-network-id-header-support/options

Resource Method: PUT

Content Type: application/json

Response Body

200

2.29 Nonverbose Error Response Configuration Options

Nonverbose Error Response Configuration Option REST API allows the user to enable, disable, and configure the SCM nonverbose configuration feature.

Table 2-93 Nonverbose Error Response Configuration Options

Method	URL	Description	Input	Return	Example
GET	/v1/security-counter-measure/verbose-error-config/options	This API is used to get nonverbose error configuration options which contains following information: • enabled: To enable or disable the feature globally. • title: non verbose error response title. • cause: non verbose error response cause. • detail: non verbose error response detail.	Not Required	Verbose Error Response Configuration Option	<pre>curl -X 'GET' 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/verbose-error-config/options' -H 'accept: */*'</pre>

Table 2-93 (Cont.) Nonverbose Error Response Configuration Options

Method	URL	Description	Input	Return	Example
PUT	/v1/security-counter-measure/verbose-error-config/options	This API is used to configure the nonverbose error configuration as following: • enabled: To enable or disable the feature globally. • title: non verbose error response title. • cause: non verbose error response cause. • detail: non verbose error response detail	Verbose Error Response Configuration Option	200 Saved	<pre>curl -X 'PUT' 'http:// <SEPP- Configurati onIP>:<PORT >sepp- configurati on/v1/ security- counter- measure/ verbose- error- config/ options' -H 'accept: */*' -H 'Content- Type:applic ation/ json' -d '{"VerboseS cmErrRspCon fig": {"enabled": true,"title ": "Rejected", "cause": "Unknown2", "detail": "ServerError" }}'</pre>

Table 2-94 Nonverbose Error Response Configuration Option Parameters

Attribute	Description	Details
enabled	This is an optional parameter. A boolean value to enable or disable the security counter measure features error response verbosity at global level. True indicates verbosity enabled. False indicates verbosity disabled. Default value is false.	Datatype: Boolean Default Value: False
title	This is an optional parameter. Nonverbose error response title for security counter measure features.	Datatype: String Default Value: Null String
cause	This is an optional parameter. Nonverbose error response cause for security counter measure features.	Datatype: String Default Value: Null String
detail	This is an optional parameter. Nonverbose error response detail for security counter measure features.	Datatype: String Default Value: Null String

Sample Response body structure for GET operations**Resource API** : /sepp-configuration/v1/security-counter-measure/verbose-error-config/options**Resource Method** : GET**Content Type** : application/json

```
{
  "VerboseScmErrRspConfig": {
    "enabled": false,
    "title": "Rejected",
    "cause": "Unknown",
    "detail": "Server Error"
  }
}
```

Sample Response body structure for PUT operations**Resource API**: /sepp-configuration/v1/security-counter-measure/verbose-error-config/options**Resource Method**: PUT**Content Type**: application/json

200 Saved

2.30 Cat-1 NRF Service API Query Parameters Validation REST APIs

The following are the Cat-1 NRF Service API Query Parameters Validation REST APIs.

2.30.1 Service API Query Param Validation List (queryParamValidationListName)

Service API Query Param Validation List (queryParamValidationListName) REST API allows the users to retrieve the present configurations, add configurations for the feature, and delete the configurations for the given serviceAPIQueryParamValidationListName.

Table 2-95 Service API Query Param Validation List Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}	This API is used to get the present configurations for the feature. This API is used to get the following configurations: • serviceApiValidationList:id • ResourceURI • httpMethod • queryParamName • queryParamValue • pairedQueryParamName • pairedQueryParamValue • serviceAPIQueryParamValidationListName	Not Required	Configured parameters for CAT1 Query Parameter Validation Feature	<pre>curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/Default' \ -H 'accept: */*'</pre>

Table 2-95 (Cont.) Service API Query Param Validation List Methods

Method	URL	Description	Input	Return	Example
PUT	/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}	This API is used to add configurations for the feature.	Valid configurations for all mandatory parameters listed below: • serviceApiValidationListId • ResourceURI • httpMethod • queryParamName • queryParamValue • pairedQueryParamName • pairedQueryParamValue • serviceAPIQueryParamValidationListName	200 Saved	<pre>curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/Default' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "serviceApiValidationList": [{ "id": 2049, "resourceURI": "/nnrf-disc/v1/nf-instances", "httpMethod": "GET" }], "queryParamsList": [{ "queryParamName": "requester-nf-type", "queryParamValue": "AMF", "pairedQueryParamName": "target-nf-type", "pairedQueryParamValue": "SMF" }], "serviceAPIQueryParamValidationListName": "Default" }'</pre>

Table 2-95 (Cont.) Service API Query Param Validation List Methods

Method	URL	Description	Input	Return	Example
POST	/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}	This API is used to add configurations for the feature.	Valid configurations for all mandatory parameters listed below: • serviceApiValidationListId • ResourceURI • httpMethod • queryParamName • queryParamValue • pairedQueryParamName • pairedQueryParamValue • serviceAPIQueryParamValidationListName	201 Saved	<pre>curl -X 'POST' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/Default' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "serviceApiValidationList": [{ "id": 2049, "resourceURI": "/nnrf-disc/v1/nf-instances", "httpMethod": "GET" }], "queryParamsList": [{ "queryParamName": "requester-nf-type", "queryParamValue": "AMF", "pairedQueryParamName": "target-nf-type", "pairedQueryParamValue": "SMF" }], "serviceAPIQueryParamValidationListName": "Default" }'</pre>

Table 2-95 (Cont.) Service API Query Param Validation List Methods

Method	URL	Description	Input	Return	Example
DELETE	/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}	This API is used to delete the configurations for the given "serviceAPIQueryParamValidationListName"	"serviceAPIQueryParamValidationListName" This is the list name against which all configurations are being done.	204 No Content	curl -X 'DELETE' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{serviceAPIQueryParamValidationListName}' \ -H 'accept: */*'

Table 2-96 Parameters

Parameter Name	Data Type	Parameter Description
serviceApiValidationListId	Integer	This is a mandatory parameter. This is the ID given for the DB once the configurations are saved.
httpMethod	String	This is a mandatory parameter. The input takes the method for the resource URI that the user wishes to add which will only be 'GET' for this feature.
resourceURI	String	This is a mandatory parameter. The input takes the NRF Discovery URI for which the query parameter validation needs to be done
Query Parameter Name	String	This is a mandatory parameter. The input takes name of the query parameter for which the validation needs to be done. In this case it will always be 'requester-nf-type'
Query Parameter Value	String	This is a mandatory parameter. The input takes the value of the query parameter for which the validation needs to be done.
Paired Query Parameter Name	String	This is a mandatory parameter. The input takes name of the paired query parameter for which the validation needs to be done. In this case it will always be 'target-nf-type'

Table 2-96 (Cont.) Parameters

Parameter Name	Data Type	Parameter Description
Paired Query Parameter Value	String	This is a mandatory parameter. The input takes the value of the paired query parameter for which the validation needs to be done.
serviceAPIQueryParamValidationListName	String	This is a mandatory parameter. This is the list name against which all configurations are being done.

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "serviceApiValidationList": [
    {
      "id": 2049,
      "resourceURI": "/nnrf-disc/v1/nf-instances",
      "httpMethod": "GET"
    }
  ],
  "queryParamsList": [
    {
      "queryParamName": "requester-nf-type",
      "queryParamValue": "AMF",
      "pairedQueryParamName": "target-nf-type",
      "pairedQueryParamValue": "SMF"
    }
  ],
  "serviceAPIQueryParamValidationListName": "Default"
}
```

Sample Response body structure for PUT operations:

Resource API: /sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}

Resource Method: PUT

Content Type: application/json

Response Body

200

Sample Response body structure for POST operations:

Resource API: /sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}

Resource Method: POST

Content Type: application/json

Response Body

201

Sample Response body structure for DELETE operations:

Resource API: /sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list/{queryParamValidationListName}

Resource Method: DELETE

Content Type: application/json

Response Body

204

2.30.2 Service API Query Param Validation List

Service API Query Param Validation List REST API allows the users to get all the parameters configured for all the existing list names.

Table 2-97 Service API Query Param Validation List Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list	This API is used to get the following configurations for all configured list names: serviceApiValidationList:id ResourceURI httpMethod queryParamName queryParamValue pairedQueryParamName pairedQueryParamValue serviceAPIQueryParamValidationListName	Not Required	Configured parameters for CAT1 Query Parameter Validation Feature	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list' \ -H 'accept: */*'

Table 2-98 Parameters

Parameter Name	Data Type	Parameter Description
serviceApiValidationList:id	Integer	This is a mandatory parameter. This is the ID given for the DB once the configurations are saved.
httpMethod	String	This is a mandatory parameter. The input takes the method for the resource URI that the user wishes to add which will only be 'GET' for this feature.
resourceURI	String	This is a mandatory parameter. The input takes the NRF Discovery URI for which the query parameter validation needs to be done
Query Parameter Name	String	This is a mandatory parameter. The input takes name of the query parameter for which the validation needs to be done. In this case it will always be 'requester-nf-type'
Query Parameter Value	String	This is a mandatory parameter. The input takes the value of the query parameter for which the validation needs to be done.
Paired Query Parameter Name	String	This is a mandatory parameter. The input takes name of the paired query parameter for which the validation needs to be done. In this case it will always be 'target-nf-type'
Paired Query Parameter Value	String	This is a mandatory parameter. The input takes the value of the paired query parameter for which the validation needs to be done.

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/v1/security-counter-measure/service-api-query-param-validation-list

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "serviceApiValidationList": [
    {
      "id": 2049,
      "resourceURI": "/nnrf-disc/v1/nf-instances",
      "httpMethod": "GET"
    }
  ]
}
```

```

    }
  ],
  "queryParamsList": [
    {
      "queryParamName": "requester-nf-type",
      "queryParamValue": "AMF",
      "pairedQueryParamName": "target-nf-type",
      "pairedQueryParamValue": "SMF"
    }
  ],
  "serviceAPIQueryParamValidationListName": "Default"
}

```

2.30.3 Security Countermeasure Feature

Security Countermeasure feature REST API allows the users to get the present configurations for the feature which tells whether the Cat-1 NRF service API query parameters validation and Cat-1 service API validation features are enabled. The REST API is used to enable or disable the mentioned features.

Table 2-99 Security Countermeasure Feature Methods

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/security-counter-measure/feature	This API is used to get the present configurations for the feature.	Not Required	Values enabled for the Cat-1 NRF service API query parameters validation and Cat-1 service API validation features.	curl -X 'GET' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/feature' \ -H 'accept: */*'
PUT	/sepp-configuration/v1/security-counter-measure/feature	This API is used to add configurations for the feature	Valid configurations for all mandatory parameters.	200 Saved	curl -X 'PUT' \ 'http://<SEPP-Configuration IP>:<PORT>/sepp-configuration/v1/security-counter-measure/feature' \ -H 'accept: */*' \ -H 'Content-Type: application/json' \ -d '{ "messageFilteringOnResourceUriAndHttpMethodEnabled": { "queryParamValidationEnabled": true, "enabled": true } }'

Table 2-100 Parameters

Parameter Name	Data Type	Parameter Description
queryParamValidationEnabled	Boolean	This is a mandatory parameter. This is used to enable and disable the Cat-1 NRF service API query parameters validation feature. True indicates that the feature is enabled and false indicates that the feature is disabled. The feature is disabled (set to false) by default.
enabled	Boolean	This is a mandatory parameter. This is used to enable and disable the Cat-1 NRF service API query parameters validation feature. True indicates that the feature is enabled and false indicates that the feature is disabled. The feature is disabled (set to false) by default.

Sample Response body structure for GET operations:

Resource API: /sepp-configuration/v1/security-counter-measure/feature

Resource Method: GET

Content Type: application/json

Response Body

```
{
  "messageFilteringOnResourceUriAndHttpMethodEnabled": {
    "queryParamValidationEnabled": true,
    "enabled": true
  }
}
```

Sample Response body structure for PUT operations:

Resource API: /sepp-configuration/v1/security-counter-measure/feature

Resource Method: PUT

Content Type: application/json

Response Body

200

2.31 Integrating SEPP with 5G Network Intelligence Fabric (5G NIF) REST APIs

Following are the REST APIs for the integrating SEPP with 5G Network Intelligence Fabric (5G NIF) feature.

2.31.1 NIF REST API

NIF REST API enables or disables the NIF Discovery feature (/sepp-configuration/v1/nif/options).

Table 2-101 NIF REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/nif/options	This API is used to check whether the NIF feature is enabled or disabled. "true" indicates enabled. "false" indicates disabled.	NIL	NIFOptions	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/options -H 'Content-Type:application/json' -X GET
PUT	/sepp-configuration/v1/nif/options	This API is used to enable or disable the NIF feature.	Parameter name: enabled	200 NIFOptions	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/options -H 'Content-Type:application/json' -X PUT -d '{"enabled": true}'

Parameters

Table 2-102 NIF Parameters

Attribute	Datatype	Description
enabled	Boolean	This is a mandatory parameter. Enable or disable NIF feature. Default Value: False

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/nif/options

Resource Method : GET

Content Type : application/json**Response Body:**

```
{"enabled": true}
```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/nif/options**Resource Method** : PUT**Content Type** : application/json**Response Body:**

```
{"enabled": true}
```

2.31.2 NIF Query Param REST API

NIF Query Param REST API is used to configure the query parameters used to discovery NIF Profiles from NRF (/sepp-configuration/v1/nif/query-param).

Table 2-103 NIF Query Param REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/nif/query-param	This API is used to check the list of query parameters used to discover 5GNIF.	NIL	NrFQueryParams	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/query-param -H 'Content-Type:application/json' -X GET
PUT	/sepp-configuration/v1/nif/query-param	This API is used to enable or disable the NIF feature.	Parameter name: queryParam queryParamValue	200 NrFQueryParams	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/query-param -H 'Content-Type:application/json' -X PUT -d '{"queryParam": "preferred-locality", "queryParamValue": "SouthLake"}'

Table 2-104 NIF Query Param Parameters

Parameter Name	Data Type	Description
queryParam	String	This is a mandatory parameter. Query parameter to be used to discover 5GNIF as per specs.
queryParamValue	String	This is a mandatory parameter. String value for query parameter.

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/nif/query-params

Resource Method : GET

Content Type : application/json

Response Body:

```
[{"queryParam":"preferred-locality","queryParamValue":"SouthLake"}]
```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/nif/options

Resource Method : PUT

Content Type : application/json

Response Body:

```
{"queryParam":"preferred-locality","queryParamValue":"SouthLake"}
```

2.31.3 NIF Rejected Message Copy Options REST API

NIF Query Param REST API is used to enable or disable Rejected Message copy feature (/sepp-configuration/v1/nif/msg-copy/options).

Table 2-105 NIF Rejected Message Copy Options REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/nif/msg-copy/options	This API is used to check whether the rejected message copy feature is enabled or disabled. "true" indicates enabled. "false" indicates disabled.	NIL	MsgCopyOptions	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/msg-copy/options -H 'Content-Type:application/json' -X GET
PUT	/sepp-configuration/v1/nif/options	This API is used to enable or disable the rejected message copy feature.	Parameter name: enabled	200 MsgCopyOptions	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/msg-copy/options -H 'Content-Type:application/json' -X PUT -d '{"enabled": true}'

Table 2-106 NIF Rejected Message Copy Options Parameters

Parameter Name	Data Type	Parameter Description
enabled	Boolean	This is a mandatory parameter. Enable or disable rejected message copy feature towards NIF.

Sample Response body structure for GET operation

Resource API : /sepp-configuration/v1/nif/msg-copy/options

Resource Method : GET

Content Type : application/json

Response Body:

```
{"enabled": true}
```

Sample Response body structure for PUT operation

Resource API : /sepp-configuration/v1/nif/msg-copy/options

Resource Method : PUT

Content Type : application/json

Response Body:

```
{"enabled": true}
```

2.31.4 Rejected Message Copy Param REST API

Rejected Message Copy Param REST API is used to configure the URI and API version to be used when sending copy of rejected message towards NIF (/sepp-configuration/v1/nif/msg-copy/params).

Table 2-107 Rejected Message Copy Param REST API

Method	URL	Description	Input	Return	Example
GET	/sepp-configuration/v1/nif/msg-copy/params	URI and api version of the message which will contain copy of the rejected message.	NIL	MsgCopyParams	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/msg-copy/params -H 'Content-Type:application/json' -X GET
PUT	/sepp-configuration/v1/nif/msg-copy/params	Used to configure URI which will be used to send message copy request.	Parameter name: apiName apiVersion	200 MsgCopyParams	curl -v http://127.0.0.1:9090/sepp-configuration/v1/nif/msg-copy/params -H 'Content-Type:application/json' -X PUT d '{"

Table 2-108 Rejected Message Copy Param REST API

Parameter Name	Data Type	Parameter Description
apiName	String	This is a mandatory parameter. API name used to send towards NIF for message copy request. Format is <apiName>/<apiVersion>/ .

Table 2-108 (Cont.) Rejected Message Copy Param REST API

Parameter Name	Data Type	Parameter Description
apiVersion	String	This is a mandatory parameter. API version used to send towards NIF for message copy request. Format is <apiName>/<apiVersion>/ .

Sample Response body structure for GET operations

Resource API : /sepp-configuration/v1/nif/msg-copy/params

Resource Method : GET

Content Type : application/json

Response Body:

```
{"id":null,"apiName":"nnif-sbi-error","apiVersion":"v1"}
```

Sample Response body structure for PUT operations

Resource API : /sepp-configuration/v1/nif/msg-copy/params

Resource Method : PUT

Content Type : application/json

Response Body:

```
{"apiName":"nnif-sbi-error","apiVersion":"v1"}
```

2.32 Egress Gateway Configuration

This section explains REST API configurations required at Egress Gateway for various features.

2.32.1 PLMN Egress Gateway Configuration

This section explains REST API configurations required at PLMN Egress Gateway for various features.

2.32.1.1 Peer Configuration

This resource is used in SbiRouting feature. This URI can be used to add or update the list of peers wherein each peer consists of ID, host, port or virtualHost, and apiPrefix. The ID of each peer is mapped to peerIdentifier in "peersetconfiguration" resource. The default value is null.

Peer Configuration

URI: /sepp/nf-common-component/v1/egw/plmn/peerconfiguration/node

Method: PUT, PATCH, GET

- **PUT:** Updates peer configuration.
- **GET:** Retrieves peer configuration.
- **PATCH:** Updates specific peer configuration.

Table 2-109 Peer Configuration

Attribute Name	Description	Details
id	Peer identifier	DataType: string Constraints: Unique value in peer configuration Default Value: NA
host	Host details of a local peer. It can be IPv4, IPv6 and FQDN details.	DataType: string Constraints: NA Default Value: NA
port	Port details of a local host peer.	DataType: string Constraints: NA Default Value: NA
virtualHost	Host details of a remote peer. This FQDN is sent to Alternate Route Service for DNS SRV resolution.	DataType: string Constraints: NA Default Value: NA
apiPrefix	API prefix details of a peer.	DataType: string Constraints: Keep the value as / only for SEPP Default Value: NA
healthApiPath	Include the SEPP API details.	DataType: string Constraints: NA Default Value: /{seppApiRoot}/{apiVersion}/status

Example:

```
curl -v -X PUT "http://<SEPPConfiguration IP>:<PORT>/<nfType>/nf-common-component/v1/{serviceName}/{instanceId}/peerconfiguration/node" -H "Content-Type: application/json" -d peer.json
```

Sample peer.json :-

```
[ { "id": "peer1", "host": "sepp-ats-rel-stubserver.ocsepp", "port": "8080", "apiPrefix": "/", "healthApiPath": "/health/v1" }, { "id": "peer2", "host": "sepp-ats-rel-stubserver.ocsepp", "port": "8080", "apiPrefix": "/", "healthApiPath": "/health/v2" }, { "id": "peer3", "virtualHost": "xyz.test.com", "apiPrefix": "/", "healthApiPath": "/health/v3" }, { "id": "peer4", "virtualHost": "abc.test.com", "apiPrefix": "/", "healthApiPath": "/health/v4" } ]
```

2.32.1.2 Peer Set Configuration

This section provides details about peer set configuration at Egress Gateway. This URI is used to add or update the list of peer sets wherein each peer set consists of id and list of http/https

instances. Each instance consists of priority and peer identifier that is mapped to id in peerconfiguration resource. The id of each peer set is mapped to peerSetIdentifier in routesconfiguration resource. The default value is null.

URI: /sepp/nf-common-component/v1/egw/plmn/peerSetConfiguration/node

Method: PUT, PATCH, GET

- **PUT:** Updates peer set configuration.
- **GET:** Retrieves peer set configuration.
- **PATCH:** Updates specific peer set configuration.

Resource: array (PeerSetConfiguration)

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/<nfType>/nf-common-component/v1/{serviceName}/{instanceId}/peerSetConfiguration/node" -H
"Content-Type: application/json" -d @peerSet.json
```

sample peerSet.json

```
[ { "id": "set0", "httpConfiguration": [ { "priority": 1, "peerIdentifier":
"peer3" }, { "priority": 2, "peerIdentifier": "peer2" }, { "priority": 3,
"peerIdentifier": "peer1" } ], "httpsConfiguration": [ { "priority": 1,
"peerIdentifier": "peer4" }, { "priority": 2, "peerIdentifier": "peer2" },
{ "priority": 3, "peerIdentifier": "peer1" } ] } ]
```

Table 2-110 Peer Set Configuration

Attribute	Description	Details
id	Identifier for Peer Set.	DataType: string Constraints: Unique value in peer set configuration. Default Value: NA
httpConfiguration	Configuration for HTTP based Peers. This value will be selected, if 3GPPAPIRootScheme value is http.	DataType: array Constraints: NA Default Value: NA
httpsConfiguration	Configuration for HTTPS based Peers. This value will be selected, if 3GPPAPIRootScheme value is https.	DataType: array Constraints: NA Default Value: NA

Table 2-111 Peer Identifier Configuration

Attribute	Description	Details
priority	Priority of peer to be used in a peer set.	DataType: integer Constraints: Priority must be unique. Default Value: NA
peerIdentifier	Peer identifier is the value of peer configured during PeerConfiguration.	DataType: string Constraints: NA Default Value: NA

2.32.1.3 Routes Configuration

The following URI can be used to configure the route ID and configuration in Ingress Gateway.

Routes Configuration

URI: /sepp/nf-common-component/v1/egw/plmn/routesconfiguration/node

Method: PUT, PATCH, GET

- PUT: Updates route configuration.
- GET: Retrieves route configuration.
- PATCH: Updates specific route configuration.

Resource: array (RoutesConfiguration)

Body

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/routesconfiguration/node" -H "Content-Type: application/json" -d @routesConfig.json
```

sample routesConfig.json

```
[ { "id": "disc_mapping", "failureReqCountErrorCodeSeriesId": "E1" }, { "id": "registration_mapping", "failureReqCountErrorCodeSeriesId": "E1" }, { "id": "accesstoken_mapping", "failureReqCountErrorCodeSeriesId": "E1" } ]
```

Table 2-112 Routes Configuration

Attribute	Description	Details
id	Route configuration identifier CAUTION: - Default Route with id 'default_route' is configured automatically. Include this route in the message body while adding new routes using the PUT operation. Otherwise, it will impact the traffic.	DataType: string Constraints: Unique value of route Default Value: NA
failureReqCountErrorCodeSeriesId	Indicates the ID that is used to map the service with the error code ID defined in errorcodeserieslist.	DataType: string Mandatory(M)/Optional(O)/Conditional(C): M

2.32.1.4 Error Criteria Sets

This section provides details about error criteria set configuration at Egress Gateway.

URI:

/sepp/nf-common-component/v1/egw/plmn/sbiroutingerrorcriteriasets/node

Method: PUT, PATCH, GET

- **PUT:** Updates sbiroutingerrorcriteria configuration.

- **GET:** Retrieves sbiroutingerrorcriteria configuration.
- **PATCH:** Updates specific sbiroutingerrorcriteria configuration.

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/sbiroutingerrorcriteriasets/node" -H "Content-Type: application/json" -d @sbiErrorCriteriaSet.json
```

```
sample sbiErrorCriteriaSet.json
```

```
[ { "id": "criteria_0", "method": [ "GET", "POST", "PUT", "DELETE", "PATCH" ],
  "exceptions": [ "java.util.concurrent.TimeoutException",
    "java.net.UnknownHostException" ] }, { "id": "criteria_1", "method": [ "GET",
    "POST", "PUT", "DELETE", "PATCH" ], "response": { "statuses":
    [ { "statusSeries": "4xx", "status": [ 400, 404 ] }, { "statusSeries": "5xx",
    "status": [ 500, 503 ] } ] } } ]
```

Table 2-113 sbiroutingerrorcriteriasets

Attribute	Description	Details
sbiroutingerrorcriteriasets.id	Unique id for a sbiRoutingErrorCriteriaSet	Data Type: string Constraints: Unique value of route Default Value: NA
sbiroutingerrorcriteriasets.method	Methods for which reroute or retry is triggered.	Data Type: string Constraints: GET, POST, PUT, PATCH, DELETE Default Value: NA
sbiroutingerrorcriteriasets.response.exceptions	Specific exceptions for which reroute or retry is triggered. Note: exceptions and response cannot be configured under same criteria Id.	Data Type: string Constraints: NA Default Value: java.util.concurrent.TimeoutException
sbiroutingerrorcriteriasets.response.statuses.statusSeries	Http Status Series for which reroute or retry is triggered, when the error response is received from downstream.	Data Type: string Constraints: 4xx, 5xx Default Value: NA
sbiroutingerrorcriteriasets.response.statuses.status	Specific HTTP Statuses that belongs to above mentioned status series for which reroute or retry is triggered. To enable retry or reroute for all the HTTP status belonging to a status series, configure this as -1.	Data Type: string Constraints: 401, 404 or -1 Default Value: NA
sbiroutingerrorcriteriasets.response.exceptions	Specific exceptions for which reroute or retry is triggered. Note: exceptions and response cannot be configured under same criteria Id.	Data Type: string Constraints: NA Default Value: java.util.concurrent.TimeoutException

2.32.1.5 Error Action Sets

This section provides details about error action set configuration at Egress Gateway.

URI:

/sepp/nf-common-component/v1/egw/plmn/sbiroutingerroractionsets/node

Method: PUT, PATCH, GET

- **PUT:** Updates sbiroutingerroraction configuration.
- **GET:** Retrieves sbiroutingerroraction configuration.
- **PATCH:** Updates specific sbiroutingerroraction configuration.

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/sbiroutingerroractionsets/node" -H "Content-Type: application/json" -d @sbiErrorActionSet.json
```

sample sbiErrorActionSet.json

```
[ { "id": "action_0", "action": "reroute", "attempts": 2, "blacklist": { "enabled": false, "duration": 60000 } }, { "id": "action_1", "action": "reroute", "attempts": 2, "blacklist": { "enabled": false, "duration": 60000 } } ]
```

Table 2-114 sbiroutingerroractionsets

Attribute	Description	Details
sbiroutingerroractionsets.id	Unique Id for sbiRoutingErrorActionSet	DataType: string Constraints: Default Value: NA
sbiroutingerroractionsets.action	Action that needs to be taken when specific criteria set is matched.	DataType: string Constraints: reroute, retry Default Value: reroute
sbiroutingerroractionsets.attempts	Maximum no of retries to either same or different peer in case of error or failures from backend.	DataType: string Constraints: NA Default Value: 3
sbiroutingerroractionsets.blackList.enabled	This flag enables the peer blacklist feature using the server headers received in the response.	DataType: boolean Constraints: true, false Default Value: false
sbiroutingerroractionsets.blackList.duration	The duration for which the peer is blacklisted and no traffic is routed to that peer for this period.	DataType: integer Constraints: NA Default Value: 60000

2.32.1.6 Error Code Profile Configuration

The following URI can be used to update the errorcodeprofiles that is used in Overload Control, Controlled Shutdown feature for populating details in error responses when a request is discarded.

Note

Below is the sample error code profile that can be linked for controlled shutdown. The errorcodeprofiles configuration is used for other features as well. Hence, the configuration must be performed with caution.

By default, the errorcodeprofiles remains null.

URI: /sepp/nf-common-component/v1/egw/plmn/errorcodeprofiles/node

Method:

- GET: Get Error Code configuration of the required service.
- PUT: Update Error Code configuration of the required service.

Content Type: application/json

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/errorcodeprofiles/node" -H "Content-Type: application/json" -d @errorCodeProfile.json
```

sample errorCodeProfile.json

```
[ { "name": "error429", "errorCode": 429, "errorCause": "Too many requests",
  "errorTitle": "Too many requests", "redirectURL": "", "retry-after": "",
  "errorDescription": "Too many requests" }, { "name": "error503", "errorCode":
  503, "errorCause": "Backend not able to handle traffic", "errorTitle":
  "Backend not able to handle traffic", "redirectURL": "", "retry-after": "",
  "errorDescription": "Backend not able to handle traffic" }, { "name":
  "shutdownerror503", "errorCode": 503, "errorCause": "UNSPECIFIED_NF_FAILURE",
  "errorTitle": "SEPP is in COMPLETE_SHUTDOWN state. Service temporarily
  unavailable", "redirectURL": "", "retry-after": "", "errorDescription": "SEPP
  is in COMPLETE_SHUTDOWN state. Service temporarily unavailable" } ]
```

Table 2-115 Error Code Profile Configuration

Attribute Name	Description	Details
name	Error name.	DataType: string Mandatory(M)/Optional(O)/Conditional(C): M
errorCode	errorCode field in an errorScenario determines the HttpStatusCode that needs to be populated in ProblemDetails (HttpStatus field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType field.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): M
errorCause	errorCause field in an errorScenario determines the error cause that needs to be populated in ProblemDetails (Cause field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O

Table 2-115 (Cont.) Error Code Profile Configuration

Attribute Name	Description	Details
errorTitle	errorTitle field in an errorScenario determines the title that needs to be populated in ProblemDetails (Title field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
redirectURL	redirectURL field in an errorScenario determines the redirection URL, this value is populated in LOCATION header while sending response from Ingress Gateway. The header is populated only when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter, the errorCode configured for the particular errorScenario lies in 3xx error series and the redirectUrl field for the particular errorScenario is configured appropriately.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
retry-after	retry-after field in an errorScenario determines the value in seconds or particular date after which the service should be retried, this value is populated in Retry-After header while sending response from Ingress Gateway. The header is populated only when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter, the errorCode configured for the particular errorScenario lies in 3xx error series and the retry-after field for the particular errorScenario is configured appropriately in seconds.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
errorDescription	errorDescription field in an errorScenario determines the description that needs to be populated in ProblemDetails (Detail field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType field.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O

2.32.1.7 Configurable Error Codes

This URI is used to configure an appropriate error response (error code, error cause, error title, and error description) for exceptions occurring at N32 Egress Gateway. The feature is disabled by default.

URI: /sepp/nf-common-component/v1/egw/plmn/configurableerrorcodes/node

Method:

- GET: Get discard policy configuration of the required service.
- PUT: Update discard policy configuration of the required service.

Content Type: application/json

Body:

```
{
  "enabled": false,
  "errorScenarios": [
    {
      "exceptionType": "CONNECTION_TIMEOUT",
      "errorProfileName": "ERR_100"
    },
    {
      "exceptionType": "REQUEST_TIMEOUT",
      "errorProfileName": "ERR_REQUEST_TIMEOUT"
    },
    {
      "exceptionType": "UNKNOWN_HOST_EXCEPTION",
      "errorProfileName": "ERR_UNKNOWN_HOST"
    },
    {
      "exceptionType": "CONNECT_EXCEPTION",
      "errorProfileName": "ERR_400"
    },
    {
      "exceptionType": "REJECTED_EXECUTION_EXCEPTION",
      "errorProfileName": "ERR_500"
    },
    {
      "exceptionType": "CLOSED_CHANNEL_EXCEPTION",
      "errorProfileName": "ERR_600"
    },
    {
      "exceptionType": "SSL_HANDSHAKE_EXCEPTION",
      "errorProfileName": "ERR_700"
    },
    {
      "exceptionType": "INTERNAL_ERROR",
      "errorProfileName": "ERR_800"
    },
    {
      "exceptionType": "NOT_FOUND_EXCEPTION",
      "errorProfileName": "ERR_NOT_FOUND"
    },
    {
      "exceptionType": "LATE_ARRIVAL_EXCEPTION",
      "errorProfileName": "ERR_1000"
    },
    {
      "exceptionType": "INVALID_HTTP_REQUEST_EXCEPTION",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "NOTIFICATION_RATE_LIMIT",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "RETRY_AFTER_ERROR",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "GRACEFUL_SHUTDOWN",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "VIRTUAL_HOST_RESOLUTION_ERROR",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "INVALID_OAUTH_TOKEN_REQUEST",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "OAUTH_INTERNAL_ERROR",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "OAUTH_TOKEN_RETRIEVAL_FAILURE",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "OAUTH_NRF_RESPONSE_FAILURE",
      "errorProfileName": "ERR_1100"
    }
  ]
}
```

Sample curl :

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/nfType/nf-common-component/v1/{serviceName}/{instanceId}/configurableerrorcodes/node" -H
"Content-Type: application/json" -d '{"enabled":true,"errorScenarios":
[{"exceptionType":"REQUEST_TIMEOUT","errorProfileName":"ERR_REQUEST_TIMEOUT"}]
}'
```

Table 2-116 Configurable Error Codes Configuration

Field Name	Description	Details
Enabled	Enables or disables configurable error codes functionality	DataType: boolean Constraints: NA Default Value: false
Exception Type	Specific exception for which error profile name is configured	DataType: string Constraints: NA Default Value: NA
Error Profile Name	Specific Name for a particular exception occurs	DataType: string Constraints: NA Default Value: NA

2.32.1.8 Retry Profile

This URI is used to configure the conditions for retry to particular peer. If a request to a particular peer fails. The PLMN Egress Gateway then checks this retryProfile and then retry the request till the retry count exhausts or we receive success response. For the first request, Retry Profile configurations will be considered. These configurations can also be done at N32 Egress Gateway and can be used if we did not receive any retry profile and default retry is enabled at EGW.

URI: /sepp/nf-common-component/v1/egw/plmn/retryprofile/node

Method:

- GET: Get discard policy configuration of the required service.
- PUT: Update discard policy configuration of the required service.

Content Type: application/json

Body:

```
{"statuses":["4xx","5xx"],"exceptions":
["java.net.ConnectException"],"retryCount":3,"requestTimeout":3000}
```

Sample curl:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/<nfType>/nf-common-
component/v1/{serviceName}/{instanceId}/retryprofile/node" -H "Content-Type:
application/json" -d '{"statuses":["4xx","5xx"],"exceptions":
["java.net.ConnectException"],"retryCount":3,"requestTimeout":3000}'
```

Table 2-117 Retry Profile Configurations

Field Name	Description	Details
retryCount	The number of retries which happens at EGW when a request fails. (This count is excluding the first request. Example: retryCount is 3 then a total of 4 attempts will be made)	DataType: INTEGER Constraints: NA Default Value: 3
requestTimeout	This is the configuration for request timeout for the call that happened from EGW to producer NF.	DataType: INTEGER Constraints: NA Default Value: 3,000

Table 2-117 (Cont.) Retry Profile Configurations

Field Name	Description	Details
statuses	This configuration is the list of HTTP error codes to match when we get the response from producer NF. It can be defined as either 4xx or a specific error code like 404. We should not define both like ["4xx", "400"] . If defined then which condition is first met will be served. If any unexpected error occurs while reading retryProfile shared by the backend service then the normal call flow would continue and retry conditions will not be considered.	DataType: LIST Constraints: NA Default Value: 4xx, 5xx
exceptions	This configuration is the list of exceptions to match when we get the response from producer NF. Following is the set of possible exceptions: • java.net.UnknownHostException • javax.net.ssl.SSLHandshakeException • java.nio.channels.ClosedChannelException • java.net.ConnectException • java.net.SocketTimeoutException • java.util.concurrent.TimeoutException • java.util.concurrent.RejectedExecutionException	DataType: LIST Constraints: NA Default Value: java.net.ConnectException

Note

If SBI routing is enabled for the route then this default route retry will not work even if we receive the retry profile as part of the request header for that route.

2.32.2 N32 Egress Gateway Configuration

This section explains REST API configurations required at N32 Egress Gateway for various features.

2.32.2.1 Error Criteria Sets

This section provides details about error criteria set configuration at Egress Gateway.

URI:

/sepp/nf-common-component/v1/egw/n32/sbiroutingerrorcriteriasets/node

Method: PUT, PATCH, GET

- **PUT:** Updates sbiroutingerrorcriteria configuration.
- **GET:** Retrieves sbiroutingerrorcriteria configuration.
- **PATCH:** Updates specific sbiroutingerrorcriteria configuration.

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/sbiroutingerrorcriteriasets/node" -H "Content-Type: application/json" -d @sbiErrorCriteriaSet.json
```

sample sbiErrorCriteriaSet.json

```
[ { "id": "criteria_0", "method": [ "GET", "POST", "PUT", "DELETE", "PATCH" ],
  "exceptions": [ "java.util.concurrent.TimeoutException",
    "java.net.UnknownHostException" ] }, { "id": "criteria_1", "method": [ "GET",
    "POST", "PUT", "DELETE", "PATCH" ], "response": { "statuses":
    [ { "statusSeries": "4xx", "status": [ 400, 404 ] }, { "statusSeries": "5xx",
    "status": [ 500, 503 ] } ] } } ]
```

Table 2-118 sbiroutingerrorcriteriasets

Attribute	Description	Details
sbiroutingerrorcriteriasets.id	Unique id for a sbiRoutingErrorCriteriaSet	DataType: string Constraints: Unique value of route Default Value: NA
sbiroutingerrorcriteriasets.method	Methods for which reroute or retry is triggered.	DataType: string Constraints: GET, POST, PUT, PATCH, DELETE Default Value: NA
sbiroutingerrorcriteriasets.response.exceptions	Specific exceptions for which reroute or retry is triggered. Note: exceptions and response cannot be configured under same criteria Id.	DataType: string Constraints: NA Default Value: java.util.concurrent.TimeoutException
sbiroutingerrorcriteriasets.response.statuses.statusSeries	Http Status Series for which reroute or retry is triggered, when the error response is received from downstream.	DataType: string Constraints: 4xx, 5xx Default Value: NA
sbiroutingerrorcriteriasets.response.statuses.status	Specific HTTP Statuses that belongs to above mentioned status series for which reroute or retry is triggered. To enable retry or reroute for all the HTTP status belonging to a status series, configure this as -1.	DataType: string Constraints: 401, 404 or -1 Default Value: NA
sbiroutingerrorcriteriasets.response.exceptions	Specific exceptions for which reroute or retry is triggered. Note: exceptions and response cannot be configured under same criteria Id.	DataType: string Constraints: NA Default Value: java.util.concurrent.TimeoutException

Note

Modifying the `sbiRoutingErrorActionSets` and `sbiRoutingErrorCriteriaSets` is not supported directly. If users wish to update these configurations, they can edit the `ocsepp_custom_values_<version>.yaml` file by adjusting the parameters `sbiRoutingErrorCriteriaSets` and `sbiRoutingErrorActionSets` under the `config-mgr-svc` section, then perform a helm upgrade.

2.32.2.2 Error Action Sets

This section provides details about error action set configuration at Egress Gateway.

URI:

/sepp/nf-common-component/v1/egw/n32/sbiroutingerroractionsets/node

Method: PUT, PATCH, GET

- **PUT:** Updates `sbiroutingerroraction` configuration.
- **GET:** Retrieves `sbiroutingerroraction` configuration.
- **PATCH:** Updates specific `sbiroutingerroraction` configuration.

Body:

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/sbiroutingerroractionsets/node" -H "Content-Type: application/json" -d @sbiErrorActionSet.json
```

sample `sbiErrorActionSet.json`

```
[ { "id": "action_0", "action": "reroute", "attempts": 2, "blacklist": { "enabled": false, "duration": 60000 } }, { "id": "action_1", "action": "reroute", "attempts": 2, "blacklist": { "enabled": false, "duration": 60000 } } ]
```

Table 2-119 `sbiroutingerroractionsets`

Attribute	Description	Details
<code>sbiroutingerroractionsets.id</code>	Unique Id for <code>sbiRoutingErrorActionSet</code>	DataType: string Constraints: Default Value: NA
<code>sbiroutingerroractionsets.action</code>	Action that needs to be taken when specific criteria set is matched.	DataType: string Constraints: reroute, retry Default Value: reroute
<code>sbiroutingerroractionsets.attempts</code>	Maximum no of retries to either same or different peer in case of error or failures from backend.	DataType: string Constraints: NA Default Value: 3
<code>sbiroutingerroractionsets.blackList.enabled</code>	This flag enables the peer blacklist feature using the server headers received in the response.	DataType: boolean Constraints: true, false Default Value: false

Table 2-119 (Cont.) sbiroutingerroractionsets

Attribute	Description	Details
sbiroutingerroractionsets.blackList.duration	The duration for which the peer is blacklisted and no traffic is routed to that peer for this period.	DataType: integer Constraints: NA Default Value: 60000

Note

Modifying the sbiRoutingErrorActionSets and sbiRoutingErrorCriteriaSets is not supported directly. If users wish to update these configurations, they can edit the *ocsepp_custom_values_<version>.yaml* file by adjusting the parameters sbiRoutingErrorCriteriaSets and sbiRoutingErrorActionSets under the config-mgr-svc section, then perform a helm upgrade.

2.32.2.3 Configurable Error Codes

This URI is used to configure an appropriate error response (error code, error cause, error title, and error description) for exceptions occurring at N32 Egress Gateway. The feature is disabled by default.

URI:

/sepp/nf-common-component/v1/egw/n32/configurableerrorcodes/node

Method:

- GET: Get discard policy configuration of the required service.
- PUT: Update discard policy configuration of the required service.

Content Type: application/json

Body:

```
{
  "enabled": false,
  "errorScenarios": [
    {
      "exceptionType": "CONNECTION_TIMEOUT",
      "errorProfileName": "ERR_100"
    },
    {
      "exceptionType": "REQUEST_TIMEOUT",
      "errorProfileName": "ERR_REQUEST_TIMEOUT"
    },
    {
      "exceptionType": "UNKNOWN_HOST_EXCEPTION",
      "errorProfileName": "ERR_UNKNOWN_HOST"
    },
    {
      "exceptionType": "CONNECT_EXCEPTION",
      "errorProfileName": "ERR_400"
    },
    {
      "exceptionType": "REJECTED_EXECUTION_EXCEPTION",
      "errorProfileName": "ERR_500"
    },
    {
      "exceptionType": "CLOSED_CHANNEL_EXCEPTION",
      "errorProfileName": "ERR_600"
    },
    {
      "exceptionType": "SSL_HANDSHAKE_EXCEPTION",
      "errorProfileName": "ERR_700"
    },
    {
      "exceptionType": "INTERNAL_ERROR",
      "errorProfileName": "ERR_800"
    },
    {
      "exceptionType": "NOT_FOUND_EXCEPTION",
      "errorProfileName": "ERR_NOT_FOUND"
    },
    {
      "exceptionType": "LATE_ARRIVAL_EXCEPTION",
      "errorProfileName": "ERR_1000"
    },
    {
      "exceptionType": "INVALID_HTTP_REQUEST_EXCEPTION",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "NOTIFICATION_RATE_LIMIT",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "RETRY_AFTER_ERROR",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "GRACEFUL_SHUTDOWN",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "VIRTUAL_HOST_RESOLUTION_ERROR",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "INVALID_OAUTH_TOKEN_REQUEST",
      "errorProfileName": "ERR_1100"
    },
    {
      "exceptionType": "OAUTH_INTERNAL_ERROR",
      "errorProfileName": "ERR_1100"
    }
  ]
}
```

```
{
  "exceptionType": "OAUTH_TOKEN_RETRIEVAL_FAILURE", "errorProfileName": "ERR_1100"
},
{
  "exceptionType": "OAUTH_NRF_RESPONSE_FAILURE", "errorProfileName": "ERR_1100"}
}]}
```

Sample curl :

```
curl -v -X PUT "http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-
component/v1/{serviceName}/{instanceId}/configurableerrorcodes/node" -H
"Content-Type: application/json" -d '{"enabled":true,"errorScenarios":
[{"exceptionType":"REQUEST_TIMEOUT","errorProfileName":"ERR_REQUEST_TIMEOUT"}]
}'
```

Table 2-120 Configurable Error Codes Configuration

Field Name	Description	Details
Enabled	Enables or disables configurable error codes functionality	DataType: boolean Constraints: NA Default Value: false
Exception Type	Specific exception for which error profile name is configured	DataType: string Constraints: NA Default Value: NA
Error Profile Name	Specific Name for a particular exception occurs	DataType: string Constraints: NA Default Value: NA

2.32.2.4 Peer Monitoring Configuration

This URI can be used to check health check frequency and timeouts for all health checks sent to different peers on global level.

Table 2-121 Peer monitoring configuration

Method	URL	Description	Input	Return	Example
PUT	http://127.0.0.1:9090/sepp/nf-common-component/v1/egw/n32/peermonitoringconfiguration	Add details for health check frequency and timeouts for all health checks sent to different peers on global level.	None	Peer monitoring configuration on global level	curl http://127.0.0.1:9090/sepp/nf-common-component/v1/egw/n32/peermonitoringconfiguration -XPUT -H 'Content-type: application/json' -d '{"enabled":false,"timeout":1000,"frequency":3000,"failureThreshold":3,"successThreshold":3}'

Table 2-122 Peer monitoring configuration Parameters

Attribute	Data Type	Compliance	Description
enabled	Boolean	M	Default value: false. Flag to enable legacy peer monitoring code not required in SEPP. Kindly make sure to keep it as false for all scenarios
timeout	Numerical	M	The duration of time after which calls to the remote SEPP health API will be timed out
frequency	Numerical	M	The frequency/recurring interval at which health check calls will be initiated toward remote SEPP
failureThreshold	Numerical	M	The no. of failure responses after which a healthy peer SEPP can be marked as unhealthy
successThreshold	Numerical	M	The no of successful responses after which an unhealthy peer SEPP can be marked as healthy

Sample response body structure for GET operations:

Resource API: sepp/nf-common-component/v1/egw/n32/peermonitoringconfiguration

Resource Method: GET

Content Type: application/json

Response Body

```
{"enabled":false,"timeout":1000,"frequency":3000,"failureThreshold":3,"successThreshold":3}
```

Sample response body structure for PUT operations:

Resource API: sepp/nf-common-component/v1/egw/n32/peermonitoringconfiguration

Resource Method: PUT

Content Type: application/json

Response Body

```
{"enabled":false,"timeout":1000,"frequency":3000,"failureThreshold":3,"successThreshold":3}
```

2.33 Ingress Gateway Configuration

This section explains REST API configurations required at Ingress Gateway for various features.

2.33.1 PLMN Ingress Gateway Configuration

This section explains REST API configurations required at PLMN Ingress Gateway for various features.

2.33.1.1 Serverheaderdetails Configurations

This API can be used for adding Server Header in the error responses sent from Ingress Gateway, depending on the values provided in the JSON. By default, this feature is disabled. To enable the feature, invoke the following REST API and update the enable or disable flag.

URI:

/sepp/nf-common-component/v1/igw/plmn/serverheaderdetails/node

Method: GET, PUT, PATCH

Content-Type: application/json

Request or Response Body Parameters

Table 2-123 Request or Response Body Parameters

Parameter	Description	Details
enabled	This is a mandatory parameter. This parameter specifies whether the feature is enabled or disabled.	Data Type: Boolean Range: true or false Example Value: false
errorCodeSeriesId	This is an optional parameter. Specifies the error list IDs	Data Type: String Range: NA Example Value: NA
configuration.nfType	This is a mandatory parameter. Specifies the type of network function	Data Type: String Range: NA Example Value: SEPP
configuration.nfInstanceId	This is a mandatory parameter. This parameter represents the UUID of the SEPP deployment that is used to generate the Server Header.	Data Type: String Range: NA Example Value: Valid SEPP Instance ID

Example**Example of Request or Response Body to Enable/ Disable Server Header:**

```
{
  "enabled": true,
  "errorCodeSeriesId": "E1",
  "configuration": {
    "nfType": "SEPP",
    "nfInstanceId": "9faf1bbc-6e4a-4454-a507-aef01a101a01"
  }
}
```


Note

- In the mentioned configuration, when sending a response to AMF, the Server Header will be appended by the SEPP with the value "SEPP-9faf1bbc-6e4a-4454-a507-aef01a101a01"
- The values in the above example are samples. Ensure that you update the values of the following parameters according to your deployment:
 - nfType must be SEPP.
 - errorCodeSeriesId: A valid configured value
 - nfInstanceId: Valid SEPP's instance value. It must be same as SEPP's instance ID.
 - Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.
- enabled is used to enable or disable the feature.
- nfType and nfInstanceId are used to form the Server Header.
- Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.

Sample curl to Enable Server Header:

```
curl --http2-prior-knowledge -X PUT http://<SEPP Configuration IP>:<PORT>/  
{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/  
serverheaderdetails/node -H "Content-Type: application/json" -d  
'{"enabled":true,"errorCodeSeriesId":"E1","configuration":  
{ "nfType":"SEPP", "nfInstanceId":"9faf1bbc-6e4a-4454-a507-aef01a101a01" } }' -v
```

Note

- enabled is used to enable or disable the feature.
- nfType and nfInstanceId are used to form the Server Header.
- Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.

2.33.1.2 Error Code Series List

This URI can be used to update the `errorcodeserieslist` that are used in Overload Control feature and Server Header feature to list the configurable exception or error for an error scenario in Ingress Gateway.

URI: `/sepp/nf-common-component/v1/igw/plmn/errorcodeserieslist/node`

Method: PUT to update Error Code Series configuration of the required service.

Content Type: `application/json`

Request or Response Body Parameters

Table 2-124 Request or Response Body Parameters

Parameter	Description	Details
id	This is a mandatory parameter. Indicates the error code identifier.	Data Type: string
errorCodeSeries	This is a mandatory parameter. List the error codes for a specific service. Note: "ErrorCodeSeries" is configured only if a set of error responses with specific error codes is expected in server header. If it is not configured then all the error responses will have server header.	Data Type: string
exceptionList	This is an optional parameter. Lists the configurable exception or error for an error scenario in Ingress Gateway.	Data Type: string Range: • ConnectionTimeout • RequestTimeout • UnknownHostException • ConnectException • NotFoundException
errorSet	This is a mandatory parameter. Possible values for "errorSet" attribute: 5xx, 4xx, 3xx	Data Type: string
errorCodes	This is a mandatory parameter. Possible values include all error codes in the respective HttpSeries value assigned for "errorSet". Note: Use single value of "-1" if all error codes in that HttpSeries are to be considered. For example: • If the series is 4XX, the values should be between 400-499. • If the series is 5XX, the values should be between 500-599. Onus is on operator to configure the errorCodes properly as explained above.	Data Type: string

Example of Request or Response Body:

```
[ { "id": "E1", "exceptionList": [ "RequestTimeout", "ConnectionTimeout",
"UnknownHostException", "NotFoundException" ], "errorCodeSeries":
[ { "errorSet": "4xx", "errorCodes": [ 400, 408 ] }, { "errorSet": "5xx",
"errorCodes": [ 500, 503 ] } ] } ] ]
```

Example with recommended configuration to enable Server Headers for all 5xx and 4xx error codes:

```
[{"id":"E1","errorCodeSeries":[{"errorSet":"4xx","errorCodes":[-1]},
{"errorSet":"5xx","errorCodes":[-1]}]}
```

Sample curl:

```
curl --http2-prior-knowledge -X PUT http://<SEPP Configuration IP>:<PORT>/
{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/
errorcodeserieslist/node -H "Content-Type: application/json" -d
' [{"id":"E1","exceptionList":
["RequestTimeout","ConnectionTimeout","UnknownHostException","NotFoundExceptio
n"],"errorCodeSeries":[{"errorSet":"4xx","errorCodes":[400,429]},
{"errorSet":"5xx","errorCodes":[500,503]}]}' -v
```

2.33.2 N32 Ingress Gateway Configuration

This section explains REST API configurations required at N32 Ingress Gateway for various features.

2.33.2.1 Discard Policy Configuration

This URI can be used to update discard policies that will be used in overload control to select the appropriate policy from the configured list based on the load level of a particular service. By default, `ocDiscardPolicies` is null.

URI:

`/sepp/nf-common-component/v1/igw/n32/ocdiscardpolicies/node`

- PUT: Update discard policy configuration of the required service.

Content-Type: application/json

Table 2-125 Request or Response Body Parameters

Field Name	Description	Details
name	This is a mandatory parameter. Name of the discarded policy. Note: name must be the value configured in <code>policyName</code> under <code>ocpolicymapping</code> .	Data Type: string
policies.action	This is an optional parameter. Defines the action to be taken on selected requests rejection based on error code.	Data Type: string Example Value: <code>RejectWithErrorCode</code>
policies.errorCodeProfile	This is an optional parameter. The error code profiles.	Data Type: string
policies.level	This is an optional parameter. Defines the overload level.	Data Type: string

Table 2-125 (Cont.) Request or Response Body Parameters

Field Name	Description	Details
policies.value	This is a mandatory parameter. Value of priority above which requests are considered as potential candidates for drop. Percentage of requests to drop in the current sampling period over the calculated rate in the previous sampling period.	Data Type: integer
scheme	This is a mandatory parameter. Discarded policy scheme based on percentage.	Data Type: string

Example of Request or Response Body:

```
{
  "name": "Policy1",
  "scheme": "PriorityBased",
  "policies": [
    {
      "level": "Warning",
      "value": 30,
      "action": "RejectWithErrorCode",
      "errorCodeProfile": "error429"
    },
    {
      "level": "Minor",
      "value": 24,
      "action": "RejectWithErrorCode",
      "errorCodeProfile": "error429"
    },
    {
      "level": "Major",
      "value": 15,
      "action": "RejectWithErrorCode",
      "errorCodeProfile": "error429"
    },
    {
      "level": "Critical",
      "value": 10,
      "action": "RejectWithErrorCode",
      "errorCodeProfile": "error429"
    }
  ]
}
```

Sample curl:

```
curl --http2-prior-knowledge -X PUT
http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/
{serviceName}/{instanceId}/ocdiscardpolicies/node -H "Content-Type:
application/json" -d
'{"name": "Policy1", "scheme": "PriorityBased", "policies":
[{"level": "Warning", "value": 30, "action": "RejectWithErrorCode", "errorCodeProfile":
"error429"},
{"level": "Minor", "value": 24, "action": "RejectWithErrorCode", "errorCodeProfile":
"error429"},
{"level": "Major", "value": 15, "action": "RejectWithErrorCode", "errorCodeProfile":
"error429"},
{"level": "Critical", "value": 10, "action": "RejectWithErrorCode", "errorCodeProfile":
"error429"}]}'
-v
```

2.33.2.2 Discard Policy Mapping

This URI can be used to update service names and corresponding policy name for the service which is mapped to "ocDiscardPolicies" based on "policyName" and also to enable/disable the Overload Control feature and the sampling period in overload control. By default, the Overload Control feature is disabled and the sampling period is the 60s. To enable the feature, REST API needs to be invoked and update the enabled flag to true.

URI: /sepp/nf-common-component/v1/igw/n32/ocpolicymapping/node

Method:

- GET: Get Policy Mapping
- PUT: Update Policy Mapping
- PATCH: Partially olicy Mapping

Content Type: application/json**Body:**

```
{"enabled":false,"mappings":[{"svcName":"ocsepp-release-pn32f-svc","policyName":"Policy2"}],"samplingPeriod":5000}
```

Table 2-126 Discard Policy Mapping Configurations

Attribute Name	Description	Details
Enable Overload Control	Specifies whether to enable or disable overload control.	DataType: Boolean Constraints: NA Default Value: False
Sampling Period (in milliseconds)	Specifies the time frame for each cycle of overload control per service. Its default value is 200 ms.	DataType: int Constraints: NA Default Value: NA

Table 2-127 Mappings Configurations

Attribute Name	Description	Details
Service Name	Specifies the name of the microservice that is further used to determine a mapping between service and discard policy name per service.	DataType: string Presence: M
Policy Name	Specifies the name of the discard policy that is used to determine a mapping between service and discard policy name per service. The drop-down list shows the policies configured using the Discard Policy page.	DataType: string The value can be: RejectWithErrorCode Presence: M

Sample curl:

```
curl --http2-prior-knowledge -X PUT http://<SEPP Configuration IP>:<PORT>/
{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/ocpolicymapping/
node -H "Content-Type: application/json" -d '{"enabled":true,"mappings":
[{"svcName":"ocsepp-release-pn32f-
svc","policyName":"Policy2"}],"samplingPeriod":5000}' -v
```

2.33.2.3 Error Code Profile Configuration

The following URI can be used to update the errorcodeprofiles that is used in Overload Control, Controlled Shutdown feature for populating details in error responses when a request is discarded.

Note

Below is the sample error code profile that can be linked for controlled shutdown. The errorcodeprofiles configuration is used for other features as well. Hence, the configuration must be performed with caution.

By default, the errorcodeprofiles remains null.

URI: /sepp/nf-common-component/v1/igw/n32/errorcodeprofiles/node

Method:

- GET: Get Error Code configuration of the required service.
- PUT: Update Error Code configuration of the required service.

Content Type: application/json

Body:

```
[ { "name": "error429", "errorCode": 429, "errorCause": "Too many requests",
  "errorTitle": "Too many requests", "redirectURL": "", "retry-after": "",
  "errorDescription": "Too many requests" }, { "name": "error503", "errorCode":
  503, "errorCause": "Backend not able to handle traffic", "errorTitle":
  "Backend not able to handle traffic", "redirectURL": "", "retry-after": "",
  "errorDescription": "Backend not able to handle traffic" }, { "name":
  "shutdownerror503", "errorCode": 503, "errorCause": "UNSPECIFIED_NF_FAILURE",
  "errorTitle": "SEPP is in COMPLETE_SHUTDOWN state. Service temporarily
  unavailable", "redirectURL": "", "retry-after": "", "errorDescription": "SEPP
  is in COMPLETE_SHUTDOWN state. Service temporarily unavailable" } ]
```

Table 2-128 Error Code Profile Configuration

Attribute Name	Description	Details
name	Error name.	DataType: string Mandatory(M)/Optional(O)/Conditional(C): M
errorCode	errorCode field in an errorScenario determines the HttpStatusCode that needs to be populated in ProblemDetails (HttpStatus field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType field.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): M
errorCause	errorCause field in an errorScenario determines the error cause that needs to be populated in ProblemDetails (Cause field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
errorTitle	errorTitle field in an errorScenario determines the title that needs to be populated in ProblemDetails (Title field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O

Table 2-128 (Cont.) Error Code Profile Configuration

Attribute Name	Description	Details
redirectURL	redirectURL field in an errorScenario determines the redirection URL, this value is populated in LOCATION header while sending response from Ingress Gateway. The header is populated only when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter, the errorCode configured for the particular errorScenario lies in 3xx error series and the redirectUrl field for the particular errorScenario is configured appropriately.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
retry-after	retry-after field in an errorScenario determines the value in seconds or particular date after which the service should be retried, this value is populated in Retry-After header while sending response from Ingress Gateway. The header is populated only when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType parameter, the errorCode configured for the particular errorScenario lies in 3xx error series and the retry-after field for the particular errorScenario is configured appropriately in seconds.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O
errorDescription	errorDescription field in an errorScenario determines the description that needs to be populated in ProblemDetails (Detail field) response from Ingress Gateway when the exception occurred at Ingress Gateway matches the configured errorScenario's exceptionType field.	DataType: integer Mandatory(M)/Optional(O)/Conditional(C): O

Sample curl:

```
curl --http2-prior-knowledge -X PUT
http://<SEPP Configuration IP>:<PORT>/{nfType}/nf-common-component/v1/
{serviceName}/{instanceId}/errorcodeprofiles/node -H "Content-Type:
application/json" -d
'[{ "name": "error429", "errorCode": 429, "errorCause": "Too many
requests", "errorTitle": "Too many requests", "redirectURL": "", "retry-
after": "", "errorDescription": "Too many requests"},
{ "name": "error503", "errorCode": 503, "errorCause": "Backend not able to handle
traffic", "errorTitle": "Backend not able to handle
traffic", "redirectURL": "", "retry-after": "", "errorDescription": "Backend not
able to handle traffic"},
{ "name": "shutdownerror503", "errorCode": 503, "errorCause": "UNSPECIFIED_NF_FAILUR
E", "errorTitle": "SEPP is in COMPLETE_SHUTDOWN state. Service temporarily
unavailable", "redirectURL": "", "retry-after": "", "errorDescription": "SEPP is in
COMPLETE_SHUTDOWN state. Service temporarily unavailable"}]'
```

-v

2.33.2.4 Error Code Series List

This URI can be used to update the `errorcodeserieslist` that are used in Overload Control feature and Server Header feature to list the configurable exception or error for an error scenario in Ingress Gateway.

URI:

`/sepp/nf-common-component/v1/igw/n32/errorcodeserieslist/node`

Method: PUT to update Error Code Series configuration of the required service.

Content Type: application/json

Request or Response Body Parameters

Table 2-129 Request or Response Body Parameters

Parameter	Description	Details
<code>id</code>	This is a mandatory parameter. Indicates the error code identifier.	Data Type: string
<code>errorCodeSeries</code>	This is a mandatory parameter. List the error codes for a specific service. Note: "ErrorCodeSeries" is configured only if a set of error responses with specific error codes is expected in server header. If it is not configured then all the error responses will have server header.	Data Type: string
<code>exceptionList</code>	This is an optional parameter. Lists the configurable exception or error for an error scenario in Ingress Gateway.	Data Type: string Range: • ConnectionTimeout • RequestTimeout • UnknownHostException • ConnectException • NotFoundException
<code>errorSet</code>	This is a mandatory parameter. Possible values for "errorSet" attribute: 5xx, 4xx, 3xx	Data Type: string

Table 2-129 (Cont.) Request or Response Body Parameters

Parameter	Description	Details
errorCodes	This is a mandatory parameter. Possible values include all error codes in the respective <code>HttpSeries</code> value assigned for "errorSet". Note: Use single value of "-1" if all error codes in that <code>HttpSeries</code> are to be considered. For example: - If the series is 4XX, the values should be between 400-499. - If the series is 5XX, the values should be between 500-599. Onus is on operator to configure the errorCodes properly as explained above.	Data Type: string

Example of Request or Response Body:

```
[ { "id": "E1", "exceptionList": [ "RequestTimeout", "ConnectionTimeout",
"UnknownHostException", "NotFoundException" ], "errorCodeSeries":
[ { "errorSet": "4xx", "errorCodes": [ 400, 408 ] }, { "errorSet": "5xx",
"errorCodes": [ 500, 503 ] } ] } ]
```

Example with recommended configuration to enable Server Headers for all 5xx and 4xx error codes:

```
[{"id":"E1","errorCodeSeries":[{"errorSet":"4xx","errorCodes":[-1]},
{"errorSet":"5xx","errorCodes":[-1]}]}
```

Sample curl:

```
curl --http2-prior-knowledge -X PUT http://<SEPP Configuration IP>:<PORT>/
{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/
errorcodeserieslist/node -H "Content-Type: application/json" -d
' [{"id": "E1", "exceptionList":
["RequestTimeout", "ConnectionTimeout", "UnknownHostException", "NotFou
ndException"], "errorCodeSeries": [{"errorSet": "4xx", "errorCodes": [400, 429]},
{"errorSet": "5xx", "errorCodes": [500, 503]}] } ]' -v
```

2.33.2.5 Serverheaderdetails Configurations

This API can be used for adding Server Header in the error responses sent from Ingress Gateway, depending on the values provided in the JSON. By default, this feature is disabled. To enable the feature, invoke the following REST API and update the enable or disable flag.

URI:

/sepp/nf-common-component/v1/igw/n32/serverheaderdetails/node

Method: GET, PUT, PATCH

Content-Type: application/json

Request or Response Body Parameters**Table 2-130 Request or Response Body Parameters**

Parameter	Description	Details
enabled	This is a mandatory parameter. This parameter specifies whether the feature is enabled or disabled.	Data Type: Boolean Range: true or false Example Value: false
errorCodeSeriesId	This is an optional parameter. Specifies the error list IDs	Data Type: String Range: NA Example Value: NA
configuration.nfType	This is a mandatory parameter. Specifies the type of network function	Data Type: String Range: NA Example Value: SEPP
configuration.nfInstanceId	This is a mandatory parameter. This parameter represents the UUID of the SEPP deployment that is used to generate the Server Header.	Data Type: String Range: NA Example Value: Valid SEPP Instance ID

Example**Example of Request or Response Body to Enable/ Disable Server Header:**

```
{
  "enabled": true,
  "errorCodeSeriesId": "E1",
  "configuration": {
    "nfType": "SEPP",
    "nfInstanceId": "9faf1bbc-6e4a-4454-a507-aef01a101a01"
  }
}
```

Note

- In the mentioned configuration, when sending a response to AMF, the Server Header will be appended by the SEPP with the value "SEPP-9faf1bbc-6e4a-4454-a507-aef01a101a01"
- The values in the above example are samples. Ensure that you update the values of the following parameters according to your deployment:
 - nfType must be SEPP.
 - errorCodeSeriesId: A valid configured value
 - nfInstanceId: Valid SEPP's instance value. It must be same as SEPP's instance ID.
 - Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.
- enabled is used to enable or disable the feature.
- nfType and nfInstanceId are used to form the Server Header.
- Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.

Sample curl to Enable Server Header:

```
curl --http2-prior-knowledge -X PUT http://<SEPP Configuration IP>:<PORT>/  
{nfType}/nf-common-component/v1/{serviceName}/{instanceId}/  
serverheaderdetails/node -H "Content-Type: application/json" -d  
'{"enabled":true,"errorCodeSeriesId":"E1","configuration":  
{"nfType":"SEPP","nfInstanceId":"9faf1bbc-6e4a-4454-a507-aef01a101a01"}}' -v
```

Note

- enabled is used to enable or disable the feature.
- nfType and nfInstanceId are used to form the Server Header.
- Ensure that an errorCodeSeries exists corresponding to the errorCodeSeriesId.

2.33.2.6 Health Check Configuration (N32 IGW)

Health Check Configuration is used to enable Ingress gateway to understand incoming health API and respond with a configured response code to denote it is healthy.

Table 2-131 Health Check Configuration

Method	URL	Description	Input	Return	Example
GET	curl http://127.0.0.1:9090/sepp/nf-common-component/v1/i gw/n32/healthCheckConfigOptions	Fetch the complete list of Proactive Status Updates.	None	List of Proactive Status Updates.	curl http://127.0.0.1:9090/sepp/nf-common-component/v1/i gw/n32/healthCheckConfigOptions -XGET
PUT	curl http://127.0.0.1:9090/sepp/nf-common-component/v1/i gw/n32/healthCheckConfigOptions	Configure the response for health API sent from Remote SEPP.	healthCheckConfiguration Object	Configurations to match health API and method with incoming health API and return configured response code	curl http://127.0.0.1:9090/sepp/nf-common-component/v1/i gw/n32/healthCheckConfigOptions -XPUT -H 'Content-type: application/json' -d '{"enabled":false,"healthCheckConfigObject":{"healthCheckResourceUri":"/health-check/v1/status","healthCheckResponseCode":200,"healthCheckRequestMethod":"OPTIONS"}}'

Attribute	Data Type	Compliance	Description
enabled	Boolean	M	enable feature on IGW.
healthCheckResourceUri	String	M	URI to match with incoming health check URI. If matches with method, the configured response code sent If no match is found, the health check request is forwarded to the backend service.
healthCheckRequestMethod	String	M	method to match with the incoming health check Method. If matches with URI, the configured response code sent Only GET and OPTIONS are supported.
healthCheckResponseCode	Numerical	M	Response code to send when URI and Method are a match. Range of values: 200,201,202,203,204,205,206,207,208,226.

Sample response body structure for GET operations:

Resource API: sepp/nf-common-component/v1/igw/n32/healthCheckConfigOptions

Resource Method: GET

Content Type: application/json

Response Body

```
{"enabled":false,"healthCheckConfigObject":{"healthCheckResourceUri":"/health-check/v1/status","healthCheckResponseCode":200,"healthCheckRequestMethod":"OPTIONS"}}
```

Sample response body structure for PUT operations:

Resource API: sepp/nf-common-component/v1/igw/n32/healthCheckConfigOptions

Resource Method: PUT

Content Type: application/json

Response Body

```
{"enabled":false,"healthCheckConfigObject":{"healthCheckResourceUri":"/health-check/v1/status","healthCheckResponseCode":200,"healthCheckRequestMethod":"OPTIONS"}}
```

3

HTTP Response Codes and Error Codes

The following are the HTTP Response Codes:

Table 3-1 HTTP Response Codes and Error Codes

Data Type	Mandatory(M)/Optional(O)/Conditional(C)	Cardinality	Response Code	Description
ProblemDetails	C	1	400 - BAD REQUEST	SEPP config-mgr-svc shall send the response when the Request body received is not as per defined Data Model.
ProblemDetails	C	1	500 - INTERNAL SERVER ERROR	SEPP config-mgr-svc shall send the response when an internal error has occurred.
Response Body as per Data Model defined	C	1	200 - OK	SEPP config-mgr-svc shall send the response when the request is successful.
ProblemDetails	C	1	404 -NOT FOUND	SEPP config-mgr-svc shall send the response when the requested entry is not present in the database.

Error Codes and Recovery Steps

The following tables list the various SEPP error codes and the recovery steps:

Table 3-2 Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-COM-DB-ERROR-0002	Remote Sepp record not found	GET remotesepp/{name} DELETE remotesepp/{name} PATCH remotesepp/{name}	This error is observed if the provided name in the request is not present.	Verify that Remote SEPP name given in request parameter is present.
SEPP-COM-DB-ERROR-0003	N32F Context not found record not found	GET handshakestatus /fqdn/{fqdn} GET handshakestatus /name/{name}	This error is observed if the context with given name or fqdn in the request parameter is not found.	Verify that context with given name or fqdn in request parameter is present in DB.

Table 3-2 (Cont.) Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-COM-DB-ERROR-0005	Database connection is down	Can be thrown from any Method (Generic Exception if application is unable to connect with Database)	This error is observed if the application is unable to make the connection with Database.	Verify that DB is up and running.
SEPP-COM-DB-ERROR-0007	SQL Grammer exception	PUT remoteseppset/{name}	This error is observed if there is some corruption in the Database related to Remote SEPP Set table (This error gets generated for all the commands that is trying to access corrupted table or Database).	Recheck the corruption in database and re-install SEPP
SEPP-COM-DB-ERROR-0008	Constraint violation exception of database table columns	PUT {remoteSepp}	This error is observed when one of the mandatory parameters required for remote SEPP are not present.	Verify that mandatory parameter like name, seppfqdn are present.
SEPP-COM-DB-ERROR-0009	Unsupported security capability list exception	POST / remotesepp PUT remotesepp/{name} PATCH remotesepp/{name}	This error is observed if unsupported securityCapabilityList is provided in request.	Make sure securityCapabilityList provided is supported by SEPP. Allowed security capability list is 'TLS' and 'TLS and PRINS.
SEPP-COM-DB-ERROR-0010	Update not allowed on table entry exception	PUT remotesepp/{name} PATCH remotesepp/{name}	This error is observed if given parameter to update is same as configured one or trying to update mandatory parameter.	Verify that the parameter provided in the request to update is different from the configured one or not while updating any mandatory parameter like name, seppfqdn etc.
SEPP-COM-DB-ERROR-0011	Remote Sepp already present	POST / remotesepp	This error is observed if Remote SEPP with same seppfqdn is already present in DB.	Verify that seppfqdn provided in configuration request is not already present in DB.
SEPP-COM-DB-ERROR-0012	Mandatory Parameter Update Not Allowed	PUT remotesepp/{name} PATCH remotesepp/{name}	This error is observed if the user is trying to update the value of mandatory parameter which is not allowed.	Verify that some of the mandatory parameters are not allowed to be updated. Those allowed should match with the value in the request.

Table 3-2 (Cont.) Error Codes and Recovery Steps

Error Code	Error Text	Command/ Method	Description	Recovery Steps
SEPP-COM- ERROR-0013	Invalid PLMN List in Request	POST / remotessepp PUT / remotessepp	This error is observed if the user has configured PLMN in incorrect format in PLMNID List.	Verify the entered PLMN (mcc and mnc) in PLMNID List while configuring Remote Sepp.
SEPP-COM-DB- ERROR-0020	Remote Sepp Set not found	GET RemoteSeppSet/ {name}	This error is observed if the Remote Sepp Set is not present	Give the Remote SEPP Set name that exist in the database
SEPP-COM-DB- ERROR-0021	Remote Sepp Set associated with Remote SEPP	DELETE RemoteSepp/ {name} PUT RemoteSepp/ {name} PATCH RemoteSepp/ {name}	This error is observed if Remote SEPP is associated with Remote Sepp Set, it gives this error on deletion.	Disassociate the Remote Sepp from Remote SEPP Set by executing the Remote SEPP Set PUT command. Or Do the following: • Delete the Remote Sepp Set • Delete the Remote Sepp • Create Remote Sepp Set again
SEPP-COM-DB- ERROR-0022	Remote Sepp Set already exists	POST RemoteSeppSet/ {name}	This error is observed if Remote Sepp Set already exists and same entry is added again.	Use a unique name in Remote Sepp Set

Table 3-2 (Cont.) Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-COM-DB-ERROR-0023	Remote Sepp Set configuration error	PUT RemoteSeppSet/{name} POST RemoteSeppSet/{name}	- Remote Sepp Set does not exists - Requested Remote Sepp does not exists - At least one Remote Sepp should be associated with Remote Sepp Set - Configured Domains are different between peers - Remote Sepp Set exists with same domain - Configured PLMNs are different between peers - Remote Sepp Set exists with same PLMN - Configured PLMNs/Domains are different between peers - Associating Remote Sepp should be unique for Remote Sepp Set	- Give the Remote SEPP Set name that exists in the database - Give the Remote SEPP name that exists in the database - Give at least a single Remote Sepp name while creating a Remote Sepp Set - Check that each Remote Sepp has same Domain when creating a Remote Sepp Set - Check that each Remote Sepp has same PLMN when creating a Remote Sepp Set - Check that each Remote Sepp name is unique while creating a Remote Sepp Set
SEPP-COM-xx-ERROR-0101	Config Not Acceptable	PUT POST PATCH /v1/remotesep/	This error is observed if PLMNidList is empty or PLMNidList size is greater than max size allowed or if domain is null.	Verify that PLMNidList is not empty or PLMNidList size is not greater than max size allowed or if domain is not null.
SEPP-COM-xx-ERROR-0102	Mandatory Parameter Missing	POST /remotesep POST /remotesepset	This error is observed if mandatory parameter is missing in request.	Verify that all mandatory parameter for configuration of Remote SEPP or Remote SEPP Set is present

Table 3-2 (Cont.) Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-COM-xx-ERROR-0103	Connection could not be established on N32c interface	POST / remotesepp DELETE remotesepp/{name} PUT remotesepp/{name} PATCH remotesepp/{name}	This error is observed if n32c service is down or not up and running.	Verify that n32c service is up and running
SEPP-COM-xx-ERROR-0104	Invalid Value for Parameter		This Error occurs when user enters the invalid value for Enum Field in SEPP.	
SEPP-COM-SVR-ERROR-0404	Unable to connect to EGW to sync config	PUT peerconfiguration / peersetconfiguration / routesconfiguration	This error is observed if config mgr is not able to update peer/peersest/routes configurations at EGW.	Verify that common configuration server is up and running.
SEPP-CN32FSEPP-ERROR-0013	PLMN ID Validation In Header Failed	NA	This error is observed if PLMN ID is not matched in header of the incoming request on CN32F microservice.	- Verify if correct regex is configured against the header identifier in Header Configuration. - Verify if MCC & MNC combination is present in the Remote PLMN ID List.
SEPP-CN32FSEPP-ERROR-0014	PLMN ID Validation In Body Failed	NA	This error is observed if PLMN ID is not matched in body of the incoming request on CN32F microservice.	- Verify if correct regex is configured against the body IE in Body IE Configuration. - Verify if MCC & MNC combination is present in the Remote PLMN ID List.
SEPP-PN32FSEPP-ERROR-0016	PLMN ID Validation In Header Failed	NA	This error is observed if PLMN ID is not matched in header of the incoming request on PN32F microservice.	- Verify if correct regex is configured against the header identifier in Header Configuration. - Verify if MCC & MNC combination is present in the helm based local PLMN ID list.

Table 3-2 (Cont.) Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-PN32FSEPP-ERROR-0017	PLMN ID Validation In Body Failed	NA	This error is observed if PLMN ID is not matched in body of the incoming request on PN32F microservice.	- Verify if correct regex is configured against the body IE in Body IE Configuration. - Verify if MCC & MNC combination is present in the helm based local PLMN ID list.
SEPP-SECURITY-PLMN-HEADER-ERROR-0015	PLMN ID Validation In Header Failed	NA	- Verify if correct regex is configured against the header in header Configuration. - Verify if MCC & MNC combination is present in the helm based local PLMN ID list.	if PLMN ID is not matched in the header of the incoming request. Metrics can be checked for the details for which it has failed.
SEPP-SECURITY-PLMN-BODY-ERROR-0016	PLMN ID Validation in body failed	NA	- Verify if correct regex is configured against the body IE in Body IE Configuration. - Verify if MCC and MNC combination is present in the helm based local PLMN ID list.	if PLMN ID is not matched in the body of the incoming request. Metrics can be checked for the details for which it has failed.

The following are the error codes of Mediation feature:

Table 3-3 Mediation Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-MEDIATION-ERROR-001	Mediation Trigger Rule Not Found.	GET x`/sepp-mediation-trigger-rule-list/{triggerRuleListName} DELETE /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Requested Trigger Rule List does not exist.	Give the Trigger Rule List Name that exist in Database.

Table 3-3 (Cont.) Mediation Error Codes and Recovery Steps

Error Code	Error Text	Command/ Method	Description	Recovery Steps
SEPP-MEDIATION-ERROR-002	Unsupported Trigger Points	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Trigger Points provided in configuration request body is not supported.	Provide valid Trigger Points in Configuration Request. Valid Trigger Points : N32_Egress_Request N32_Ingress_Response N32_Ingress_Request N32_Egress_Response
SEPP-MEDIATION-ERROR-003	Mediation Trigger Mandatory Parameter Update Not Allowed.	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Trigger Rule List mandatory parameter like TriggerRuleListName can not be updated.	Make sure TriggerRuleListName you are providing in configuration request url is same as name in request url path.
SEPP-MEDIATION-ERROR-004	Trigger Rule is Mandatory Parameter.	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	If MediationAllEnabled is false and there is no TriggerRules or empty TriggerRules in request.	If MediationAllEnabled is false, then make sure there is TriggerRules Provided in Request.
SEPP-MEDIATION-ERROR-005	Invalid Error Status Code	PUT /mediation/feature	Invalid Http Status Code is provided in Error Configuration Request.	Make sure to provide valid HTTP Status Code in statusCode field in Error Configuration Request
SEPP-MEDIATION-ERROR-006	Invalid ResourceURI and HTTPMethod Error	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	ResourceURI and HttpMethod provided in Request is not valid.	Make sure to provide ResourceURI and HttpMethod combination that is configuration for SEPP, already present in Database.
SEPP-MEDIATION-ERROR-007	DELETE Not Allowed	DELETE /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Trigger Rule List Delete Not Allowed.	Ensure you are deleting only that Trigger Rule List that is not associated with Remote SEPP Set.

Table 3-3 (Cont.) Mediation Error Codes and Recovery Steps

Error Code	Error Text	Command/Method	Description	Recovery Steps
SEPP-MEDIATION-ERROR-008	Trigger Rule Configuration Error	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Error in Configuration of Trigger Rule List.	Ensure there is no duplicated ResourceURI and Method in request body.
SEPP-MEDIATION-ERROR-009	Mediation Trigger Rules Configuration Mandatory Parameter Missing Error	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Mediation Trigger Rules Configuration Mandatory Parameter Missing in configuration request.	Ensure all mandatory parameters are present in Mediation Trigger Rule Configuration request.
SEPP-MEDIATION-ERROR-010	Multiple Local Trigger Rule List Configuration Error	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	Multiple Local Trigger Rule List Configuration is Not Allowed.	Make sure we are not configuring another Local Trigger Rule List if there is already one configured in DB. Only one Local Trigger Rule List can be configured for SEPP.
SEPP-MEDIATION-ERROR-011	Mediation Feature Mandatory Parameter Error	PUT /mediation/feature	Mediation Feature Configuration Mandatory Parameter is missing.	Make sure if FeatureEnabled is true in request then all field Error Configuration is present in request.
SEPP-MEDIATION-ERROR-012	Mediation Local Trigger Rule IPX Mode Error	PUT /sepp-mediation-trigger-rule-list/{triggerRuleListName}	In IPX Mode SEPP allow only 2 Trigger Points (N32 Ingress Request, N32 Egress Response) in local TRL configuration.	Make sure there is not any invalid Trigger Points like N32 Egress Request or N32 Ingress Response in Local Trigger Rule Configuration Request.
SEPP-MEDIATION-ERROR-013	Mediation service is not available	PUT /mediation/feature	Mediation Service Not deployed.	Before Enabling Mediation Feature through API , make sure Mediation Service is being deployed for SEPP.
SEPP-MEDIATION-ERROR-014	Invalid Error Action	PUT /mediation/feature	Invalid Error Action in Mediation Feature Configuration request.	Make sure to provide valid ErrorAction in Mediation Feature Configuration request in ErrorConfiguration section.

The following are the error codes of Cat-1 feature:

Table 3-4 Cat-1 Error Codes and Recovery Steps

Error Code	Error Text	Description	Recovery
SEPP-SECURITY-ERROR-001	Service API not in allowed list	If resource URI and Http Method is not matched as per the configured allowed list on SEPP.	Verify whether the proper Resource URI and HTTP method is configured in the CNC Console GUI. Go to the Security Countermeasure section, check under the Service API Allowed List for that particular Allowed list name for N32 Egress or N32 Ingress Direction.
SEPP-CN32FSEPP-ERROR-0012	Service API Validation Failed	This error occurs on CN32F microservice. If resource URI and Http Method is not matched as per the configured allowed list on SEPP.	Verify whether the proper Resource URI and HTTP method is configured in the CNC Console GUI. Go to the Security Countermeasure section, check under the Service API Allowed List for that particular Allowed list name for N32 Egress or N32 Ingress Direction.
SEPP-PN32FSEPP-ERROR-0015	Service API Validation Failed	This error occurs on PN32F microservice. If resource URI and Http Method is not matched as per the configured allowed list on SEPP.	Verify whether the proper Resource URI and HTTP method is configured in the CNC Console GUI. Go to the Security Countermeasure section, check under the Service API Allowed List for that particular Allowed list name for N32 Egress or N32 Ingress Direction.

The following are the error codes of Cat-2 Network ID Validation feature:

Table 3-5 Cat-2 Network ID Error Codes and Recovery Steps

Error Code	Error Text	Description	Recovery
SEPP-CN32FSEPP-ERROR-0013	Network ID Validation In Header Failed	Check whether PLMN ID is not matched in header of the incoming request on CN32F microservice.	1. Verify if correct regex is configured against the header identifier in Header Configuration. 2. Verify if MCC and MNC combination is present in the visitor or target PLMN ID List based on the associated SEPP configuration

Table 3-5 (Cont.) Cat-2 Network ID Error Codes and Recovery Steps

Error Code	Error Text	Description	Recovery
SEPP-CN32FSEPP-ERROR-0014	Network ID Validation In Body Failed	Check whether PLMN ID is not matched in body of the incoming request on CN32F microservice.	1. Verify if correct regex is configured against the body IE in Body IE Configuration. 2. Verify if MCC and MNC combination is present in the home or visitor PLMN ID List based on configuration of associated SEPP.
SEPP-PN32FSEPP-ERROR-0016	Network ID Validation In Header Failed	Check whether PLMN ID is not matched in header of the incoming request on PN32F microservice.	1. Verify if correct regex is configured against the header identifier in Header Configuration. 2. Verify if MCC and MNC combination is present in the target or visitor PLMN ID list based on the associated SEPP configuration.
SEPP-PN32FSEPP-ERROR-0017	Network ID Validation In Body Failed	Check whether PLMN ID is not matched in body of the incoming request on PN32F microservice.	1. Verify if correct regex is configured against the body IE in Body IE Configuration. 2. Verify if MCC and MNC combination is present in the target or visitor PLMN ID list based on the associated SEPP configuration.

Table 3-6 Cat-3 Previous Location Check Error Codes

Error Code	Error Text	Description	Recovery
SEPP-PREVIOUS-LOCATION-CHECK-VALIDATION-ERROR-0019 or SEPP-PN32FSEPP-ERROR-0018	Previous Location Check Validation Failed	This error code is observed only on PN32F microservice. If Serving Network ID is not matching against the serving network ID coming from UDR response, to check whether UE authentication is success. This error also occurs if the authentication from UDR is false.	1. Verify whether the correct regex is configured against the serving network identifier in either Header or Body Configuration. 2. Verify whether the MCC and MNC combination is present in the Serving Network ID. 3. Verify whether the identifier coming in the ingress request on PN32F microservice is also same as the serving Network name coming as part of the UDR response if UE authentication is successful.
SEPP-PREVIOUS-LOCATION-CHECK-VALIDATION-EXCEPTION-0020	Previous Location Check Validation Failed Due To Exception	This error will occur if the system is not able to extract the SUPI, or if the incoming message doesn't contain SUPI, or if there are any sort of connectivity issues with NRF or UDR.	1. Verify if correct regex for UE ID in Header or Body configuration screen is configured due to which correct UE ID value is extracted. 2. Verify if the incoming message has SUPI. 3. Verify whether the FQDN or IP fetched for the UDR as part of NRF discovery call is reachable. 4. Verify if UDR discovery procedure from NRF is successful. 5. Verify if the SUPI received in the Ingress request message is part of the SUPI range received in UDR profile from discovery response from NRF.

